

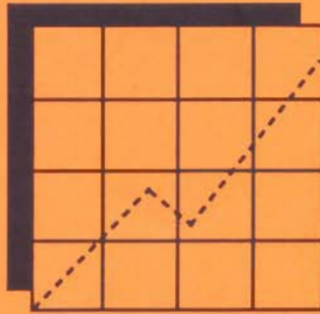


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Technical Report 16



Matching State Goals to a Model of Outcomes and Indicators for Grade 8

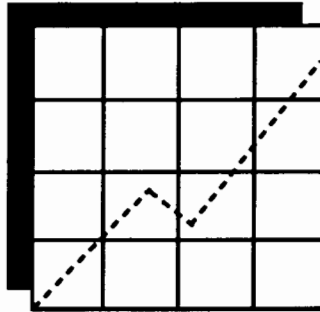
National Center on Educational Outcomes

The College of Education and Human Development
UNIVERSITY OF MINNESOTA

in collaboration with

St. Cloud State University
and
National Association of State Directors of Special Education

Technical Report 16



Matching State Goals to a Model of Outcomes and Indicators for Grade 8

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October, 1995

The National Center on Educational Outcomes (NCEO) was established in October, 1990 to work with state departments of education, national policymaking groups and others to facilitate and enrich the development and use of indicators of educational outcomes for students with disabilities. It is believed that responsible use of such indicators will enable students with disabilities to achieve better results from their educational experiences. The Center represents a collaborative effort of the University of Minnesota, the National Association of State Directors of Special Education and St. Cloud State University.

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Overview

In 1990, the President and governors of the United States agreed upon six national education goals. Their purpose was to help improve the quality of education by setting high standards and focusing on how well our society is able to achieve them. The original six goals (and two others) have become part of education reform law and at least ten different standards-setting groups have been working to set out guidelines of what U.S. students should know and be able to do. The passage of the *Goals 2000: Educate America Act*, along with other education reform initiatives such as the *School to Work Opportunity Act* and the *Improving America's Schools Act* (the former *Elementary and Secondary Education Act*) are designed to further stimulate standards-based assessment and reform in schools across the nation.

States have been following closely on the heels of these national reform initiatives. Within six months of announcing the national educational goals, 18 states had announced their own versions of the goals, and within one year 44 states had done so. Many states have gone on to articulate learner outcomes, objectives, performance standards, and benchmarks/indicators. And, building on the Goals 2000 work, most states are now using language that includes *all* students in their educational reforms, including students with disabilities.

At the same time that these reforms were initiated, the National Center on Educational Outcomes for Students with Disabilities (NCEO) began its work by identifying a conceptual model of outcomes and indicators appropriate for all students, including students with disabilities (Figure 1). Using a multi-attribute, consensus-building approach (Vanderwood & Ysseldyke, 1993), hundreds of stakeholders from a variety of perspectives (including national reformers, special educators, school administrators, teachers, parents, measurement experts, legislators, and representatives of advocacy groups) contributed to the articulation of eight major outcome domains.

The model articulates outcomes and indicators at key stages in a student's development: age 3, age 6, grade 4, grade 8, school-completion, and post-school. In Figure 2, the specific outcomes within each domain are provided for the grade 8 level. Possible indicators of each outcome have also been identified. The overall design, from domain to outcomes to indicators, is shown in Figure 3 on the following page.

One of NCEO's activities is to check the extent to which there is correspondence between state articulated student outcomes and the outcomes specified in the NCEO conceptual model. This matching activity also gives us the opportunity to present an inventory of the outcomes and indicators that have been articulated by each state at the grade 8 level. We believe this information will be useful to state and local level practitioners involved in the articulation of educational goals, performance standards, assessments, and curriculum frameworks at different age and grade levels.

Figure 1. NCEO Conceptual Model of Education Outcomes

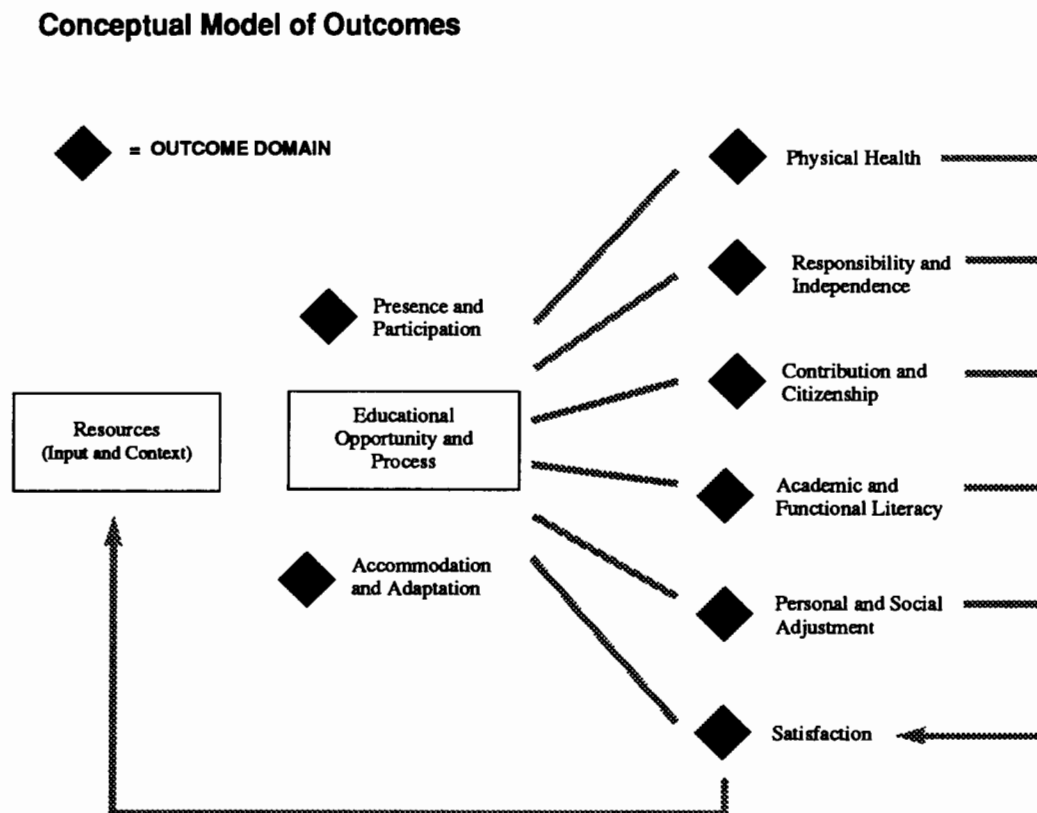
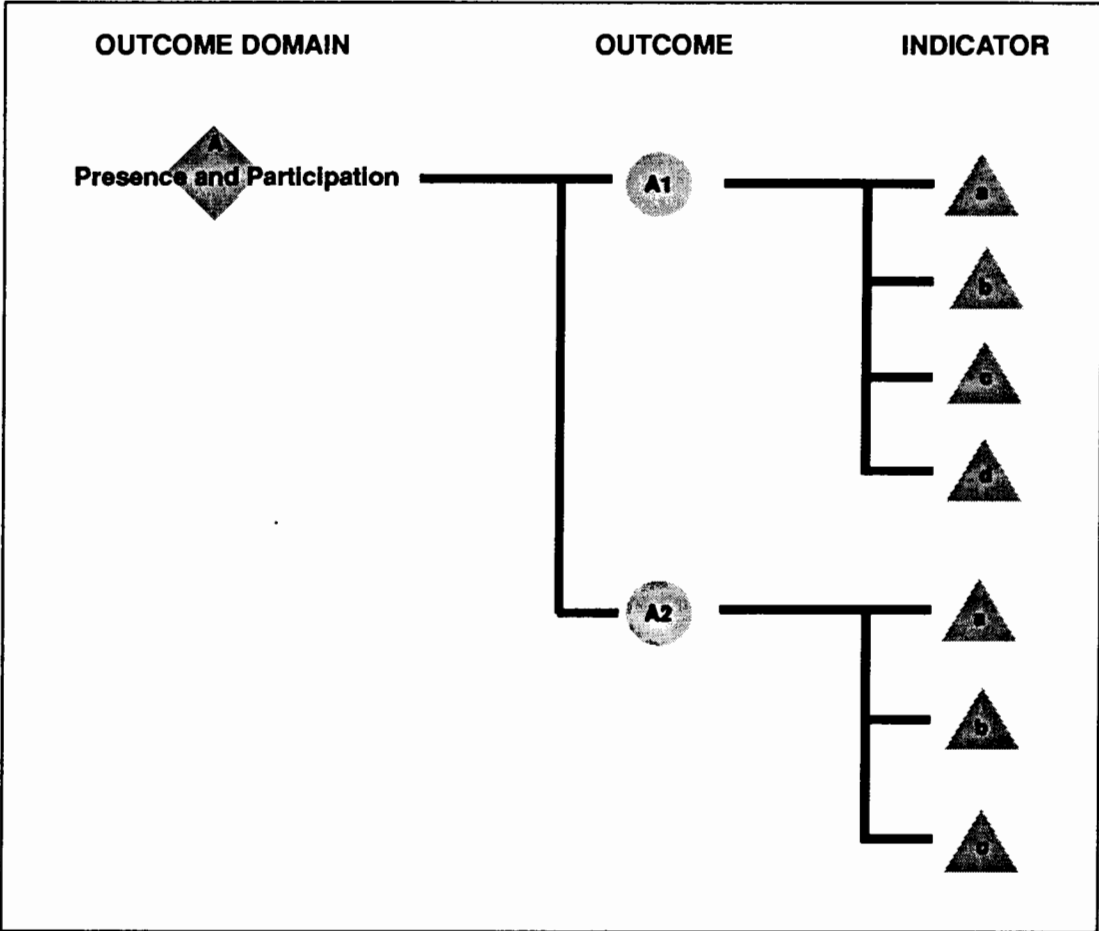


Figure 2. NCEO Outcome Domains and Outcomes for Grade 8

| OUTCOME DOMAIN | OUTCOME |
|-------------------------------------|--|
| A. Presence and Participation | A1. Is present in school A2. Participates |
| B. Accommodation and Adaptation | B1. Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains B2. Demonstrates the presence of family |
| C. Physical Health | C1. Makes healthy lifestyle choices C2. Is aware of basic safety, fitness, and health care needs C3. Is physically fit |
| D. Responsibility and Independence | D1. Demonstrates age-appropriate independence D2. Gets about in the environment D3. Is responsible for self |
| E. Contribution and Citizenship | E1. Complies with school and community rules E2. Knows the significance of voting E3. Volunteers |
| F. Academic and Functional Literacy | F1. Demonstrates competence in communication F2. Demonstrates competence in problem solving strategies and critical thinking skills F3. Demonstrates competence in math, reading, and writing skills F4. Demonstrates competence in other academic and nonacademic areas F5. Demonstrates competence in using technology |
| G. Personal and Social Adjustment | G1. Copes effectively with personal challenges, frustrations, and stressors G2. Has good self image G3. Respects cultural and individual differences G4. Gets along with other people |
| H. Satisfaction | H1. Student satisfaction with school experience H2. Parent/guardian satisfaction with education that student is receiving H3. Community satisfaction with education that student is receiving |

Figure 3. Design of Domains, Outcomes, and Indicators in Model



Method

The process of matching the educational goals, outcomes, and standards adopted by states to NCEO's list of outcomes and indicators included three distinct stages.

Stage 1: Obtaining State Documents

During the Spring of 1994, we mailed letters to all Commissioners of Education or State Superintendents requesting copies of their states' most recent student outcomes, standards, or goals document(s). In the Summer of 1994, we sent out a second letter to states from which we had not received responses. At this point, we asked nonrespondents to verify whether these documents (a) have not been published at the state level, or (b) are under development. A total of 48 states (including the District of Columbia) responded, either submitting documentation or verifying that the documentation is not available or is currently under development and not available for review. Thirty-six states submitted some type of documentation. Of the states submitting documentation, 30 included information related to goals, outcomes, standards, or indicators that could be compared to the NCEO conceptual model at grade 8.

Stage 2: Selecting Documents to Match at the Grade 4 Level

States have developed various documents related to state articulated education goals, outcomes, and standards. We selected the state documents that most specifically reflected learner goals, objectives or standards, and indicators, without delving into curriculum-level materials or state assessment test items.¹ When states submitted multiple types of documents, we considered them for inclusion in the mapping activity in the following priority order:

1. Statements of learner goals, objectives, outcomes, performance standards, benchmarks, and/or indicators that typically were related to state assessment systems;
2. Statements of curriculum standards or frameworks that include specific statements of learner goals, objectives, performance standards, benchmarks, or indicators;
3. Statements of state education goals;
4. Statements of educational program standards or opportunity-to-learn standards.

Only a few states target educational goals toward specific ages or grades of students. A number of states have a single set of goals that cover kindergarten through grade 12; others have clusters of age or grade related goals (e.g., K-3, 5-8, and 9-12). In many states, the grades or ages included in the cluster vary by subject or domain area.

As a result, two NCEO staff independently reviewed the documents submitted by each state to (1) select the type of document that would be used in the matching activity, and (2) specify the age or grade levels that would be matched to the grade 8 level of the NCEO model. Discrepancies between the reviewers were resolved by group consensus, and/or review by a third individual. The document used as part of the matching activity is listed and briefly described at the beginning of each state list of goals in Chart 4.

¹ Some of the terms used by States include goals, objectives, outcomes, standards, indicators, or benchmarks. We refer to them generally as state goals.

Stage 3: The Matching Process

NCEO's model is presented in three levels that become increasingly more specific: Domains, Outcomes, and Indicators. Matching was done at each of these levels in Charts 1-3. In addition, we present a listing of each state's goals that we used in the matching process in Chart 4. More specifically, the following sequence was used to complete the matching process.

State Articulated Goals: States' goals were first listed using their format as much as possible (see Chart 4). We then matched the NCEO domains, outcomes, and indicators to these state goals. Matches were first established at the domain level. If the state goal fit within the NCEO domain, a "deeper" match at the outcome and indicators levels was sought. The deepest possible match to the NCEO model is recorded in a space next to the state goal.

The Indicator Level: Using the information from Chart 4, we then reversed the process and matched the state goals to the NCEO model at all three levels: Indicator, Outcome, and Outcome Domain. If possible, matches were made first at the indicator level. If this was not possible, we then looked to match a state goal with an outcome, and then a domain. Chart 3, which shows the results of this process, contains an "X" at the deepest level of match. Thus, when an "X" appears at the domain or outcome level, the match is generally less precise than if it were at the indicator level.

The Outcome Level: If the state has *one or more* goals that fit under one of the NCEO outcomes (at the indicator or outcome levels), we put an "X" in the outcome box and also in the broader domain box (see Chart 2).

The Domain Level: If the state has *one or more* goals that fit under a specific NCEO domain (at any level), an "X" was put in the box for that domain (see Chart 1).

As is often the case in content analyses, the concepts included in state articulated goals do not provide a one-to-one correspondence with the concepts included in NCEO's domains, outcomes, or indicators. Thus, several decisions had to be made by the reviewers. The following decisions provide an illustration of the reasoning used in the matching process.

The degree of specificity in the states' goals and the NCEO model are not always the same. Since the intent of our review was to examine the overall correspondence between state goals and the NCEO model, we sometimes match specific goals listed in the state document to an NCEO domain. A match with an NCEO domain, therefore, does not necessarily indicate the state has embraced all the NCEO outcomes and indicators within that domain.

The state goals sometimes contained more than one concept and seemed to fall under more than one NCEO domain, outcome, or indicator. In these instances, we matched the state goal to as many domains, outcomes, or indicators as seemed appropriate. Thus, the state goal *Students will participate in problem-solving activities so they can use concrete models to develop an understanding of concepts of addition, subtraction, multiplication, and division* matches to three NCEO outcomes or indicators: (A2a) Percent of time students participate actively in a variety of meaningful learning activities and routines in general education classrooms, (F2a) Percent of students who demonstrate problem-solving and critical thinking skills, and (F3a) Percent of students who demonstrate competence in math to function in home, school, and community environments.

NCEO's outcome indicators are written in the form of finding a percent of the number of students that meet a particular indicator. An example of an indicator is *Percent of students who meet individualized standards of physical fitness*. Most state goals are not written using this

language. Although the form of measurement for the state goal may not be the same, the two were matched if the same general concept were discussed in both.

General Findings

The following general findings emerged when state goals were matched to NCEO's model at the domain level:

- All 30 of the states that have articulated goals for students at grade 8 included statements that correspond to the NCEO outcome domain, Academic and Functional Literacy
- Between one-half to three-quarters of the states we examined specified goals that corresponded to the following NCEO domains:
 - Presence and Participation (23 out of 30 States)
 - Responsibility and Independence (21 out of 30)
 - Contribution and Citizenship (20 out of 30)
 - Personal and Social Adjustment (22 out of 30)
- Few states identified goals that were matched to two NCEO domains: Accommodation and Adaptation (four out of 30) and Satisfaction (two out of 30)

We also matched state goals to the NCEO model at the outcome level. This analysis takes us one step "deeper" (or more specific) into the NCEO model. We examined the general degree of match between the states' goals and the overall group of outcomes within each NCEO domain. The key question we asked is: To what extent do states identify student goals that correspond to the outcomes specified under each domain of the NCEO model? To answer this question, we determined the proportion of states that articulated goals that correspond to the outcomes specified under each domain of the NCEO model. General findings include:

- A high proportion of states (more than 75%) specified goals that correspond to most of the outcomes under the NCEO domain, Academic and Functional Literacy.
- All four of the outcomes under the domain Personal and Social Adjustment were matched to goals of at least one-half of the States we examined
- A moderate proportion of states (50-75%) articulated goals that generally corresponded to at least one outcome under the following domains:
 - Presence and Participation (outcome: Participates)
 - Physical Health (outcomes: Makes healthy lifestyle choices and Is aware of basic safety, fitness, and health care needs)
 - Responsibility and Independence (outcome: Is responsible for self)
 - Contribution and Citizenship (outcome: Complies with school and community rules)
- Given the poor correspondence at the domain level, it is not surprising that few states (less than 25%) have articulated goals that correspond to outcomes under the following two NCEO domains: Accommodation and Adaptation, and Satisfaction

The NCEO model includes a number of indicators for each outcome statement. We grouped states in terms of the degree of correspondence of goals with NCEO indicators. Strong

matches represent more than 75% of the states. Moderate matches represent 50-75% of the states, while weaker matches represent less than 50% of the States. General findings include:

- There was a strong match (greater than 75%) for most indicators under the domain, Academic and Functional Literacy
- The following indicators (followed by their domain and outcome in parenthesis) received a moderate number of matches (50-75%):
- Percent of students who are exploring career options within the community (Domain: Presence and Participation; Outcome: Participates)
- Percent of students who can prioritize and set goals and persevere toward them (Domain: Responsibility and Independence; Outcome: Is responsible for self)
- Percent of children who respect and show concern for others (Domain: Personal and Social Adjustment; Outcome: Respects cultural and individual differences)
- Percent of students who engage in productive group work (Domain: Personal and Social Adjustment; Outcome: Gets along with other people)
- The remaining NCEO indicators were only weakly matched to state goals. This overall lack of correspondence, however, may be due more to the level of specificity being used by States to articulate goals than a lack of conceptual congruence.

Reference

Vanderwood, M.L., & Ysseldyke, J.E. (1993). Consensus building: A process for selecting educational outcomes and indicators (Outcomes and Indicators Number 2). Minneapolis, MN: National Center on Educational Outcomes.

States Included in the Grade 8 Matching

| | | | |
|----|----------------------|----|----------------|
| AR | Arkansas | NE | Nebraska |
| CA | California | NH | New Hampshire |
| CO | Colorado | NM | New Mexico |
| DE | Delaware | NY | New York |
| DC | District of Columbia | NC | North Carolina |
| FL | Florida | OH | Ohio |
| HI | Hawaii | OK | Oklahoma |
| ID | Idaho | OR | Oregon |
| IL | Illinois | PA | Pennsylvania |
| IN | Indiana | SC | South Carolina |
| KS | Kansas | SD | South Dakota |
| KY | Kentucky | UT | Utah |
| MD | Maryland | VA | Virginia |
| MI | Michigan | WA | Washington |
| MT | Montana | WV | West Virginia |

Chart 1. State Matching to NCEO Model Outcome Domains

| OUTCOME DOMAIN | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|
| STATE | A | B | C | D | E | F | G | H |
| AR | X | | | X | X | X | X | |
| CA | X | | X | X | X | X | X | |
| CO | | | | | | X | | |
| DE | | | | X | | X | X | |
| DC | X | X | X | | X | X | | |
| FL | X | X | X | X | X | X | X | X |
| HI | X | X | X | X | X | X | X | |
| ID | X | | | X | | X | X | |
| IL | | | | | | X | | |
| IN | X | X | | X | X | X | X | X |
| KS | X | | X | X | X | X | X | |
| KY | X | | X | X | X | X | X | |
| MD | | | | X | X | X | X | |
| MI | X | | X | X | X | X | X | |
| MT | X | | X | X | X | X | X | |
| NE | | | | | | X | | |
| NH | X | | | | X | X | | |
| NM | X | | X | X | X | X | X | |
| NY | X | | X | X | X | X | X | |
| NC | X | | | X | X | X | X | |
| OH | | | | | X | X | | |
| OK | X | | X | X | X | X | X | |
| OR | X | | X | X | | X | X | |
| PA | X | | X | X | X | X | X | |
| SC | X | | X | | | X | X | |
| SD | | | | | | X | | |
| UT | X | | X | X | X | X | X | |
| VA | X | | X | | | X | | |
| WA | X | | X | X | X | X | X | |
| WV | X | | X | X | | X | X | |

KEY:

- A. Presence and Participation
- B. Family Involvement/Accommodation and Adaptation
- C. Physical Health
- D. Responsibility and Independence
- E. Contribution and Citizenship
- F. Academic and Functional Literacy
- G. Personal and Social Adjustment
- H. Satisfaction

Chart 2. State Matching to NCEO Model Outcome Domains and Outcomes

| NCEO DOMAINS AND OUTCOMES | < 25% | 25 - 50% | 51 -75% | > 75% |
|---|-------|----------|---------|-------|
| A. Presence and Participation | | | | X |
| 1. Is present in school | X | | | |
| 2. Participates | | | X | |
| B. Accommodation and Adaptation | X | | | |
| 1. Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains | X | | | |
| 2. Demonstrates the presence of family support and coping skills | X | | | |
| C. Physical Health | | | X | |
| 1. Makes healthy lifestyle choices | | X | | |
| 2. Is aware of basic safety, fitness, and health care needs | | X | | |
| 3. Is physically fit | | X | | |
| D. Responsibility and Independence | | | X | |
| 1. Demonstrates age-appropriate independence | | X | | |
| 2. Gets about in the environment | X | | | |
| 3. Is responsible for self | | | X | |
| E. Contribution and Citizenship | | | X | |
| 1. Complies with school and community rules | | | X | |
| 2. Knows the significance of voting | X | | | |
| 3. Volunteers | | X | | |
| F. Academic and Functional Literacy | | | | X |
| 1. Demonstrates competence in communication | | | | X |
| 2. Demonstrates competence in problem solving strategies and critical thinking skills | | | | X |
| 3. Demonstrates competence in math, reading, and writing skills | | | | X |
| 4. Demonstrates competence in other academic and nonacademic areas | | | | X |
| 5. Demonstrates competence in using technology | | | | X |
| G. Personal and Social Adjustment | | | X | |
| 1. Copes effectively with personal challenges, frustrations, and stressors | | X | | |
| 2. Has good self-image | | | X | |
| 3. Respects cultural and individual differences | | | X | |
| 4. Gets along with other people | | | X | |
| H. Satisfaction | X | | | |
| 1. Student satisfaction with school experience | X | | | |
| 2. Parent/guardian satisfaction with the education that student is receiving | X | | | |
| 3. Community satisfaction with education that student is receiving | X | | | |

Chart 3. State Matching to NCEO Outcome Domains, Outcomes and Indicators

| NCEO DOMAINS, OUTCOMES AND INDICATORS | A | C | D | F | H | I | I | I | K | M | M | N | N | N | N | O | O | P | S | S | U | V | W | W |
|--|----|----|----|----|----|----|----|-----|-----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|
| | RA | OE | EC | LI | DL | NS | YD | ITE | HMY | CH | KR | AC | DT | AA | V | | | | | | | | | |
| A. Presence and Participation | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1. Is present in school | | | | | | | | | | | | | | | X | | | | | | | | X | |
| a. Rate of absenteeism during school year (differentiated for reasons of suspension, medical/health, truancy, and other) | | | | X | | | X | | | | | | | X | | | | | | | | | X | |
| b. Percent of students excluded from their typical school placement | | | | X | | | | | | | | | | | | | | | | | | | | |
| c. Percent of students attending specific settings (for example, separate schools, residential settings, and homebound) | | | | X | | | | | | | | | | | | | | | | | | | | |
| 2. Participates | | | | X | X | X | X | | | X | X | | | | | | X | | | | | | | |
| a. Percent of time students participate actively in a variety of meaningful learning activities and routines in general education classrooms | X | | | X | | | X | X | | X | X | | | X | X | X | X | X | X | X | X | X | X | X |
| b. Percent of time students participate actively in extracurricular activities during school year | | | | | | | | | | X | | | | | | | | | | | | | | |
| c. Percent of students who participate in district, state, and national testing programs (including alternative testing programs) | | | | | | | | | | | | | | X | | | | | | | | | | |
| d. Percent of students who move between school settings during the year (mobility rate) | | | | | | | | | | | | | | | | | | | | | | | | |
| e. Percent of students who participate actively in community activities | X | | | X | X | | X | X | X | X | | | X | X | | X | X | | | | | | X | |
| f. Percent of students who are exploring career options within the community | X | | | X | | | X | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X |
| B. Accommodation and Adaptation | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains | | | | | | | X | | | | | | | | | | | | | | | | | |
| a. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to move about in their environments | | | | | | | X | | | | | | | | | | | | | | | | | |
| b. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to communicate | | | | | | | | | | | | | | | | | | | | | | | | |
| c. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to read (or receive information from materials usually printed) and/or perform other academic skills | | | | | | | | | | | | | | | | | | | | | | | | |
| d. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to participate in activities in home, school, and community environments | | | | | | | X | | | | | | | | | | | | | | | | | |

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

| NCEO DOMAINS, OUTCOMES AND INDICATORS | A | C | D | D | F | H | I | I | I | K | K | M | M | M | N | N | N | N | N | O | O | O | P | S | S | U | V | W | W | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | A | O | E | C | L | I | D | L | N | S | Y | D | I | T | E | H | M | Y | C | H | K | R | A | C | D | T | A | A | V |
| e. Percent of students who demonstrate successful enrichments, adaptations, accommodations, or compensation skills required to manage personal needs in home, school, and community environments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Demonstrates the presence of family support and coping skills | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of families using community resources and programs needed by students | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| b. Percent of families participating in the education of their children | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | |
| c. Percent of families providing environments supportive of their children's education and learning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C. Physical Health | | | | | | | X | | | | | | | | | | | | | | | X | X | | | | X | | | |
| 1. Makes healthy lifestyle choices | X | | | | X | X | | | | X | X | | X | | X | X | | | | | X | X | X | | | X | | X | X | |
| a. Percent of students who make good nutritional choices | | | | | | | | | | X | | | X | | X | | | | | | X | X | | | | X | | | | |
| b. Percent of students who elect to participate regularly in sports, recreational, and/or exercise activities | | | | X | X | | | | | X | | X | | X | | | | | | | X | X | X | | | X | | X | | |
| c. Percent of students who indicate that they use tobacco, alcohol, or drugs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Is aware of basic safety, fitness, and health care needs | X | | | | X | | | | | X | | | | | | | | | | | X | X | X | | | X | | X | | |
| a. Percent of students who are aware of basic safety precautions and procedures | | | | | | | | | | | | X | X | | X | | | | | | X | X | X | X | | X | | X | | |
| b. Percent of students who are aware of basic fitness needs | | | | | X | | | | | X | | | | | X | | | | | | X | X | | | | | | | | |
| c. Percent of students who are aware of basic health care needs | X | | | | | | | | | | | X | | X | | | | | | | X | X | X | | | | | | X | |
| d. Percent of students who are aware of dangers of use and abuse of tobacco, alcohol, drugs, poisons, and medicines | | | | | X | | | | | | | X | | X | X | | | | | | X | X | | | X | | X | | | |
| 3. Is physically fit | | | | | | | | | | | X | | X | | X | | | | | | X | X | X | | | X | | X | | |
| a. Percent of students who meet individualized standards of physical fitness | | | | X | | | | | | | | X | | X | | | | | | | X | X | | | X | | X | | | |
| D. Responsibility and Independence | X | | | | X | | | | | X | X | X | X | X | | X | X | | | | | X | | X | | X | | | | |
| 1. Demonstrates age-appropriate independence | | | | | X | | | | | | | | X | | | | | | | | X | | X | | | | | | | |
| a. Percent of students who assume responsibility in a family, group, or individual situation | X | | | | X | X | | | | X | X | X | X | | X | X | | | | | X | X | | | X | | X | X | | |
| 2. Gets about in the environment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of students who can get to and from a variety of destinations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b. Percent of students who complete transactions in the community (for example, shopping, going to the library) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Is responsible for self | X | | | | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | |
| a. Percent of students who can attend to their own hygiene needs | | | | | X | | | | | | | | | | | | | | | | X | | | | | | | | | |

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

| NCEO DOMAINS, OUTCOMES AND INDICATORS | A | C | D | F | H | I | I | I | K | M | M | N | N | N | N | N | O | O | P | S | S | U | V | W | W | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | A | O | E | L | D | L | N | S | Y | D | I | T | E | H | M | Y | C | H | K | R | A | C | D | T | A | A | V |
| b. Percent of students who can take care of their own belongings | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c. Percent of students who access a support network that effectively advocates for the student | | | | | | | | | | | | X | | | | | | | | X | | | | | | | | |
| d. Percent of students who effectively advocate for themselves | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | |
| e. Percent of students who can prioritize and set goals and persevere toward them | X | | X | X | X | X | | | X | X | X | X | | | X | X | | | X | X | | | | | | X | X | |
| E. Contribution and Citizenship | X | | | | X | | | | X | X | X | X | | | X | X | X | | X | X | | | | X | X | | | |
| 1. Complies with school and community rules | | | | | X | | | | | | | X | | | X | X | | | X | | | | | | | | | |
| a. Percent of students who are beginning to act as responsible citizens (for example, recycling, helping each other, caring about the environment, respecting property) | X | | | | X | X | | | X | X | X | X | | | X | X | | | X | | | X | X | | X | X | | |
| b. Percent of students who have been expelled, repeatedly suspended, or subjected to disciplinary actions | | | | | X | X | | | X | | | | | | | | | | X | | | | | | | | | |
| c. Percent of students involved in the legal system | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Knows the significance of voting | | | | | | | | | X | | | | | | X | | | | | | | | | | | | | |
| a. Percent of students who know the significance of voting | | | | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| 3. Volunteers | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| a. Percent of students who participate in school and classroom governance activities | | | | | | | | | X | | X | | | | X | | | | | | | | | | | | | |
| b. Percent of students who use their interests and abilities to benefit others and contribute to the group | X | | | | X | X | | | X | | | | | | X | X | | | | | | | | | | X | | |
| c. Percent of students who volunteer time to school, civic, community, or non-profit activities | | | | | | | | | X | | X | X | | | X | | | X | | | | | | | | X | | |
| F. Academic and Functional Literacy | X | | | | | X | X | X | X | X | X | X | X | X | X | X | | | X | | | | | | X | | | |
| 1. Demonstrates competence in communication | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| a. Percent of students who use and comprehend language that effectively accomplishes the purpose of the communication | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 2. Demonstrates competence in problem-solving strategies and critical thinking skills | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of students who demonstrate problem-solving and critical thinking skills | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 3. Demonstrates competence in math, reading, and writing skills | | | | | | | | | | | | | | | | | | X | X | | | | | | X | | | |
| a. Percent of students who demonstrate competence in math to function in home school, and community environments | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| b. Percent of students who demonstrate competence in reading to function in home school, and community environments | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| c. Percent of students who demonstrate competence in writing to function in home school, and community environments | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

| NCEO DOMAINS, OUTCOMES AND INDICATORS | A | C | C | D | F | H | I | I | I | K | K | M | M | N | N | N | N | N | O | O | P | S | S | U | V | W | W | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | A | O | E | L | I | D | L | N | S | Y | D | I | T | E | H | M | Y | C | H | K | R | A | C | D | T | A | A | V |
| d. Percent of students who excel in math, reading, writing, and/or other academic skills | | | | X | X | | | | X | | | | | | X | | | | | | | X | | | | | | | |
| e. Percent of students who demonstrate need for remediation | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| 4. Demonstrates competence in other academic and nonacademic areas | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| a. Percent of students who demonstrate competence in other academic domains (science, language, geography, social studies) to function in home, school, and community environments | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| b. Percent of demonstrate competence in cultural domains (fine and performing arts) to function in home, school, and community environments | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 5. Demonstrates competence in using technology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of students who apply technology to enhance functioning in home, school, and community environments | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| G. Personal and Social Adjustment | X | | | X | X | | | | X | X | X | X | | | X | X | | | X | | | | X | | | | | | |
| 1. Copes effectively with personal challenges, frustrations, and stressors | | | | | | X | | | X | X | X | X | | | X | X | | | X | | | | X | | | X | X | | |
| a. Percent of students who deal appropriately with frustration and unfavorable events | | | | | X | X | | | | | | X | | | | | | | | | | | | | | | | | |
| b. Percent of students who express feelings and needs in socially acceptable ways | | | | X | | | | X | X | | X | X | | | | | | | X | | | | | | | | | | |
| c. Percent of students whose behavior reflects an appropriate degree of self-control | | | | | | | | | | X | | | | | | | | | | | | | | | | X | | | |
| d. Percent of students whose behavior reflects a knowledge of and acceptance of the consequences of their behavior (for example, makes restitution) | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Has good self-image | | | | | X | | | | | X | X | | | | X | | | | | | | | | | | | | | |
| a. Percent of students who perceive themselves as worthwhile | | | X | X | X | X | X | X | X | X | X | X | | | X | X | | | | | | | | X | | | | | |
| b. Percent of students who perceive themselves as competent | X | X | X | X | X | X | X | X | X | X | X | X | | | X | | | | X | X | | | | | | | X | | |
| c. Percent of children who demonstrate knowledge of and acknowledge their own limitations | | | | | X | X | | | | | X | | | | X | | | | | | | | | | | | | | |
| 3. Respects cultural and individual differences | X | X | | | | | | | X | X | X | X | | | X | | | | X | X | | | | | | | | | |
| a. Percent of students who respect and show concern for others | X | X | X | X | X | X | X | X | X | X | X | X | | | X | X | | | X | X | X | | | X | X | X | X | X | |
| b. Percent of students who accept cultural, racial, ability, and family differences | X | X | X | X | X | X | X | X | X | X | X | X | | | X | X | | | X | | | | | | | X | | | |
| c. Percent of students who participate in making the community welcoming and inclusive of diversity | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| 4. Gets along with other people | X | | | X | X | | X | X | X | X | X | | | X | X | | | | X | X | | | X | X | X | X | X | X | |
| a. Percent of students who have friends their own age and are part of a social network | X | | | | | | | | | | | X | | | | | | | X | | | X | | | | | | | |

Chart 3, continued. State Matching to NCEO Outcome Domains, Outcomes and Indicators

| NCEO DOMAINS, OUTCOMES AND INDICATORS | A | C | C | D | D | F | H | I | I | I | K | K | M | M | M | N | N | N | N | N | O | O | O | P | S | S | U | V | W | W |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | A | O | E | C | L | I | D | L | N | S | Y | D | I | T | E | H | M | Y | C | H | K | R | A | C | D | T | A | A | V |
| b. Percent of students who engage in productive group work | X | X | | X | | X | X | X | | X | X | X | X | X | | | X | X | X | | X | X | X | X | | X | | X | X | |
| c. Percent of students who demonstrate skill in managing interpersonal conflict | | X | | | | X | X | X | | X | | X | X | | | X | X | | | X | X | | | | | | | | | |
| H. Satisfaction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Student satisfaction with school experience | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of students who are satisfied with their level of achievement (in all domains) | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| b. Percent of students who are satisfied with their educational experiences | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| c. Percent of students who are satisfied with their level of independence | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Parent/guardian satisfaction with education student is receiving | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of parents/guardians who are satisfied with their children's level of achievement | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| b. Percent of parents/guardians who are satisfied with their children's educational experiences | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| c. Percent of parents/guardians who are satisfied with their children's level of independence | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Community satisfaction with education that student is receiving | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | |
| a. Percent of community (teachers, policymakers, employers, general public) satisfied with level of student achievement | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| b. Percent of community (teachers, policymakers, employers, general public) satisfied with what is being provided in school (curriculum, extracurricular, teaching, and supports) | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| c. Percent of community (teachers, policymakers, employers, general public) satisfied with students' educational experiences | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Chart 4. NCEO Codes for Outcome Domains, Outcomes, and Indicators Matched to State Goals.

The following pages list the states' goals as they appear in their amendments. For each of them, we have indentified the corresponding NCEO codes.

Arkansas

Documents Utilized

Draft of the Arkansas Foreign Language Curriculum Framework (September, 1993)
The Arkansas English Language Arts and Mathematics Curriculum Frameworks (1993 edition)
Draft of the Arkansas Reading Curriculum Framework (September, 1993)
Arkansas Science Curriculum Framework (1994)

Background

In 1991, the Arkansas General Assembly passed Act 236, which calls for schools to make curriculum changes that emphasize teaching students to think. In accordance to Act 236, the Arkansas Department of Education has developed curriculum frameworks that specify specific learner outcomes which are developed within particular subject areas. Frameworks describe student learning for K-4, 5-8, and 9-12. These curriculum frameworks are the basis for state-level assessments of schools.

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| FOREIGN LANGUAGE | NCED CODE |
|--|-----------|
| Strand 1: LISTENING | |
| Content Standard: Students will listen to a variety of materials for comprehension, response, evaluation and enjoyment. | F1 |
| 1.1 Student Learning Expectations, Grades 5-8 | |
| 8. Distinguish variations in sounds and intonation patterns. | F1a |
| 9. Use a variety of technological tools to enhance listening skills. | F1a |
| 10. Comprehend basic structures, expressions and common vocabulary. | F1a |
| 11. Recognize familiar material in unfamiliar contexts. | F1a |
| 12. Understand narratives dialogues or announcements. | F1a |
| 13. Comprehend native speech in controlled situations. | F1a |
| 14. Recognize verbal clues in cultural situations. | F1a |
| 15. Improve reading, oral and written performance through listening. | F1a |
| 16. Analyze and evaluate what is heard. | F1a, F2a |
| Strand 2: SPEAKING | |
| Content Standard: Students will speak the language at appropriate levels of proficiency in a variety of situations. | F1a |
| 2.1 Student Learning Expectations, Grades 5-8 | |
| 8. Ask and answer questions and make descriptive statements using complex grammatical structures. | F1a |
| 9. Create with the language combining and recombining familiar material. | F1a |
| 10. Initiate and sustain conversation in variety of situations. | F1a |
| 11. Communicate effectively and appropriately in a range of common situations and for a variety of purposes. | F1a |
| Strand 3: READING | |
| Content Standard: Students will read a variety of materials for comprehension, response, evaluation and enjoyment. | F2a, F3b |
| 3.1 Student Learning Expectations, Grades 5-8 | |
| 11. Expand vocabulary by using dictionaries and technological tools. | F4, F5a |
| 12. Read familiar material orally with correct pronunciations and intonation. | F1a, F3b |
| 13. Interpret written language in areas of practical need. | F3b |
| 14. Derive meaning from material in context. | F3b |

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| 15. Understand main ideas and details. | F3b |
| 16. Predict the outcomes of a story. | F2a, F3b |
| 17. Engage in intensive and extensive reading, including literary selections. | F3b, F4b |
| Strand 4: WRITING | |
| Content Standards: Students will write effectively in different modes of discourse using process writing. | F3c |
| 4.1 Student Learning Expectations, Grades 5-8 | |
| 7. Use a foreign language dictionary. | F4 |
| 8. Use computers and other available technology to write and revise texts. | F3c, F5a |
| 9. Use familiar material in guided composition, including prewriting and postwriting activities | F3c |
| 10. Write for an uninterrupted period of time. | F3c |
| 11. Write cooperatively. | F3c, G4b |
| 12. Express likes, dislikes and preferences. | F2a |
| 13. Synthesize familiar material through the writing of narratives, dialogues and descriptions. | F2a, F3c |
| 14. Create original compositions. | F3c, F4b |
| Content Standard 2: Students will develop written products that are structurally correct. | |
| 4.2 Student Learning Expectations, Grades 5-8 | |
| 5. Write from dictation | F3c |
| 6. Write fixed expression and limited memorized material. | F3c |
| 7. Write directed and original simple sentences. | F3c |
| 8. Create original compositions demonstrating control of syntax in simple sentences. | F3c, F4b |
| 9. Narrate and describe events in the present, past and future. | F3c |
| Strand 5: CULTURE | |
| Content Standard 1: Students will recognize, appreciate and respond to the special characteristics, contributions and traditions of the target culture. | G3b |
| 5.1 Student Learning Expectations, Grades 5-8 | |
| 7. Understand that there are similarities and differences in attitudes toward common human experiences. | G3b |
| 8. Become aware of cultural connotations of common words and phrases. | F4a |
| 9. Experience, through simulation and technology, aspects of life in another country. | F4a |
| 10. Compare and contrast customs of various countries. | F4a |
| Content Standard 2: Students will acquire a knowledge of and appreciation for the arts, history, geography and social structure of other countries. | |
| 5.2 Student Learning Expectations, Grades 5-8 | |
| 5. Acquire knowledge of notable people, traditions, and historical events. | F4a |
| 6. Recognize the contributions and importance of diverse cultural groups. | F4a |
| 7. Appreciate the importance of folk arts and fine arts. | F4a |
| 8. Understand the fundamental concepts of geography--location, place, human-environmental interaction, movement and region--of target countries. | F4a |
| 9. Compare and contrast the economic, political, geographic and social systems of various countries. | F4a |
| READING CURRICULUM FRAMEWORK, 9-9-93 | |
| Strand 1: READING KNOWLEDGE | |
| Content Standard: Students will use knowledge of the reading process as they construct meaning through the interaction of a variety of reader, text and contextual conditions. | F2a, F3b |
| 1.1 Student Learning Expectations, Grades 5-8 | |
| 1. Know the goal of reading is constructing meaning. | F3b |
| 2. Know there are relationships between written and oral language. | F3b |

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| 3. Know the reader's prior knowledge influences the meaning the reader gains from the text. | F3b |
| 4. Know that reading is communication between the author and the reader. | F3b |
| 5. Know reading strategies are tools for constructing meaning, thinking critically, and solving problems. | F2a, F3b |
| 6. Know features, structures and types of text influence reading. | F3b |
| 7. Know the different environments, tasks and purposes influence reading. | F3b |
| 8. Know critical thinking broadens and deepens the understanding of what is read. | F2a, F3b |
| 9. Know the different cultures, eras and ideas influence reading. | F3b, F4c |
| 10. Know the reader, text and context interact to influence reading. | F3b, F4a |
| Strand 2: READING BEHAVIOR | |
| Content Standard: Students will use appropriate strategies to monitor and direct their reading. They will construct, examine, extend and evaluate meaning from a variety of sources, for a variety of purposes and in a variety of contexts. | F3b |
| 2.1 Student Learning Expectations, Grades 5-8 | |
| 21. Apply syntactic, semantic, and phonetic cues to decode and construct meaning from print with emphasis on content areas. | F3b |
| 22. Employ background knowledge to aid in reading and writing, comprehension, problem solving strategies, and critical thinking. | F2a, F3b, F3c |
| 23. Analyze features and organization of the text, e.g. bold type, glossary, etc. | F2a |
| 24. Analyze text structure, e.g., story elements, patterns of organization, etc. | F2a, F3b |
| 25. Clarify and assess the author's opinion, purpose, style, audience, form, and point of view, even when not explicitly stated. | F2a, F3b |
| 26. Integrate textual information within sentences, the whole text, outside the text and from the readers' knowledge. | F3b |
| 27. Apply literal and inferential comprehension, critical thinking and problem solving strategies to a variety of genres from diverse cultures and time periods. | F2a, F3b, F4b |
| 28. Monitor own comprehension and self-correct when necessary. | F3b |
| 29. Engage in cooperative learning, group learning and in-depth conversations to enhance comprehension. | F3b, G4b |
| 30. Expand content-specific and personal vocabularies, e.g., reading, writing, listening, speaking. | F4, F4b |
| 31. Compare purpose, task and situation in contexts. | F2a, F3b |
| 32. Employ strategies flexibly according to reader, text and contextual factors, e.g. prediction, skimming etc. | F3b |
| 33. Evaluate and react critically in oral and written language to what has been read. | F1a, F2a, F3b |
| 34. Comprehend oral, visual and written instructions. | F1a, F3b |
| 35. Demonstrate proficiency in oral reading, e.g., shared reading activities, etc. | F1a |
| 36. Develop creative, playful and artistic use of oral and written language, e.g., puns, role-playing, etc. | F1a, F3c |
| 37. Select appropriate resource material, independently, from a variety of sources, e.g., library media center, community, etc. | A2a, D3 |
| 38. Collect, organize and synthesize data from a wide variety of informational and technological resources, e.g. CD-ROM, interviews, etc. | F2a, F5c |
| Strand 3: READING DISPOSITIONS | |
| Content Standard: Students will demonstrate a willingness to use reading to continue to learn, to communicate and to solve problems. | F1a, F2a, F3b |
| 3.1 Student Learning Expectations, Grades 5-8 | |
| 1. Value reading. | F3b |
| 2. Develop a positive attitude toward reading and toward themselves as readers. | G2b |
| 3. Enjoy reading and listening to a variety of texts. | F3b |
| 4. Choose to read a variety of materials for a variety of purposes. | D3e, F3b |
| 5. Self-select reading materials from libraries and other sources. | D3, D3e |

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| 6. Experience a personal response to materials read. | F3b |
| 7. Initiate and participate in conversations about reading. | F1a, F3b |
| 8. Use reading to achieve goals outside the classroom. | F3b |
| 9. Choose reading to satisfy, extend and expand personal interests. | F3b |
| 10. Choose reading as an information-gathering tool to develop informed opinions and make decisions. | F3b |
| SCIENCE CURRICULUM FRAMEWORK | |
| Strand 1: SCIENTIFIC INQUIRY | |
| Content Standard: Students will demonstrate an understanding of science as a process of inquiry. | F4a |
| 1.1 Student Learning Expectations, Grades 5-8 | |
| 7. Understand that the laws of science are universal. | F4a |
| 8. Understand that a scientific thought is non-dogmatic. | F4a |
| 9. Recognize that science deals only with inquiry about the natural world. | F4a |
| 10. Understand that a scientific theory is based on testable evidence that is open to falsification and can be used to predict future events. | F4a |
| 11. Identify problems and generate experimental data utilizing appropriate technology. | F4a |
| 12. Pursue innovative ideas to analyze and evaluate problems and explanations. | F4a, F5a |
| 13. Think critically and logically about the relationship between evidence and explanations. | F2a, F4a |
| 14. Generate conclusions based on evidence. | F2a, F4a |
| 15. Design and conduct appropriate experiments to solve problems. | F2a, F4a |
| 16. Read and communicate scientific information. | F1, F3b, F4a |
| 17. Explore cultural and gender bias as an impediment to scientific research. | F3b, G3b |
| 18. Relate scientific discoveries to their contributor, their impact on society and to appropriate cultural aspects. | F4a |
| 19. Recognize that scientific thought is a continuum influenced by historical events. | F4a |
| Strand 2: CONNECTIONS AND APPLICATIONS | |
| Content Standard: Students will demonstrate an understanding of the connections and applications of science. | F4a |
| 2.1 Student Learning Expectations, Grades 5-8 | |
| 6. Demonstrate how science is connected to all disciplines. | F4a |
| 7. Apply appropriate knowledge and process skills from all curricular areas to form a solution to a given problem. | F2a, F4a |
| 8. Understand the similarities and differences between scientific inquiry and technological design. | F4a |
| 9. Apply various thinking/problem solving strategies to scientific issues. | F2a, F4a |
| 10. Utilize appropriate technology to investigate models, analyze data and present simulations. | F4a, F5a |
| 11. Investigate a variety of science specific and related careers within the community and beyond. | A2f, F4a |
| Strand 3: PHYSICAL SYSTEMS | |
| Content Standard: Students will explore, demonstrate, communicate, apply, and evaluate the knowledge of physical systems. | F1, F2a, F4a |
| 3.1 Student Learning Expectations, Grades 5-8 | |
| 15. Demonstrate an understanding of the states of matter. | F4a |
| 16. Identify and describe the properties of an atom. | F4a |
| 17. Recognize and describe combinations of matter. | F4a |
| 18. Explore the Periodic Chart. | F4a |
| 19. Experiment with physical and chemical changes. | F4a |
| 20. Explore the sources and preservation of energy and energy resources. | F4a |
| 21. Construct models and demonstrate the function of machines. | F4a |
| 22. Investigate the laws of motion. | F4a |

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| 23. Experiment with and measure forces. | F4a |
| 24. Demonstrate and communicate the relationship between magnetic fields and electric currents | F4a |
| 25. Investigate the properties of energy transfer by light. | F4a |
| 26. Investigate variations of sound. | F4a |
| 27. Choose appropriate measurement devices for a given activity. | F4a |
| Strand 4: LIFE SCIENCE SYSTEMS | |
| Content Standard: Students will explore, demonstrate, communicate, apply and evaluate the knowledge of life systems. | F1, F2a, F4a |
| 4.1 Student Learning Expectations, Grades 5-8 | |
| 10. Describe similarities/differences between single celled and multi-celled organisms. | F4a |
| 11. Explain how cells use food as a source of energy. | F4a |
| 12. Compare and classify organisms into major groups on the basis of their structure. | F4a |
| 13. Describe the life cycles of various organisms. | F4a |
| 14. Explain how systems and processes work together in humans and other organisms. | F4a |
| 15. Describe how heredity and environment influence/determine characteristics of an organism. | F4a |
| 16. Explain how physical and/or behavioral characteristics of organisms help them to survive in their environments. | F4a |
| 17. Describe how biologists might trace possible evolutionary relationships among present and past life forms. | F4a |
| 18. Analyze ecosystems in terms of population relationships, food webs, energy flow and biotic succession. | F4a |
| 19. Trace the pathway of materials as they cycle through the environment. | F4a |
| 20. Evaluate human impact on the environment. | F4a |
| Strand 5: EARTH/SPACE SYSTEMS | |
| Content Standard: Students will explore, demonstrate, communicate, apply and evaluate knowledge of the properties of earth and space systems. | F1, F2a, F4a |
| 5.1 Student Learning Expectations, Grades 5-8 | |
| 11. Investigate the formation of rocks, minerals and fossils and their use in determining the age and geological history of the earth. | F4a |
| 12. Explain the natural changes in the earth's surface over time. | F4a |
| 13. Explore the concept of plate tectonics and describe surface features of the earth using maps. | F4a |
| 14. Describe and model the natural physiographic divisions of Arkansas. | F4a |
| 15. Describe and measure (when appropriate) the composition, characteristics and changing weather patterns of the atmosphere. | F4a |
| 16. Investigate the impact that water in all of its forms has on the earth's surface. | F4a |
| 17. Trace the pathways of how rain water in Arkansas reaches the Gulf of Mexico. | F4a |
| 18. Describe and explain the reasons for seasonal changes. | F4a |
| 19. Analyze how the features of the oceans (estuaries, benthos, minerals, absorption of CO ₂ , food, mid-oceans ridges, etc.) affects humans. | F2a, F4a |
| 20. Compare the earth's composition to other planets in terms of supporting life. | F4a |
| 21. Explain and compare the motions of planets, moons and comets in the solar system. | F4a |
| 22. Investigate the theories of the formation of the solar system. | F4a |
| 23. Explore the potential of space exploration and its relationship to the study of the universe. | F4a |
| 24. Analyze the impact of human activities on the earth's crust, hydrosphere, atmosphere and biosphere (i.e., climate change, greenhouse warming, ozone depletion and UV radiation) and explore methods of conservation and recycling of the earth's resources. | F2a, F4a |
| ENGLISH, LANGUAGE ARTS AND MATHEMATICS CURRICULUM FRAMEWORKS | |
| ENGLISH FRAMEWORKS | |
| Strand 1: WRITING | |

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| Content Standard 1: Students will use writing as a means of exploring thought and as a process involving prewriting activities, drafting, receiving, feedback, revising, editing and postwriting activities, including evaluating, publishing and displaying. | F3c |
| 1.1 Student Learning Expectations, Grades 5-8 | |
| 16. Write in class for uninterrupted periods of time about experiences, thoughts, feelings and attitudes of self and others. | F3c |
| 17. Analyze thinking through the writing of explanations and directions, outline, mapping, etc. | F2a, F3c |
| 18. Apply a variety of prewriting activities including clustering, brainstorming, dialogue, drawing, role playing, learning logs, etc. | F3c |
| 19. Develop a first draft that focuses on a central idea. | F3c |
| 20. Revise writing based on a student-teacher collaborative feedback in order to re-examine for purpose, audience, voice, sentence effectiveness, etc. | F3c |
| 21. Use a thesaurus. | F3c |
| 22. Share final product with others through publication, display, reading aloud, etc. | F3c |
| Content Standard 2: Students with appropriate instruction will write in different modes of discourse for a variety of audiences and purposes. | F3c |
| 1.2 Student Learning Expectations, Grades 5-8 | |
| 4. Discover language through "fun" writing activities. | F3c |
| 5. Write in a variety of forms such as personal narrative, dialogue, persuasive essays, messages and letters, poetry, advertisements, etc. | F3c |
| 6. Evaluate diction, style and vocabulary in relation to purpose and audience. | F3c |
| 7. Write to reflect personal, multicultural and universal ideas. | F3c |
| 8. Write to synthesize information from multiple sources. | F3c |
| Content Standard 3: Students will develop final written products which conform to conventional standards. | F3c |
| 1.3 Student Learning Expectations, Grades 5-8 | |
| 4. Maintain and evaluate a collection of writing samples. | F3c |
| 5. Edit written work for developmentally appropriate spelling, usage and mechanics. | F3c |
| Strand 2: READING | |
| Content Standard 1: All students will read to comprehend, respond to, evaluate and appreciate works of literature and other kind of writing which reflect their own cultures and viewpoints as well as those of others. | F2a, F3b, G3b |
| 2.1 Student Learning Expectations, Grades 5-8 | |
| 18. Read individually and in groups. | F3b |
| 19. Establish purpose for reading. | F3b |
| 20. Analyze related and implied main ideas and supportive details. | F2a, F3b |
| 21. Analyze literature using patterns of organization such as cause and effect, comparison and contrast, etc. | F2a, F3b, F4b |
| 22. Distinguish personal opinions and points of view that influence what is said, heard, or read. | F2a |
| 23. Analyze literature for the purpose, ides and style of the author. | F2a, F4b |
| 24. Understand developmentally appropriate literary concepts such as symbolism, allusion, figurative language, etc. | F4b |
| 25. Expand personal vocabulary. | F4 |
| 26. Use library and reference skills. | F4 |
| Content Standard 2: Students will read independently for a wide range of goals and purposes. | F3b |
| 2.2 Student Learning Expectations, Grades 5-8 | |
| 5. Read a variety of materials to meet students personal needs and interests. | F3b |
| 6. Read to discern validity of written material such a propaganda and bias. | F3b |

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| 7. Read and follow directions. | F3b |
| 8. Read to research an ideas using various technical resources. | F3b, F5a |
| Strand 3: SPEAKING | |
| <u>Content Standard 1:</u> Students will develop communication skills through a variety of formal and informal speaking opportunities which are integrated into the language arts curriculum. | F1a, F4b |
| 3.1 Student Learning Expectations, Grades 5-8 | |
| 16. Give and follow directions. | F1, F1a |
| 17. Contribute to discussions. | E3b, F1a |
| 18. Summarize and paraphrase what others have said. | F1a |
| 19. Read orally with meaning and expression. | F1a |
| 20. Speak before a group to express or defend an opinion, present information, tell a story, present an oral interpretation. | F1a |
| 21. Conduct an interview. | F1a |
| <u>Content Standard 2:</u> Students will develop organizational strategies and oral usage appropriate to a variety of situations. | F1a |
| 3.2 Student Learning Expectations, Grades 5-8 | |
| 7. Use clear, concise language which is organized according to purpose, audience and situation. | F1a |
| 8. Exhibit confidence as a speaker through effective use of language, body and voice. | F1a, G2b |
| Strand 4: LISTENING | |
| <u>Content Standard:</u> Students will learn in meaningful contexts the listening skills they need to succeed academically, socially, and professionally. | F1a |
| 4.1 Student Learning Expectations, Grades 5-8 | |
| 10. Develop listening skills for the classroom. | F1a |
| 11. Develop listening skills for varied social situations. | F1a |
| 12. Develop listening skills appropriate to the work place. | F1a |
| 13. Analyze and evaluate what is heard. | F1a, F2a |
| THE MATHEMATICS CURRICULUM FRAMEWORK | |
| Strand 1: NUMBER SENSE, PROPERTIES AND OPERATIONS | |
| <u>Content Standard 1:</u> The student will understand properties of numbers and operations. | F3a |
| 1.1 Student Learning Expectations, Grades 5-8 | |
| 7. Generalize from numerical patterns and verify results. | F3a |
| 8. Enhance number sense through mental computation, calculators and communication. | F3a, F5a |
| 9. Represent numbers and operations in a variety of equivalent forms using models, diagrams and symbols. | F3a |
| 10. Develop competency with rational number computation with and without technology. | F3a, F5a |
| 11. Use elementary number theory. | F3a |
| <u>Content Standard 2:</u> The students will demonstrate an understanding of numbers and numerical relationships and the application to real-world situations. | F3a |
| 1.2 Student Learning Expectations, Grades 5-8 | |
| 5. Use estimation and computation in application problems. | F3a |
| 6. Apply ratios and proportional thinking in a variety of situations. | F3a |
| 7. Understand that the problem situation determines the notational representation of the number. | F3a |
| 8. Study the relationship of numbers in one and two dimensional graphs. | F3a |
| 9. Demonstrate an understanding of the hierarchy of the real number system. | F3a |
| 10. Use technology and manipulatives in problem solving. | F3a, F5a |

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| Strand 2: GEOMETRY | |
| Content Standard 1: Students will explore, demonstrate, communicate and apply knowledge of the properties of geometric shapes. | F1, F3a |
| 2.1 Student Learning Expectations, Grades 5-8 | |
| 3. Identify, describe, compare and classify geometric figures in one, two and three dimensions. | F3a |
| 4. Apply geometric properties. | F3a |
| Content Standard 2: Students will demonstrate an understanding of geometric relationships allowing them to use geometry to connect mathematics to their world. | F3a |
| 2.2 Student Learning Expectations, Grades 5-8 | |
| 6. Explore and make predictions regarding transformation of geometric figures. | F2a, F3a |
| 7. Establish and apply geometric relationships through informal reasoning. | F2a, F3a |
| 8. Explore geometric concepts using manipulatives and technology. | F3a, F5a |
| 9. Visualize and represent geometric figures with special attention to developing spatial sense. | F3a |
| Content Standard 3: Students will be able to solve problems that involve geometry and its application to other topics in mathematics or to other fields. | F2a, F3a |
| 2.3 Student Learning Expectations, Grades 5-8 | |
| 5. Represent and solve problems using geometric models. | F2a, F3a |
| 6. Develop an appreciation of geometry as a means of describing the physical world. | F3a |
| Strand 3: MEASUREMENT | |
| Content Standard 1: The student will use measurement attributes (length, capacity, weight, mass, area, volume, time, money, temperature, scale and angle) to describe and compare mathematical and real-world objects. | F3a |
| 3.1 Student Learning Expectations, Grades 5-8 | |
| 5. Develop estimation strategies. | F3a |
| 6. Estimate, calculate and compare the one, two and three dimensional features of objects in metric, customary and non-standard units of measure. | F3a |
| 7. Convert from one measurement to another within the same system (customary or metric). | F3a |
| Content Standard 2: The student will demonstrate the appropriate use of measuring instruments. | F3a |
| 3.2 Student Learning Expectations, Grades 5-8 | |
| 2. Use non-standard tools of measurement. | F3a |
| 3. Select appropriate units and tools to measure to a required degree of accuracy. | F3a |
| 4. Extend an understanding of the process of measurement. | F3a |
| 5. Demonstrate an understanding of the structure and use of a variety of measurement systems. | F3a |
| Content Standard 3: The student will apply measurement concepts to solve problems. | F2a, F3a |
| 3.3 Student Learning Expectations, Grades 5-8 | |
| 4. Develop formulas and procedures for determining measures to solve problems. | F3a |
| 5. Develop the concepts of rate and other derived and indirect measurements to solve problems. | F3a |
| 6. Solve problems by active involvement in measurement experiences. | F3a |
| 7. Use manipulatives and technology. | F3a, F5a |
| 8. Construct and use scale drawings. | F3a |
| Strand 4: DATA ANALYSIS, STATISTICS AND PROBABILITY | |
| Content Standard 1: The student will be actively involved in each of the steps that comprise data analysis, from gathering information to communicating results. | F1, F3a |
| 4.1 Student Learning Expectations, Grades 5-8 | |
| 5. Systematically collect, organize and describe data. | F3a |
| 6. Construct, read and interpret tables, charts and graphs. | F3a |
| 7. Make predictions and convincing arguments that are based on data analysis. | F3a |

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| Content Standard 2: The students will explore probability models through experiments and simulations. | F3a |
| 4.2 Student Learning Expectations, Grades 5-8 | |
| 3. Model situations by constructing sample spaces. | F3a |
| 4. Make predictions based on experimental or theoretical probabilities. | F3a |
| 5. Use a probability model for comparing experimental results with mathematical expectations. | F3a |
| 6. Use manipulatives and technology. | F3a, F5a |
| Content Standard 3: The student will use probability and statistical concepts in problem solving and decision making situations. | F2a, F3a |
| 4.3 Student Learning Expectations, Grades 5-8 | |
| 4. Evaluate arguments that are based on statistical data. | F2a, F3a |
| 5. Make inferences and convincing arguments based on statistics. | F2a, F3a |
| 6. Appreciate the power that probability and statistical methods have in decision making. | F3a |
| 7. Use technology. | F5a |
| Strand 5: ALGEBRA FUNCTIONS | |
| Content Standard 1: The student will use the language of algebra as representational tool. | F3a |
| 5.1 Student Learning Expectations, Grades 5-8 | |
| 8. Visualize algebra as the bridge between arithmetic and higher level mathematics. | F3a |
| 9. Use manipulatives and technology to develop the concepts of variables, expressions and equations. | F3a, F5a |
| 10. Represent, explore and analyze situations and number patterns with tables, graphs and equations. | F3a |
| 11. Summarize the algebraic relationships discovered through explorations. | F3a |
| Content Standard 2: The student will use algebraic concepts to model, solve and test solutions to mathematical and real-world problems. | F2a, F3a |
| 5.2 Student Learning Expectations, Grades 5-8 | |
| 4. Conduct informal investigations for analyzing, representing and generalizing functional relationships. | F2a, F3a |
| 5. Use algebraic notations and thinking to formalize real-world problems. | F3a |
| 6. Explore and solve equations and inequalities informally and formally using manipulatives and technology. | F3a, F5a |
| 7. Communicate in written and verbal form a verification of the solution. | F1a, F3a, F3c |

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Documents Utilized

- Foreign Language Framework for California Public Schools Kindergarten through Grade Twelve (1989)*
Mathematics Framework for California Public Schools Kindergarten through Grade Twelve (1992)
Health Framework for California Public Schools Kindergarten through Grade Twelve (1994)
English - Language Arts Framework for California Public Schools Kindergarten through Grade Twelve (1987)
History - Social Science Framework for California Public Schools Kindergarten through Grade Twelve (1987)
Physical Education Framework for California Public Schools Kindergarten through Grade Twelve (1994)
Science Framework for California Public Schools Kindergarten through Grade Twelve (1990)

Note: California also has a Visual and Performing Arts Framework; however, we had not received as copy at the date of publication and were unable to match to this subject area.

Background

Reform efforts during the late 1980s and early 1990s in California have focused on upgrading the curriculum and strengthening graduation requirements. The curriculum frameworks, published by the California State Board of Education, were developed in a separate process for each subject area and are in the process of being updated. All of the frameworks describe student learning at specific grade-levels, typically K-4, 5-8, and 9-12. The frameworks are voluntary; but they are tied to the statewide assessment system, textbook adoption, and professional development. They were developed by leading educators throughout the state and are to be used by local schools as guidelines.

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| HEALTH, GRADES 6-9 | NCEC CODE |
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| <p>Unifying Idea: Acceptance of personal responsibility for lifelong health. Expectations: Students will demonstrate ways in which they can enhance and maintain their own health and well-being. Students will demonstrate behaviors that prevent disease and speed recovery from illness. Students will practice behaviors that reduce the risk of becoming involved in potentially dangerous situations and react to those situations in ways that help to protect their health.</p> | <p>C1 C2c C2</p> |
| <p>Unifying Idea: Respect for and promotion of the health of others. Expectations: Students will play a positive, active role in promoting the health of their families. Students will promote positive health practices within the school and the community, including developing positive relationships with their peers.</p> | <p>C1, D1a C1, G4a</p> |
| <p>Unifying Idea: An understanding of the process of growth and development. Expectations: Students will understand the variety of physical, mental, emotional, and social changes that occur throughout life.</p> | <p>F4</p> |

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| <p>Students will understand and accept individual differences in growth and development. Students will understand their developing sexuality, will choose to abstain from sexual activity, and will treat the sexuality of others with respect.</p> | <p>F4, G3b C1, G3b</p> |
| <p>MATHEMATICS</p> | |
| <p>NCTM STANDARDS FOR GRADES 5-8</p> | |
| <p>Standard 1: Mathematics as Problem Solving</p> | |
| <p>In grades five through eight, the mathematics curriculum should include numerous and varied experiences with problem solving as a method of inquiry and application so that students can:</p> | |
| <p>Use problem-solving approaches to investigate and understand mathematical content.</p> | <p>F2a, F3a</p> |
| <p>Formulate problems from situations within and outside mathematics.</p> | <p>F2a, F3a</p> |
| <p>Develop and apply a variety of strategies to solve problems, with emphasis on multistep and nonroutine problems.</p> | <p>F2a, F3a</p> |
| <p>Verify and interpret results with respect to the original problem situation.</p> | <p>F3a</p> |
| <p>Generalize solutions and strategies to new problem situations.</p> | <p>F3a</p> |
| <p>Acquire confidence in using mathematics meaningfully.</p> | <p>F3a, G2b</p> |
| <p>Standard 2: Mathematics as Communication</p> | |
| <p>In grades five through eight, the mathematics curriculum should include opportunities to communicate so that students can:</p> | |
| <p>Model situations, using oral, written, concrete, pictorial, graphical, and algebraic methods.</p> | <p>F1a, F3a</p> |
| <p>Reflect on and clarify their own thinking about mathematical ideas and situations.</p> | <p>F2a, F3a</p> |
| <p>Develop common understandings of mathematical ideas, including the role of definitions.</p> | <p>F3a</p> |
| <p>Use the skills of reading, listening, and viewing to interpret and evaluate mathematical ideas.</p> | <p>F1, F3a, F3b</p> |
| <p>Discuss mathematical ideas and make conjectures and convincing arguments.</p> | <p>F2a, F3a</p> |
| <p>Appreciate the value of mathematical notation and its role in the development of mathematical ideas.</p> | <p>F3a</p> |
| <p>Standard 3: Mathematics and Reasoning</p> | |
| <p>In grades five through eight, reasoning should permeate the mathematics curriculum so that students can:</p> | |
| <p>Recognize and apply deductive and inductive reasoning.</p> | <p>F2a</p> |
| <p>Understand and apply reasoning processes, with special attention being given to spatial reasoning and reasoning with proportions and graphs.</p> | <p>F2a, F3a</p> |
| <p>Make and evaluate mathematical conjectures and arguments.</p> | <p>F2a, F3a</p> |
| <p>Validate their own thinking.</p> | <p>F2a</p> |
| <p>Appreciate the pervasive use and power reasoning as a part of mathematics.</p> | <p>F2a, F3a</p> |
| <p>Standard 4: Mathematical Connections</p> | |
| <p>In grades five through eight, the mathematics curriculum should include the investigation of mathematical connections so that students can:</p> | |
| <p>See mathematics as an integrated whole.</p> | <p>F3a</p> |
| <p>Explore problems and describe results, using graphical, numerical, physical, algebraic, and verbal mathematical models or representations.</p> | <p>F3a</p> |
| <p>Use a mathematical idea to further their understanding of other mathematical ideas.</p> | <p>F3a</p> |
| <p>Apply mathematical thinking and modeling to solve problems that arise in other disciplines such as art, music, psychology, science, and business.</p> | <p>F3a</p> |
| <p>Value the role of mathematics in our culture and society.</p> | <p>F3a</p> |
| <p>Standard 5: Number and Number Relationships</p> | |
| <p>In grades five through eight, the mathematics curriculum should include the continued development of number and number relationships so that students can:</p> | |
| <p>Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, and scientific notation) in real-world and mathematical</p> | <p>F3a</p> |

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| problem situations. | |
| Develop number sense for whole numbers, fractions, decimals, integers, and rational numbers. | F3a |
| Understand and apply ratios, properties, and percents in a wide variety of situations. | F3a |
| Investigate relationships among fractions, decimals, and percents. | F3a |
| Represent numerical relationships in one-dimensional and two-dimensional graphs. | F3a |
| Standard 6: Number Systems and Number Theory | |
| In grades five through eight, the mathematics curriculum should include the study of number systems and number theory so that students can: | |
| Understand and appreciate the need for numbers beyond the whole numbers. | F3a |
| Develop and use order relations for whole numbers beyond the whole numbers. | F3a |
| Extend their understanding of whole number operations to fractions, decimals, integers, and rational numbers. | F3a |
| Understand how the basic arithmetic operations are related to one another. | F3a |
| Develop and apply number theory concepts (e.g., primes, factors, and multiples) in real-world and mathematical problem situations. | F3a |
| Standard 7: Computation and Estimation | |
| In grades five through eight, the mathematics curriculum should develop the concepts underlying computation and estimation in various contexts so that students can: | |
| Compute with whole numbers, fractions, decimals, integers, and rational numbers. | F3a |
| Develop, analyze, and explain procedures for computation and techniques for estimation. | F3a |
| Develop, analyze, and explain methods for solving proportions. | F3a |
| Select and use an appropriate method for computing from among mental arithmetic, paper-and-pencil, calculator, and computer methods. | F3a |
| Use computation, estimation, and proportions to solve problems. | F3a |
| Use estimation to check the reasonableness of results. | F3a |
| Standard 8: Patterns and Functions | |
| In grades five through eight, the mathematics curriculum should include explorations of patterns and functions so that students can: | |
| Describe, extend, analyze, and create a wide variety of patterns. | F3a |
| Describe and represent relationships with tables, graphs, and rules. | F3a |
| Analyze functional relationships to explain how a change in one quantity results in change in another. | F2a |
| Use patterns and functions to represent and solve problems. | F2a, F3a |
| Standard 9: Algebra | |
| In grades five through eight, the mathematics curriculum should explorations of algebraic concepts and processes so that students can: | |
| Understand the concepts of variable, expression, and equation. | F3a |
| Represent situations and number patterns with tables, graphs, verbal rules, and equations and explore the interrelationships of these representations. | F3a |
| Analyze tables and graphs to identify properties and relationships. | F3a |
| Develop confidence in solving linear equations, using concrete, informal, and formal methods. | F3a, G2b |
| Investigate inequalities and nonlinear equations informally. | F3a |
| Apply algebraic methods to solve a variety of real-world and mathematical problems. | F2a, F3a |
| Standard 10: Statistics | |
| In grades five through eight, the mathematics curriculum should include exploration of statistics in real-world situations so that students can: | |
| Systematically collect, organize, and describe data. | F3a |
| Construct, read, and interpret tables, charts, and graphs. | F3a |
| Make inferences and convincing arguments based on data analysis. | F2a, F3a |
| Evaluate arguments based on data analysis. | F2a, F3a |
| Develop an appreciate for statistical methods as powerful means for decision making. | F2a, F3a |
| Standard 11: Probability | |
| In grades five through eight, the mathematics curriculum should include explorations of | |

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| probability in real-world situations so that students can: | |
| Model situations by devising and carrying out experiments or simulations to determine probabilities. | F3a |
| Model situations by constructing a sample space to determine probabilities. | F3a |
| Appreciate the power of using a probability model by comparing experimental results with mathematical expectations. | F3a |
| Make predictions based on experimental or theoretical probabilities. | F2a, F3a |
| Develop an appreciation for the pervasive use of probability in the real world. | F3a |
| Standard 12: Geometry | |
| In grades five through eight, the mathematics curriculum should include the study of the geometry of one, two, and three dimensions in a variety of situations so that students can: | |
| Identify, describe, compare, and classify geometric figures. | F3a |
| Visualize and represent geometric figures with special attention to developing spatial sense. | F3a |
| Explore transformations of geometric figures. | F3a |
| Represent and solve problems using geometric models. | F3a |
| Understand and apply geometric properties and relationships. | F3a |
| Develop an appreciation of geometry as a means of describing the physical world. | F3a |
| Standard 13: Measurement | |
| In grades five through eight, the mathematics curriculum should include extensive concrete experiences using measurements so that students can: | |
| Extend their understanding of the process of measurement. | F3a |
| Estimate, make, and use measurements to describe and compare phenomena. | F3a |
| Select appropriate units and tools to measure to the degree of accuracy required in a particular situation. | F3a |
| Understand the structure and use of systems of measurement. | F3a |
| Extend their understanding of the concepts of perimeter, area, volume, angle measure, capacity, and weight and mass. | F3a |
| Develop the concepts of rates and other derived and indirect measurements. | F3a |
| Develop formulas and procedures for determining measures to solve problems. | F2a, F3a |
| FOREIGN LANGUAGE | |
| INSTRUCTION IN ENGLISH AS A SECOND LANGUAGE | |
| Goals of Instructional Programs | |
| Students who successfully complete instruction in English as a second language should be able to: | |
| Function well enough in English to be successful in programs designed for native speakers of English. | F4a |
| Function successfully in the general school curriculum as appropriate for age, ability, and experience. | F4a |
| Demonstrate continuous progress without special instruction in English. | F4a |
| Demonstrate improved self-confidence and self-esteem in both an English-speaking environment and in their native-language environment. | F4a |
| COMPETENCY LEVELS | |
| Listening | F4a |
| <u>Novice:</u> Understands learned material at an elementary level. | |
| <u>Intermediate:</u> Understands routine speech and conversations. | |
| <u>Advanced:</u> Understands main ideas and details of many kinds of presentations. | |
| <u>Superior:</u> Understands all standard speech, including idioms and subtleties. | |
| <u>Distinguished:</u> Understands all forms and styles of speech. | |

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| <p>Reading <u>Novice:</u> Recognizes alphabet and understands learned and written material. <u>Intermediate:</u> Understands main ideas, facts, and narratives in textbooks dealing with everyday matters. <u>Advanced:</u> Understands simple stories, news, letters, and technical textbooks of a general nature. <u>Superior:</u> Reads prose, literature, and so forth on a great variety of topics at a normal speed. <u>Distinguished:</u> Reads any written material and understands content, intent, cultural references, and so forth.</p> | F4a |
| <p>Conversation <u>Novice:</u> Communicates learned material at an elementary level. <u>Intermediate:</u> Participates in basic communication tasks; combines and recombines basic speech elements. <u>Advanced:</u> Maintains extended conversations; satisfies work and school needs; handles unforeseen problems. <u>Superior:</u> Communicates in most formal and informal situations, including abstract matters; can hypothesize and so forth. <u>Distinguished:</u> Communicates on a professional level; can tailor speech to audience, can negotiate, persuade, interpret, and so forth.</p> | F4a |
| <p>Writing <u>Novice:</u> Can copy, transcribe, and write learned material. <u>Intermediate:</u> Writes short messages and simple letters; takes notes, writes simple summaries. <u>Advanced:</u> Writes narratives, descriptions, business correspondence, résumés, and summaries. <u>Superior:</u> Expresses self in formal and informal writing; does research papers; writes on professional topics. <u>Distinguished:</u> Writes with precision; can represent a point of view; tailors writing to audience.</p> | F4a |
| <p>Culture <u>Novice:</u> Aware of stereotypes; handles cultural dimensions of everyday activities. <u>Intermediate:</u> Perceives cultural differences and recognizes points of misunderstanding; handles aspects of more complex situations. <u>Advanced:</u> Demonstrates important cultural behaviors; knows how misunderstandings arise; handles personal relationships and historical references. <u>Superior:</u> Handles most native customs, values, and attitudes in most social and professional situations. <u>Distinguished:</u> Near-native proficiency in sensitivity to values, beliefs, geographical differences, and historical conditioning.</p> | F4a |
| <p>Content/Vocabulary <u>Novice:</u> Understands 800 to 1,600 words; uses 300 to 600 words; frequently encounters basic everyday topics. <u>Intermediate:</u> Understands 1,000 to 3,000 words; uses 600 to 1,000 words; frequently encounters general topics. <u>Advanced:</u> Understands 2,400 to 4,500 words; uses 1,200 to 2,000 words; expands topics to business, politics, and social arrangements. <u>Superior:</u> Understands 3,500 to 6,000 words; uses 2,000 to 3,000 words; expands topics to more abstract areas of feeling, emotions, personality, and so forth. <u>Distinguished:</u> Near-native ability in topics and vocabulary handled.</p> | F4a |
| <p>Accuracy Accuracy constitutes the degree of control students have over such aspects as grammar, word choice, cultural appropriateness, graphics, comprehension, and so forth. Accuracy becomes</p> | F4a |

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| <p>most crucial at any level when errors result in miscommunication. Specific accuracy concerns for each stage of competency development can be found in other publications.</p> <p>Competency Competency is the degree of skill in using all components as integrated acts of communication.</p> | F4a |
| SCIENCE | |
| PHYSICAL SCIENCES | |
| Section A: Matter | |
| 1. What is matter, and what are its properties? | F4a |
| 2. What are the basic units of matter, and where did matter come from? | F4a |
| 3. What principles govern the interactions of matter? How does chemical structure determine the physical properties of matter? | F4a |
| Section B: Reactions and Interactions | |
| 1. What happens when substances change? | F4a |
| 2. What controls how substances change? | F4a |
| Section C: Force and Motion | |
| 1. What is motion? What are some basic kinds of motion? How is motion described? | F4a |
| 2. What is force? What are the characteristics of forces? What is the relationship of force to motion? | F4a |
| 3. What are machines, and what do they do? What principles govern their action? | F4a |
| Section D: Energy: Sources and Transformations | |
| 1. What is energy? What are its characteristics? | F4a |
| 2. What do we do with energy? What changes occur as we use it? | F4a |
| Section E: Energy: Heat | |
| 1. What is heat energy? Where does it come from, and what are its properties? | F4a |
| 2. How do we use heat energy? | F4a |
| Section F: Energy: Electricity and Magnetism | |
| 1. What are electricity and magnetism? What are they like, and what are their basic properties? How do they interact? | F4a |
| 2. How do we use electricity and magnetism? | F4a |
| Section G: Energy: Light | |
| 1. How does light enable us to see? What are the sources of light? What is light? | F4a |
| 2. What are the properties of light? | F4a |
| 3. How do we use light? | F4a |
| Section H: Energy: Sound | |
| 1. Where does sound come from? What are its sources? How can sound be described? | F4a |
| 2. How does sound enable us to hear? How do we produce sounds? | F4a |
| 3. How do we use sound? | F4a |
| EARTH SCIENCES | |
| Section A: Astronomy | |
| 1. What kinds of objects does the universe contain, and how do these objects relate to one another? | F4a |
| 2. How has the universe evolved? | F4a |
| 3. How do we learn about the contents and structure of the universe? | F4a |
| Section B: Geology and Natural Resources | |
| 1. How has plate tectonics shaped the evolution of the earth? | F4a |
| 2. How are rocks and minerals formed, how are they distinguished, and how are they classified? | F4a |
| 3. What is the history of the earth, and how have geomorphic processes shaped the earth's present features? | F4a |
| 4. What are the responsibilities of humans toward natural resources? | F4a |

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| Section C: Oceanography | |
| 1. What is the water cycle? How does water the cycle affect the climate, weather, and life of the earth? How does water affect surface features of the land and the ocean floor? | F4a |
| 2. What are the oceans? What are the environments and topography of the ocean bottoms? How do the oceans support life, and how have the oceans and their marine life changed through time? | F4a |
| 3. How do waters circulate in the ocean, and how does this circulation affect weather and climate? | F4a |
| 4. How do humans interact with the oceans? What may be some long-term effects of human interactions with the oceanic environments? | F4a |
| LIFE SCIENCES | |
| Section A: Living Things | |
| 1. What are the characteristics of living things? | F4a |
| 2. How do the structures of living things perform their functions, interact with each other, and contribute to the maintenance and growth of the organism? | F4a |
| 3. What are the relationships of living organisms, and how are living things classified? | F4a |
| 4. How do humans interact with other living things? | F4a |
| Section B: Cells, Genetics, and Evolution | |
| [Note: In this section, the term <i>cells</i> includes the general areas of cellular and molecular biology, as well as biochemical topics covered in high school biology. <i>Cells</i> also includes general histological and structural features of tissue and organ systems, as well as cellular parts and components in one-celled and multi-celled organisms. <i>Genetics</i> includes genetic structure and developmental processes. <i>Evolution</i> includes population genetics, evolutionary biology, and paleontology.] | |
| 1. What are cells? What are their component structures and their functions? How do they grow? What is the biochemical basis of life and of metabolism? | F4a |
| 2. How are the characteristics of living things passed on through generations? How does heredity determine the development of individual organisms? | F4a |
| 3. How has life changed and diversified through time? What processes and patterns characterize the evolution of life? | F4a |
| Section C: Ecosystems | |
| 1. What are ecosystems, and how do organisms interact in ecosystems? | F4a |
| 2. How does energy flow within an ecosystem? | F4a |
| 3. How do ecosystems change? | F4a |
| 4. What are the responsibilities of humans toward ecosystems? | F4a |
| LANGUAGE ARTS | |
| The overarching goals of the English-Language Arts curriculum are: | |
| To prepare all students to function as informed and effective citizens in our democratic society. | D, E, F, G |
| To prepare all students to function effectively in the world of work. | D, F |
| To prepare all students to realize personal fulfillment. | G |
| HISTORY AND SOCIAL SCIENCE | |
| GOAL OF KNOWLEDGE AND CULTURAL UNDERSTANDING | |
| Historical Literacy | |
| Develop a keen sense of historical empathy. | F4a |
| Understand the meaning of time and chronology. | F4a |
| Analyze cause and effect. | F2a |
| Understand the reasons for continuity and change. | F4a |

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| Recognize history as common memory with political implications. | F4a |
| Understand the importance of religion, philosophy, and other major belief systems in history | F4a |
| Ethical Literacy | |
| Recognize the sanctity of life and the dignity of the individual. | F4a, G3 |
| Understand the ways in which different societies have tried to resolve ethical issues. | F4a |
| Understand that the ideas people profess affect their behavior. | F4a |
| Realize that concern for ethics and human rights is universal and represents the aspirations of men and women in every time and place. | F4a |
| Cultural Literacy | |
| Understand the rich, complex nature of a given culture—its history, geography, politics, literature, art, drama, music, dance, law, religion, philosophy, architecture, technology, science, education, education, sports, social structure, and economy. | F4a |
| Recognize the relationships among the various parts of a nation's cultural life. | F4a |
| Learn about the mythology, legends, values, and beliefs of a people. | F4a |
| Recognize that literature and art reflect the inner life of a people. | F4a, F4b |
| Develop a multicultural perspective that respects the dignity and worth of all people. | G3a, G3b |
| Geographic Literacy | |
| Develop an awareness of place. | F4a |
| Develop location skills and understanding. | F4a |
| Understand human and environmental interaction. | F4a |
| Understand human movement. | F4a |
| Understand world relationships and their historical, cultural, economic, and political characteristics. | F4a |
| Economic Literacy | |
| Understand the basic economic problems confronting all societies. | F4a |
| Understand comparative economic systems. | F4a |
| Understand the basic economic goals, performance, and problems of our society. | F4a |
| Understand the international economic system. | F4a |
| Understand the close relationship between social and political systems. | F4a |
| Understand the close relationship between society and the law. | F4a |
| Understand comparative political systems. | F4a |
| GOAL OF DEMOCRATIC UNDERSTANDING AND CIVIC VALUES | |
| National Identity | |
| Recognize that American society is now and always has been pluralistic and multicultural. | F4a |
| Understand the American creed as an ideology extolling equality and freedom. | F4a |
| Recognize the status of minorities and women in different times in American history. | F4a |
| Understand the unique experiences of immigrants from Asia, the Pacific islands, and Latin America. | F4a |
| Understand the special role of the United States in world history as a nation of immigrants. | F4a |
| Realize that true patriotism celebrates the moral force of the American idea as a nation that unites as one people the descendants of many cultures, races, religions, and ethnic groups. | F4a |
| Constitutional Heritage | |
| Understand the basic principles of democracy. | F4a |
| Understand the historical origins of basic constitutional concepts such as representative government, separation of powers, and trial by jury. | F4a |
| Civic Values, Rights, and Responsibilities | |
| Understand what is required of citizens in a democracy. | F4a |
| Understand individual responsibility for the democratic system. | F4a |
| GOAL OF SKILLS ATTAINMENT AND SOCIAL PARTICIPATION | |
| Participation Skills | |
| Develop personal skills. | G |

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| Develop group interaction skills. | G4b, G4c |
| Develop social and political participation skills. | A2e, D1a, E1a, G4 |
| Critical Thinking Skills | |
| Define and clarify problems. | F2a |
| Judge information related to a problem. | F2a |
| Solve problems and draw conclusions. | F2a |
| Basic Study Skills | |
| The basic skills of history-social science include the ability to: | |
| 1. Acquire information by listening, observing, using community resources, and reading various forms of literature and primary and secondary source materials. | F4 |
| 2. Locate, select, and organize information from written sources such as books, periodicals, government documents, encyclopedias, and bibliographies. | F4 |
| 3. Retrieve and analyze information by using computers, microfilm, and other electronic media. | F4, F5a |
| 4. Read and interpret maps, globes, models, diagrams, graphs, charts, tables, pictures, and political cartoons. | F4a |
| 5. Understand the specialized language used in historical research and social science disciplines. | F4a |
| 6. Organize and express ideas clearly in writing and in speaking. | F1a, F3c |

Note: Material contained in this chart was adapted from *Statement on Competencies in Languages Other Than English Expected of Entering Freshmen: Phase I—French, German, Spanish*. Sacramento: The Academic Senates of the California Community Colleges, The California State University, and the University of California, 1986.

Colorado

Documents Utilized

- Draft Model K-12 Reading and Writing Standards (no date)*
- Draft Model K-12 Mathematics Standards (no date)*
- Draft Model K-12 Science Standards (no date)*
- Draft Model K-12 History Standards (no date)*
- Draft Model K-12 Geography Standards (no date)*

Background

Colorado vests the authority to grant diplomas, set graduation requirements, determine course offerings, and establish curriculum in its local school boards. Each district can either adopt the model state content standards or develop its own standards that meet or exceed the state standards. A new student assessment program is scheduled to begin during the 1996-97 school years that will measure Colorado's progress in achieving the model content standards. These state assessment results will be used to corroborate district assessment results.

Colorado

| READING AND WRITING STANDARDS | NCEO CODE |
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| 1. Students use the correct forms of grammar/usage, mechanics/punctuation, and spelling in their writing. | F3c |
| 2. Students write for a variety of purposes and audiences. | F3c |
| <u>Students:</u> | |
| Write for purposes such as telling stories, conveying technical information, and persuading. | F3c |
| Write for a wide range of audiences such as peers, teachers, and the community. | F3c |
| Plan, draft, revise, edit, and proofread their writing. | F3c |
| Use a variety of approaches such as figurative language, symbolism, dialect, and precise vocabulary to convey meaning. | F3c |
| Organize their writing using strategies such as listing, cause and effect, comparison and contrast, problem and solution, and narration to convey their purpose for writing. | F3c |
| Write to demonstrate critical thinking skills such as analysis, synthesis, and evaluation. | F3c |
| Distinguish when it is appropriate to use dialect, based on their purpose and audience for writing. | F3c |
| Use handwriting, keyboarding, and/or word processing to produce writing that is readable. | F3c, F5a |
| <u>A Student Can:</u> | |
| Think of and develop ideas for a variety of writing purposes such as telling a story, publishing a class newsletter, writing a letter to an adult, writing a book report, creating and producing a play, introducing a speaker or an event, or narrating a presentation. | F3c |
| Generate writing topics, develop ideas, and use organizational tools for planning his or her writing. | F3c |
| Use vocabulary and figures of speech, such as similes, to communicate his or her message clearly and precisely. | F3c |
| Adapt word choice to various audiences. | F3c |
| Give and receive feedback as an aid to revising and editing writing for a larger audience. | F3c |
| 3. Students read and understand a variety of materials. | F3b |
| 4. Students use reading and writing to enhance thinking and understanding. | F2a, F3b, F3c |
| 5. Students evaluate the quality of their reading and writing and work toward improvement. | F3b, F3c |
| 6. Students read to locate, select, and make use of information from a variety of print, media, and technological sources. | F3b |
| 7. Students read and recognize literature as an expression of human experience. | F3b, F4b |

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| MATHEMATICS | |
| 1. Students develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems. | F1, F2a, F3a |
| 2. Students use algebraic methods to explore, model, and describe patterns and functions involving numbers, shapes, data, and graphs. | F3a |
| 3. Students use data collection and analysis, statistics, and probability in problem-solving situations and communicate the reasoning and processes used in solving these problems. | F1, F2a, F3a |
| 4. Students use geometric concepts, their properties and relationships in one, two, and three dimensions to model and solve real-world problems. | F2a, F3a |
| 5. Students use a variety of tools and techniques to make and use measurements in both everyday circumstances and problems situations. | F3a |
| <u>Students:</u> | |
| Understand and apply the attributes of length, capacity, mass, time, temperature, perimeter, area, volume, and angle measurement. | F3a |
| Make and use measurements to describe and compare real-world phenomena. | F3a |
| Describe and use rates of change (e.g., temperature as it changes throughout the day, or speed as the rate of change of distance over time) and other derived and indirect measurements. | F3a |
| Select appropriate units (including metric and U.S. customary) and tools (e.g., rulers, protractors, compasses, and thermometers) to measure to the degree of accuracy required to solve a given problem | F3a |
| <u>A Student Can:</u> | |
| Estimate, use, and describe measures of length, perimeter, capacity, weight, time, and temperature. | F3a |
| Compare and order objects according to some measurable attribute. | F3a |
| Without using measuring tools, know the approximate measures of familiar objects (e.g., the width of your finger, the temperature of a room, and the weight of a hammer). | F3a |
| Select and use appropriate units of measurements in problem-solving situations. | F2a, F3a |
| 6. Students understand, develop, and use computational skills and techniques, including estimation, mental math, paper-and-pencil, calculators, and computers, in problem-solving situations. | F2a, F3a, F5a |
| SCIENCE | |
| 1. Students are able to design, conduct, communicate about, and evaluate a scientific investigation. | F1, F4a |
| 2. Students know about and understand common properties, forms, and interactions of matter and energy. | F4a |
| 3. Students know the characteristics and structure of living things, the processes of life, and how living things interact with their environment. | F4a |
| 4. Students understand the processes and interactions of earth's systems and the structure and dynamics of earth and other objects in space. | F4a |
| Students know the composition of the earth, its history and the natural processes that shape it. | F4a |
| Students know the general characteristics of the atmosphere and the fundamental processes of weather. | F4a |
| <u>A Student Can:</u> | |
| Recognize that the sun is a major source of earth's heat and light. | F4a |
| Observe and describe local weather conditions, such as sunny, windy, and cloudy. | F4a |
| Recognize how our activities are affected by weather, such as the types of clothing we wear, travel plans, and the kinds of recreation in which we engage. | F4a |
| Collect and record weather data such as temperature and amount of cloud cover. | F4a |
| Students know the major sources of water, its uses and importance, and its cyclic patterns of movement through the environment. | F4a |
| Students know the structure of the solar system, the dynamics of the universe, and how space is explored. | F4a |

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| 5. Students know ways that science, technology, and human activity have impact on the world and its resources. | F4a |
| 6. Students know about and understand connections among the science disciplines, and the relationship of science to other areas of human activity. | F4a |
| HISTORY | |
| 1. Students know the chronological organization of history and how to group people and events into major eras to identify and explain historical relationships. | F4a |
| 2. Students know how to use the processes of historical inquiry. "Historical inquiry" refers to the process of studying history to find out what, who, why, when, etc., in a logical, problem-solving manner. | F4a |
| 3. Students know how societies have developed and changed throughout history. | F4a |
| 4. Students know the history of how technology and economic systems have developed and changed. | F4a |
| 5. Students know the history of the development of political theories and institutions. Students know how democracy has developed and been maintained in the United States. | F4a F4a |
| A Student Knows: | |
| Historical figures in the United States who have advanced the rights of individuals and promoted the common good. | F4a |
| How national holidays, symbols, and celebrations exemplify fundamental ideas and principles of democracy in the United States. | F4a |
| The need for rules and personal responsibility in a school, neighborhood, community, state or region. | F4a |
| Students know the historical development and characteristics of various systems of government. | F4a |
| Students know how political power has been acquired and used throughout history. | F4a |
| Students know the history of relationships among different political powers and the development of international relations. | F4a |
| 6. Students know the history of religions and philosophical ideas. | F4a |
| GEOGRAPHY | |
| 1. Students know how to use maps, globes, and other tools to locate and derive information about people, places, and environments. | F4a |
| Students know how to use maps, globes, and other graphic tools. | F4a |
| Students develop knowledge of Earth to locate people places, and environments. | F4a |
| A Student Can: | |
| Draw a simple map of continents and oceans. | F4a |
| Locate earth's major physical and human features (including major cities, countries, bodies of water, etc.). | F4a |
| Locate places within his/her own and nearby communities in Colorado. | F4a |
| Locate major physical and human features in the Rocky Mountain region and the United States. | F4a |
| Students know to analyze the spatial organization of Earth's surface. | F4a |
| 2. Students know the physical and human characteristics of places and study regions for the purpose of interpreting patterns of change. | F4a |
| 3. Students understand how the processes of nature interact to shape Earth's surface patterns and systems. | F4a |
| 4. Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, conflict, and cooperation. | F4a |
| 5. Students understand the effects of interactions between human and physical systems and recognize how interpretations of these effects can change. | F4a |
| 6. Students apply knowledge of people, places, and environments to interpret the past and present and to plan for the future. | F4a |

Delaware

Documents Utilized

Science Curriculum Frameworks--Draft (May, 1994)

History/Geography/Social Studies Curriculum Framework Commission: Content Standards--Draft (May, 1994)

The English Language Arts Curriculum Framework Document--First Draft (May, 1994)

Background

The Delaware Department of Public Instruction is currently engaged in a multi-year educational reform effort initiated in 1992. This reform effort will set standards for what children should know at grades 3, 5, 8, and 10. Four curriculum frameworks are being developed by Curriculum Framework Commissions which are comprised of about 45 volunteers, community leaders, administrators, parents, students, and members of the business community. It is hoped that the curriculum frameworks will be ready for implementation during the 1995-96 school year.

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MATHEMATICS

NCEC CODE

MATHEMATICAL THINKING PROCESSES

1. Students will engage in **PROBLEM SOLVING** as the core of the entire mathematics program. Problem solving provides the context in which concepts and skills are introduced and learned, requires the application of a variety of strategies; develops persistence, self-reliance and confidence; integrates mathematical reasoning, communication and connections; and emphasizes the process that could lead to a reasonable solution.
2. Students will develop their ability to **COMMUNICATE MATHEMATICALLY** by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral, and visual formats.
3. Students will develop their ability to **REASON MATHEMATICALLY** by solving problems in which there is need to investigate significant mathematical ideas in all content areas; to justify their thinking; to question and extend their thinking; and to construct their own learning.
4. Students will develop their ability to make **MATHEMATICAL CONNECTIONS** by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines while allowing the flexibility to approach problems from within and outside mathematics in a variety of ways.

UNIFYING THEMES

5. Students will develop an understanding of **ESTIMATION, MEASUREMENT, and COMPUTATION** by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper, and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.
6. Students will develop **NUMBER SENSE** by solving problems in which there is a need to represent and model real numbers verbally, physically, and symbolically; to use operations with understanding; to explain relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

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| <p>7. Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations, and graphs; to generalize number patterns; and to describe, represent, and analyze relationships among variable quantities.</p> <p>8. Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of, and discover relationships between geometric figures.</p> <p>9. Students will develop an understanding of STATISTICS and PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability of events.</p> <p>10. Students will develop an understanding of PATTERNS, RELATIONSHIPS, and FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model, and describe real-world functional relationships.</p> | |
| <p>Standard 1: Students will engage in PROBLEM SOLVING as the core of the entire mathematics program. Problem solving provides the context in which concepts and skills are introduced and learned; requires the application of a variety of strategies; develops persistence, self-reliance, and confidence; integrates mathematical reasoning, communication, and connections; and emphasizes the <u>process</u> that could lead to a reasonable solution.</p> | <p>D3e, F1, F2a, F3a, G2b</p> |
| <p>PERFORMANCE INDICATORS</p> | |
| <p>Through the investigation of meaningful problems, individually or cooperative groups while using appropriate technology, all students in grades K-10 should be able to:</p> | <p>F3a, F5a, G4b</p> |
| <p>1.01 Read and understand the problem.</p> | <p>F3a, F3b</p> |
| <p>1.02 Develop a plan for solving the problem.</p> | <p>F2a, F3a</p> |
| <p>1.03 Implement the plan and solve the problem.</p> | <p>F3a</p> |
| <p>1.04 Reflect on their answer with respect to the original problem.</p> | <p>F3a</p> |
| <p>1.05 Generalize strategies and solutions to new problem situations.</p> | <p>F2a, F3a</p> |
| <p>Standard 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening, and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral, and visual formats.</p> | <p>F1a, F2a, F3a, F3c</p> |
| <p>PERFORMANCE INDICATORS</p> | |
| <p>Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 should be able to:</p> | <p>F3a, F5a, G4b</p> |
| <p>2.01 Model real-world situations using oral, written concrete, pictorial, graphical, and algebraic methods.</p> | <p>F1a, F3a, F3c</p> |
| <p>2.02 Use reading, listening, viewing, speaking, and writing to explain and develop mathematical ideas.</p> | <p>F1a, F3a, F3c</p> |
| <p>2.03 Use mathematical notation and language to describe and discuss real-world situations.</p> | <p>F3a</p> |
| <p>2.04 Read mathematics with understanding.</p> | <p>F3a</p> |
| <p>2.05 Develop common understanding of mathematical ideas and use generalizations discovered through investigation to formulate definitions.</p> | <p>F3a</p> |
| <p>2.06 Ask questions to clarify the situation.</p> | <p>F1a, F3a</p> |
| <p>Standard 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content areas; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.</p> | <p>F2a, F3a</p> |

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| <p>PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 should be able to use inductive and deductive reasoning to:</p> | F3a, F5a, G4b |
| 3.01 Formulate and test conjectures; | F2a, F3a |
| 3.02 Draw and then justify conclusions. | F1, F2a, F3a |
| 3.03 Construct and follow logical arguments. | F2a |
| 3.04 Use properties, models, known facts, and relationships to explain and defend their thinking. | F1, F3a |
| <p>Standard 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines while allowing the flexibility to approach problems from within and outside mathematics in a variety of ways.</p> | F2a, F3a |
| <p>PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 should be able to:</p> | F3a, F5a, G4b |
| 4.01 Make connections linking conceptual and procedural knowledge. | F3a, F4 |
| 4.02 Solve problems involving other disciplines. | F2a |
| 4.03 Use connections among mathematical topics. | F3a |
| 4.04 Use various representations of the same concept. | F3a |
| 4.05 Make the connection from manipulative solutions to algorithmic solutions to technological solutions. | F3a |
| 4.06 Determine the reasonableness of a mathematical solution as it applies in a real-world situation. | F2a, F3a |
| <p>Standard 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.</p> | F2a, F3a, F5a |
| <p>PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, all students in grades 6-8 should be able to:</p> | F3a, F5a, G4b |
| 5.23 Estimate then measure angles, circumference, volume and surface areas to the degree of accuracy required using standard and nonstandard units; | F3a |
| 5.24 Convert measurements units within the same system; | F3a |
| 5.25 Apply ratios, proportions and percents to real life situations; | F3a |
| 5.26 Compute circumference; areas of triangles, parallelograms, trapezoids and circles; and surface area and volume of cylinders, triangular and rectangular prisms and pyramids; | F3a |
| 5.27 Apply order of operations with symbols of inclusion; | F3a |
| 5.28 Describe the most appropriate method for calculating an answer in a given situation; | F3a |
| 5.29 Compute with rational numbers; | F3a |
| 5.30 Determine if an estimate is an over-estimate or and under-estimate. | F3a |
| <p>Standard 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit, and to determine the relative magnitude of real numbers.</p> | F2a, F3a |
| <p>PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups</p> | F3a, F5a, G4b |

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| while using appropriate technology, building upon the K-5 expectations, all students in grades 6-8 should be able to: | |
| 6.19 Connect different representations of rational numbers; | F3a |
| 6.20 Apply multiple representations of numbers: integers, fractions, decimals, percents, exponents, and scientific notation; | F3a |
| 6.21 Model integer representations using manipulatives; | F3a |
| 6.22 Demonstrate an understanding of order relations for rational numbers; | F3a |
| 6.23 Examine the relative effect of operations on rational numbers; | F3a |
| 6.24 Use various forms of "one" to demonstrate the equivalence of fractions. | F3a |
| Standard 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations, and graphs; to generalize number patterns; and to describe, represent, and analyze relationships among variable quantities. | F2a, F3a |
| PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, all students in grades 6-8 should be able to: | F3a, F5a, G4b |
| 7.08 Represent situations with tables, graphs, verbal rules, and equations; and describe the interrelationships of the representations; | F3a |
| 7.09 Model and solve real-world and mathematical problems using algebraic methods; | F2a, F3a |
| 7.10 Evaluate algebraic expressions and formulas for given values of the variable; | F2a, F3a |
| 7.12 Solve proportions; | F2a, F3a |
| 7.13 Solve linear inequalities and non-linear equations using informal methods. | F2a, F3a |
| Standard 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of and discover relationships between geometric figures. | F2a, F3a |
| PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, all students in grades 6-8 should be able to: | F3a, F5a, G4b |
| 8.13 Identify, describe, compare and classify two and three dimensional figures; | F3a |
| 8.14 Use a compass and straight edge as tools for basic geometric constructions; | F3a |
| 8.15 Investigate and discover geometric relationships through the use of manipulatives, constructions and computer graphic software; | F3a, F5a |
| 8.16 Create models of nets of three dimensional figures such as a cube, rectangular prism, cylinder and square pyramid; | F3a |
| 8.17 Visualize and draw orthographic projections; | F3a |
| 8.18 Discover and apply geometric properties and relationships such as congruence, similarity, parallelism, perpendicularity and symmetry; | F3a |
| 8.19 Apply geometric properties and relationships to make conjectures. | F3a |
| Standard 9: Students will develop an understanding of STATISTICS and PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inference or predictions; to present convincing arguments; and to model mathematical situations to determine the probability. | F1, F2a, F3a |
| PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, all students in grades 6-8 should be able to: | F3a, F5a, G4b |
| 9.11 Collect, organize, describe, and make predictions with data; | F3a |

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| 9.12 Construct and describe displays of data such as stem-and leaf plots, scatter plots, box plots, and circle graphs; | F3a |
| 9.13 Make and evaluate arguments that are based on data analysis; | F2a, F3a |
| 9.14 Calculate and use mean, median, mode and range to interpret data; | F2a, F3a |
| 9.15 Analyze a sample to make inferences about a population; | F2a, F3a |
| 9.16 Compare and make predictions based on theoretical and experimental probabilities; | F2a, F3a |
| 9.17 Construct a sample space to determine theoretical probabilities. | F2a, F3a |
| Standard 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS, and FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model, and describe real-world functional relationships. | F2a, F3a |
| PERFORMANCE INDICATORS Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, building upon the K-5 expectations, all students in grades 6-8 should be able to: | F3a, F5a, G4b |
| 10.07 Recognize, analyze, create, extend, describe and generalize a wide variety of patterns and relationships; | F2a, F3a |
| 10.08 Analyze functional relationships to explain how to change in one quantity results in a change in another; | F2a, F3a |
| 10.09 Identify geometric patterns and relationships; | F2a, F3a |
| 10.10 Detect patterns and functions from statistical data; | F2a, F3a |
| 10.12 Use patterns and functions to represent and solve problems. | F2a, F3a |
| HISTORY/GEOGRAPHY/SOCIAL STUDIES | |
| STANDARDS FOR GRADES 6-8 | |
| HISTORY | |
| Standard 1: Students should be able to examine historical materials relating to a particular region, society, or theme and analyze change over time, and make logical inferences concerning cause and effect. | F2a, F4a |
| Standard 2: Students should be able to examine historical materials in order to compare and contrast differing sets of ideas, personalities, institutions, etc., by identifying similarities and differences. | F4a |
| Standard 3: Students should be able to examine historical documents, artifacts, and other materials, and analyze them in terms of credibility, and the purpose, perspective, or point of view for which they were constructed. | F4a |
| Standard 4: Students should be able to demonstrate a knowledge of major historical developments and their continuing influences on history. | F4a |
| GEOGRAPHY | |
| Standard 1: Students should be able to demonstrate "mental maps" of world sub-regions which integrate human activity and features of the natural environment. | F4a |
| Standard 2: Students should be able to understand the major processes which shape patterns in the natural environment at the world scale, and relate these processes to a general knowledge of the physical environments of world regions. | F4a |
| Standard 3: Students should be able to demonstrate understanding of the processes affecting the location of economic activities in different world regions. | F4a |
| Standard 4: Students should be able to demonstrate understanding of the processes affecting the location of economic activities in different world regions. | F4a |

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| <p>Standard 5: Students should be able to analyze how conflict and cooperation among people contributes to the division of the Earth's surface into distinctive cultural regions and political territories.</p> <p style="text-align: center;">ECONOMICS</p> <p>Standard 1: Students should be able to compare and contrast the ways in which individuals, businesses, communities, and governments make economic decisions and potential consequences of those decisions.</p> <p>Standard 2: Students should be able to compare and contrast production, distribution, and exchange in different economic systems throughout the world.</p> <p>Standard 3: Students should be able to show that the structure of economic systems has a relationship to the cultural values, resources, and technologies within societies and around the world.</p> <p style="text-align: center;">CIVICS</p> <p>Standard 1: Students should be able to identify both contemporary and historical roles of the three branches of government in resolving major political crises, and the possible conflict between the nation and the state.</p> <p>Standard 2: Students should be able to describe the operation of the federal and state governments, and demonstrate how those governments have been modified over time to adapt to changing circumstances.</p> <p>Standard 3: Students should be able to analyze the role of individuals in the governmental process in varying historical and cultural settings.</p> <p>Standard 4: Students should be able to describe the structure and operation of major contemporary political systems.</p> <p style="text-align: center;">SCIENCE</p> <p>Standard 1: MATERIALS AND THEIR PROPERTIES, GRADES 5-8</p> <p>A . Chemical and Physical Properties</p> <p>1a. Construct a model of simple common molecules such as water and relate the molecular arrangement and motion to the different physical states of the material.</p> <p>2a. Use a variety of instruments to quantitatively measure the physical properties of a material (melting point, boiling point, solubility, acidity).</p> <p>2b. Identify and describe, by observing laboratory activities and everyday events, how the properties of the new substances formed during chemical reactions differ from the properties of the original material (rusting, cooking).</p> <p>3a. Investigate the qualitative effects of temperature, volume, and pressure changes on a sample of gas (expansion of heated balloon).</p> <p>B . The Particulate Model</p> <p>2a. Construct models of simple common molecules such as water, hydrogen, oxygen, and sodium chloride, and discuss the relationship of these molecular structures to the physical properties of each material. Hypothesize how these material might interact with one another.</p> <p>2b. Investigate changes of state for common substances and develop accurate descriptions of those changes of state using the particulate model.</p> <p>C . Mixtures and Solutions</p> <p>1a. Identify the component parts of a solution, and demonstrate the use of ratios and percentages in preparing solutions of different concentrations.</p> <p>2a. Investigate the relationship of various properties of solution (taste, boiling point, freezing point, color, pH), to the concentration of the solute.</p> | <p>F2a, F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F2a, F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F1, F4a</p> <p>F4a</p> <p>F2a, F4a</p> <p>F1, F4a</p> <p>F4a</p> <p>F4a</p> |

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| D. Reactions of Materials and the Conservation to Matter | |
| 2a. Use laboratory investigations to demonstrate the formation of new materials. Use the same or different experiments to measure the mass of substances before and after a chemical change to demonstrate conservation of matter (e.g.; electrolysis of water, precipitation, gas [CO ₂] evolution). | F4a |
| E. Technology and Application | |
| 1a. Identify how physical and chemical changes are used in the application and/or development of materials essential to modern life (cooking, concrete, adhesives, air conditioning). | F4a |
| 1b. Investigate and report on an example of the influence of material technology on society or on the selection of material for a specific use (iron, copper, gunpowder, cotton, wool, nylon, solar cells). | F4a |
| 1c. Explain how a civilization's values, needs, and resources influence what kind of technologies are developed and accepted by society. | F4a |
| Standard 3: EARTH'S DYNAMIC SYSTEMS, GRADES 5-8 | |
| A. Properties and Composition of Rocks and Soil | |
| 1a. Sort and group rocks and minerals into natural classification systems using physical and chemical tests. | F4a |
| 2a. Design and build models to demonstrate how wind and water shape the land. | F4a |
| B. Forces That Shape Earth | |
| 1a. Plot the location of earthquakes, volcanoes, and major mountain systems to determine the existence and movement of crustal plates. | F4a |
| C. Atmospheric Dynamics | |
| 1a. Perform daily weather measurements, over an extended period of time, using a variety of instruments (barometer, anemometer, sling psychrometer). Compare and contrast the measurements to local and regional weather data. | F4a |
| 2a. Use U.S. weather maps to identify air masses, fronts and their movements, and to describe the effects of weather on specific geographic locations. | F4a |
| 2b. Discuss the origin and impact of the great storms of the east coast (hurricanes, northeasters, snow and ice storms). Assess adequacy of emergency planning procedures to respond to the damage which such storms can cause. | F4a |
| D. Hydrologic Dynamics | |
| 1a. Design simple experiments to demonstrate the influence of various factors on the hydrologic cycle. | F4a |
| 2a. Investigate the influence of the Atlantic Ocean on erosion of coastal areas, commerce, and the climate of Delaware. | F4a |
| E. Geologic Times | |
| 1a. Construct models and geological profiles to demonstrate the age relationship of sedimentary rock layers. | F4a |
| F. Stewardship of Earth's Resources | |
| 2a. Determine the composition and suitability for use of various local water sources (rivers, streams, wells, etc.); investigate reasons for variations in the results, And determine how local regulations effect water use. | F4a |
| G. Technology and Applications | |
| 1a. Use technology (maps, satellite imagery, and instrumentation's) to locate possible sources of atmospheric pollution. Compare sources with meteorological data to locate the probable origin of local contamination. | F4a, F5a |
| Standard 5: LIFE PROCESSES, GRADES 5-8 | |
| A. Structure/Function Relationship | |
| 1a. Use microscopes to observe cellular structures. Discuss the function of these observed structures and determine whether the cell is plant or animal. | F4a, F5a |
| 2a. Investigate and describe various life processes (e.g., digestion, locomotion, fermentation, | F4a |

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| behavior) in unicellular organisms such as amoebae, paramecium, and yeast. | |
| B. Matter and Energy Transformations | |
| 1a. Conduct simple experiments with green plants to determine the requirements and products of photosynthesis. Draw conclusions about the relationship of matter and energy in plants. | F2a, F4a |
| C. Internal Balance | |
| 1a. Use models or organisms to develop an understanding of how organ and organ systems in plants and animals work together for the well being of the entire organism. | F4a |
| D. Life Cycles of Living Organisms | |
| 1a. Observe, describe, and measure changes that occur in an organism (e.g., bean plant, butterfly, frog chicken) as it develops from a seed or fertilized egg to and adult. | F4a |
| E. Health and Well-Being | |
| 1a. Select a relevant health topic (e.g., diet, drugs, exercise, disease), write a literature research paper that explains how normal life processes are affected, and give an oral presentation on the results of the research. | F1a, F3c, F4a |
| F. Technology and Applications | |
| 1a. Investigate the impact of improved sanitation measures on the health of the local population using a full range of community resources such as guest lecturers, field trips, libraries, and community agencies. | F4a |
| ENGLISH LANGUAGE ARTS | |
| Standard 1: Students will use written and oral English appropriate for various purposes and audiences. | F1a, F3c |
| 1. WRITTEN COMMUNICATION | |
| Writing is a flexible and recursive process which encompasses identifying purposes and audiences, prewriting, drafting, revising, editing, and publishing. The writer will produce texts which exhibit the formal conventions and qualities defined for effective writing appropriate for each developmental level. | F3c |
| A. The student writes argumentative and persuasive texts exhibiting the following qualities: | |
| 1. The writer takes a clear-cut stand on the selected issue. | F3c |
| 2. The writer says concisely what is meant. | F3c |
| 3. The writer exhibits knowledge of the audience through: | F3c |
| a. Selecting a language appropriate to the audience, | F3c |
| b. Building a relevant similarity with the audience, and | F3c |
| c. Predicting audience response and building a case accordingly. | F3c |
| 4. The writer selects a structure (or organizational pattern) for the argument and maintains it throughout the piece. | F3c |
| 5. The writer exhibits knowledge of the purpose for the piece. | F3c |
| 6. The writer establishes credibility and exhibits knowledge of the topic. | F3c |
| 7. The writer supports arguments with relevant sources ranging from personal opinions and example to quotations and other opinions to statistics and data. | F3c |
| 8. The writer exhibits cogent reasoning. | F3c |
| B. The students write narrative texts, both fiction and nonfiction, exhibiting the following qualities: | |
| 1. The writer carefully selects events, descriptive and explanatory details, and dialogue to bring the narrative to life for the reader. | F3c |
| 2. The writer follows a structure that exhibits: | F3c |
| a. A definite beginning to arouse the reader's interest and to provide the information necessary to understand the rest of the narrative, | F3c |
| b. A middle that sustains interest by depicting a series of events with accompanying details, and | F3c |
| c. An ending that satisfies the interest by revealing the final outcome and perhaps some reflection by the author on the meaning and significance of the experience. | F3c |

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| 3. The writer exhibits a strong sense of organization by selecting a sequence of events so that one event moves smoothly into another. | F3c |
| 4. The writer selects every event, detail, and line of dialogue with the purpose of telling the story. The writer does not try to communicate everything that happened—only what gives meaning to the story. | F3c |
| 5. The writer may use dialogue to: | |
| a. Add realism, | F3c |
| b. Move the action forward, and | F3c |
| c. Reveal character. | F3c |
| 6. The writer selects and sustains the following: | |
| a. A language natural to the narrative, | F3c |
| b. A point of view appropriate to the narrative, and | F3c |
| c. Verb tense (or tenses) consistent with the flow of the narrative. | F3c |
| C. The student writes expository text, both technical (that which is used in the workplace) and academic (that which is used in institutions of higher learning), exhibiting the following qualities: | |
| 1. The writer presents relevant information accurately, clearly, concisely, and objectively. | F3c |
| 2. The writer adjusts his material according to the readers' capabilities and interests. | F3c |
| 3. The writer selects an appropriate method of analysis (i.e., definition, cause/effect, comparison/contrast, process analysis). | F3c |
| 4. The writer uses and documents primary and secondary sources. | F3c |
| 5. In addition to demonstrating the above qualities, the writer of academic text: | |
| a. Finds and focuses on a subject; | F3c |
| b. Gathers and records information; | F3c |
| c. Develops the composition through the use of carefully selected reasons/examples, incidents/anecdotes, facts and statistics, and/or sensory details; | F3c |
| d. Follows a structure that includes introduction with a clear thesis, body, and conclusion; | F3c |
| e. Uses appropriate transitions to assure cohesion. | F3c |
| 6. In addition to demonstrating the above qualities, #1 to #4, the writer of a technical text: | |
| a. Presents factual information to answer a request or supply needed data; | F3c |
| b. Collects and organizes technical data; | F3c |
| c. Organizes data into technical formats (i.e., memos, letters, proposals, visuals, reports, messages, résumés, applications, etc.); and | F3c |
| d. Selects words, sentence structure, and layout to facilitate reader comprehension. | F3c |
| 2. ORAL COMMUNICATION | |
| The speaker draws upon the language of his or her home, community, culture, and the public language of the larger culture to construct oral texts. The speaker will demonstrate oral language proficiency in speech situations, such as conversations, interviews, collaborative group work, oral presentations, and formal speeches. In addition to the qualities defined for effective writing, the oral presentation will exhibit the following characteristics: | |
| A. The speaker creates a strong impression of being secure, comfortable, and in command of the situation. | F1a |
| B. The speaker controls volume, tone, speed, and enunciation to achieve an intended effect. | F1a |
| C. The speaker indicates attentiveness to others' contributions or feedback through oral feedback, facial expression, eye contact, and gestures. | F1a |
| D. The speaker's word choices effectively support what he/she is saying. | F1a |
| E. The speaker verbalizes and responds indicating interest, involvement, and enthusiasm. | F1a |
| F. The speaker engages in effective group dynamics and makes an obvious positive contribution to the intended outcome. | F1a |
| G. The speaker constructs oral texts using criteria specified for a written discourse to communicate effectively with a range of audiences for a variety of purposes. | F1a |
| H. The speaker incorporates a range of technological devices, when appropriate, for the presentation. | F1a |

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| Standard 2: Students will construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading, and viewing. | |
| A . The student applies efficient, effective, decoding strategies to process printed texts. | F3b F3b |
| 1. The student silently reads grade-appropriate texts: | |
| a. With accuracy, and | |
| b. At an acceptable rate. | |
| 2. The student orally reads grade appropriate text: | F1a |
| a. With expressiveness, | |
| b. With accuracy, and | |
| c. At an acceptable rate. | |
| B. The student self-monitors comprehension. | F2a, F3b |
| 1. The student generates a purpose for reading, listening, or viewing. | F2a, F3b |
| 2. The student assimilates information to revise predictions and make inferences. | F2a, F3b |
| 3. The student reviews for clarification. | F3b |
| 4. The student adjusts rate. | F3b |
| C. The student demonstrates an overall understanding of oral and printed texts. | F3b |
| 1. The student can, through speaking and/or writing, retell a story or restate an informative text. | F1a, F3b |
| 2. The student organizes the important points of the text via summaries, outlines, and/or graphic organizer. | F3b |
| 3. The student gives written reaction to text. | F3c |
| D. The student critically analyzes and evaluates information and messages presented through print and speech sources. | F2a |
| 1. The student synthesizes information. | F2a |
| 2. The student formulates and expresses opinions about text and media presentations. | F1, F2a |
| 3. The student responds to questions requiring critical thinking. | F2a |
| 4. The student draws conclusions. | F2a |
| 5. The student evaluates persuasive texts and media presentations for bias and misinformation. | F2a |
| 6. The student evaluates expository and technical texts for their completeness, accuracy, and clarity of communication. | F2a, F3b |
| 7. The student evaluates the literary merit of various texts and media presentations. | F2a, F4b |
| E. The student develops an informed and critical understanding of the nature of mass media, the techniques used by them, and the impact of these techniques. | F2a, F4 |
| 1. The student evaluates how the content, technique, and form of electronic messages affect him/her. | F2a, F4 |
| 2. The student recognizes a variety of persuasive and propagandistic techniques and how they are used in a variety of forms including advertising, political campaigns, documentaries, and news formats. | F2a, F4 |
| F. The student integrates from several sources and applies this information. | F2a |
| 1. The student makes decisions. | F2a |
| 2. The student solves problems. | F2a |
| 3. The student completes tasks. | F2a |
| 4. The student creates products. | F4 |
| Standard 3: Students will access, organize, and evaluate information gained by listening, reading, and viewing. | |
| A . The student identifies, locates, and selects sources of information relevant to a defined need. | F4 |
| 1. The student uses a variety of sources for information and ideas. | F4 |
| 2. The student extracts information relevant to the purpose. | F4 |
| 3. The students gathers information and ideas using technology. | F4, F5a |
| B. The student organizes, manipulates, and expresses the information and ideas relevant to a defined need. | F4 |
| 1. The student develops an efficient process for research manipulation. | F4 |
| 2. The student applies higher-order thinking skills in selecting and organizing information. | F2a, F4 |
| 3. The student uses technology to synthesize information into a meaningful format. | F4, F5a |

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| 4. The student presents information which is sufficient in quantity and depth to suit the purpose. | F4 |
| 5. The student represents information, ideas, and experiences using text, drawings, graphs, diagrams, photographs, videos, and graphics. | F4 |
| C. The student effectively evaluates both sources and information. | F4 |
| 1. The student selects sources which are acknowledged and authoritative. | F4 |
| 2. The student analyzes sources and information for accuracy, bias, stereotypes, and validity. | F2a, F4 |
| 3. The student acknowledges and addresses any bias and/or discrepancies which may be present in source materials. | F4 |
| 4. The student interprets the information, as appropriate, to the purpose. | F2a, F4 |
| 5. The student formulates logical conclusions to complete the task. | F2a, F4 |
| Standard 4 | |
| Students will use literary knowledge to connect self to society and culture. Literature is a central and integrative element of culture and develops an understanding and appreciation of humanity. | |
| A. The student responds to literature using personal experience. | F4b, G3a, G3b |
| 1. The student identifies with or sympathizes with characters of varying ages, genders, nationalities, races, cultures, and religions. | F4b, G3a, G3b |
| 2. The student questions, challenges, or rejects characters based on a clear understanding of motivation and situations. | F2a, F4b |
| 3. The student relates incidents in the text to life. | F4b |
| 4. The student reacts to how narrative point of view affects the reader, the author, and the text. | F4b |
| 5. The student relates principal ideas of literary text to personal experiences. | F4b |
| 6. The student explores and experiments with other literary texts as a result of the emotional response. | F4b |
| B. The student responds to literature using interpretive, critical, and evaluative processes. | F2a, F4b |
| 1. The student makes inference about content, events, characters, setting, author's purpose. | F2a, F4b |
| 2. The student interprets the use of literary devices (e.g., figurative language, allusion, diction, dialogue, description, etc.), tone, mood. | F4b |
| 3. The student evaluates literary qualities such as use of language, content, and literary elements. | F2a, F4b |
| 4. The student evaluates the suitability of characters' actions in a particular event, the emotional appeal of the text, and/or the author's method (adequacy or validity of the genre and the relevancy of the approach). | F4b |
| C. The student responds appreciatively to a broad range of culturally significant literary texts written by historical and modern authors. | F4b |
| 1. The student values literary texts representing the rich diversity of American cultural heritage inclusive of ages, genders, nationalities, races, and religions. | F4b, G3b |
| 2. The student values literary texts representative of various historical periods ranging from the ancient world to the present. | F4a, F4b |
| 3. The student gains esteem from world literature. | F4b, G2a |
| D. The student uses literature as a basis for understanding self and society. | F4b |
| 1. The student perceives literary themes as a means to develop a sense of self and connectedness to others and to develop an awareness of major social and political issues. | F4b |
| 2. The student appreciates the interrelationship between literature and the arts as communication systems expressed through a variety of media. | F4b |

District of Columbia

Document Utilized

Baseline Indicators: A Framework for Accountability -- Draft (October, 1993)

Background

The *Baseline Indicators: A Framework for Accountability* is a product from the on-going efforts of the Interagency Standards Committee, and should be considered as a draft. This committee was one of four that were formed following the January 23, 1993 "Education Summit," where a commitment was made to improve the DC Public Schools by providing "enhanced educational standards and student achievement, through inter-agency cooperation and communication." The indicators were identified by surveying various indicator systems and other resources. They were intended to become the foundation for annual reports on the progress of schools in the school system. DC Public Schools are also involved in the process of setting performance standards based upon the baseline indicators.

Note: For the comparison to NCEO's grade 8 model, the following Washington, DC educational goals did not apply and were not matched: Increased graduation rates, quality teachers, and post-secondary opportunities.

District of Columbia

| EDUCATIONAL GOALS | NCEO CODE |
|---|-----------|
| Goal 3: IMPROVED ACADEMIC ACHIEVEMENT | no match |
| <u>Reading</u> | |
| 1. Standardized test(s) administered | |
| a. Percent of students scoring by decile on the CTBS | no match |
| b. Percent of students scoring above national norm on the CTBS | no match |
| <u>Mathematics</u> | |
| 2. Standardized test(s) administered | |
| a. Percent of students scoring by decile on the CTBS | no match |
| b. Percent of students scoring above national norm on the CTBS | no match |
| c. Percentage of all public school 8th graders who scored at the following levels in mathematics achievement (1990) and of 4th and 8th graders on the 1992 NAEP: Below Basic, Basic, Proficient, Advanced | F3d, F3e |
| <u>Science</u> | |
| 4. Standardized test(s) administered | |
| a. Percent of students scoring by decile | F3d |
| b. Percent of students scoring above national norm | F3d |
| <u>Taking a Foreign Language</u> | |
| 5. Percent of students who took a foreign language prior to 9th grade | F4a |
| 6. Number of students enrolled in foreign languages | F4a |
| <u>Gifted and Talented</u> | |
| 13. Number of schools with gifted and talented programs | no match |
| 14. Percent of students participating in gifted and talented programs | no match |

District of Columbia

| | NCEC CODE |
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| <u>Chapter 1</u> | |
| 15. Number of students who successful exited the Chapter 1 program from the previous year. | no match |
| 16. Number of Chapter 1 schools showing improvement in promotion rates over previous year. | no match |
| 17. Number of Chapter 1 schools showing improvement in test scores over pervious year. | no match |
| 18. Number and percent participating in sports- by sport, grade and gender | C1b |
| GOAL 6: SAFE AND CARING ENVIRONMENT | |
| 1. Number of schools with health clinics | no match |
| 2. Number of student visits to health clinics | no match |
| 3. Number of schools with drug education programs | no match |
| 4. Drug/alcohol incidents reported | no match |
| 5. Number of drug-related arrests | no match |
| 6. Total amount of deferred maintenance (millions of dollars) | no match |
| 7. Schools with HIV and STD prevention programs | no match |
| 8. Schools with nutrition education programs | no match |
| 9. Schools with programs for children of drug-addicted parents | no match |
| 10. Schools with programs to reduce student suicide and stress | no match |
| 11. Schools with programs to reduce crime and gangs | no match |
| 12. Schools with mediation and conflict resolution programs | no match |
| 13. Schools with pregnancy prevention programs | no match |
| 14. Schools with programs for homeless children | no match |
| 15. Percent of 4th, 8th and 10th grade students who passed the Physical Assessment Test (Pilot) by gender | C3a |
| 16. Percent classrooms air conditioned | no match |
| 17. Percent of D.C. public high school teachers who reported that the following were moderate or serious problems in their schools: physical abuse of teachers, verbal abuse of teachers, robbery or theft, vandalism of school property | no match |
| 18. Percentage of D.C. public schools students who reported being physically abused. | no match |
| 19. Number of suspensions for violent or disruptive behavior. | A1b, E1b |
| GOAL 7: CULTURAL ARTS | |
| <u>Art</u> | |
| 2. Percent junior high schools offering art instruction | no match |
| 4. Number of art teachers (resident or itinerant, by level) | no match |
| 5. Total number of art teachers | no match |
| <u>Music</u> | |
| 7. Percent junior high schools offering both vocal and instrumental music | no match |
| 9. Number of vocal music teachers (resident or itinerant, by level) | no match |
| 10. Number of instrumental music teachers (resident or itinerant, by level) | no match |
| 11. Total number of music teachers | no match |
| GOAL 8: PARENTAL INVOLVEMENT | |
| 1. Number of parent volunteers including Parent Partners | B2b |
| 2. Number of parents present at "Back-to-School" nights | B2b |
| 3. Number of parents involved on the local school restructuring teams | B2b |
| 4. Number of parents involved as member of the parent organizations such as PTA/HSA/PTSA | B2b |
| 5. Percent of schools with active parent organizations | B2b |
| 6. Number of parents attending Citywide Parent Conference | B2b |
| 7. Number of schools with certified Local School Restructuring Teams | no match |

Florida

Documents Utilized

Blueprint 2000: A System of School Improvement and Accountability (June 1993)
Transition System: Companion to Blueprint 2000 (1993)

Background

Since 1985, Florida has had curriculum guides that identify the course content and intended outcomes for all courses in grades 6-12. Districts must adopt student-performance standards for each course based on these guidelines. In 1991, the legislature established a commission on student-performance standards. It identified 10 performance standards based on the competencies identified by the U.S. Secretary of Labor's Commission on Achieving Necessary Schools. The content and performance standards describe student learning at different grade levels (e.g., K-3, 4-5, 6-8, and 9-10). In 1993, the state began developing pre-K-12 curriculum frameworks that will identify the essential content in each subject and give sample benchmark outcomes. They will not include state-mandated performance standards.

Note: The following goals did not apply to and were not matched to the NCEO model for grade 8: Graduation Rate and Readiness for Postsecondary Education and Employment, Teachers and Staff, and Adult Literacy.

Florida

| NCEO CODE | |
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| <p>GOAL 3: STUDENT PERFORMANCE: Students successfully compete at the highest levels nationally and internationally and are prepared to make well-reasoned, thoughtful, and healthy lifelong decisions.</p> | C1, F2a, F3d |
| <p>Standard 1: Florida students locate, comprehend, interpret, evaluate, maintain, and apply information, concepts, and ideas found in literature, the arts, symbols, recordings, video and other graphic displays, and computer files, in order to perform tasks and/or for enjoyment.</p> <p>OUTCOMES</p> <p>While performing individual and group tasks, students:</p> <ol style="list-style-type: none"> 1. Locate data and determine the main idea or essential message; 2. Identify relevant details and facts; 3. Evaluate accuracy, appropriateness, style, relevance, and plausibility; 4. Analyze information, concepts, and ideas relative to their own value system; 5. Use ideas, concepts, and informational resources for aesthetic and recreational purposes; 6. Independently complete a task which requires the use or application of information, concepts, or ideas; and 7. Evaluate and make valid inferences from new, incomplete, or nonverbal information. | F1, F4a, F4b, F5a F4 F2a, F4 F2a, F4b F2a F4 D3e F2a |
| <p>Standard 2: Florida students communicate in English and other languages using information, concepts, prose, symbols, reports, audio and video recording, speeches, graphic displays, and computer-based programs.</p> <p>OUTCOMES</p> <p>While performing individual and group tasks, students:</p> <ol style="list-style-type: none"> 1. Completely and accurately record information in writing and other media, and communicate that information, in turn, through a variety of media; 2. Compose and create, through a variety of oral, visual, and written media, communications such as letters, reports, directions, manuals, and proposals; | F1, F1a, F3c, F5a F1, F3c F1a, F3c |

Florida

| | NCEC CODE |
|---|--------------------|
| 3. In all communications using English and other languages, accurately use language, graphic representations, styles, organizations, and format appropriate to the language, information, concept, or idea and the subject matter, purpose, and audience; | F1a, F3c |
| 4. Prepare communications through a variety of media which include supporting documentation and detail; and | F3c |
| 5. Check, edit, and revise communications to ensure appropriate form, emphasis, grammar, spelling, and punctuation. | F3c, F4a |
| Standard 3: Florida students use numeric operations and concepts to describe, analyze, disaggregate, communicate, and synthesize numeric data and to identify and solve problems. | F2a, F3a |
| OUTCOMES | |
| While performing individual and group tasks, students: | |
| 1. Accurately identify and perform appropriate numeric procedure with problems found in numeric, symbolic, or word form; | F3a |
| 2. Estimate approximate numeric solutions to problems without use of calculating devices; and | F3a |
| 3. Accurately analyze, synthesize, and evaluate numeric ideas, concepts, and information through appropriate formulae, symbols, theorems, equations, tables, graphs, diagrams, and charts. | F2a, F3a |
| Standard 4: Florida students use creative thinking skills to generate new ideas, make the best decisions, recognize and solve problems through reasoning, interpret symbolic data, and develop efficient techniques for lifelong learning. | F2a, F3a |
| OUTCOMES | |
| While performing individual and group tasks, students: | |
| 1. Use imagination, combine ideas or information in new ways, and make connections between seemingly unrelated ideas by discovering a rule or principle underlying the relationship between two or more objects and use the rule or principle to solve a problem; | F2a |
| 2. Clarify goals and recognize constraints to their attainment and evaluate and choose the best alternative; | F2a |
| 3. Recognize that a problem exists, define the problem, investigate possible causes of the problem, identify possible solutions, analyze, evaluate, and select the best solution(s), and implement the solutions; | F2a |
| 4. Organize and intellectually process symbols, pictures, objects, and information in a way which permits the mind to generate the reality of what is being represented; and | F2a |
| 5. Develop and use individually effective and efficient learning techniques that permit them to apply new knowledge and skills in different ways. | F4 |
| Standard 5: Florida students display responsibility, self-esteem, sociability, self-management, integrity, and honesty. | D, D3, E1, G2a, G4 |
| OUTCOMES | |
| While performing individual and group tasks, students: | |
| 1. Exert a high level of effort and perseverance toward goal attainment; | D3e |
| 2. Exhibit diligence in reaching high-task accomplishment and performance by setting high standard, paying needed attention to detail, displaying high standard of attendance and punctuality, adapting to variable environments, and approaching and completing tasks with enthusiasm, vitality, and optimism; | A1a, D3e, F3d, G |
| 3. Demonstrate a realistic and positive view of themselves as unique individuals; | G2a |
| 4. Demonstrate friendliness, assertiveness, leadership, adaptability, empathy, and politeness in familiar and unfamiliar groups; | G3a, G4 |
| 5. Exhibit interest in what others say and do; | G4 |
| 6. Deal with persons and situations with integrity, reliability, and honesty; | E1a |
| 7. Exhibit civic, personal, and social responsibility; | D1a, E1a |

Florida

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| 8. Demonstrate behaviors that support physical wellness and personal well-being; and | C1, G |
| 9. Assume a positive role in the family, work place, and community. | A2e, D1a, E1a, E3b |
| Standard 6: Florida students will appropriately allocate time, money, materials, and other resources. | F4 |
| OUTCOMES While performing individual and group tasks, students: | |
| 1. Identify and prioritize activities in an appropriate sequence and develop, implement, and adjust an effective schedule in order to accomplish a goal; | D3e, F4 |
| 2. Prepare a budget appropriate to the activities required for goal attainment; maintain accurate records of actual costs and revenues; and revise the budget plan as needed; | F4 |
| 3. Identify and acquire the materials and supplies needed for completion of the activity and anticipate how those materials can be best stored and distributed to complete the activity with the least cost and greatest efficiency; and | F4 |
| 4. Identify the human skills, knowledge, and values necessary to successfully complete the activity; describe how to make successful matches between the persons best capable of completing the activity and the activity itself; and provide meaningful feedback on task completion to those involved. | F4 |
| Standard 7: Florida students integrate their knowledge and understanding of how social, organizational, informational, and technological systems work with their abilities to analyze trends, design and improve systems, and use and maintain appropriate technology. | F2a, F5a |
| OUTCOMES While performing individual and group tasks, students: | |
| 1. Identify the need for information, select possible information and evaluate its appropriateness, and then obtain the information from existing sources, or create it; | F2a, F4 |
| 2. Organize, process, and maintain in a systematic fashion, print and other forms of technologically stores information and transform the information into appropriate formats to enhance the accomplishment of a goal; | D3e, F5a |
| 3. Analyze trends and the performance of systems to predict the impact of these trends and performances on goal attainment; | F2a |
| 4. Make suggestions to modify existing systems in order to enhance goal attainment; | F1, F2a |
| 5. Select the procedures or technology that will best facilitate goal attainment by visualizing the necessary methods and applicable technology, choosing, installing, and monitoring the device or system which will produce the best results; and | F2a, F5a |
| 6. Demonstrate competence in solving problems in the sue of technology, including generating workable solutions and identifying the appropriate person or place from which to obtain the needed assistance. | F2a, F5a |
| Standard 8: Florida students work cooperatively to successfully complete a project or activity. | G4b |
| OUTCOMES While performing individual and group tasks, students: | |
| 1. Contribute ideas and make suggestions to a group effort to solve a problem or complete an activity in support of attainment of a goal; | F2a, G4b |
| 2. Assist a group to be successful by doing their own share of the tasks necessary to complete a task and encourage other group members by listening and responding appropriately to their contributions, identifying and building upon the strengths of individual members of the group, helping to resolve differences within the group which impede goal attainment; and | D1a, E3b, F1, G4c |
| 3. Help others learn by helping them to identify and apply related concepts and theories to the activity, identify needed skills, knowledge, and values which will facilitate goal attainment, and providing meaningful feedback, including reinforcement of others' successful performance. | E3b, F1 |

Florida

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| <p>Standard 9: Florida students establish credibility with their colleagues through competence and integrity and help their peers achieve their goals by communicating their feelings and ideas to justify or successfully negotiate a position which advances goal attainment.</p> <p>OUTCOMES While performing individual and group tasks, students:</p> <ol style="list-style-type: none"> 1. Effectively communicate thoughts, ideas, and values to influence others toward action which will facilitate goal attainment; 2. Justify positions logically while taking meaningful viewpoints of others into consideration and making positive use of the rules and values followed by others; and 3. Work toward an agreement with others that will further goal attainment by resolving divergent interests and points of view, clarifying points of view, and adjusting quickly to new facts or ideas, and making reasonable compromises that promote goal attainment. | <p>D3e, E3b, F1, G1b</p> <p>F1, D3e</p> <p>F1, G3a</p> <p>F1, F4b, G4c</p> |
| <p>Standard 10: Florida students appreciate their own culture and the cultures of others, understand the concerns and perspectives of members of other ethnic and gender groups, reject the stereotyping of themselves and others, and seek out and utilize the views of persons from diverse ethnic, social, and educational backgrounds while completing individual and group projects.</p> <p>OUTCOMES While performing individual and group tasks, students:</p> <ol style="list-style-type: none"> 1. Demonstrate appreciation of their own culture and the cultures of others; 2. Cooperate with persons of different gender, ethnic, or socioeconomic backgrounds to successfully accomplish tasks; and 3. Recognize bias and stereotyping in media, literature, and visual and performing arts. | <p>G3b</p> <p>G3b G3b, G4b</p> <p>F4, G3b</p> |
| <p>ASSESSMENT Assessment for school improvement and accountability should minimize state level intervention, empower local school communities, hold schools accountable, and improve and inform instruction. There is a legitimate state interest to report on the progress of education but this interest should be constrained to a minimum amount of information necessary for state level reporting and should not place undue burdens on the school improvement process.</p> | <p>no match</p> |
| <p>Goal 3 requires an assessment system that can be partially implemented immediately and that will allow for a transition to the Blueprint 2000 Student Assessment System. In moving through the transition:</p> <p>Assessment methods must be developed and implemented for those performance standards and outcomes that cannot be assessed using existing methods.</p> <p>A new version of the High School Competency Test will be developed to begin to reflect the Blueprint 2000 performance standards.</p> <p>The Florida Writing Assessment will continue to be developed and implemented.</p> <p>Norm-referenced test (NRT) requirements in grades 4, 8, and 10, including the Grade Ten Assessment Test (GTAT), will be continued at least until the Blueprint 2000 Assessment System is fully implemented.</p> | <p>no match</p> |
| <p>KEY DATA ELEMENTS</p> <ol style="list-style-type: none"> 1. Schools shall report the number and percent of students passing the High School Competency Test (HSCT) on their first attempt. 2. Schools shall report the number and percent of students scoring at each level on the Florida Writing Assessment. 3. Schools shall report the number and percent of students scoring in each quartile of the Grade Ten Assessment Test. 4. Schools shall report results on district norm-referenced test(s). | <p>no match</p> <p>no match</p> <p>no match</p> <p>no match</p> |

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| 5. Schools shall report the number and percent of students passing upper level courses and advanced programs and the number and percent still enrolled. In the fall of 1995 school will report the number and percent of students moving from Level 1 to Level 2 to Level 3. | no match |
| 6. Schools shall report the number and percent of students passing the HSCT by the end of their senior year. | no match |
| GOAL 4: LEARNING ENVIRONMENT School boards provide a learning environment conducive to teaching and learning. | |
| Standard 1: Schools provide a learning environment that enables students, teachers, and staff to successfully meet the standards and outcomes identified by this Commission. | no match |
| OUTCOMES | |
| 1. Students, teachers, and staff exhibit a positive self-concept and demonstrate high expectations for behavior and achievement. | no match |
| 2. Students, teachers, and staff demonstrate that they view their accomplishments as appropriately recognized and celebrated. | no match |
| 3. Students, parents, teachers, staff, and other stakeholders demonstrate that they feel welcome, secure, and positive about the student's school environment and experiences. | H1, H2, H3 |
| 4. Students, teachers, and staff view their participation as important, as evidenced by their average daily attendance and participation. | A1a |
| 5. Schools receive adequate resources and flexibility and demonstrate that their pupil/teacher ratio will ensure high quality teaching and learning and is appropriate to their school improvement plan. | no match |
| 6. Schools receive adequate resource and maximum flexibility and demonstrate that they provide and maintain facilities, materials, equipment, technology, and programs that will ensure high quality teaching and learning and are appropriate to their school improvement plan. | no match |
| 7. Schools exhibit that parents and other stakeholders are involved in classroom activities and participate in school programs. | B2b |
| GOAL 5: SCHOOL SAFETY AND ENVIRONMENT Communities provide an environment that is drug-free and protects students' health, safety, and civil rights. | |
| Standard 1: Schools provide an environment for students and staff that promotes good health and is free of violence, weapons, hazard, vandalism, and substance abuse. | no match |
| OUTCOMES | |
| 1. A collaborative agreement exists among the school district and other stakeholders to keep the school campus free of disruptive influences, create a mechanism to enhance the environment in the community at large, and establish specific responsibility for maintaining a safe, healthy, and drug-free school environment. | no match |
| 2. Schools collaborate with law enforcement and other stakeholders to ensure a safe school environment that is free of violence, weapons, vandalism, hazard, and substance abuse. | no match |
| 3. Schools collaborate with social service agencies and other appropriate stakeholders to ensure all students participate in comprehensive health education program. | no match |
| 4. Schools collaborate with environmental agencies and other appropriate stakeholders to ensure a safe school environment in all classrooms and laboratories. | no match |
| Standard 2: Local, state, and federal laws, rules and regulation related to health, safety, and civil rights are enforced. Schools ensure that students and staff are protected from and are not subjected to any and all forms of discrimination and harassment. All programs, activities, and services are inclusive and free of bias. | no match |
| OUTCOMES | |
| 1. All appropriate stakeholders ensure the civil rights and safety of all members of the school. | no match |

Florida

| | NCEO CODE |
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| 2. Schools ensure equal opportunity for all staff and students to participate in all programs, activities, and services. | A2 |
| 3. Schools utilize bias-free assessment measures and instruments for appropriate student placement decisions. | no match |
| 4. Schools develop and implement comprehensive written policies addressing any and all forms of harassment. | no match |
| 5. Schools incorporate standard safety and health practices into the school and school bus environments. | no match |
| Standard 3: All students demonstrate personal responsibility for contributing to a school and school bus environment that is safe and free of tobacco, alcohol, and other drugs. | C2d, D1 |
| OUTCOMES | |
| 1. Students and other appropriate stakeholders collaborate to develop the Code of Student Conduct to ensure that their schools and school buses are safe and free of tobacco, alcohol, and other drugs. | no match |
| KEY DATA ELEMENTS | |
| 1. Schools shall report the number and percent of incidents of violence, weapons, vandalism, substance abuse, and harassment. This information will be collected by the Department of Education in collaboration with other governmental agencies to address the incidence of violence in the schools. | no match |
| 2. Schools shall report the number and percent of the student population enrolled in selected program areas (i.e., gifted, other exceptional education students, vocational education, dropout prevention, early childhood programs, ESOL programs, dual enrollment, advanced placement, and upper level math and science courses) by race, gender, and special population. | A1c |
| 3. Schools shall report the number and percent of suspensions (in-school and out-of-school) and expulsions. | A1a, E1b |
| 4. Schools and districts shall report the number and type of agreements with appropriate community agencies, such as law enforcement, health/social services, public libraries, or environmental protection, that will help establish and maintain an environment that is safe, free from health hazards, and free from drugs. The agreements may be negotiated at the school level or at the district level on behalf of the schools, and shall be approved by the school board (see "School Board Responsibilities for Development of Agency Agreements," page 6). | no match |
| 5. Schools shall report information on hazardous conditions in and around school property. | no match |

Idaho

Document Utilized

Implementing Performance Based Education: A handbook for School Districts (June, 1994)

Background

Idaho has recently developed draft standards in 10 subjects: health education, fine arts, foreign languages, humanities, language arts, mathematics, physical education, science, social studies, and vocational and technical education. These frameworks describe student learning for grade K-4, 5-8, and 9-12. The frameworks will be voluntary and the state has yet to decide whether they will be tied to specific statewide assessments.

Idaho

| STUDENT PERFORMANCE BENCHMARKS | NCEO CODE |
|---|---------------|
| EIGHTH GRADE STUDENTS | |
| 1. An Idaho eighth grader communicates effectively in written, oral and multimedia forms (such as audio and video recorded presentations; charts, maps, graphs and visual aids; and computer enhanced presentations). | F1a, F3c, F5a |
| LIST OF TRAITS | |
| <u>Ideas and Content.</u> The communication is clear, focused, interesting, and appropriate for the audience. Details and anecdotes demonstrate a command of the subject. | F1 |
| <u>Organization.</u> Communication is organized. The order, structure, and presentation are well organized and address issues in a clear and direct manner. | F1 |
| <u>Voice.</u> The communication speaks appropriately and directly to the audience in a way that is individualistic, expressive and engaging. | F1a |
| <u>Form.</u> The communication conveys the intended message. Words, models, and symbols are used appropriately to enhance the presentation. | F1 |
| <u>Conventions.</u> The communication includes appropriate use of grammar, capitalization, punctuation, usage, spelling and paragraphing. | F1a, F3c |
| 2. An Idaho eighth grader locates, organizes and uses knowledge, information, and technology effectively. | F4, F5a |
| LIST OF TRAITS | |
| <u>Reading.</u> Written information is read with accuracy and understanding. | F3b |
| <u>Active Listening.</u> Verbal information is understood by the listener and appropriate feedback is given to the speaker. | F1 |
| <u>Identifications of Sources.</u> Sources of knowledge and information are identified and used efficiently. Information technology is used appropriately. | F4, F5a |
| <u>Organization of Information.</u> Information is effectively organized using clear criteria to select material. | F4 |
| 3. An Idaho eighth grader identifies and describes problems or issues and develops effective strategies for addressing those concerns. | F2a |
| LIST OF TRAITS | |
| <u>Presentation of Concerns.</u> The problem or issue is clearly described, using figures, diagrams or models as appropriate. | F1 |

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| <u>Development and Implementation Strategies.</u> Clear and creative strategies, are selected, explored, implemented and evaluated. | F2a |
| <u>Verification of Results.</u> Results are related to prior knowledge and evaluated for reasonableness. | F2a |
| 4. An Idaho eight grader demonstrates creativity and originality in the design, production, and presentation of activities. | F4 |
| LIST OF TRAITS <u>Creativity and Originality.</u> Innovative methods in the design, production, and presentation of activities are explored and developed. | F4 |
| 5. An Idaho eighth grader critiques and evaluates the quality of work products and processes. | F2a |
| LIST OF TRAITS <u>Group and Self-Evaluation.</u> Individuals and groups are able to critique their own work and the work of others. | F2a, G2c |
| <u>Identification of Strengths.</u> Evidence of ability, talent, and knowledge are identified within the performance and related to previous performances. | G2b |
| <u>Identification of Weaknesses.</u> Areas for further improvement are identified and discussed. | G2c |
| 6. An Idaho eighth grader demonstrates the ability and skills to work collaboratively. | G4b |
| LIST OF TRAITS <u>Monitor Behavior.</u> Personal behavior in group activities is monitored and consideration for individual differences is demonstrated. | G3a, G3b, G4b |
| <u>Team Skills.</u> Active listening and participation skills are used in group activities. | A2, F1, G4b |
| <u>Provide Feedback.</u> Constructive comments on cooperative work are given and received. | F1, G4b |
| <u>Group Functioning.</u> How the group does its work is assessed and managed, with conflict resolution skills used to solve problems. | F2a, G4b, G4c |
| <u>Ethnic and Racial Differences.</u> Learns to live in a changing society with mutual respect and appreciation for others. | G3a, G3b |
| 7. An Idaho eighth grader demonstrates characteristics of an effective lifelong learner. | F |
| LIST OF TRAITS <u>Vision.</u> Goals and priorities are identified. | D3e |
| <u>Self-esteem.</u> A positive vision of self and others is developed. A positive desire to learn is demonstrated. | G2a, G3a |
| <u>Initiative and Perseverance.</u> The desire and ability to plan, implement, and conclude a project over time is demonstrated. | D3e |
| <u>Responsibility.</u> Responsibility for personal actions is demonstrated. | G1 |
| <u>Adaptability.</u> Changes and challenges dealt with in a positive way. Plans and actions are modified appropriately in response to changing circumstances. | G1a |
| <u>Skills of Strategic Learner.</u> A variety of strategies for learning are explored and developed. | F4 |

Illinois

Document Utilized

An Overview of IGAP Performance Standards for Reading Mathematics, Writing, Science, Social Sciences (1993)

Background

The Illinois Academic Standards Project is currently developing academic standards in the fine arts, foreign languages, language arts, mathematics, physical development and health, science, and social sciences. The project is also identifying connections across subjects and incorporating the basic skills needed for employment and citizenship. These academic standards include both content standards and performance benchmarks. Standards describe student learning for grades K-3, 3-5, 5-8, 8-10, and 10-12. The standards will include benchmarks at grades 3, 5, 8, 10, and 12. The standards will be fully correlated with performance standards for the state assessment system.

Illinois

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| <p>READING PERFORMANCE DEFINITIONS FOR GRADES 3, 6, 8, AND 10</p> <p>The state goal for reading requires that as a result of their schooling, students will be able to read, comprehend, interpret, evaluate, and use written material. To assess this goal, the reader attributes presented below assume that the reading and thinking process that students use varies little across grades. Successful, facile readers at all levels must be able to predict, make inferences, evaluate information, interpret, and apply information that they have read.</p> <p>Level 1: Level 1 students may not be able to read material that is appropriate to their grade. Particularly at the upper grades, they do not think of themselves as readers and often fail to value reading for personal purposes. As a result, they may exhibit aberrant response patterns on tests or give up. They often respond negatively to items about reading habits, attitudes and dispositions. In some cases, grade 3 and 6, level 1 students display positive attitudes toward reading but they have not progressed in ability to a level 2 reader year.</p> <p>Attribute: They can process explicitly stated information inconsistently. Indicator: They often, but not always, identify specific details as answers to text-based questions. Attribute: They fail to exhibit balance between text and personal knowledge: They over-rely on specific pieces of information. Indicator: They are easily misled by distractions that contain important but irrelevant words from the text. Attribute: They fail to exhibit balanced text and personal knowledge: They over-rely on prior knowledge. Indicator: They are easily misled by distractions that are not applicable to this particular questions although possibly applicable in everyday experience.</p> <p>Level 2: Level 2 students are able to read material appropriate to their grade. They have the motivation, skill, and strategies to persist in completing reading tasks. They think of themselves as readers and engage in some voluntary reading. They respond positively to some questions about reading habits, attitudes, and dispositions.</p> <p>Attribute: They can reliably process explicitly stated information in the text. Indicator: They respond accurately to most text-explicit terms.</p> | <p>F2a, F3b</p> |

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Attribute: They use their personal knowledge to interpret and construct meaning.
 Indicator: They respond accurately to some items that focus on interpretation.
 Attribute: Knowledge of text and genre (Grade 3): They approach the texts as a meaningful unit and recognize that attending to the author's structure, particularly in stories, aids comprehension and recall.
 Indicator: They respond more accurately to text-based statements of main ideas, summaries, and themes about narrative texts than to similar questions about expository texts.
 Attribute: Knowledge of text and genre (Grades 6, 8, and 10): They approach the text as a meaningful unit and recognize that attending to the author's structure aids comprehension and recall in both narrative and expository texts.
 Indicator: They respond with similar degrees of accuracy to text-based statements of main ideas, summaries, and themes about narrative and expository texts.
 Attribute: When directed to do so, they can retain information to summarize and synthesize.
 Indicator: They respond with a moderate degree of accuracy to main ideas, summaries, and themes that are fairly close to the text.

Level 3: In addition to the attributes of the level 2 reader, students who operate at level 3 easily read grade-level text and make appropriate connections and associations. They demonstrate high levels of success on a variety of items. They think of themselves as able readers and value reading as a personally rewarding voluntary activity. They respond positively to reading survey items measuring habits, attitudes, and dispositions.

Attribute: They read interactively and adaptively, approaching text from their own perspective and/or the author's, as appropriate.
 Indicator: They show similar patterns of success on measures of narrative and expository comprehension.
 Attribute: They balance and assess the place and importance of ideas from the text and personal knowledge to construct and revise meaning.
 Indicator: They demonstrate high levels of success on a variety of items.
 Attribute: They consistently and continuously summarize, integrate, and synthesize ideas within and across texts.
 Indicator: They respond accurately to items that assess main ideas, summaries, and themes regardless of whether they are restatements or more abstract elaborations of ideas from the text.
 Attribute: They monitor their reading and adapt their reading strategies to their purpose, their personal knowledge, and the demands of the text.
 Indicator: They respond accurately to a variety of constructing meaning items as well as reading strategies items.
 Attribute: They are familiar with and sensitive to different genres (e.g., narrative and expository).
 Indicator: They show comparable patterns of success on both narrative and expository texts.
 Attribute: Literary devices (grades 3 and 6): They are familiar with and can understand texts that exhibit the application of rudimentary literary devices such as figurative language and point of view.
 Indicator: They respond accurately to items assessing their awareness of these literary devices.
 Attribute: Literary devices (Grades 8 and 10): They are familiar with, can understand and can evaluate the use of a range of literary devices such as iron, satire, figurative language and point of view.
 Indicator: They respond accurately to items assessing both their awareness of and the intended effect of these literary devices.
 Attribute: They can recognize multiple perspective, motivations, and interpretations.
 Indicator: They select more than one correct alternative even when alternatives represent different ways of reasoning.
 Attribute: They can apply information and/or insights to new situations, problems, or texts.
 Indicator: They respond accurately to transfer and application.

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MATHEMATICS PERFORMANCE DEFINITIONS FOR GRADES 3, 6, 8, AND 10

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Mathematics definitions incorporate the seven state goals for learning in mathematics and elements of the goals for mathematical literacy established by the National Council of Teachers of Mathematics. The definitions describe students who can solve problems, communicate, reason, and make connections within and across the broad content areas of mathematics using currently available technology. The seven goals for learning mathematics are:

F2a, F3a, F5a

1. **Number Concepts and Skills**

This goal includes the ability to model, read, write, compute, and reason with numbers in a variety of settings. The ability to add, subtract, multiply, and divide, using whole numbers, integers, fractions, and decimals reflects this goal.

F3a

2. **Percent, Ratio and Proportion.**

This goal includes the ability to understand and use ratios, proportions, and percentages for comparing and analyzing quantitative relationships.

F2a, F3a

3. **Measurement**

This goal includes the ability to relate measurement and systems of measurement to common situations including measuring area and volume.

F3a

4. **Algebraic Concepts and Skills**

This goal includes the ability to identify, analyze, and solve problems using variables, equations, inequalities, functions, and their graphs.

F2a, F3a

5. **Geometric Concepts**

This goal includes the ability to understand and apply geometric concepts and relationships in a variety of forms.

F3a

6. **Data Collection and Analysis**

This goal includes the ability to understand and use methods of data collection and analysis, including tables, charts, and comparisons. It also includes the ability to make predictions based on experiments or calculated probabilities.

F2a, F3a

7. **Estimation/Approximation**

This goal includes the ability to use mathematics skills to estimate, approximate, or predict outcomes and to judge the reasonableness of results.

F2a, F3a

Grade 8, Level 1: Level 1 students are able to identify and use the correct fundamental operation for one- and two-step problems that involve whole numbers of decimals. They can deal with practical mathematical situations that arise from the students' own experience. These students understand place value and order of operations, and they have some understanding of basic operations with simple fractions that have common or easily related denominators. They can express simple common ratios but lack the ability to construct related proportions. These students are able to determine the reasonable ness of given estimates and some solutions to numerical problems.

Level 1 students can make conversions between units of length within either the customary or metric system. They know and are able to apply formulas for perimeters and areas of simple geometric figures and can extend the use of these formulas to rectangular three-dimensional settings. They can identify, compare, and contrast the basic attributes of common two- and three-dimensional objects and similar figures.

These students can translate and solve one-step equations that involve the four basic operations and can evaluate formulas and expressions that apply these four operations to whole numbers. These students also can plot ordered pairs of integers on a coordinate plane. Level 1 students are capable of organizing, interpreting, and analyzing data from personal or provided surveys, tables, or graphs. They can perform simple experiments in probability and describe the results.

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Overall, students show little readiness for the study of algebra because they do not consistently demonstrate the requisite problem-solving, reasoning, and representational skills. Furthermore, they have little command of the calculator beyond performing simple numerical operations. These limited abilities are characterized by an inability to perform even the content presented in the classroom.

Grade 8, Level 2: Level 2 students are able to solve practical problems that involve integers, decimals, fractions, percents, and proportions with or without a calculator. They also understand variables and solve equations using one variable. These students can establish ratios and relate them to proportions in common problem settings with which they are familiar. Their grasp of percentages allows them to handle simple situations that involve each type of percent usage such as determining interest, sales tax, or commissions.

Level 2 students can make conversion between units of mass and capacity within a measurement system and calculate the surface area and volume of standard rectangular solids and spheres. They can draw illustrations for common geometric relationships and apply relationships that involve lines and angles in a variety of settings.

Level 2 students can solve simple equations or one-step equations that have integral solutions. They can also evaluate algebraic expressions using order of operations and implied multiplication procedures. Level 2 students can evaluate formulas and expressions that involve exponents with and without a calculator. They can graph a given line with integral coefficients on a coordinate plane. These students predict solutions to equations and numerical problems using estimation, rounding, or mental mathematics to determine their response. In statistical settings, level 2 students can generalize from data to predict possible trends. They exhibit a basic understanding of relative frequency probability involving common objects or games.

Overall, level 2 students have solid grasp of the core curriculum at grade 8, including problem solving strategies, reasoning, and communication skills. They tend to be bound by the materials they have seen but are able to extend their reasoning through the use of calculators and computer utilities. They are developing their abilities to interpret and generalize from graphical representations. They are on the path to the study of algebra.

Grade 8, Level 3: Level 3 students are able to solve a wide variety of practical problems involving percents, proportions, and exponents. They have a solid conceptual understanding of the interrelationships among fractions, decimals, and percents, and their connections with proportions. They can apply these skills in combinations with estimation and rounding to predict reasonable solutions to multi-step, complex problems.

Level 3 students can apply formulas and conversions of measurements in nonroutine settings. They can apply properties of triangles including similar and congruent figures and the Pythagorean theorem in familiar settings.

Level 3 students are able to translate and solve multi-step equations involving rational numbers. They can evaluate formulas and expressions involving the four fundamental operations with fractions, decimals, and integers. They are also capable of graphing inequalities on a number line or a plane. These students have also developed an intuitive appreciation for the interpretation of the slope of a line. These students are capable of reading and interpreting complex statistical graphs, charts, and tables. In addition, they are capable of calculating probabilities by constructing a sample space and identifying favorable outcomes for somewhat difficult but elementary problems.

Overall, Level 3 students have a very broad understanding of the problem-solving, reasoning, and communication skills expected of students at this stage of learning. They have considerable algebraic skills and are ready for the study of algebra if they are not already engaged in it. They can use scientific calculators productively both to carry out calculations and to explore the nature of numerical patterns and data sets. Their work is characterized by consistently correct and insightful performance.

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WRITING PERFORMANCE DEFINITIONS FOR GRADES 3, 6, 8, AND 10

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The state goal for writing states that as a result of their schooling, students will be able to write standard English in a grammatical, well-organized and coherent manner for a variety of purposes. To ascertain whether students meet the state goal for writing, IGAP assesses students' abilities to write for three broad purposes:

Persuasive There are two types of assignments: The position paper in which students take a position and develop one side of an argument or the problem/solution paper in which students develop both a problem and a solution.

F3c

Expository Students are asked to explain, interpret, or describe something based upon background experiences or information provided in the prompt. These assignments differ from the narrative in that the writer does not include personal reactions or feelings in describing or presenting information.

F3c

Narrative There are two types of assignments: The paper in which students recount and reflect upon a personally significant experience of the paper in which students report and record reactions to an observed event. For assignments in which students share or recount personal experiences, they are expected to describe the action and their reactions. In reports of observed events, students also narrate an event and describe the reactions of participants.

F3c

All of the writing assignments tap students' abilities to write about background experience and general academic content. Both sources of knowledge form the basis of students' understanding and interpretation. Students are not expected to have specific knowledge of content area in order to respond to the state assessment prompt. The paper is not evaluated on the basis of wrong or right answers but rather the credibility and logic of the support and elaboration in regard to the assignment. Furthermore, the assessment calls upon a range of higher-order thinking skills including comparison, interpretation, and evaluation.

The writing features that raters use to score essays are defined as follows:

Integration: Evaluation of the essay based on a judgement of how effectively the composition as a whole uses the basic features to address the assignment.

Focus: The clarity with which a composition presents a clear main idea, point of view, theme, or unifying event.

Support/Elaboration: The degree to which the main point or event is elaborated and explained by specific details and reasons.

Organization: The clarity and/or coherence of the logical flow of ideas and the explicitness of the text structure or plan.

Conventions: The use of standard written English.

Grade 8, Level 1: The students at the top of this level may be able to write a basic form paper which is simple, informative, and clear, presenting nothing more than essentials but perhaps missing one of the required features. The students at the lowest end of the spectrum produce papers with only the rudiments of techniques for forming focus, organization, and support, or they may not have sufficient writing to show that criteria are met. Some level 1 students have few convention errors and a master of sentence construction while others at this level make numerous errors which interfere with communication.

Grade 8, Level 2: The students at this level write basically developed papers in which the features are all present. Some features such as focus may be more developed but, for the most part, the paper is simple, informative, and clear, presenting few things more than the essentials. Level 2 students show sufficient evidence of mastery of sentence construction with few errors depending on the length of the paper and the writing conditions.

Grade 8, Level 3: The students at this level write well-formed papers in which all the features are present and well-developed but not all features may be equally well-developed throughout the paper. Level 3 students show sufficient evidence of mastery of sentence construction with only a few errors depending on the length of the paper and the writing conditions.

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| SCIENCE PERFORMANCE DEFINITIONS FOR GRADES 4, 7, AND 11 | NCEC CODE |
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| <p>The four goals in science comprise the science performance definitions. As a result of their school, students will have a working knowledge of:</p> | |
| <p>Goal 1: The concepts and basic vocabulary of biological, physical, and environmental sciences and their application to life and work in contemporary technological society.</p> | F4a |
| <p>Goal 2: The social and environmental implication and limitations of technological development.</p> | F4a |
| <p>Goal 3: The principles of scientific research and their application in simple research projects.</p> | F4a |
| <p>Goal 4: The processes, techniques, methods, equipment, and available technology of science.</p> | F4a, F5a |
| <p>Science, in its quest for objective truth, provides a conceptual framework for the understanding of natural phenomena and their causes and effects. The purpose of establishing a performance definitions is to provide guidelines for the development of students who understand and use that framework productively and creatively. Scientifically knowledgeable students understand the basic concepts and principles of science; recognize the reciprocal relationships among science, technology, and society; know the difference between objective fact and subjective value; understand the logic of experimental design; and use scientific instruments, units, and safety practices appropriately. Most importantly, they can apply their knowledge and skills in problem-solving and decision-making. In doing so, science students reason critically; evaluate hypotheses empirically; reach evidence-based decisions logically; and communicate results clearly, honestly and openly. In broad terms:</p> | |
| <p>Level 1: Describes students who do not meet the state goals for science. They may recognize, but do not fully understand, the fundamental content or processes of science appropriate for their age. This is to say they may know the “what” with respect to the content and processes of science but do not understand “why,” (i.e., do not grasp the reasons or principles which govern them). They view science as static, comprising only facts or recipes. Their conclusions are often guided more by preconception than by empirical evidence.</p> | |
| <p>Level 2: Describes students who meet the state goals for science. They have clearly mastered the fundamental content and processes of science appropriate for their age. What distinguishes them from level 1 students is that they also have begun to understand the principles and laws which govern relationships among concepts and processes (i.e., “why”). They understand them, however, only in the context in which they are learned. They begin to view science as dynamic but are seldom able to apply their knowledge and skills to novel or unfamiliar topics. They attempt to ground their conclusions in empirical information.</p> | |
| <p>Level 3: Describes students who exceed the state goals for science. What distinguishes them from the level 1 and level 2 students is that they also can use science concepts and principles to pose and solve problems. Further, they identify similarities of relationships among phenomena and know how to extend their knowledge and skills to new problems independently and creatively. They base their predictions and conclusions on available information and view science as dynamic, useful, and applicable to everyday life.</p> | |
| <p>GRADE 7: GOAL 1</p> | |
| <p>Level 1: Students may recognize scientific concepts in the physical, biological, and earth sciences such as motion (velocity); force (magnets, electricity, gravity); evolution (natural selection); patterns of physical, chemical, and biological changes (cycles, states of matter, reproduction); and forces that shape Earth (water, wind, volcanoes, earthquakes). However, they do not understand these concepts as parts of systems, models, or principles. They tend to know “what” (i.e., they can sometimes describe phenomena and label them correctly) but not “why” (i.e., the principles that govern them). They do not consistently demonstrate mastery of fundamental concepts (work/power, prey/predator, density/volume); laws (gravity)</p> | |

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and principles of science (conservation, cause/effect, function/structure). They do not grasp mathematical relationships among variables, especially in inverse relationships. They seldom integrate discrete facts into broader concepts and therefore, do not extend their understanding across a variety of contexts appropriately.

Level 2: Students show increasingly clear, reasonable, and consistent understanding of science concepts such as those cited above. They recognize that these concepts are components of models (mental, physical, mathematical), systems (solar, circulatory, nervous), and the principles which govern them. They can apply models or principles to simple problems but often must have mental connections drawn for them. They seldom extend their knowledge beyond immediate topics. For example, they may understand the principle which governs the angles of incidents and reflection of light shining on a mirror but do not independently extend that principle to basketballs, marbles, or pingpong balls.

Level 3: Students not only understand concrete instances of the major concepts but also make connections among related concepts, models, and systems. They are able to transfer and apply scientific concepts and principles to novel situations. For example, they are likely to understand the connections between the angle at which a basketball bounces from a backboard and the angles of incidence and reflection of light.

GRADE 7: GOAL 2

Level 1: Students may recognize selected social and environmental implications of technology. Although they may identify some societal impacts of technology, they do not understand their economic or political implications broadly or consistently. For example, they may recognize a relationship between the use of natural resources and the generation of waste but cannot explain why or how they are related. Their interpretations and decisions tend to be based on short-term concerns, and they do not grasp the reciprocal relationships among science, technology, and society.

Level 2: Students have a broader sense of the role of science and technology and its impact on society. They are aware of the political and economic impact of science and technology on the larger community. They generally understand that science and technology impact contemporary social, environmental, health, and ethical issues (biodegradable materials, genetic testing, pollution, medical treatment, energy resources). They can evaluate the pros and cons of simple issues using empirical data and scientific principles. As well, they often make informed consumer decisions.

Level 3: Students recognize the implications of selected scientific and technological discoveries on the quality of human and animal life. They may express concern about technological issues (water, food, and energy supplies; oil spills; acid rain; agricultural practices), seek informed solutions, and offer them to those in authority. They understand the global impact of societal attitudes and practices and may try to alter them locally. They often identify the scientific knowledge required for the development of specific technologies (the relationship of germ theory of communicable disease to prevention by vaccines, sanitation, or isolation).

GRADE 7: GOAL 3

Level 1: Students may recognize the ethical practices of science but apply them inconsistently. Their concern with getting the "correct" answer tempts them to change the data collected to match classmates' results or expected outcomes. They often change predictions to match data ex post facto. They can identify variables but confuse independent and dependent variables. Their knowledge of the logic of experimental designs is essentially limited to following directions. They tend to rely on social authorities for "correct" answers and may believe that scientific explanations cannot be questioned or changed.

Level 2: Students understand the basic ethical principles of science and the reasons for them and are often willing to accept discrepancies between predictions and experimental outcomes. They can design and conduct a simple experiment yet sometimes have difficulty correctly identifying independent and dependent variables. They recognize that scientific explanations

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are tentative and, in the face of new evidence, subject to change. They know the difference between a statement of fact and a value judgement (opinion) and show increasing knowledge of valid versus invalid sources of information.

Level 3: Students, in addition to the skills cited above, can pose simple researchable problems, state hypotheses, identify and control key variables, and conduct simple experiments. They communicate their procedures so that others can replicate them to verify their results. They recognize that science is a creative enterprise and that there may be more than one way to attack a problem effectively.

GRADE 7: GOAL 4

Level 1: Students are often unfamiliar with specific scientific equipment, metric units of measurement, and techniques. For example, they may have trouble measuring with a graduated cylinder or balance and are sometimes unconcerned with laboratory safety rules. They often interpret and communicate the results of an activity or experiment by giving limited or literal accounts. They can collect data and graph them if specific guidance is given. However, their ability to interpret a graph and apply its meaning to other contexts is absent. They often make predictions or draw conclusions that are not grounded in available information.

Level 2: Students, with guidance, use the equipment necessary to collect data safely and adequately. They can usually interpret and communicate the results of their experiments through the use of graphs or diagrams but may need some guidance in communicating results and procedures orally and in writing. They usually make meaningful predictions or draw conclusions based on available information.

Level 3: Students can turn data into information and information into conclusions and convey them clearly. Specifically, they use science equipment, tools, laboratory safety procedures independently. They can organize and use data to make generalizations and interpretations and can communicate procedures and results orally and in writing. They make meaningful predictions consistently and draw conclusions based on available information. They are familiar with the metric system, scales, models, and computers as scientific tools.

SOCIAL SCIENCE PERFORMANCE DEFINITIONS FOR GRADES 4, 7, 11

The five state goals for the social sciences provide students with an understanding of themselves and of society, prepare them for citizenship in a democracy, and offer them a foundation for understanding the complexities of the world community. As a result of their schooling, students will be able to:

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| Goal 1: Understand and analyze comparative political and economic systems with an emphasis on the political and economic systems of the United States; | F2a, F4a |
| Goal 2: Understand and analyze events, trends, personalities, and movements shaping the history of the world, the United States, and Illinois; | F2a, F4a |
| Goal 3: Demonstrate a knowledge of the basic concepts of the social sciences and how these help to interpret human behavior; | F4a |
| Goal 4: Demonstrate a knowledge of world geography with an emphasis on the United States; and | F4a |
| Goal 5: Apply the skills and knowledge gained in the social sciences to decision-making in life situations. | F2a, F4a |

These goals extend beyond history and geography to encompass economics, governments, and the behavioral sciences. In addition, they address the application of this knowledge and skill in decision-making. The study of the social sciences requires students to recall relevant content; to interpret maps, charts, graphs, and cartoons; to distinguish fact from opinion and relevant from irrelevant information; to solve problems systematically; and to access information. Therefore, the extent to which students are able to show these skills

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provides the framework for distinguishing among students at each of the three performance levels.

As well as specifically addressing the five goals, these definitions build upon the work of various organizations such as the national council of the Social Studies, National Council for History Education, and the National Council for Geographic Education. They also build upon the efforts of the National Assessment of Educational Progress in the areas of history and geography education.

Grade 7, Level 1: Level 1 students have an inconsistent mastery of data, concepts, and skills. They can identify some historic and contemporary leaders, events, and issues. However, their knowledge base is narrow and incomplete. Their use of such basic tools as maps, globes, and reference works is limited as are their analytical and thinking skills. Their knowledge of U.S. history may be confined to holidays and heroes. Their ability to describe significant events or persons; relate fundamental trends, themes, or ideas; or outline any substantive chronology is minimal. For example, these students may know that both the Civil War and the Civil Rights Movement occurred. However, they are unable to make any fundamental connection other than both involved African-Americans.

Level 1 students also have limited awareness of current events and limited mastery of the social sciences of geography, economics, government, sociology, and psychology. These students relate to concepts with which they have had direct experience. For example, the level 1 student who has visited the Rocky Mountains believes that all mountains are made of sharp, angular rocks with limited vegetation near the top.

These students can make connections across time and space only with substantial guidance. Thus, they often cannot demonstrate such skills during traditional testing situations. Level 1 students can manage only simple problem-solving situations—narrowly focused, needed information readily at hand—and the problem-solving structure often must be provided. In this area, the students' skills may be very elementary. Thus, out-of-class reports are generally copied verbatim from the encyclopedia or other reference work.

Grade 7, Level 2: Students who operate at level 2 have benefited from systematic instruction in history, geography, government, and to a lesser extent, economics and the other social sciences. Thus, they can identify and place in context a range of historically significant people, events, and issues. They are familiar with the concepts and generalizations of geography and government. They exhibit some skill in using the analytical tools of social science disciplines. They also can apply their knowledge from these areas of study across time and space.

Drawing upon a variety of content, these students are able to demonstrate an understanding of such fundamental concepts as diversity, change, environmental and cultural heritage, democracy, freedom, and the fundamental rights and responsibilities of citizenship.

Although perfection is not expected, level 2 students demonstrate a consistent pattern of performance that shows mastery.

Level 2 students' skills include the use of maps and globes; interpretation of tables or graphs; identification of part-whole, cause-effect, fact-opinion, and relevant-irrelevant relationships; and resolution of problems with multiple solutions. They are able to relate fundamental trends, themes, and ideas; use a variety of research tools effectively; and understand current events.

Grade 7, Level 3: Students who function at level 3 differ from their cohorts in degree more than in kind. Across the five goals, level 3 students demonstrate greater consistency in the recall of information, interpretation and analysis of data, solution of problems, and acquisition of information from a variety of resources. Their knowledge base is broad and deep. They can pursue multi-step procedures using tools and concepts from the social sciences.

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| <p>They also can use historical, geographic, or social science themes to organize topics and to incorporate information from outside the classroom into their understanding of the subject. Such students can make connections across time and space. They may see parallels between ethnic strife in eastern Europe over territory and turf battles among urban street gangs. Further, they can compare the conflicts involved in building democracies in the former Soviet Union and some of the same struggles the American colonies encountered 200 years ago.</p> | |

Indiana

Documents Utilized

Special Education Program Improvement Manual (January, 1990)
Indiana Educator: A Guide to Indiana's Comprehensive Assessment System (Spring 1994)

Background

In July 1993, the State Board of Education adopted Essential Skills Content Standards in mathematics and language arts for grades 3, 4, 8, 10, and 12. These standards represent what students are expected to know, and they form the basis of statewide assessments. The Essential Skills Content Standards were developed by thousands of educators in Indiana. The 1990 Special Education Improvement Manual specified Indiana's Effectiveness Indicators for Special Education, a list of indicators for program success that relates to 10 areas of programming.

Indiana

| PROGRAM AND STUDENT OUTCOMES | | NCEO CODE |
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| <p>An effective educational program ensures the development of academic, vocational, and social competencies commensurate with each student's potential and fosters a high sense of satisfaction in the individuals who are major stakeholders in the process (students, parents, teachers, administrators, district staff, school board, and community). Students with handicaps need to be satisfied with the educational services they have received and feel that the total program has met their needs by preparing them to function as productive citizens in their community. Other stakeholders need to be confident that school programs will lead to successful achievement and positive benefits for all students. (Note: Priority indicators are marked with an asterisk.)</p> | | |
| <p>PROGRAM HEADINGS AND PERFORMANCE INDICATORS.</p> | | |
| 10.1 | STUDENT PERFORMANCE | |
| 10.1.1 | Attendance, graduation, dropout, and suspension rates of students with handicaps compare favorably with rates of regular education students. | A1a, E1b |
| 10.1.3 | Non and limited English proficient students with handicaps progress at a satisfactory rate in their special education and regular education programs. | F |
| 10.1.4 | Students with handicaps develop academic competencies:* | F |
| 10.1.4.1 | Commensurate with their abilities, they develop competencies in appropriate academic curriculum areas such as reading, language arts, mathematics, science, social studies, cultural arts, and technology; and | F3a, F3b, F3c, F4a, F4b, F5a |
| 10.1.4.2 | They achieve or go beyond their individualized educational program (IEP) goals and objectives in academic areas. | F3d |
| 10.1.5 | Students with handicaps develop vocational competencies commensurate with abilities and interests.* | F |
| 10.1.5.1 | They acquire job preparation and vocational skills. | F |
| 10.1.5.2 | They demonstrate pre-employment competencies such as: | |
| 10.1.5.2.1 | Ability to identify career or vocational interest. | A2f |
| 10.1.5.2.2 | Knowledge of selected career and requisite skills and attributes. | A2f |
| 10.1.5.2.3 | Ability to identify training and employment options and opportunities, and ability to seek employment or further education or training. | A2f |

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| 10.1.5.3 | As appropriate, students develop job-specific skills including knowledge and skills normally required to carry out entry-level tasks of a specific occupation or cluster of occupations; and | no match |
| 10.1.5.4 | Students develop work maturity skills, including those skills needed to obtain and retain a job.* | no match |
| 10.1.6 | Students with handicaps develop positive behaviors and attitudes including: | D, G |
| 10.1.6.1 | Positive self-concepts,* | G2a |
| 10.1.6.2 | Positive attitudes toward others,* | G3a, G4 |
| 10.1.6.3 | Productive work and study habits, and | F |
| 10.1.6.4 | Effective social skills. | G |
| 10.1.7 | Students with handicaps develop and express creative interests and talents. | no match |
| 10.1.8 | Students with handicaps develop self-help and independent living skills in such areas as:* | D3 |
| 10.1.8.1 | Applying problem-solving and decision-making skills;* | F2a |
| 10.1.8.2 | Communicating needs and feelings effectively; | F1a, G1b |
| 10.1.8.3 | Knowing about essential aids and equipment and how to acquire them; | B1 |
| 10.1.8.4 | Knowing about benefit programs and financial assistance opportunities and how to acquire them; | B1e |
| 10.1.8.5 | Understanding affirmative action, fair employment, and other anti-discrimination guarantees that affect them; | B1 |
| 10.1.8.6 | Advocating for legal, personal or consumer rights; | B1, D3d |
| 10.1.8.7 | Negotiating confidently with agencies or individuals to acquire essential benefits and services; | B1, B1e |
| 10.1.8.8 | Understanding how earned and unearned income affects benefits eligibility; | B1e |
| 10.1.8.9 | Knowing about and understanding how to acquire personal care assistance to live independently,* | B1d, B1e |
| 10.1.8.10 | Knowing about housing options and understanding how to acquire them; | B1e |
| 10.1.8.11 | Applying the principles of accessibility to homes; | B1a |
| 10.1.8.12 | Knowing about transportation options and how to acquire/use them; and | B1a |
| 10.1.8.13 | Being comfortable in social situations and using leisure time productively. | G4 |
| 10.2 | STAKEHOLDERS SATISFACTION | |
| 10.2.1 | Student Satisfaction | |
| 10.2.1.1 | Students with handicaps are satisfied with the educational services they have received and feel that the special education, regular education, and vocational education programs have met their needs.* | H1b |
| 10.2.1.2 | Students with handicaps are satisfied with their progress in school. | H1a |
| 10.2.1.3 | Students with handicaps are satisfied with the way they have been treated in school by faculty, staff, and other students and with their level of integration with nonhandicapped peers. | H1b |
| 10.2.2 | Parents | |
| 10.2.2.1 | Parents of children with handicaps are satisfied with:* | H2 |
| 10.2.2.1.1 | The special education program, procedures, and services provided for their children and with their children's progress; | H2a, H2b |
| 10.2.2.1.2 | Their level of participation and involvement; | H2 |
| 10.2.2.1.3 | The way their child is treated at school by faculty, staff, and other students; and | H2b |
| 10.2.2.1.4 | Their child's integration with nonhandicapped students. | H2b |
| 10.2.3 | School Staff Satisfaction | |
| 10.2.3.1 | Staff members express a sense of challenge and satisfaction in their professional | H3 |

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| 10.2.3.2 | roles and feel they make a difference as a result of involvement in decision-making. Staff are satisfied with the inclusion of students with handicaps within the regular education programs and have positive attitudes toward special education. | H3b |
| 10.2.3.3 | Staff are satisfied with the special education program and services in such areas as policies and procedures, instructional delivery and results, and in-service training. | H3b |
| 10.2.4 | <u>Employers' Satisfaction</u> | |
| 10.2.4.1 | Employers express willingness to employ students/graduates with handicaps and are satisfied with the performance of these students and graduates.* | H3a |
| 10.2.5 | <u>School Board and Community</u> | |
| 10.2.5.1 | The school board indicates support for the special education program through the allocation of necessary resources. | no match |
| 10.2.5.2 | Students with handicaps are viewed positively and treated well in the community.* | no match |
| 10.2.5.3 | Parent and nonparent taxpayers indicate satisfaction with, and demonstrate support for, the special education program. | H2b, H3b |
| 10.2.5.4 | Community leaders and business persons indicate support for the special education program through donations or contributions, employment of graduates, and support of special activities. | no match |
| LANGUAGE ARTS | | |
| 1. | Use language, both oral and written, while working with others to learn and solve problems. | F1a, F2a, F3c, G4b |
| 1.1 | Use resources for acquiring information and conducting research of personal significance. | F4, F4a |
| 1.2 | Reflect on and discuss new ideas. | A2a, F1, F4a |
| 1.3 | Initiate and participate in conversations and discussions. | A2a, F4a, F4b |
| 1.4 | Participate in literary and dramatic activities. | F4b |
| 1.5 | Read many works by a "favorite" author. | F3b, F4b |
| 1.6 | Improve writing based on peer and teacher response. | F3c, F4a |
| 2. | Communicate clearly using oral language and listen effectively. | F1, F1a, F4a |
| 2.1 | Summarize ideas and acknowledge different points of view. | F1, F4a |
| 2.2 | Give accurate information. | F1a, F4a |
| 2.3 | Paraphrase what others have said. | F1a, F4a |
| 2.4 | Participate regularly in formal and informal speaking situations. | A2, F1, F4a |
| 3. | Read for understanding. | F3b |
| 3.1 | Make connections to prior reading. | F4a |
| 3.2 | Critically examine reading materials. | F2a, F3b, F4a |
| 3.3 | Follow directions on forms and products. | F3v, F4a |
| 3.4 | Comprehend magazines and newspapers. | F3b, F4a |
| 3.5 | Comprehend a broad variety of literature including adolescent novels. | F3b, F4a |
| 3.6 | Read for uninterrupted periods of time. | F3b, F4a |
| 3.7 | Comprehend electronic media such as computer text. | F3b, F4a, F5a |
| 4. | Select and use appropriate strategies for writing. | F3c, F4a |
| 4.1 | Revise content as appropriate for audience and purpose. | F3c, F4a |
| 4.2 | Edit and proofread for usage, mechanics, and spelling. | F3c, F4a |
| 4.3 | Use dictionaries and handbooks for revising and editing. | F3c, F4a |
| 4.4 | Use the prewriting process (prewriting, drafting, peer sharing, revising, and editing) to produce final products. | F3c, F4a |
| 4.5 | Produce final products that communicate effectively with readers and follow accepted conventions (grammar, usage, mechanics) of written language. | F1, F3c, F4a |

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| 4.6 | Write for different purposes and audiences to produce: personal and informational essays; reflective pieces; business letters; simple directions and completed business forms. | F3c, F4a |
| 4.7 | Synthesize information from at least one source. | F3c, F4a |
| 5. | Use prior knowledge and content area information to reason, apply concepts, and make critical judgements. | F2a, F4a |
| 5.1 | Distinguish between fictional and nonfictional accounts. | F3b, F4a, F4b |
| 5.2 | Identify author's/writer's purpose and perspective. | F3b, F4a |
| 5.3 | Distinguish between relevant and irrelevant information. | F3b, F4a |
| 5.4 | Compare and contrast. | F2a, F3b, F4a |
| 5.5 | Discuss relationships between form and content. | F1, F4a |
| 5.6 | Discuss relationships between literary works and other art forms. | F4b |
| 5.7 | Identify features of common literary genres. | F4b |
| 5.8 | Understand the functions of common literary conventions. | F4b |
| MATHEMATICS | | |
| 1. | Develop strategies for solving problems through translating data into mathematical language. | F2a, F3a |
| 1.1 | Continue to solve problems by strategies, such as making a list, drawing a picture, and looking for a pattern. | F2a, F3a |
| 1.2 | Solve problems that require interpreting a diagram or drawing, using logical reasoning, and using guess and check. | F2a, F3a |
| 1.3 | Solve a simpler problem to suggest a solution to a more complex one. | F2a, F3a |
| 1.4 | Solve word problems involving application of percent, such as interest, discount, sales tax, etc. Solve word problems involving application of ratio and proportion. | F2a, F3a |
| 1.5 | Solve problems involving two or more operations. | F2a, F3a |
| 1.6 | Explain the thought process in solving routine and non-routine problems. | F1, F2a, F3a |
| 2. | Develop and practice effective communication using the language of mathematics. | F1, F3a |
| 2.1 | Explain the thought process in writing or orally when given a problem-solving situation. | F1a, F2a, F3a, F3c |
| 2.2 | Explain and justify the solution to a given problem in a variety of settings such as cooperative learning. | F1a, F3a, G4b |
| 2.3 | Make and validate conjectures about possible relationships. | F2a, F3a |
| 3. | Develop reasoning skills and apply them to problem-solving situations. | F2a, F3a |
| 3.1 | Given a three-dimensional model or pictorial representation, identify the object from a different view. | F2a, F3a |
| 3.2 | Given a pictorial representation of a three-dimensional object, reproduce the object using appropriate manipulatives. | F2a, F3a |
| 3.3 | Given a problem-solving situation involving three-dimensional space, draw an appropriate diagram to aid in the solution of the problem. | F2a, F3a |
| 3.4 | Given a problem-solving situation, identify one or more strategies for solving the problem. | F2a, F3a |
| 4. | Recognize and make connections. | F2a, F3a |
| 4.1 | Recognize relationships and patterns within the set of rational numbers. | F2a, F3a |
| 4.2 | Recognize that mathematical topics, such as measurement, statistics, and problem-solving have implications fro social studies, science, home economics, and other disciplines. | F2a, F3a |
| 4.3 | Investigate and recognize the role of mathematics in our society. | F2a, F3a |
| 4.4 | Use geometric concepts and terminology, such as similarity, to describe phenomenon in nature, art, and other events. | F2a, F3a |
| 5. | Reinforce an understanding of the place-value system for whole numbers and decimals. | F3a |
| 5.1 | Express a whole number in exponential form. | F3a |

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| 5.2 Order a set of whole numbers and decimals sequentially. | F3a |
| 5.3 Determine the equivalent of a fraction and conversely given a set of whole numbers and fractions. | F3a |
| 6. Reinforce an understanding of fractions, and develop an understanding of percent, integers, and irrationals. | F3a |
| 6.1 Determine the prime factorization of a whole number less than 100. | F3a |
| 6.2 Express a fraction as a decimal. | F3a |
| 6.3 Explore the relationships between fractions, decimals, and percents. | F3a |
| 7. Develop computational proficiency within the set of real numbers. | F3a |
| 7.1 Given a problem involving adding, subtracting, multiplying, or dividing two fractions with like or unlike denominators, solve the problem with or without regrouping. | F3a |
| 7.2 Use estimation to predict the results of a problem involving the four fundamental operations. | F3a |
| 8. Develop estimating skills with whole numbers, fractions, and decimals with application to measurement, geometry, and problem-solving. | F2a, F3a |
| 8.1 Estimate the results of a problem involving the four operations of whole numbers. | F2a, F3a |
| 8.2 Estimate the sum or difference of a problem involving addition or subtraction of decimals and fractions. | F2a, F3a |
| 8.3 Given a problem-solving situation, make an appropriate estimate relating size, quantity, temperature, capacity, and passage of time. | F2a, F3a |
| 9. Develop an understanding of geometric terms and concepts and apply those concepts in problem-solving activities. | F2a, F3a |
| 9.1 Identify the properties of a plane or solid figure. | F3a |
| 9.2 Given a set of plane figures and their attributes, identify those that are similar. | F3a |
| 10. Develop measurement skills using customary and/or metric units. | F3a |
| 10.1 Given a plane figure and a ruler, measure a line segment of that figure. | F3a |
| 10.2 Given a plane figure and a protractor, measure an interior angle of that figure. | F3a |
| 10.3 Given a plane figure, determine its perimeter and /or circumference and apply the concepts to problem-solving situations. | F2a, F3a |
| 10.4 Given a polygon, determine its area and apply the concepts to problem-solving situations. | F2a, F3a |
| 11. Collect, organize, analyze, and interpret data through the use of fundamental analysis procedures and communicate appropriate conclusions. | F1, F2a, F3a |
| 11.1 Given a bar, line, or picture graph, interpret and analyze the data. | F2a, F3a |
| 11.2 Choose an appropriate scale and construct a graph or diagram using a set of numerical data. | F3a |
| 11.3 Given a problem situation, collect, organize, and present the numerical data in a variety of forms. | F3a |
| 11.4 Given a set of data containing 3-digit numbers, present this data in a stem-and-leaf or box-and-whisker plot. | F3a |
| 11.5 Identify the appropriate graph for a given set of data. | F3a |
| 11.6 Given a set of data, find the measures of central tendency (mean, median, mode). | F3a |
| 11.7 Given a set of numerical data, determine the ordered pairs and make a scatter plot. | F3a |
| 11.8 Make appropriate inferences and predictions based on analysis of a given set of data. | F2a, F3a |
| 12. Develop an understanding of the basic concepts of probability and an ability to apply these concepts to making appropriate predictions. | F3a |
| 12.1 Determine the number arrangements of several objects by using the Basic Counting Principle or by using a diagram. | F3a |
| 12.2 Find the number of permutations of three objects. | F3a |
| 12.3 Find the number of combinations of three objects. | F3a |

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| 13. Develop an understanding of ratios, proportions, and percents with applications to problem-solving. | F2a, F3a |
| 13.1 Use proportions to solve problems. | F2a, F3a |
| 13.2 Solve real life problems involving discount, tax, interest, markup, and/or statistics using the concept of percent. | F2a, F3a |
| 14. Develop explorations of algebraic concepts and processes. | F3a |
| 14.1 Given an equation, determine the value of the variable. | F3a |
| 14.2 Plot points on an x/y axis. | F3a |
| 14.2 Given a problem, write an equation and find its solution. | F3a |
| 15. Develop and reinforce appropriate skills in the use of calculators and computers in problem-solving situations. | F2a, F3a, F5a |
| 15.1 Use the calculator to solve word problems involving whole numbers and decimals. | F2a, F3a, F5a |
| 15.2 Use the calculator to explore patterns and relationships among whole numbers and decimals and rational numbers. | F2a, F3a, F5a |
| 15.3 Use the computer to explore number relationships and geometrical relationships. | F2a, F3a, F5a |
| 15.4 Use the computer as a tool to analyze and represent data and to solve problems. | F2a, F3a, F5a |

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Documents Utilized

- Kansas Curricular Standards for Communication* (September, 1993)
Kansas Mathematics Curriculum Standards (revised July, 1993)
Kansas Curricular Standards for Science (March, 1993; reprinted, February, 1994)

Background

In 1991, the legislature mandated state assessments based on what students should know and be able to do. The first draft of the math standards was completed in 1990 and has been revised several times since then; standards in other subjects were completed initially in 1993 and are now being revised. Each subject has a different age grouping. For example, the math standards describe student learning for grades K-4, 5-8, and 9-12. Districts are not required to adopt the curriculum standards; however, the standards form the basis for the state's testing system.

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| CURRICULAR STANDARDS FOR SCIENCE | NCEO CODE |
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| <p>Student Outcome 1 All students will demonstrate in academic and applied situations a high level of mastery of essential skills as evidenced by the following standards:</p> <p>A. Read and comprehend a variety of resources. B. Communicate clearly, both orally and in writing, for a variety of purposes and audiences. C. Use mathematics and mathematical principles. D. Access and use information.</p> | <p>F3b F1a, F3c F3a F4</p> |
| <p>Student Outcome 2 All Students will demonstrate effective communication skills as evidenced by the following standards:</p> <p>A. Analyze, summarize, and comprehend what is read in all subject areas. B. Write and orally communicate for:</p> <ol style="list-style-type: none"> 1. clear articulation, 2. analysis, 3. conceptualization, 4. synthesis, and 5. summarization of information. | <p>F3b F1a, F2a, F3b</p> |
| <p>Student Outcome 3 All students will demonstrate complex thinking skills academic and applied situations as evidenced by the following standards:</p> <p>A. Apply problem-solving skills. B. Find information; process, analyze, and synthesize it; and apply it to new situations. C. Use creative, imaginative, and divergent thinking to formulate and solve problems, and to communicate the results.</p> | <p>F2a F2a, F4 F2a, F4</p> |
| <p>Student Outcome 4 All students will demonstrate the necessary characteristics to work effectively both independently and in groups as evidenced by the following standards:</p> <p>A. Work collaboratively in teams. B. Work together without prejudice, bias, or discrimination, using techniques to separate people from problems, focusing on interests not positions, inventing options for mutual gain, and using objective criteria.</p> | <p>G4b G3b, G4b</p> |

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| <p>Student Outcome 5 All students will demonstrate physical and emotional well-being as evidenced by the following standard:</p> <p>A. Have the knowledge, skills, and behaviors essential to live a healthy and productive life.</p> | C1, E |
| <p>THE NATURE OF SCIENCE</p> | |
| <p>THE LEARNER (GRADE 8):</p> | |
| <p>1. Applies problem solving skills. Integrates science process skill in problem solving. Evaluates the strengths and weaknesses of claims, arguments or data. Generates scientific questions based upon observations. Designs and conducts simple investigations. Identifies and controls variables in experimentation. Uses appropriate technology as a tool in problem solving. Interprets the results of experimentation using statistical reasoning. Uses appropriate technology as a tool in problem solving.</p> | <p>F2a, F4a F2a, F4a F2a, F4a F4a F4a F4a F4a F4a, F5a F3a, F4a F2a, F4a, F5a</p> |
| <p>2. Solves Problems Cooperatively. Participates in a science investigation team to resolve a student- and/or teacher-facilitated problem. Expresses support and acceptance toward group members. Performs and articulates selected group roles and responsibilities. Identifies effective behaviors that contribute to successful group productivity.</p> | <p>F2a, G4b A2a, F2a, G4b G3a D1a, E1a F4</p> |
| <p>3. Expresses Creativity in Problem Solving. Designs and performs a controlled experiments to test and assigned problem.</p> | <p>F2a F4a</p> |
| <p>4. Applies Problem-Solving Skills to Authentic, Community Based Issues. Conducts research using community resources.</p> | <p>F2a, F4a F4a</p> |
| <p>5. Demonstrates and Values and Inquiring Attitude (as evidenced by curiosity, openness to new ideas, respect for reason, and a reliance on data, facts and observations, etc.). Considers alternative points of view. Asks questions at a variety of levels (recall, comprehension, application, analysis, synthesis, and evaluation). Seeks evidence for conclusions. Applies processes of science in personal decision-making.</p> | <p>F4a F2a F1a, F4a F2a, F4a F4a</p> |
| <p>6. Exhibits Safe and Proper Techniques for Using Instruments and Materials of Science. Uses simple measuring devices to make metric measurements. Demonstrates laboratory safety.</p> | <p>C1a, F4a F4a C1a, F4a</p> |
| <p>THE MEANING OF SCIENCE COMMUNICATED (Receiving, interpreting, and giving information that has meaning).</p> | |
| <p>THE LEARNER (GRADE 8):</p> | |
| <p>1. Receives and interprets meaning from information or observed phenomena. Describes an object, event, process, procedure, or phenomenon using scientific terms. Demonstrates the ability to follow written and oral directions. Uses research skills in locating information from printed and electronic media and empirical observations.</p> | <p>F2a, F4a F1, F4a F1, F4 F4</p> |
| <p>2. Communicates meaning to others using oral language, written language, mathematics, symbols, tables, graphs, visual aids, and technology.</p> | <p>F1a, F3a, F3c, F4a, F5a</p> |

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| <p>Communicates scientific understandings using oral language, written language, mathematics, symbols, tables, graphs, visual aids, and/or technology. Organizes and presents information and data in ways that others can understand it. Describes an experimental process or procedure so that it can be replicated by others.</p> | <p>F1a, F3a, F3c, F4a, F5a F1 F1, F4a</p> |
| <p>THE INTEGRATION OF SCIENCE (All the fields of science are interrelated with each other and with other disciplines. Themes are the conceptual organizations of accumulated knowledge within science disciplines.)</p> | <p>F4a</p> |
| <p>THE LEARNER (GRADE 8):</p> | |
| <p>1. Explains and interprets theories and concepts in the life, earth and physical sciences using unifying themes, including, but not limited to Energy/Matter, Patterns of Change, Systems and Interactions, Patterns of Stability and equilibrium, and Models.</p> | <p>F4a</p> |
| <p><u>Systems and Interactions</u> Analyzes and connects systems and their interactions in the natural world.</p> | <p>F2a, F4a</p> |
| <p><u>Energy and Matter</u> Understands that forms and interactions of matter and energy determine the nature of the environment.</p> | <p>F4a</p> |
| <p><u>Patterns of Change (Trends, cycles, chaos)</u> Identifies patterns of change in the natural an technological world as trends, cycles, or chaos.</p> | <p>F4a</p> |
| <p><u>Stability (Equilibrium, conservation, symmetry)</u> Cites examples from the natural world of equilibrium. Explains how matter and energy are conserved in natural phenomena. Show examples of how upset equilibrium's can return.</p> | <p>F4a F4a F4a</p> |
| <p><u>Model (physical, conceptual, and mathematical)</u> Describes the use of models in the workings of technology. Represents phenomena with physical, conceptual, and mathematical models. Explains rationale for using models.</p> | <p>F4a F4a F4a</p> |
| <p>THE RELATIONSHIP OF SOCIAL, TECHNOLOGICAL, AND SCIENTIFIC ISSUES (Science and Technology have complex interrelationships with social and physical environments.)</p> | |
| <p>THE LEARNER (GRADE 8):</p> | |
| <p>1. Applies reasoned decision-making skills to issues of personal and public concern. Explains how science, mathematics and technology apply in real world situations. Makes decisions related to personal health, nutrition and lifestyle based on knowledge of scientific concepts. Understand that science and technology can affect individual lifestyles. Recognizes science as a key component of many careers.</p> | <p>F2a, F4a F3a, F4a C1, C1a, F4a F4a F4a</p> |
| <p>2. Analyzes how science and technology change our social and physical environment. Invents a device to solve problems or meet specific needs. Discusses the historical development of key scientific concepts and principles. Recognizes the contributions made in science by people of different cultures, gender, and ethnic backgrounds. Understands that the developments of science and technology affect the condition of life. Analyzes how imagination and society's needs influence scientific and technological advancements.</p> | <p>F2a, F4a F4a F4a F4a</p> |
| <p>3. Evaluates the interrelationships between the beliefs of societies and the way in which science and technology are applied. Explains interrelationships between research, technology, and society's responses. Analyzes the ecological impact humans have on the equilibrium of the biosphere.</p> | <p>F4a F4a F4a</p> |

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| Evaluates issues that relate to ecological responsibility. | F4a |
| CURRICULAR STANDARDS FOR COMMUNICATIONS | |
| COMMUNICATIONS DEVELOPMENT PROGRAM ESSENTIAL OUTCOMES AND BENCHMARKS | |
| <p>1. Learners will speak and write for a variety of audiences and purposes and listen and read for a variety of purposes. To communicate effectively, students must have clear purpose, the strategies and skills to accomplish that purpose, and they must know with whom they are communicating.</p> | F1, F1a, F3c |
| ESSENTIAL COMMUNICATION BENCHMARKS: MIDDLE SCHOOL | |
| The Learners Will: | |
| A. prepare writing and speaking for the world outside their classroom. | F1a, F3c |
| B. describe their attitudes toward what they are reading and writing and the effect these attitudes have on their purpose. | F3b, F3c, F4 |
| C. demonstrate control over such features of writing as ideas that are well developed, clear, and interesting; an authentic and appropriate voice; organization that helps the reader; effective word choice; clear and fluent sentences; conventions (spelling, capitalization, punctuation, usage), and clear handwriting and appropriate punctuation. | F3c |
| D. demonstrate control over such features of speaking as audience analysis, message construction (using the features mentioned in item C above), and delivery. | F1a |
| E. discover and demonstrate their own best reading and writing processes as they generate, arrange, select, evaluate, and revise their ideas. | F3b, F3c |
| F. identify the purpose of the writer's or speaker's message and reflect upon how that purpose affects the learner and/or the audience. | F1, F2a, F3b |
| G. demonstrate their understanding that reading is not a set of steps, but rather a process that varies with material to be read, the reader's purpose, and other factors unique to the individual reader. | F3b |
| 2. The learners will use language to construct meaning of their own and to understand the meaning of other people. Students use language to make connections among school subjects and between school subjects and their own experiences. Through this process, students see a larger picture and arrive at increased clarity, order, and subtlety of understanding. | F3b |
| ESSENTIAL COMMUNICATION BENCHMARKS: MIDDLE SCHOOL | |
| The Learners Will: | |
| A. apply past experiences and prior knowledge in order understand better new information and experience. | F4 |
| B. describe logical, ethical, and emotional appeals. | F2a, F4 |
| C. describe how some propaganda techniques attempt to influence them. | F2a, F4 |
| D. distinguish between deductive and inductive reasoning and use logical reasoning in their reading, writing, listening, and speaking. | F1, F1a, F3b |
| E. explain how the language we use can limit or advance our thinking. | F4a |
| F. demonstrate their understanding that all people do not arrive at the same meanings, that our experience influences the meaning we come to, and that meaning is influence by culture, race, gender, and socioeconomic status. | F4a |
| G. use reading, writing and oral language s tools for learning, both in the classroom and in the public world. | F1, F3b, F3c |
| 3. Learners will demonstrate an understanding of the development nature of language. Some basic theoretical knowledge should help students understand why communication succeeds and fails and how to ensure frequent success. | F4a |

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| <p>ESSENTIAL COMMUNICATION BENCHMARKS: MIDDLE SCHOOL The Learners Will:</p> <ul style="list-style-type: none"> A. demonstrate their understanding that the ability to learn language is innate and that learners' language is influenced by their environment. B. demonstrate their understanding of the importance to children's language development of reading and talking to young children in order to fulfill the learners' responsibilities as role models. C. demonstrates an understanding that language is symbolic, arbitrary, and systematic. D. demonstrate an understanding of how language changes. F. demonstrate an understanding that grammar is an attempt to describe a language. G. demonstrate an understanding of the communication process by interpreting, analyzing, and improving faulty communication. <p>4. Learners will recognize that in a multicultural society there will be numerous languages and dialects, and they will accord each language and dialect equal status as a social expression of human experience.</p> <p>No language or dialect is linguistically superior to another, just as no culture is inherently superior to another culture. Unfortunately, many people are restricted from favored social status or improved economic advantages because their language or dialect is considered inferior.</p> <p>American students need to honor diversity in language as part of honoring diverse cultures; especially compelling is the need to honor the dialects and cultures that are within our own borders. At the same time, students must recognize the importance of appropriate levels of usage. In practice, such recognition involves the selection of the speaker's or writer's social dialect most appropriate to audience and purpose. In this sense, "standard" English represents a dialect that should be common to all rather than a label of favored social status. Nonstandard dialects, including attempts by foreigners to speak English, are not corruptions of standard English but rather communication which uses rule systems not shared by standard English.</p> | <p>F4a F4a F4a F4a F1, F2a, F4a F4a, G3b</p> |
| <p>ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY, MIDDLE AND ELEMENTARY SCHOOL</p> <ul style="list-style-type: none"> A. demonstrate control of standard American English. B. demonstrate in their speaking and writing that they value their own language and dialect. C. demonstrate and understanding that no language or dialect is superior to another. D. demonstrate an understanding of why some languages and dialects are misjudged as superior to others. E. demonstrate an understanding that to meet their purpose, writers and speakers will choose form among dialects they speak, and they will choose a degree of formality or informality. F. demonstrate a familiarity with the literature of diverse cultures and with the work of both men and women speakers and writers. <p>5. Learners will enhance their creative and critical thinking by developing and describing their own standards for aesthetic and critical evaluation.</p> | <p>F1, F4a F1a, F3b G3b F4a, G3b F4a F4b F2a, F4b</p> |
| <p>In addition to developing technical proficiency in the receptive and productive aspects of oral and written language, students need to develop their own unique standards for appreciating and critiquing human expression. The development of personal standards extends the resources of the entire language community.</p> <p>ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY AND MIDDLE SCHOOL The Learners Will:</p> <ul style="list-style-type: none"> A. create and critique their own criteria for assessing written and oral expression responsive to author purpose and audience need. | <p>F1, F2a, F4</p> |

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| B. demonstrate an understanding that personal and varied interpretation is part of the richness of any art. | F4b |
| C. interpret and evaluate literary and dramatic activities and works with openmindedness, curiosity, and a willingness to ask questions. | F2a, F4b |
| 6. Learners will use a variety of print, non-print, and technological resources to find information for critical and creative thinking. | F2a, F5a |
| Creative and critical thinking require access to information. | |
| ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY, MIDDLE AND ELEMENTARY SCHOOL | |
| The Learners Will: | |
| A. create written and spoken work with information from a variety of technologies in schools, libraries and communities. | F1a, F3b, F5a |
| B. select the technologies appropriate for the ways they learn best. | F5a |
| C. demonstrate that they can create work of their own with the help of information from others. | D3e |
| 7. Learners will demonstrate the interpersonal and group communication skills necessary to work with others. | F1, G4b |
| Though we frequently think of ourselves as a nation of individuals, cooperation and teamwork have always been important to us and will continue to be important. | |
| ESSENTIAL COMMUNICATION BENCHMARKS: SECONDARY AND MIDDLE SCHOOL | |
| The Learners Will: | |
| A. function effectively in a variety of roles within formal and informal groups. | D1a, G4b |
| B. seek accurate information about topics under discussion and communicate a point of view honestly. | E |
| C. refine and describe their understanding of the right of free speech. | E |
| D. demonstrate a systematic approach to solving problems in a variety of situations. | F2a |
| E. resolve conflict through negotiation and compromise. | G4c |
| F. analyze and respect differences in attitude, behavior, values, and beliefs. | G3a, G3b |
| G. identify, reflect upon, critically evaluate, and adjust appropriately the means they use to communicate strong feelings. | F2a, G1b |
| H. accept criticism, disagreement, disappointment, and compliments appropriately. | G1 |
| I. avoid interfering in the communication of others. | G3a |
| K. demonstrate sensitivity to those with physiological communication difficulties, such as difficulties with hearing, articulation, vision, and language. | G3b |
| L. demonstrate sensitivity to those with clinical speech apprehension. | G3b |
| CURRICULAR STANDARDS FOR SOCIAL STUDIES, K-8 | |
| Program Outcome 1: Students will use appropriate concepts, processes, and tools from a variety of disciplines in thinking critically and creatively about knowledge. | F2a, F4 |
| Student Outcome 1a: Students will demonstrate in depth use of a range of disciplines to acquire, organize, reorganize, generate, and apply knowledge. | F4 |
| By The 8th Grade Level, Students Individually And Collaboratively Will: | |
| <u>Benchmarks</u> | |
| Use tools, skills, terminology, and concepts from the social sciences, the humanities, the natural sciences, and mathematics | |

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| <p>in finding information on a topic, and issue, or a situation, in arranging information in usable formats, in analyzing, evaluating, and making connections in information, in synthesizing, imagining, and elaborating on information, in achieving a goal or producing a decision or solution, and in creating written, spoken, and symbolic products to present the results of an investigation.</p> | <p>F4 F4 F2a, F4 F2a, F4 F4 F1a, F3c, F4</p> |
| <p><u>Indicators</u> Use a variety of techniques and resources in acquiring information (e.g., reading, listening, interviews, observations, maps, atlases, graphs, charts, photographs, documents, artifacts, computer data bases).</p> | <p>F1, F3b, F4, F5a</p> |
| <p>Use a variety of representations and patterns in organizing information (e.g., models, symbols, graphics, descriptions, sequences, problems/solutions, concepts/characteristics/examples).</p> | <p>F4</p> |
| <p>Use a variety of reasoning strategies in translating issues and situations, processing information, and communicating conclusions (e.g., analyzing, connecting, evaluating, synthesizing, imagining, elaborating, problem solving, designing, decision making).</p> | <p>F1, F2a, F4</p> |
| <p>Use a variety of tools and methods in communicating results of investigations (e.g., oral and written reports, videotapes, small group and classroom discussions, debates, maps, graphs, tables, flowcharts, collages, stories, plays, outlines, songs, paintings, pictures).</p> | <p>F4</p> |
| <p>By The 8th Grade Level, Students Individually And Collaboratively Will:</p> | |
| <p><u>Benchmarks</u></p> | |
| <p>Analyze and make judgements about the ways in which societies organize for producing and distributing goods and services.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the ways in which societies organize for governing and maintaining order.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the ways in which societies organize human groups.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the influence of culture and cultural diversity.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the influence of time, continuity, and change.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the influence of space and place.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the influence of scarcity.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the influence of interdependence.</p> | <p>F2a, F4a</p> |
| <p>Analyze and make judgements about the influence of science and technology.</p> | <p>F2a, F4a</p> |
| <p>Give examples of and reason for economic, legal, political, and social conditions and motivations which contribute to cooperation, competition, and conflict among societies.</p> | <p>F4a</p> |
| <p>Analyze and make judgements about the ways in which different societies address recurring problems.</p> | <p>F2a, F4a</p> |
| <p><u>Indicators:</u></p> | |
| <p>Use the following perspectives interpreting issues and problems:</p> | |
| <p>Economic (i.e., a perspective which focuses on questions concerning production, distribution, and consumption of goods and service within and among a economic systems. Concepts such as scarcity, opportunity cost, trade-off, and productivity serve as organizers around which questioning occurs in this perspective).</p> | <p>F4a</p> |
| <p>Environmental (i.e., a perspective which focuses interdependent relationships among the life forms, ecosystems, and human societies of the Earth. Concepts such as system, interaction, adaptation/modification, and change serve as organizers around which questioning occurs in this perspective).</p> | <p>F4a</p> |
| <p>Historical (i.e., a perspective which focuses on questions concerning ways people view themselves in and over time. Concepts such as time, causation, change/continuity, and conflict serve as organizers around which questioning occurs in this perspective).</p> | <p>F4a</p> |

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| <i>Spatial</i> (i.e., a perspective which focuses on questions concerning location and place of Earth's physical and human features. Concepts such as pattern, distance, connection, and interaction serve as organizer around which questioning occurs in this perspective). | F4a |
| <i>Civic</i> (i.e., a perspective which focuses on questions concerning ways people exercise rights, privileges, and obligations of citizenship. Concepts such as system, authority, power, and justice serve as organizers around which questioning occurs in this perspective). | F4a |
| <i>Cultural</i> (i.e., a perspective which focuses on questions concerning ways groups of people live. Concepts such as group, institution, community, and culture, serve as organizers around which questioning occurs in this perspective). | F4a |
| <i>Age</i> (i.e., a perspective which focuses on questions concerning ways societies link expectations of people to age. Concepts such as culture, norm, status, and law serve as organizers around which questioning occurs in this perspective). | F4a |
| <i>Gender</i> (i.e., a perspective which focuses on questions concerning ways societies influence and shape gender roles. Concepts such as culture, role, status, and socialization serve as organizers around which questioning occurs in this perspective). | F4a |
| By The 8th Grade Level, Students Individually And Collaboratively Will: | |
| <u>Benchmarks</u> | |
| Design, evaluate, and put in action strategies for addressing question at issues and problems to be solved in life-role situations such as learner, citizen, worker/producer, consumer, investor, friend, member of social groups, and family member. | F2a, F4a |
| Formulate, evaluate, and defend strategies for resolving conflicts which persist within and across societies. | F2a, F4a |
| <u>Indicators</u> | |
| <i>Evaluate, take, and defend positions</i> (e.g., envision the "ideal" setting or circumstances; describe the present situation; construct, evaluate, and implement a plan of action to move form the present circumstance to the more ideal one; and evaluate the status of both the present an ideal conditions over time and make adjustments in the plan of action as necessary). | F2a, F4a |
| <i>Research issues and problems</i> (e.g., question resource persons making presentations in the classroom; participate in classroom activities such as simulations of hearings, board meetings, and lobbying; interview community members involved in social and political actions; observe board hearings and, if appropriate, make presentations). | F4, F4a |
| <i>Monitor public policy making</i> (e.g., track a issue or problem in the news media, gather information form interest groups and political parties, interview public officials, observe how policy is carried out in public settings through classroom visits to local sites such as courts, hospitals, city halls). | F4a |
| <i>Influence public policy making</i> (e.g., take part in classroom activities such as simulations of hearings, consensus and coalition building, and lobbying and presentations of positions on issues and problems to school and community members). | E3a |
| Use the following perspectives in interpreting issues and problems and in creating strategies for personal and public policies and actions: (indicators 8-k, outcome 2b, continued) | |
| <i>Economic</i> (i.e., a perspective which focuses on questions concerning production, distribution, and consumption of goods and service within and among economic systems. Concepts such as scarcity, opportunity cost, trade-off, and productivity serve as organizers | F4a |

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| around which questioning occurs in this perspective). | |
| Environmental (i.e., a perspective which focuses interdependent relationships among the life forms, ecosystems, and human societies of the Earth. Concepts such as system, interaction, adaptation/ modification, and change serve as organizers around which questioning occurs in this perspective). | F4a |
| Historical (i.e., a perspective which focuses on questions concerning ways people view themselves in and over time. concepts such as time, causation, change/continuity, and conflict serve as organizers around which questioning occurs in this perspective). | F4a |
| Spatial (i.e., a perspective which focuses on questions concerning location and place of Earth's physical and human features. Concepts such as pattern, distance, connection, and interaction serve as organizers around which questioning occurs in this perspective). | F4a |
| Civic (i.e., a perspective which focuses on questions concerning ways people exercise rights, privileges, and obligations of citizenship. concepts such as system, authority, power, and justice serve as organizers around which questioning occurs in this perspective). | F4a |
| Cultural (i.e., a perspective which focuses on questions concerning ways groups of people live. Concepts such as group, institution, community, and culture, serve as organizers around which questioning occurs in this perspective). | F4a |
| Age (i.e., a perspective which focuses on questions concerning ways societies link expectations of people to age. Concepts such as culture, norm, status, and law serve as organizers around which questioning occurs in this perspective). | F4a |
| Gender (i.e., a perspective which focuses on questions concerning ways societies influence and shape gender roles. Concepts such as culture, role, status, and socialization serve as organizers around which questioning occurs in this perspective). | F4a |
| Program Outcome 3: Students will develop civic competence and responsibility. | D1a, E, E1a |
| Student Outcome 3a: Students will demonstrate in depth use of civic understandings, skills and dispositions. | D, E, E1a |
| By The 8th Grade Level, Students Individually And Collaboratively Will: | |
| Benchmarks | |
| Evaluate the ways in which the behaviors and skills of individuals influence public problem solving and decision making. | F4a |
| Evaluate the ways in which the relationships among individuals, groups, and institutions influence public problem solving and decision making. | F4a |
| Evaluate the ways in which the ideals, principles, and practices of citizenship in American constitutional democracy influence public problem solving and decision making. | F4a |
| Design, evaluate, and put in action strategies for participation in civic life that involve addressing a real life need, | A2e, D1a, E3c |
| Bringing school and community issues and problems into the classroom for discussion and reflection, | A2e, D1a, E3c |
| Building collaborative relationships within and across the classroom, school, and community, and | A2e, D1a, E3c |
| Developing a tangible product for public view. | A2e, D1a, E3c |
| Indicators | |
| Analyze and make judgements about the utility of the following dispositions or traits of character in facilitating thoughtful and effective participation in problem solving and decision making: | F2a, G4b |
| Civility (i.e., treating others with respect, listening to other points of view, and avoiding hostile, abusive, emotional and illogical arguments), | G3a |
| Respect for law (i.e., abiding by laws, even though one may not be in complete agreement with every law), | E1a |
| Openmindedness (i.e., considering other points of view), | G3 |

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| <i>Critical mindedness</i> (i.e., questioning the validity of various positions, including one's own), | F2a |
| <i>Negotiation and compromise</i> (i.e., coming to agreement with those with whom one may differ), and | G4b, G4c |
| <i>Persistence</i> (i.e., attempting again and again to accomplish a worthwhile goal). | D3e |
| Analyze and make judgements about the ways in which racial, religious, ethnic, geographic, and linguistic diversity influences the problems solving and decision making processes (e.g., conflicts about values, principles, and interest may make agreement on particular issues such as abortion or desegregation difficult or impossible). | F2a, F4a |
| Analyze and make judgements about the ways in which personal, social, religious, and economic relationships and organizations influence problem solving and decision making (e.g., provide opportunities for individuals to associate around common purposes, make it possible for individuals to concentrate their influence on government). | F2a, F4a |
| Analyze and make judgements about the conflicts that exist among the fundamental values and principles of American constitutional democracy (e.g., conflicts between liberty and equality, free speech and privacy, individual rights and the common good). | F2a, F4a |
| Analyze and make judgements about the disparities that exist between the ideals of American constitutional democracy and the realities of American social and political life (e.g., slavery, segregation, equality of opportunity). | F2a, F4a |
| Analyze and make judgements about the utility of the following dispositions or trait of character in facilitating thoughtful and effective participation in problem solving and decision making: | F2a, F4a |
| <i>Individual responsibility</i> (i.e., fulfilling the moral and legal obligations of membership in society), | F2a, F4a |
| <i>Self discipline/self-governance</i> (i.e., adhering voluntarily to self-imposed standards of behavior rather than requiring the imposition of external controls), | F2a, F4a |
| <i>Respect for the rights of individuals</i> (e.g., the right to hold and to advocate diverse ideas, the right to join in associations to advance particular points of view), | F2a, F4a |
| <i>Compassion</i> (i.e., concerning one's self about and attending to the well-being of others), | F2a, F4a |
| <i>Civic mindedness</i> (i.e., concerning one's self about and attending to public affairs), and | F2a, F4a |
| <i>Patriotism</i> (i.e., maintaining loyalty to the values and principles underlying American constitutional democracy). | F2a, F4a |
| Analyze and make judgements about the effects of significant world political, economic, technological, cultural, demographic, and environmental developments on problem solving and decision making in American society (e.g., competing ethnic and religious loyalties, internationalization of capital, computer technology, mass markets, population growth, ozone depletion). | F2a, F4a |
| Analyze and make judgements about the ways in which personal, political, and economic rights influence problem solving and decision making (e.g., personal rights such as freedom of conscience and freedom of association and expression would play significant roles when applied to reducing a discrepancy between reality and American ideals). | F2a, F4a |
| Analyze and make judgements about the relationships among the following individual rights: | F2a, F4a |
| <i>Personal rights</i> (e.g., right to freedom of conscience, right to privacy and personal autonomy), | F2a, F4a |
| <i>Political rights</i> (e.g., right to freedom of speech, right to petition), and | F2a, F4a |
| <i>Economic rights</i> (e.g., right to acquire, use, transfer, and dispose of property). | F2a, F4a |
| Analyze and make judgements about the relationships between the following individual responsibilities: | F2a, F4a |
| <i>Personal responsibilities</i> (e.g., taking care of one's self, supporting one's family, and community) and | F2a, F4a |
| <i>Public responsibilities</i> (e.g., voting, serving as a juror). | F2a, F4a |

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| Analyze and make judgements about the relationships between the following forms of individual participation: | F2a, F4a |
| <i>Political participation</i> (e.g., petitioning political and law enforcement officials for more adequate protection against crime) and | F2a, F4a |
| <i>Social participation</i> (e.g., forming a neighborhood watch for crime). | F2a, F4a |
| MATHEMATICS CURRICULUM STANDARDS | |
| Program Outcome 1: The students uses mathematics to solve problems, understanding that may problems have more than one answer, there are multiple methods of solving problems, and answers may be represented in a variety of forms. | F3a |
| Formulates problems | F3a |
| Applies a variety of strategies to solve problems | F3a |
| Verifies and interprets results | F3a |
| Generalizes solutions | F3a |
| Program Outcome 2: The student uses mathematics to reason and analyze. | F2a, F3a |
| recognizes valid and invalid arguments | |
| Uses inductive reasoning to recognize patterns and form conjectures | F2a, F3a |
| Uses proportional and spatial reasoning to solve problems | F2a, F3a |
| Uses deductive reasoning to verify conclusions, judge the validity of arguments, and construct valid arguments | F2a, F3a |
| Program Outcome 3: The student uses mathematical language to communicate ideas and relate written expressions, oral expression, and mathematical symbols. | F1, F3a, F3c |
| Expresses mathematical ideas by speaking, writing, demonstrating, and depicting them graphically | F1a, F3a, F3c |
| Understands, interprets, and evaluates mathematical ideas that are presented in written, oral, or visual forms | F2a, F3a |
| Uses mathematical vocabulary, notation, and structure to represent ideas, describe relationships, and model situations | F3a |
| Asks clarifying and extending questions relating to problem situations within outside mathematics. | F1a, F3a |
| Program Outcome 4: The student applies mathematical knowledge and understanding of concepts. | F3a |
| Represents the same mathematical concept in different contexts, formats, and problem situations | F3a |
| Uses models, diagrams, and symbols to represent concepts | F3a |
| Identifies and generates examples and nonexamples | F3a |
| Identifies properties and conditions of a given concept | F3a |
| Compares and contrasts mathematical concepts | F2a, F3a |
| Program Outcome 5: The student applies mathematical procedures. | |
| Represents the same mathematical procedure in different contexts, formats, and problem situations | F3a |
| Recognizes and discusses correct and incorrect procedures | F3a |
| Reliably and efficiently executes procedures | F3a |
| Uses one or more methods to verify results | F3a |
| Extends or modifies existing procedures and explores new ones | F3a |
| Program Outcome 6: The student chooses and applies a variety of mathematical methods to investigate, conjecture, and/or verify results. | F3a |
| Determines whether an estimate or exact result is needed | F3a |
| Selects and appropriately uses technology | F3a, F5a |
| Selects and appropriately uses manipulative | F3a |
| Selects and appropriately uses models | F3a |
| Selects and appropriately uses other mathematical methods | F3a |
| Program Outcome 7: the student investigates connections of mathematical ideas and applications. | F3a |

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| Among the mathematical topics; | F3a |
| Among mathematics and other disciplines; and | F3a |
| Among mathematics and real-life problem situations | F3a |
| Program Outcome 8: The student works effectively in a variety of settings to learn mathematics and to solve problems situations within and outside mathematics. | F2a, F3a |
| Independently | F2a, F3a |
| In small discussion groups | F2a, F3a, G4b |
| In large groups | F2a, F3a, G4b |
| In cooperative groups | F2a, F3a, G4b |
| Program Outcome 9: The student demonstrates a positive disposition toward mathematics. | F3a |
| Confidence in using mathematics to solve problems, to communicate ideas, and to reason | F1, F2a, F3a, G2b |
| Flexibility in exploring mathematical ideas and trying alternative methods in solving problems | F2a, F3a, G2b |
| Willingness to persevere in mathematical tasks | D3e, F3a, G2b |
| Interest, curiosity, and inventiveness in doing mathematics | D3e, F3a, G2b |
| Inclination to monitor and reflect on their own thinking and performance | F3a, G2b |
| Valuing the applications of mathematics | F3a, G2b |
| Appreciation of the role of mathematics in a multicultural/multi-ethnic society | F3a, G2b |
| Curriculum Outcome 1: Number Sense and Systems (8th Grade) | |
| The student develops and demonstrates number sense for rational numbers to solve problems situations within and outside of mathematics. | F2a, F3a |
| Determines reasonableness of results | F3a |
| Develops and uses order relations for whole numbers, fractions, decimals, integers, and rational numbers. | F3a |
| Uses multiple representations for the same rational number | F3a |
| Estimates quantities using rational numbers | F3a |
| Curriculum Outcome 2: Number Sense and Systems (8th Grade) | |
| The student recognizes, applies, and explains properties of the rational number system and its operations. | F3a |
| Curriculum Outcome 3: Number Sense and Systems (8th Grade) | |
| The student investigates the history and structure of the rational number system. | F3a |
| Models and explains the relationships among counting numbers, whole numbers, integers, fractions, and rational numbers | F3a |
| Understands and appreciates the need for numbers beyond the whole numbers, simple fractions, mixed numbers, and decimals | F3a |
| Explores irrational numbers such as pi and square roots | F3a |
| Curriculum Outcome 4: Number Sense and Systems (8th Grade) | |
| The student explains, models, and performs operations with simple algebra and the rational number system to solve problems situations within and outside mathematics. | F2a, F3a |
| Selects and uses appropriate rational number estimation and computation | F3a |
| Selects and uses appropriate computational tools | F3a |
| Develops and explains computational procedures and estimation strategies | F3a |
| Uses estimation to check reasonableness of results | F3a |
| Curriculum Outcome 5: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade) | |
| The student recognizes, describes, extends, develops, and explains a wide variety of patterns from problems situations within and outside of mathematics. | F2a, F3a |
| Curriculum Outcome 6: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade) | |
| The student recognizes and describes linear functions and uses appropriate graphing technology to graph and analyze linear functions. | F3a |
| Understands x and y intercepts | F3a |

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| Explores slope as a characteristic of a linear function | F3a |
| Curriculum Outcome 7: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade) | |
| The student recognizes, interprets, explains, and manipulates expressions involving variables. The student uses linear equations and inequalities to solve problem situations within and outside of mathematics. | F2a, F3a |
| Understands the concept of variable | F3a |
| Uses variables to generalize patterns, tables, graphs, and charts | F3a |
| Explains the difference between an equation and an expression | F3a |
| Verbalizes the meaning of symbolic expressions | F3a |
| Curriculum Outcome 8: Patterns, Functions, Algebraic Concepts and Relationships (8th Grade) | |
| The student develops and uses models to represent and justify mathematical relationships and to assist in the solution of problem situations within and outside of mathematics. | F2a, F3a |
| Curriculum Outcome 9: Geometry and Spatial Sense (8th Grade) | |
| The student recognizes, applies, and compares properties of common geometric figures using appropriate technology, manipulatives, or constructions. | F3a |
| Curriculum Outcome 10: Geometry and Spatial Sense (8th Grade) | |
| The student uses estimation, measurement formulas to solve problem situations within and outside of mathematics. | F2a, F3a |
| Describes attributes of two-dimensional figures and common three-dimensional figures | F3a |
| Investigates measurement formulas | F3a |
| Applies basic measurements formulas | F3a |
| Selects appropriate measurement tools, appropriate units of measurement, and appropriate degrees of accuracy | F3a |
| Curriculum Outcome 11: Geometry and Spatial Sense (8th Grade) | |
| The student investigates and explores two-dimensional geometry from an algebraic perspective to solve problem situations within and outside of mathematics. | F2a, F3a |
| Curriculum Outcome 12: Geometry and Spatial Sense (8th Grade) | |
| The student recognizes and performs transformations of two-dimensional geometric figures to solve problems within and outside of mathematics. | F2a, F3a |
| Curriculum Outcome 13: Probability and Statistics (8th Grade) | |
| The student explores the use of probability in real-life situations. | F3a |
| Devises and conducts experiments and simulations | F3a |
| Compares empirical results with theoretical results | F3a |
| Investigates combinatorics and probability theory | F3a |
| Recognizes the many uses of probability in the real world | F3a |
| Curriculum Outcome 14: Probability and Statistics (8th Grade) | |
| The students generate, read, organize and interpret data from problem situations within and outside of mathematics. | F2a, F3a |
| Understands and applies measures of central tendency (mean, median, and mode) | F3a |
| Selects and displays data in appropriate formats | F3a |
| Identifies and applies valid sampling techniques | F3a |
| Calculates and interprets the range of a set of data | F3a |
| Curriculum Outcome 15: Probability and Statistics (8th Grade) | |
| The student uses data analysis, statistics, and probability to generate convincing arguments, to draw conclusions, and to make decisions to solve problem situations within and outside of mathematics. | F2a, F3a |

Kentucky

Document Utilized

Kentucky's Learning Goals and Learner Outcomes (no date).

Background

In 1989, the governor created a 12-member Council on School Performance Standards to determine what Kentucky students should know and be able to do and how learning should be assessed. As part of the Kentucky Education Reform Act, passed in 1990, the state adopted six broad learning goals. The legislation authorized that the goals be framed in measurable terms. The resulting 75 learner outcomes are tied to the states broad goals for all students. For each outcome, benchmarks are provided to indicate student progress toward the outcome (elementary, middle, and high school).

Kentucky

| LEARNING GOALS AND LEARNER OUTCOMES | NCEO CODE |
|--|-------------------|
| 1. Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives. | F1, F3a |
| 1.1 Students use research tools to locate sources of information and ideas relevant to a specific need or problem. | F4 |
| 1.2 Students construct meaning from a variety of print materials for a variety of purposes through reading. | F3b |
| 1.3 Students construct meaning from messages communicated in a variety of ways for a variety of purposes through observing. | F1 |
| 1.4 Students construct meaning from messages communicated in a variety of ways for a variety of purposes through listening. | F1 |
| 1.5 Students communicate ideas by quantifying with whole, rational, real, and/or complex numbers. | F1, F3a |
| 1.6 Students manipulate information and communicate ideas with a variety of computational algorithms. | F1, F3a |
| 1.7 Students organize information and communicated ideas by visualizing space configurations and movements. | F1, F3a |
| 1.8 Students gather information and communicate ideas by measuring. | F1, F3a |
| 1.9 Students organize information and communicate ideas by algebraic and geometric reasoning such as relations, patterns, variables, unknown quantities, deductive, and inductive processes. | F2a, F3a |
| 1.10 Students organize information through development and use of classification rules and classification systems. | F4a |
| 1.11 Students organize information through development and use of audiences for a variety of purposes in a variety of modes through writing. | F3c |
| 1.12 Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through speaking. | F1a |
| 1.13 Students construct meaning and/or communicate ideas and emotions through the visual arts. | F4b |
| 1.14 Students construct meaning and/or communicate ideas and emotions through music. | F4b |
| 1.15 Students construct meaning from and/or communicate ideas and emotions through movement. | F4b |
| 1.16 Students use computers and other electronic technology to gather, organize, manipulate and express information and ideas. | F1, F5a |
| 2. Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives. | F3a, F4, F4a, F4b |

Kentucky

| | | NCEO CODE |
|----------------------------|---|-----------|
| SCIENCE | | |
| 2.1 | Students use appropriate and relevant scientific skills to solve specific problems in real-life situations. | F2a, F4a |
| 2.2 | Students identify, compare, and contrast patterns and use patterns to understand and interprets past and present events and predict future events. | F4a |
| 2.3 | Students identify and describe systems, subsystems, and components and their interactions by completing tasks and/or creating products. | F4a |
| 2.4 | Students use models and scale to explain or predict the organization, function, and behavior of objects, materials, and living things in their environment. | F4a |
| 2.5 | Students understand the tendency of nature to remain constant or move toward a steady state in closed systems. | F4a |
| 2.6 | Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them. | F4a |
| MATHEMATICS | | |
| 2.7 | Students demonstrate understanding of number concepts. | F3a |
| 2.8 | Students demonstrate understanding of concepts related to mathematical procedures. | F3a |
| 2.9 | Students demonstrate understanding of concepts related to space and dimensionality. | F3a |
| 2.10 | Students demonstrate understanding of measurement concepts. | F3a |
| 2.11 | Students demonstrate understanding of change concepts on patterns and functions. | F3a |
| 2.12 | Students demonstrate understanding of concepts related to mathematical structure. | F3a |
| 2.13 | Students demonstrate understanding of data concepts related to both certain and uncertain events. | F3a |
| SOCIAL STUDIES | | |
| 2.14 | Students recognize issues of justice, equality, responsibility, choice, and freedom and apply these democratic principles to real-life situations. | E1a, F4a |
| 2.15 | Students recognize varying forms of government and address issues of importance to citizens in democracy, including authority, power, civic action, and rights and responsibilities. | F4a |
| 2.16 | Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order and change. | F4a |
| 2.17 | Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world. | F4b |
| 2.18 | Students make economic decisions regarding production and consumption of goods and services related to real-life situations. | F4a |
| 2.19 | Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment. | E1a, F4a |
| 2.20 | Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future. | F4a |
| 2.21 | Students observe, analyze, and interpret human behaviors to acquire a better understanding of self, others, and human relationships. | F2a, F4a |
| ARTS AND HUMANITIES | | |
| 2.22 | Students create products and make presentations that convey concepts feelings. | F4b |
| 2.23 | Students analyze their own and others artistic products and performances. | F2a, F4b |
| 2.24 | Students appreciate creativity and values of the arts and the humanities. | F4b |
| 2.25 | Through their productions and performance or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities. | F4b |
| 2.26 | Students recognize differences and commonalities in the human experience through their productions, performances, or interpretations. | F4b |

Kentucky

| | NCEO CODE |
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| 2.27 Students complete tasks, make presentations, and create models that demonstrate awareness of the diversity of forms, structures, and concepts across languages and how they may interrelate. | F4b |
| 2.28 Students understand and communicate in a second language. | F1, F4a |
| PRACTICAL LIVING | |
| 2.29 Students demonstrate effective individual and family life skills. | D1a |
| 2.30 Students demonstrate effective decision-making and evaluative consumer skills | D |
| 2.31 Students demonstrate skills and self-responsibility in understanding, achieving, and maintaining physical wellness. | C1, C2, D3 |
| 2.32 Students demonstrate positive strategies for achieving and maintaining mental and emotional wellness. | G1 |
| 2.33 Students demonstrate the ability to assess and access health systems services and resources available in their community which maintain and promote healthy living for its citizens. | C1, D3 |
| 2.34 Students perform psychomotor skills effectively and efficiently in a variety of settings. | C3 |
| 2.35 Students demonstrate knowledge, skills, and values that have lifetime implications for involvement's in physical activity. | C1b, C2b |
| VOCATIONAL STUDIES | |
| 2.36 Students demonstrate strategies for selecting career path options. | A2f |
| 2.37 Students produce and/or make presentations that communicate school-to-work/post-secondary transition skills. | F1, A2f |
| 2.38 Students demonstrate the ability to complete a post-secondary opportunities search. | A2f |
| 3. Students shall develop their abilities to become self-sufficient individuals. | D3, E, F |
| 3.1 Students demonstrate positive growth in self-concept through appropriate tasks or projects. | G2 |
| 3.2 Students demonstrate the ability to maintain a healthy lifestyle. | C1 |
| 3.3 Students demonstrate the ability to be adaptable and flexible through appropriate tasks or projects. | no match |
| 3.4 Students demonstrate the ability to be resourceful and creative. | no match |
| 3.5 Students demonstrate self-control and self discipline. | G1c |
| 3.6 Students demonstrate the ability to make decisions based on ethical values. | E |
| 3.7 Students demonstrate the ability to learn on one's own. | D3e |
| 4. Students shall develop their abilities to become responsible members of a family, work group, or community, including demonstrating effectiveness in community service. | A2e, D1a, E1a |
| 4.1 Students effectively use interpersonal skills. | G4 |
| 4.2 Students use productive team membership skills. | G4b |
| 4.3 Students individually demonstrate consistent, responsive, and caring behavior. | D1a, E3b, G3a |
| 4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others. | D3 |
| 4.5 Students demonstrate an understanding of, appreciation for, and sensitivity to multi-cultural and world view. | G3 |
| 4.6 Students demonstrate an open mind to alternative perspectives. | G |
| 5. Students shall develop their abilities to think and solve problems in school situations and in a variety of situations they will encounter in life. | F2a |
| 5.1 Students use critical thinking skills in a variety of situations that will be encountered in life. | F2a |
| 5.2 Students use creative thinking skills to develop or invent novel, constructive ideas or products. | no match |
| 5.3 Students create and modify their understanding of a concept through organizing information. | F4 |
| 5.4 Students use a decision-making process to make informed decisions among options. | F2a |

Kentucky

| | | NCEO CODE |
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| 5.5 | Students use problem-solving processes to develop solutions to relatively complex problems. | F2a |
| 6. | Students shall develop their abilities to connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources. | F4 |
| 6.1 | Students address situations (e.g. topics, problems, decisions, products) from multiple perspectives and produce presentations or products that demonstrate a broad understanding. Examples of perspective include: economic, social, cultural, political, historic, physical, technical, aesthetic, environmental, and personal. | F4 |
| 6.2 | Students use what they already know to acquire new knowledge, develop new skills or interpret new experiences. | F4 |
| 6.3 | Students expand their understanding of existing knowledge (e.g. topic, problem, situation, product), by making connections with new and unfamiliar knowledge skills and experiences. | F4 |

Maryland

Document Utilized

Learning Outcomes in Mathematics, Reading, Writing/Language Usage, Social Studies, and Science for Maryland School Performance Assessment Program (May, 1990).

Background

In December 1989, the Maryland State Board of Education established the Maryland School Performance Program, a systematic outcome-based approach for promoting student achievement and school performance. One component of this program features the development of new criterion-referenced assessment batteries in key subject areas for students in grades 3, 5, 8, and 11. The learning outcomes are broad in scope and will guide test contractors in their work with Maryland teachers and curriculum supervisors in the development of the assessments. The learning outcomes are mandatory. They are tied to the state assessments, which are part of a statewide accountability system for schools and school districts.

Maryland

| LEARNING OUTCOMES IN MATHEMATICS, READING, WRITING/LANGUAGE USAGE, SOCIAL STUDIES, AND SCIENCE | NCEO CODE |
|--|---------------|
| MATHEMATICS--GRADES 3, 5, AND 8 | |
| Students will demonstrate their ability to solve problems in mathematics including problems with open-ended answers, problems which are solved in cooperative atmosphere, and problems which are solved with the use of technology. | F2a, F3a, F5a |
| Students will demonstrate their ability to communicate mathematically. They will read, write, and discuss mathematics with language and the signs, symbols, and terms of the discipline. | F1, F3a |
| Students will demonstrate their ability to reason mathematically. They will make conjectures, gather evidence, and build arguments. | F2a, F3a |
| Students will demonstrate their ability to connect mathematics topics within the discipline and with other disciplines. | F3a |
| Students will demonstrate their ability to apply estimation strategies in computation, with use of technology, in measurement, and in problem solving. They will determine reasonableness of solutions. | F3a, F5a |
| Students will demonstrate their ability to solve problems using arithmetic operations with technology where appropriate. | F2a, F3a, F5a |
| Students will demonstrate their ability to describe and apply number relationships using concrete and abstract materials. They will choose appropriate operations and describe effects of operations on numbers. | F3a |
| Students will demonstrate their ability to apply geometric relationships using one, two and three dimensional objects. They will demonstrate congruency, similarity, symmetry, reflection and apply these concepts to the solution of the geometric problems. | F3a |
| Students will demonstrate and apply concepts of measurement using non-standard and standard units and metric and customary units. They will estimate and verify measurements. They will apply measurement to interdisciplinary and real world problems solving situations. | F2a, F3a |
| Students will demonstrate the basic concepts of probability such as predicting and finding probabilities. | F3a |
| Students will demonstrate their ability to recognize numeric and geometric relationships and will generalize a relation from data. | F3a |

Maryland

| | NCEO CODE |
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| Students will demonstrate their ability to perform algebraic operations and will be able to model algebraic concepts using concrete materials. | F3a |
| Students will demonstrate a positive attitude toward mathematics and will value and appreciate the role of mathematics in school, the culture, and society. | F3a |
| GRADE 8 | |
| COMPUTATIONS AND ESTIMATION (Use calculator as appropriate; use applications; may include fractions and decimals in same problem) | |
| Add, subtract, multiply, divide whole numbers, fractions, decimals, integers, rationals. | F3a |
| Given a problem, write the appropriate proportion and solve it | F3a |
| Choose an appropriate operation to solve a problem | F3a |
| Determine if a solution is sensible (pg. 97) | F3a |
| Use various estimation strategies | F3a |
| Estimate before calculating | F3a |
| Solve problems involving money, time, and elapsed time | F2a, F3a |
| Understand the meaning of the operations | F3a |
| NUMBER AND NUMBER RELATIONSHIPS | |
| Represent and use numbers in a variety of equivalent forms such as integers, percents, scientific notation, fractions, decimals, exponential notation, rationals | F3a |
| Describe relationships among fractions, decimals, percents | F3a |
| Apply ratios and proportions (scale drawings, maps) | F3a |
| Apply percents (discounts) | F3a |
| Represent relationships on a two dimensional graph. (ordered pairs) (p 207) | F3a |
| NUMBER SYSTEMS AND NUMBER THEORY | |
| Describes effects of arithmetic operations | F3a |
| Order numbers (integers, fractions, decimals, rationals) | F3a |
| Be able to use various strategies to solve problems | F2a, F3a |
| GEOMETRY | |
| Draw and describe the results of transformation such as reflections and rotation (slides, flips, turns) | F3a |
| Describe quantitatively geometric relationships such as a number of sides, faces, vertices, diagonals, sums of angles. | F3a |
| Distinguish between and apply congruency and similarity to the solution of geometric problems. | F3a |
| Apply Pythagorean theorem | F3a |
| Describe angle relationships formed by a transversal and parallel lines | F3a |
| Do simple constructions such as angle bisectors (p 112) | F3a |
| MEASUREMENT (include: nonstandard and standard units; metric and customary units) | |
| Determine area by partitioning | F3a |
| Determine volumes and surface areas of solids | F3a |
| Determine area of polygons | F3a |
| Determine perimeter of figures including irregular | F3a |
| Estimate and verify measurements by using measuring tools | F3a |
| Use the concepts of rate and indirect measurement in the solutions of problems | F2a, F3a |
| Select the appropriate unit of measurement and the tool to find the measurement | F3a |
| Apply measurement to inter-disciplinary and real-world problem solving situations such as elapsed time. | F2a, F3a |
| STATISTICS (use calculator as appropriate) | |
| Construct circle graphs | F3a |
| Collect organize, display, interpret data for given situations using appropriate display such as circle graphs, box and whisker plots, scatter plots, glyphs | F3a |
| Use data analysis to write an evaluative argument in a real life situation | F3a |
| Determine the best measure of central tendency and calculate it | F3a |
| PROBABILITY (extensive hands-on) | |

Maryland

| | NCEO CODE |
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| Use simulations to develop a model for real-life situations | F3a |
| Find probability of dependent and independent events | F3a |
| Predict and then determine probability by experimentation including certainty, impossibility, equally likely, not equally likely events | F3a |
| PATTERNS AND FUNCTIONS (numeric and geometric) | |
| Given a functional relationship, describe how a change in one variable results in a change in the other (given a circle, describe the change in area if radius is doubled) | F3a |
| Generalize a relation from a pattern, graph, table and given a relation, represent it by a pattern, graph, table (100-101) | F3a |
| ALGEBRA | |
| Evaluate algebraic expressions (include exponents) | F3a |
| Solve simple equations, inequalities | F2a, F3a |
| Given a problem situation, create a model, table, and write the rule (p 103) | F3a |
| Distinguish between an unknown and variable | F3a |
| Use order of operations | F3a |
| Solve systems of linear equations by graphing | F3a |
| Simplify algebraic expression by combining like terms (model with chips) | F3a |
| READING OUTCOMES--GRADES 3,5,8 AND 11 | |
| Students will demonstrate positive attitudes towards a reading variety of texts | F3b |
| Students will demonstrate their ability to construct, extend, and examine meaning for a variety of texts by using strategic behavior and integrating both their prior knowledge about reading and topic familiarity. | F2a, F3b |
| Students will demonstrate their ability to vary their orientation to the text by interacting with a variety of texts for different purposes. Students will read for literary experience (novels, plays, short stories), to be informed (content texts, articles, editorials), and to perform a task (follow directions, some action required of students). | F3b, F4b |
| Students will demonstrate their ability to interact with texts through four stances: global understanding, developing interpretation, personal reflection/response, and critical stance in order to construct, examine, and extend meaning. | F3b |
| Students will demonstrate their ability to construct a global understanding when reading a variety of texts for different purposes by considering such things as the main theme or topic and the author's overall purpose or point of view. | F3b |
| Students will demonstrate their ability to develop an interpretation for a variety of texts and purposes by revisiting the text. Students will clarify, verify, and revise their understanding by considering such things as plot and character development, by organizing text information, or by following directions to complete a task. | F3b |
| Students will demonstrate their ability to construct a personal reflection/response by considering their prior knowledge and information from the text. Students will compare the author's point of view with their own or new information from the text with their own background knowledge | F3b |
| Students will demonstrate their ability to construct a critical stance for a variety of texts and purposes. In forming and substantiating a critical response, students will identify and analyze the author's perspective and craft. | F2a, F3b |
| READING OUTCOMES MODEL GRADES 3, 5, 8, 11 | |
| CONSTRUCTING, EXAMINING, AND EXTENDING MEANING | |
| Students will demonstrate their ability to construct, examine, and extend meaning for a variety of texts and purposes through four reading stances: global understanding, developing interpretation, personal reflection/response, and a critical stance. Student's ability to integrate their knowledge about texts, topic familiarity, and strategic behavior will help bring about the construction, examination, and extension of meaning. | F3b |

Maryland

| | NGEO CODE |
|---|-----------|
| READ FOR LITERARY EXPERIENCE | |
| GLOBAL UNDERSTANDING | |
| Students will demonstrate their ability to develop initial understanding to a variety of texts and for different purposes. | F3b |
| REPRESENTATIVE INDICATORS | |
| Identify theme | F3b, F4b |
| Identify a character's or story's main problem | F3b, F4b |
| DEVELOPING INTERPRETATION | |
| Students will demonstrate their ability to develop interpretation for a variety of texts and purposes by revisiting the text to clarify, verify, and revise their understanding. | F2a, F3b |
| REPRESENTATIVE INDICATORS | |
| Identify traits of character(s) | F4b |
| Identify plot development | F4b |
| Note character change | F4b |
| Describe mood | F4b |
| Enumerate steps the character takes to solve a problem | F4b |
| Retell or summarize the story | F4b |
| Read with expression/intonation | F4b |
| Dramatize the story | F4b |
| PERSONAL REFLECTION/RESPONSE: Students will demonstrate their ability to develop personal response to the text by considering their prior knowledge and information from the text. | F3b, F4b |
| REPRESENTATIVE INDICATOR | |
| Compare/contrast with their personal views and experience the author's view of human experience and character. | F3b, F4b |
| CRITICAL STANCE | |
| Students will demonstrate their ability to develop a critical stance by identifying and analyzing the authors perspective and craft. | F2a, F4b |
| REPRESENTATIVE INDICATORS | |
| Identify and analyze the author's perspective (e.g., bias) | F2a, F4b |
| Analyze literary elements of the authors craft (e.g. iron, flashback, writing pattern) | F2a, F4b |
| Form and substantiate a qualitative judgement | F2a, F4b |
| READ TO BE INFORMED | |
| Identify an author's overall purpose/point of view | F3b |
| Identify the general meaning of a passage | F3b |
| Clarify information and concepts | F3b |
| Reorganize text information | F3b |
| Identify new information in passage | F3b |
| Identify and evaluate types of information that author uses | F3b |
| READ TO PERFORM A TASK | |
| Identify the overall purpose or organization of a document | F3b |
| Find specific information in a document | F3b |
| Relate graphics to text | F3b |
| Clarify information, steps, and/or organization | F3b |
| Follow directions to complete a task | F3b |
| Compare information in the passage with prior knowledge | F3b |
| Tell how information in the document relates to one's own background knowledge | F3b |
| Identify author's writing devices (e.g., propaganda techniques) | F3b |
| Judge the usefulness and clarity of the document | F2a, F3b |
| Give possible outcomes of directions | F2a, F3b |

Maryland

| | NCEC CODE |
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| WRITING/LANGUAGE USAGE OUTCOMES | |
| The students will demonstrate ability to write for various audiences and to address a variety of purposes--to inform, to persuade, to express personal ideas. | F3c |
| The students will demonstrate ability to use appropriate style and conventions for a variety of audiences and purposes. | F3c |
| The students will develop as writers through frequent writing experiences and many opportunities to interact with each piece of writing, having had occasions to prewrite, draft, revise, and proofread. | F3c |
| The students will demonstrate ability to write effectively to inform by developing and organizing relevant information, establishing an argumentative purpose, and by designing an appropriate strategy for an identified audience. In this way, students will establish and support a meaningful position. | F3c |
| The students will demonstrate ability to write effectively to persuade by selecting and organizing relevant information, establishing an argumentative purpose, and by designing an appropriate strategy for an identified audience. In this way, students will create meaning using personal or fictional ideas. | F3c |
| The students will demonstrate ability to write effectively to express personal ideas by selecting a form and its appropriate elements (e.g., plot, dialogue, rhyme scheme, etc.) In this way, students will create meaning using personal or fictional ideas. | F3c |
| The students will demonstrate ability to write effectively by considering correctness, completeness, and appropriateness and by making conscious language choices that create style and tone and affect reader response. In this way, students will focus on sentence form, word choice, grammar, usage, punctuation, capitalization, and spelling. | F3c |
| The students will demonstrate positive attitudes toward writing. | F3c |
| WRITING/LANGUAGE USAGE OUTCOMES MODEL GRADES 3, 5, 8, 11 | |
| PREWRITING | |
| Uses background and knowledge | F3c |
| Generates ideas for topics | F3c |
| Establishes meaning | F3c |
| Sets purpose | F3c |
| Orders ideas | F3c |
| Identifies audiences | F3c |
| Chooses form | F3c |
| DRAFTING | |
| Writes first draft for a purpose and an audience | F3c |
| REVISING | |
| Uses self, peer, and teacher input to revise | F3c |
| Considers changes | F3c |
| Considers completeness | F3c |
| Considers appropriateness of style | F3c |
| PROOFREADING | |
| Considers correctness | F3c |
| SOCIAL STUDIES OUTCOMES FOR GRADES 3, 5, AND 11 | |
| Students will demonstrate an understanding of the historical development and present function of principles, institutions, and processes of political systems in Maryland and the United States. | F4a |
| Students will demonstrate an understanding of the history, diversity, an commonality of the peoples of the world, the reality of human interdependence, the need for global cooperation, and a multi-cultural perspective. | F4a |
| Students will demonstrate an understanding of geographic concepts and processes needed to examine the role of culture, technology, and the environment in the location and distribution of human activities. | F4a |

Maryland

| | NCEO CODE |
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| Students will demonstrate an understanding of the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers in American society. | F4a |
| Students will demonstrate an ability--individually and as part of group--to gather information, think critically, and solve problems as needed to facilitate responsible decision-making, to understand complex ideas, and to generate new ideas. | F4a |
| Students will demonstrate attainment of a positive self-concept and empathy toward others in order to improve interaction among individuals and groups in our democratic society. | F4a, G2a, G3a, G4 |
| Students will demonstrate attainment of understandings and attitudes needed to secure a reasoned commitment to human dignity, justice, and democratic processes. | D, E, F4a, G4 |
| MATRIX OF INDICATORS | |
| POLITICAL SYSTEMS: | |
| Students will demonstrate an understanding of the historical development and current status of principles, institutions, and processes of political systems in Maryland and the United States. | F4a |
| GRADES 6-8/POLITICAL SYSTEMS | |
| Using historical documents such as the Mayflower Compact, the Declaration of Independence, and the U.S. Constitution, analyze the basic principles of American government. | F4a |
| Relate historical events and ideas of the late 18th and 19th centuries to the evolution of the American political system. | F4a |
| Using case studies from world cultures and American history, analyze consequences resulting from the exercise or denial of rights and/or responsibilities. | F4a |
| Analyze examples of ways in which individuals or groups can advance or impede political change (lobbying, voting, demonstrating, etc.) | F4a |
| Analyze examples from a global context in which individuals and groups brought about civic improvement. | F4a |
| SKILLS AND PROCESSES: | |
| Students will demonstrate an ability--individually and as part of a group--to gather information, think critically, and solve problems as needed to facilitate responsible decision-making, to understand complex ideas, and to generate new ideas. | F2a, F4a, G4b |
| GRADES 6-8/SKILLS AND PROCESSES | |
| Obtain, interpret, evaluate, organize, and use information from observing, investigating, listening, and reading. | F4 |
| Obtain, interpret, evaluate, organize, and use print and non-print sources of information such as maps, charts, globes, graphics, and tables. | F4a |
| Define and clarify problems drawn from history and the social sciences, judge information related to the problems, propose solutions, and draw conclusions based on available data. | F2a, F4a |
| Using decision-making models, analyze the decisions made by people in other times and places, and evaluate the consequences. | F4a |
| Analyze situations to determine what group action is required and demonstrate skills needed to move a group to action. | F4a |
| VALUING SELF AND OTHERS | |
| Students will demonstrate attainment of a positive self-concept and empathy toward others in order to improve interaction among individuals and groups in our democratic society. | F2a, F4a, G4b |
| GRADES 6-8/VALUING SELF AND OTHERS | |
| Examine one's own feelings, values, and capabilities in an effort to develop a positive self concept and acceptance of others. | G2a, G4b |
| Develop an appreciation of American society as a pluralistic one consisting of diverse cultures, customs, and traditions. | F4a |

Maryland

| | NCEO CODE |
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| Using case studies, analyze the impact of social institutions and the media on the behavior of individuals and groups | F4a |
| UNDERSTANDING ATTITUDES | |
| Students will demonstrate attainment of understanding and attitudes needed to secure a reasoned commitment to human dignity, justice, and democratic processes. | F2a, F4a, G4b |
| GRADES 6-8/UNDERSTANDING AND ATTITUDES | |
| Analyze beliefs and values associated with commitment to the rule of law. | E |
| Using a variety of cultural and ethnic contexts, analyze situations illustrating conflicts between conscience and respect for authority. | E |
| Using a variety of cultural and ethnic contexts, analyze situation in which individuals demonstrate respect and support for the rights and dignity of all peoples. | E |
| Analyze situations from a variety of historical contexts in which respect for majority rule and rights of the individuals is demonstrated. | E, F4a |
| PEOPLES OF THE NATION AND WORLD | |
| Students will demonstrate an understanding of the history, diversity, and commonality of the peoples of the nation and world, the reality of human interdependence, the need for global cooperation, and a multicultural perspective. | F4a |
| Summarize the main points of current event. | |
| GRADES 6-8/PEOPLES OF THE NATION AND WORLD | |
| Investigate and gain appreciation for various cultures throughout the world. | F4a, G4b |
| Examine contributions resulting from interactions among individuals and groups from various ethnic, racial, and religious backgrounds. | F4a |
| Perceive that human experiences, in earlier times and other places, may be applicable to solving contemporary problems. | F4a |
| Evaluate consequences of individual and collective decisions in promoting peace or precipitating conflict. | F4a |
| Provide examples of technologies, institutions, languages, and beliefs which link the different peoples of the world. | F4a |
| Analyze current world issues from different perspective. | F4a |
| GEOGRAPHY | |
| Students will demonstrate an understanding of geographic concepts and processes as needed to examine the role of culture, technology, and the environment in the location and distribution of human activities. | F2a, F4a, G4b |
| GRADES 6-8/GEOGRAPHY | |
| Locate places, cultural features, and natural features by interpreting and constructing maps using directions, legends, grid systems, boundary lines, scales, and political units. | F4a |
| Evaluate and environmental issues and recommend ways of protecting the environment while meeting human needs. | F4a |
| Evaluate the ways humans modify their physical setting to meet economic needs, and the resulting changes in their quality of life. | F4a |
| Analyze patterns of population growth and settlement in different times, cultures, and environments. | F4a |
| Analyze the influence of transportation and communication on the movement of people, goods, and ideas from place to place. | F4a |
| Compare regions on a state national, and global basis. | F4a |
| Analyze ways in which different cultural groups view environmental decisions. | F4a |
| ECONOMICS | |
| Students will demonstrate an understanding of the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers in American society. | F4a |

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| GRADES 6-8/ECONOMICS | |
| Using case studies, analyze the role of scarcity in economic decision-making. | F4a |
| Using case studies, cite examples of economic interdependency among world communities. | F4a |
| Analyze the effects of supply and demand on the production of goods and services in historical and contemporary contexts. | F4a |
| Relate the development and implementation of taxation to given historical and economic conditions. | F4a |
| Compare the economic characteristics of Maryland with those of the U.S. | F4a |
| Analyze the impact of technological change and resource use in promoting economic growth in the U.S. | F4a |
| SUGGESTED SCIENCE OUTCOMES | |
| Students will demonstrate their acquisition and integration of major concepts and unifying themes from the life, physical, and earth/space sciences. | F4a |
| Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena. | F4a |
| Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practice science. | F4a |
| Student will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting, and communicating information. | F1, F4a |
| Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affecting the individual, society, and the environment. | F2a, F4a |
| SCIENCE OUTCOMES MODEL GRADES 3, 5, 8, 11: STUDENTS WILL DEMONSTRATE THEIR ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE LIFE SCIENCES. | |
| CURRICULUM FOCUS OF STATES SCIENCE ASSESSMENT--GR 6-8 | |
| The life science program (6-8) includes and emphasis on investigation of the structure and function of the human body and the impact of human behavior on other living organisms and the environment. | F4a |
| NATURE OF SCIENCE (not grade level specific) | |
| Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena. | F4a |
| HABITS OF MIND (not grade level specific) | |
| Students will demonstrate ways of thinking and acting inherent to the practice of science. | F4a |
| ATTITUDES (not grade level specific) | |
| Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practices science. | F4a |
| SCIENCE PROCESSES (not grade level specific) | |
| Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting and communication information. | F1, F4a |
| APPLICATION (not grade level specific) | |
| Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affection the individual, society and the environment. | F2a, F4a |
| STUDENTS WILL DEMONSTRATE THEIR ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE EARTH/SPACE SCIENCES. | |

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| <p>The earth/space science program (6-8) includes an emphasis on collection and interpretation of evidence that leads to an understanding of the processes of...</p> | |
| <p>NATURE OF SCIENCE (not grade level specific) Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena</p> | F4a |
| <p>HABITS OF MIND (not grade level specific) Students will demonstrate ways of thinking and acting inherent to the practice of science.</p> | F4a |
| <p>ATTITUDES (not grade level specific) Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practices science.</p> | F4a |
| <p>SCIENCE PROCESSES (not grade level specific) Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting and communication information.</p> | F1, F4a |
| <p>APPLICATION (not grade level specific) Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affection the individual, society and the environment.</p> | F2a, F4a |
| <p>STUDENTS WILL DEMONSTRATE THEIR ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE PHYSICAL SCIENCES</p> | |
| <p>The physical science program (6-8) includes an emphasis on exploration of the behavior and underlying structure of matter and the interactions of matter and energy.</p> | F4a |
| <p>NATURE OF SCIENCE (not grade level specific) Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena.</p> | F4a |
| <p>HABITS OF MIND (not grade level specific) Students will demonstrate ways of thinking and acting inherent to the practice of science.</p> | F4a |
| <p>ATTITUDES (not grade level specific) Students will demonstrate positive attitudes toward science and its relevance to the individual, society, and the environment and demonstrate confidence in their ability to practices science.</p> | F4a |
| <p>SCIENCE PROCESSES (not grade level specific) Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting and communication information.</p> | F4a |
| <p>APPLICATION (not grade level specific) Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affection the individual, society and the environment.</p> | F2a, F4a |

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Documents Utilized

- Michigan Essential Goals and Objectives for Science Education (K-12)* (August, 1991)
- Michigan Essential Goals and Objective for Writing* (October, 1985)
- Essential Goals and Objectives for Reading Education* (no date)
- Michigan Essential Goals and Objectives for Speaking and Listening* (September, 1991)
- Essential Goals and Objectives for Social Studies in Education in Michigan* (August, 1992)
- Essential Goals and Objectives for Computer Education* (Spring, 1987)
- Michigan Essential Goals and Objectives for Arts Education (K-12)* (1989)
- Michigan Essential Goals and Objectives for Foreign Language Education (K-12)* (1991)
- Michigan Essential Goals and Objectives for Mathematics Education* (October, 1990)

Background

Public Act 25 of 1990 states that Michigan's core curriculum outcomes must be based upon the state's goals and objectives. Essential goals and objectives have been published for major subject areas. These publications are used by local school districts (1) as part of a core curriculum; (2) for the development of local curriculum materials, and (3) for the development of accountability measures. In December 1993, the legislature passed a law that required standards to be developed in four core subjects (English/language arts, mathematics, science, and social studies). These content standards will include benchmarks that specify what students should know and be able to do at the end of elementary, middle, and high school.

Note: Two projects, Michigan's Special Education Program Outcomes and the Outcomes Training Project, are providing educators across the State with a source for educational outcomes that are specific to the unique needs of learners with disabilities and training in their use and assessment. Student outcomes that have been specified by disability area are not included here.

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| LISTENING | |
| A. PERCEIVING AND DISCRIMINATING | |
| At the High School, Middle/Junior High, and Elementary levels, students will: | |
| Outcome 1: Distinguish between verbal and nonverbal communication. | Fla |
| Objective 1. Identify patterns (e.g., repetition, rhythm, rhyming) in communication. | Fla |
| 2. Discriminate between sounds (e.g., environmental, extraneous, warning) and language. | Fla |
| 3. Identify cultural differences in verbal and nonverbal communication. | Fla |
| Outcome 2: Develop an appreciation of the contribution of the listener to the communication process. | Fla |
| Objective 1. Recognize the implications of a commitment to be an effective listener. | Fla |
| 2. Recognize distinctions between the physical process of hearing and the mental process of Listening. | Fla |
| 3. Recognize the diverse roles of the listener in the communication process. | Fla |
| Outcome 3: Perceive emotional dimensions and aesthetic meanings through paralinguistic and Nonverbal cues. | Fla |
| Objective 1. Distinguish between intentional and unintentional facial expression. | Fla |
| 2. Distinguish between intentional and unintentional bodily movement--kinesthetic cues. | Fla |
| 3. Distinguish between intentional and unintentional vocal expression--paralinguistic cues. | Fla |

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| 4. Distinguish between intentional and unintentional eye messages--eye contact and proximic cues. | F1a |
| B. ATTENDING | |
| At the High School, Middle/Junior High, and Elementary levels , students will: | |
| Outcome 1: Exhibit good attentive listening behavior. | F1a |
| Objective 1. Recognize situations which require listening. | F1a |
| 2. Give full attention to the message (e.g., use monitoring cues to aid turn-taking). | F1a |
| 3. Focus on a significant, single stimulus. | F1a |
| 4. Identify internal (e.g., daydreaming) and external (e.g., faking attention) distractions. | F1a |
| 5. Attend to visual as well as auditory cues. | F1a |
| Outcome 2: Apply the different functions of listening. | F1a |
| Objective 1. Listen to imagine. | F1a |
| 2. Listen for information. | F1a |
| 3. Listen to assess and evaluate. | F1a |
| 4. Listen for pleasure. | F1a |
| 5. Listen to discover affective messages. | F1a |
| Outcome 3: Recognize the different purposes of listening. | F1a |
| Objective 1. Recognize the discriminative purpose. | F1a |
| 2. Recognize the comprehensive purpose. | F1a |
| 3. Recognize the therapeutic purpose. | F1a |
| 4. Recognize the critical purpose. | F1a |
| 5. Recognize the appreciative purpose. | F1a |
| C. ASSIGNING | |
| At the High School, Middle/Junior High, and Elementary levels , students will: | |
| Outcome 1: Apply principles of listening to secure essential information. | F1a |
| Objective 1. Paraphrase an oral statement completely and accurately. | F1a |
| 2. Retell an oral account in sequence. | F1a |
| 3. Identify the main idea in an oral message. | F1a |
| 4. Identify supporting detail in an oral message. | F1a |
| Outcome 2: Recognize organizational patterns. | F4 |
| Objective 1. Recognize chronological patterns. | F4 |
| 2. Recognize topical patterns. | F4 |
| 3. Recognize spatial patterns. | F4 |
| 4. Recognize comparison and contrast patterns. | F4 |
| 5. Recognize problem-solution patterns. | F4 |
| 6. Recognize climactic patterns. | F4 |
| 7. Recognize organizational devices, such as transitions that help to determine meaning. | F4 |
| Outcome 3: Comprehend spoken messages. | F1a |
| Objective 1. Identify the communication rituals used in everyday situations (e.g., legal, occupational, religious, social). | F1a |
| 2. Recognize the effects of word choice (e.g., jargon, time-bound language) on comprehension. | F4 |
| 3. Develop the ability to concentrate more on content rather than presentation. | F1a, F4 |
| 4. Use verbal and nonverbal cues to determine meaning and sequence. | F1a, F4 |
| 5. Distinguish between connotative and denotative meanings. | F4 |
| 6. Compare new information to ideas and concepts retained in memory. | F4 |
| D. EVALUATING | |
| At the High School, Middle/Junior High, and Elementary levels , students will: | |
| Outcome 1: Use cognitive and affective elements of the message to give meaning to the listener. | F1a, F4 |
| Objective 1. Distinguish between fantasy and reality. | F4 |

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| 2. Distinguish between fact and opinion. | F4 |
| 3. Distinguish between literal and figurative. | F4 |
| 4. Distinguish between objective and emotional. | F4 |
| 5. Distinguish between relevant and irrelevant. | F4 |
| 6. Distinguish between complete and incomplete messages. | F4 |
| 7. Distinguish between clear and unclear messages. | F4 |
| Outcome 2: Distinguish between valid and invalid inferences. | F2a, F4 |
| Objective 1. Recognize the effects of propaganda techniques on meaning. | F4 |
| E. RESPONDING | |
| At the High School, Middle/Junior High, and Elementary levels, students will: | |
| Outcome 1: Listen to understand the message. | F1a |
| Objective 1. Use intrapersonal skills to review the meaning of a message. | F1a |
| 2. Validate understanding of the message by an objective oral synopsis of the information. | F1a |
| 3. Recognize the effects of personal bias on meaning. | F1a, F4 |
| Outcome 2: Promote a supportive communication environment. | F1a, G4 |
| Objective 1. Encourage self-disclosure in others through supportive feedback. | F1a |
| 2. Provide appropriate minimal reinforcers (e.g., head nods, "uh-huh") while receiving communication. | F1a |
| 3. Time response to reflect a sensitivity to the communication process. | F1a |
| F. REMEMBERING | |
| At the High School, Middle/Junior High, and Elementary levels, students will: | |
| Outcome 1: Retain information in both short-term and long-term memory. | F4 |
| Objective 1. Use notetaking techniques to record current information, to retrieve prior knowledge, and to link old information with new. | F4 |
| 2. Use semantic mapping. | F4 |
| 3. Use precise writing. | F3b |
| 4. Use principle-fact techniques. | F4 |
| 5. Use the standard outline form in both key word and sentence form. | F4 |
| Outcome 2: Apply memory techniques to aid retention of messages. | F4 |
| Objective 1. Use a grouping system. | F4 |
| 2. Use an ordering system. | F4 |
| 3. Use a reordering system. | F4 |
| 4. Use mnemonic strategies. | F4 |
| SPEAKING | |
| A. MESSAGES | |
| 1. ETHICS | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Demonstrate an understanding of ethical communication decisions. | F4 |
| Objective 1. Analyze the ethical use of communication in critical historical situations. | F2a, F4 |
| 2. Be able to present both sides of an issue. | F4 |
| 3. Use proper citations for information. | F4 |
| 4. Use reasoning and evidence in an ethical manner. | F4 |
| 5. Use credible sources for information. | F4 |
| 2. EVIDENCE | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Identify the primary options to secure evidence for communication. | F4 |
| Objective 1. Recognize the use of personal experience or observation to support a communication. | F4 |
| 2. Recognize the use of external resources or indirect experiences to support a communication. | F4 |

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| 3. Recognize the use of experimental research to support a communication. | F4 |
| Outcome 2: Apply common sources of evidence to support inferences in an oral communication. | F1a, F4 |
| Objective 1. Use written resources to support a communication. | F1, F3c |
| 2. Use interview resources to support a communication. | F1a |
| 3. Use observation to support a communication. | F1a |
| 4. Identify research strategies to enhance finding evidence for presentations. | F1, F4 |
| 5. Recognize essential resources to facilitate finding evidence for presentations. | F1, F4 |
| 3. REASONING | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Identify and apply diverse patterns of inductive and deductive reasoning. | F2a |
| Objective 1. Identify and apply reasoning from analogy in oral communication. | F1a, F2a |
| 2. Identify and apply reasoning from cause in oral communication. | F1a, F2a |
| 3. Identify and apply reasoning from sign in oral communication. | F1a, F2a |
| 4. Identify and apply reasoning from generalization in oral communication. | F1a, F2a |
| 4. LANGUAGE | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Recognize the symbolic importance of language. | F4a |
| Objective 1. Promote objectivity in language use through recognizing distinctions between denotative and connotative meanings in words. | F4a |
| 2. Apply the principle that meanings vary by circumstance and interpretation. | F1a, F4a |
| 3. Use specific language to minimize abstractions in meaning. | F1a, F4a |
| 5. AUDIENCE ANALYSIS | |
| At the Middle/ Junior High level, students will: | |
| Outcome 1: Discover methods to codify the demographic characteristics of an audience. | F4 |
| Objective 1. Analyze audiences by observing and surveying specific demographic characteristics. | F4 |
| Outcome 2: Recognize the process of adjusting messages and/or speaking techniques to the topic and the presenter. | F1a |
| Objective 1. Analyze the attitude of an audience toward the topic, and how it affects communication. | F4 |
| 2. Analyze the attitude of an audience toward the presenter and how it affects communication. | F4 |
| B. STRUCTURE | |
| 1. ORGANIZATIONAL ANALYSIS | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Develop clear central ideas (propositions or theses) | F1a |
| Objective 1. Develop central ideas that are written in a complete, clear sentence. | F1a, F3c |
| 2. Develop central ideas that are written to show a relationship among specific components. | F1a, F3c |
| 3. Develop central ideas that present both sides of an issue. | F1a, F4 |
| Outcome 2: Develop outlines for communication which distinguish general from specific concepts. | F1a, F4 |
| Objective 1. Develop outlines that distinguish main points. | F1a, F4 |
| 2. Develop outlines that distinguish subpoints. | F1a, F4 |
| 3. Develop outlines that show support in a subordinate position to subpoints. | F1a, F4 |
| Outcome 3: Apply patterns of organization to the specific purposes of oral communication. | F1a, F4 |
| Objective 1. Use the chronological pattern of organization to outline a communication subject. | F1a, F4 |
| 2. Use the spatial pattern of organization to outline a communication subject. | F1a, F4 |
| 3. Use the cause-effect pattern of organization to outline a communication subject. | F1a, F4 |
| 4. Use the problem-solution patterns of organization to outline a communication subject. | F1a, F4 |
| 2. INTRODUCTIONS | |
| At the Middle/Junior High level, students will: | |

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| Outcome 1: Demonstrate an awareness of diverse objectives for introductions. | F1a |
| Objective 1. Demonstrate how an introduction to a communication can capture the attention of the audience. | F1a |
| 2. Demonstrate how an introduction to a communication can preview the major ideas for and audience. | F1a |
| 3. Demonstrate how an introduction to a communication can contain a central idea. | F1a |
| 3. CONCLUSIONS | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Demonstrate an awareness of varied options for conclusions. | F1a |
| Objective 1. Demonstrate how a conclusion to communication can review the major ideas for an audience. | F1a |
| 2. Demonstrate how a conclusion to a communication can restate the central idea for an audience. | F1a |
| 3. Demonstrate how a conclusion can use unique appeals to retain the attention of the respondents to a communication. | F1a |
| C. PRESENTATION | |
| 1. METHODS OF PRESENTATION | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Use a speaking style that is effective for specific communication experiences. | F1a |
| Objective 1. Define and explain the different speaking styles- manuscript, memorization, extemporaneous, and impromptu. | F1a |
| 2. Demonstrate the ability to use diverse speaking styles. | F1a |
| 2. VOCAL CHARACTERISTICS (volume, rate, pitch, articulation, pronunciation) | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Maximize vocal resources to enhance communication potential. | F1a |
| Objective 1. Develop skills of self-analysis to judge the volume, rate, and pitch. | F1a |
| 2. Use a basic knowledge of the anatomy and physiology of the vocal mechanism to enhance the voice. | F1a |
| 3. Explain the basic fundamentals of sound--frequency, wave length, and amplitude. | F1a |
| 4. Explain the principles of sound--breathing, phonation, articulation, and resonance--as they relate to the vocal mechanism. | F1a |
| 5. Demonstrate effective diaphragmatic breathing techniques. | F1a |
| 6. Demonstrate improvement in the correct and responsible use of diction by the application of appropriate techniques. | F1a |
| 3. NONVERBAL CHARACTERISTICS (eye contact, facial expression, posture, gestures, movement, personal appearance) | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Use communication strategies to facilitate the use of nonverbal characteristics. | F1 |
| Objective 1. Demonstrate the use of appropriate nonverbal cues in a variety of communication situations. | F1 |
| 2. Develop proper posture and movement for communication. | F1 |
| 3. Demonstrate the ability to use gestures and body movements to enhance communication. | F1 |
| 4. Demonstrate effective use of eye contact in communication. | F1 |
| 5. Analyze nonverbal characteristics to enhance personal development. | F1 |
| 6. Recognize the correlation between appearance and self-image. | F4 |
| 4. AIDS TO PRESENTATION | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Make and use effective and appropriate audio-visual aids. | F4 |
| Objective 1. Demonstrate the proper construction (e.g., use of color, underlining, boxes, highlighting) of visual aids to highlight ideas. | F4 |
| 2. Recognize that audiovisual aids (e.g., microphone) can be distracting if not used properly. | F4 |

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| 3. Demonstrate the ability to use audiovisual equipment (e.g., overhead projector, tape recorder, flip charts) for the purpose of aiding communication. | F1, F5a |
| D. FEEDBACK | |
| At the Middle/Junior High level, students will: | |
| Outcome 1: Use verbal communication principles to advance an understanding of a communication. | F1a |
| Objective 1. Use questioning principles to advance a communication relationship. | F1a |
| 2. Use summarizing principles to advance a communication relationship. | F1a |
| 3. Use principles of clarification to advance a communication relationship. | F1a |
| Outcome 2: Use oral communication to resolve problems or differences of opinion with another person. | F1a, G4c |
| Objective 1. Apply the principles of oral communication to conflict resolution. | F1a, G4c |
| Outcome 3: Provide constructive criticism of oral communication experiences. | F1a, F2a |
| Objective 1. Use descriptive communication, with a focus on behaviors rather than personal characteristics, to express negative feelings. | F1a, G1b |
| 2. Evaluate criticism to understand the distinctions between constructive and destructive criticism. | F2a |
| Outcome 4: Demonstrate how feedback affects the various parts of a communication model. | F1 |
| Objective 1. Recognize the distinctions in the use of feedback ion speaker-centered and audience-centered communication models. | F1 |
| Outcome 5: Use the questioning process to advance an analysis of the message. | F1a, F2a |
| Objective 1. Develop clearly phrased and clearly focused questions. | F1a |
| 2. Develop skills to provide adequate responses to inquiries. | F1a |
| ESSENTIAL GOALS AND OBJECTIVES FOR COMPUTER EDUCATION | |
| I. COMPUTING AND ITS EVOLVING ROLE IN A TECHNOLOGICAL SOCIETY, GRADES 7-9 | |
| RATIONALE: Students need to be aware of the role of technology and its future impact on society, as well as their lives. As members of a society which utilizes technology and information processing, students also need to be cognizant of the social issues involved, their ethical obligations, and the legal responsibilities related to computer usage. By gaining a historical perspective, students will be able to identify trends in computing and formulate ideas about the future evolution and effect of the technology. | |
| A. History of Computers and Computing | |
| Goal: To understand the historical development of the computer. | F4a |
| Objective: The learner will: | |
| 2. compare the different generations of computers and summarize their impact on society | F4a |
| 3. evaluate the trends in computer development | F4a |
| B. Role and Impact | |
| Goal: To appreciate the role and impact of computers in society | F4a |
| Objective: The learner will: | |
| 4. evaluate the effect computers have on society and their influence on economic issues | F4a |
| 5. identify other technologies that interact with the computer and recognize their uses (suggested, but not limited to videodiscs, robotics, CAD/CAM systems, CD-ROM, and communication technologies. | F4a |
| 6. identify special purpose devices and describe their unique capabilities (suggested, but not limited to communication enhancement, adaptive devices, music synthesizers, speech synthesizer, and optical scanners) | F4a |
| C. Social Issues | |
| Goal: To understand the current and emerging ethical and social issues raised by the increased use of computers. | |
| Objective: The learner will: | |

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| 2. identify possible effects of the illegal use of computers | F4a |
| D. Future Trends | |
| Goal: To formulate theories about the future evolution and effect of computers and other emerging technologies. | F4a |
| Objective: The learner will: | |
| 1. identify possible changes in computers and other emerging technologies and recognize the possible impact on the home and workplace. | F4a |
| II. COMPUTING FUNDAMENTALS, GRADES 7-9 | |
| RATIONALE: This strand of <u>Essential Goals and Objectives for Computer Education</u> comprises skills and knowledge which permit the student, through actual use, to independently operate a computer system successful. It is recommended that basic skills be learned before more advanced topics and objectives are addressed. | |
| A. Understanding Computer Systems | |
| Goal: To understand the basic operation, terminology, and parts of computer systems | F5a |
| Objective: The learner will: | |
| NONE | |
| B. Operating Computer Systems | |
| Goal: To independently operate a computer system | F5a |
| Objective: The learner will: | |
| 8. interpret the documentation to gain information about hardware and software products in use | F5a |
| 9. evaluate software considering the content value and limitations | F5a |
| III. COMPUTER APPLICATIONS, GRADES 7-9 | |
| RATIONALE: Students need to use application software to understand how the computer can become a tool for solving problems. By becoming proficient in using word processing, data base management, and an electronic spreadsheet and familiar with computer graphics, communications software, and computer programming, a foundation will be built for enhancing problem solving skill. | |
| A. Word Processing | |
| Goal: To understand the creation, modification, and display of text using word processing. | F5a |
| Objective: The learner will: | |
| NONE | |
| B. Database Management | |
| Goal: To understand the process of information management using a database | F5a |
| Objective: The learner will: | |
| 5. design the input format and enter information into a database | F5a |
| 6. edit the contents of the database | F5a |
| 7. create a print format to display the data requested | F5a |
| 8. analyze data for the purpose of developing, testing, and revising hypotheses | F2a, F5a |
| C. Electronic Spreadsheet | |
| Goal: To understand the process of numeric manipulation using an electronic spreadsheet | F5a |
| Objective: The learner will: | |
| 1. answer "What if?" questions and test hypotheses with an already created spreadsheet | F5a |
| D. Computer Graphics | |
| Goal: To become familiar with computer graphics | F5a |
| Objective: The learner will: | |
| 3. create a graph or chart using a prepared software package | F5a |
| E. Computer Communications | |
| Goal: To become familiar with communications between two or more computers | F5a |
| Objective: The learner will: | |
| 1. explain the general purposes and several common uses of computer communications | F5a |

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| 2. identify the types of hardware and software required for computer communications | F5a |
| 3. explain the general method of enabling two or more individuals using computers to communicate with each other | F5a |
| 4. list activities made possible through the use of computer communications | F4 |
| 5. indicate some of the safeguards which must be taken to protect society against misuse of computer communications | F4 |
| F. Computer Programming | |
| Goal: To become familiar with programming in a computer language | F5a |
| Objective: The learner will: | |
| 2. develop statements in a programming language which represent a step-by-step approach to a problem | F5a |
| 3. enter the statements (program) into the computer | F5a |
| 4. execute and debug the program as needed | F5a |
| 5. validate the program by comparing the output with anticipated output | F5a |
| IV. COMPUTER ENHANCED PROBLEM SOLVING, GRADES 7-9 | |
| RATIONALE: The computer can enhance the process of problem solving within the K-12 curriculum. Software designed to specifically develop problem solving skills can provide a foundation for application of these skills. The programs highlighted in the Computer Applications strand of this document are excellent tools to assist in applying these problem solving skills. | |
| The development and application of problem solving skills using the computer are best accomplished when students work together. Computer interaction is most effective when human interaction is emphasized and encouraged. | |
| A. The Computer as a Problem Solving Tool | |
| Goal: To understand how computer-related tools can be used in the problem solving process | F2a, F5a |
| Objective: The student will: | |
| 3. discuss the intended uses of the application programs referenced in the Computer Applications strand | F5a |
| 4. describe a specified problem and determine an appropriate application package to use in solving the problem | F5a |
| 5. solve a given problem using an appropriate application package | F2a, F5a |
| MICHIGAN ESSENTIAL GOALS AND OBJECTIVES FOR ARTS EDUCATION (K-12) | |
| THE GOALS OF DANCE EDUCATION | |
| Goal I: To use dance as a vehicle for self-expression through kinesthetic, affective, cognitive, and aesthetic aspects of the movement discipline. | F4b |
| a. Because the self is the primary instrument of dance, the learner will become aware of the body, its range and limitations of movement: what the body can do; how the body can move; where it moves. | |
| b. The skills, understandings, and attitudes that students acquire through dance help them to externalize their reactions to life, foster the appreciation of beauty, challenge the intellect and broaden their social capacities. | |
| Goal II: To develop perceptive, imaginative, cognitive, and creative abilities through dance experiences. | F4b |
| a. Students of dance become acutely aware of their own ideas and feelings, developing the ability to perceive with greater sensitivity, and providing bases for making informed choices. | |
| b. Dance helps students use the senses to perceive abstract and concrete meanings. | |

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| <p>c. Dance provides opportunities for students to engage in the process of forming their ideas, concepts and beliefs. They are encouraged to find new movements and/or to organize known movements in new ways. The student is at once both teacher and learner.</p> <p>Goal III: To understand the value of dance for the development of self concept and social awareness.</p> <p>a. Because dance engages the self, the learner comes to understand more about the unique physical strengths and weaknesses of his/her own body and that of others.</p> <p>b. Dance students learn the necessity for give and take as they communicate their ideas and work toward satisfaction in problem solving.</p> <p>c. The dancer learns about human interaction and seeks to understand and regard the ideas of others.</p> <p>Goal IV: To develop respect for the originality of expression in ourselves and in response to others in nonverbal communication.</p> <p>a. Dance students learn to trust their own inventiveness, to take risks, accept challenges, to express and give form to feelings and ideas for the purpose of self-elucidation and to share these feelings and ideas with others.</p> <p>b. Dance requires the learner to bring aesthetic criteria to the evaluation and an appreciation of composition, choreography and performance.</p> <p>Goal V: To foster understanding of the role of dance in our culture and in the culture of other people in an historical context.</p> <p>a. Students will learn about the development of dance in America by participating in dance forms indigenous to America and studying the development through both cursory and in-depth historical references.</p> <p>b. Students will learn about the development of dance in historical periods, the cultural influence of dance during these periods and gain knowledge of the structure and meaning of dances of other cultures through the study of and participation in a variety of dance forms.</p> <p>c. Students learn about other art forms and the role of the arts and humanities in the development of diverse cultures.</p> <p>Goal VI: To develop internal and external skills and resources.</p> <p>a. Dance activities provide a natural vehicle for the externalization of knowledge and skills. The student assimilates knowledge through the processes of exploration, improvisation, problem solving, dance making, and choreography.</p> <p>b. Students discover new aspects of themselves and the dance experience through the developmental acquisition of skills.</p> <p>c. The student acquires greater knowledge of the related arts and develops the ability to draw on these resources.</p> <p>d. The student develops the ability to refine the intent of a creative idea.</p> | <p>F4b, G2, G3</p> <p>F4b, G2a, G3a, G3b</p> <p>F4b</p> <p>F4b</p> |
| <p>DRAMA/THEATER EDUCATION</p> <p>I=INTRODUCTION OF SKILLS OR CONCEPTS D=DEVELOPMENT OF SKILLS OR CONCEPTS R=REINFORCEMENT AND REFINEMENT</p> <p>GOALS AND OBJECTIVES FOR DRAMA/THEATER, GRADES 7-9</p> <p>I. DEVELOP INTERNAL AND EXTERNAL PERSONAL RESOURCES</p> <p>A. Sensory and Emotional Perception</p> | |
| <p>R 1. Respond to and focus on details of sensory and emotional experiences.</p> <p>D 2. Use sensory and emotional recall to develop experiences as actor and viewer.</p> | <p>F4b</p> <p>F4b</p> |

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| D | 3. Recognize individual differences in sensory perception and emotional states. | F4b |
| D | 4. Interpret subtleties of sensory perception and emotional states. | F4b |
| D | 5. Develop and use a range of techniques to understand a character as actor and/or viewer. | F4b |
| I | 6. Explore sensory and emotional values in theatrical design. | F4b |
| B. Imagination | | |
| R | 1. Express images through dramatic play an story telling and react to imaginary objects, environments and perceptions. | F4b |
| R | 2. Use imagination in playmaking. | F4b |
| R | 3. Use dramatic action to communicate and transform mental images. | F4b |
| R | 4. Use imagination to form and express thought, feeling, and character. | F4b |
| R | 5. Use imagination in theater production as participant and/or viewer. | F4b |
| C. Movement | | |
| R | 1. Use movement for creative expression to explore thought, feeling and roles. | F4b |
| R | 2. Use movement to express thought, feeling, and character. | F4b |
| R | 3. Identify and use movement techniques to express character. | F4b |
| D | 4. Recognize and use movement as an integral element of theater. | F4b |
| D. Language | | |
| R | 1. Use language for personal exploration and social interaction, and commentary on personal experience. | F4a, F4b |
| R | 2. Use language to discover relationships through social interaction. | F4a, F4b |
| D | 3. Express meaning and character through language to reveal and communicate text and context. | F4a, F4b |
| D | 4. Demonstrate understanding of theater language. | F4a, F4b |
| E. Voice | | |
| R | 1. Use voice as a means of self-expression. | F4b |
| R | 2. Use voice to explore thought, feeling, and role in dramatic activities. | F4b |
| R | 3. Identify and use vocal techniques to express a variety of characterizations. | F4b |
| D | 4. Understand and use the vocal techniques and amplification of the voice in diverse theater activities and environments | F4b |
| F. Discipline | | |
| R | 1. Demonstrate responsible behavior in a dramatic play. | D1a, F4b |
| R | 2. Demonstrate responsible behavior in dramatic activities. | D1a, F4b |
| R | 3. Demonstrate social discipline in dramatic activities. | F4b |
| R | 4. Develop and apply artistic discipline. | F4b |
| G. Self-Concept | | |
| R | 1. Develop self-awareness and confidence in dramatic play. | F4b, G2b |
| R | 2. Discover self as effective in imagining, interacting and reflecting in dramatic activities. | F4b |
| D | 3. Improve understanding of self and others (similarities and differences) through expanding role repertoire. | F4b, G3a, G3b |
| ID | 4. Develop objectivity in appraising personal abilities and creative endeavors. | F4b, G2b, G2c |
| II. CREATE DRAMA/THEATER THROUGH ARTISTIC COLLABORATION | | |
| A. Interpersonal Skills/Ensemble | | |
| R | 1. Develop ability to join with and respond to others in dramatic activities. | F4b, G4b |
| R | 2. Explore behavior appropriate to the dramatic situation. | F4b, G4b |
| R | 3. Cooperate and interact empathetically during activities. | F4b, G3a, G4b |
| ID | 4. Practice the balance of personal needs with the social responsibilities and requirements of the dramatic situation. | F4b |
| I | 5. Explore and practice the need for ensemble in theater production. | F4b |
| B. Problem Solving | | |
| R | 1. Recognize that people in stories and life have problems. | F4b |
| R | 2. Explore the concept of problem and resolution, and appreciate alternative resolutions to problems in a dramatic context. | F4b |

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| D 3. Explore consequences and implications of alternative resolutions to problems through enactment. | F4b |
| D 4. Explore the production process as creative problem solving and evaluate consequences and implications. | F2a, F4b |
| D 5. Explore the production process as creative problem solving and evaluate consequences and implications. | F2a, F4b |
| C. Improvisation | |
| R 1. Participate in dramatic play and improvised dramatic activities. | A2a, F4b |
| R 2. Use improvisation for scripted and unscripted material. | F4b |
| D 3. Recognize the use of improvisation in preparing and performing theater production. | F4b |
| D. Characterization | |
| R 1. Assume roles through imitation. | F4b |
| R 2. Explore a variety of roles in life and fantasy situations. | F4b |
| R 3. Incorporate physical, emotional, and social dimensions of roles and characters. | F4b |
| D 4. Develop and use the skill of analysis in creating characters. | F4b |
| ID 5. Understand and use technical elements to develop characters. | F4b |
| E. Playmaking/Playwriting | |
| R 1. Apply observations of and imitate life experiences and imaginary scenes in dramatic activities. | F4b |
| R 2. Participate in playmaking focusing on the development and resolution of dramatic problems. | F4b |
| ID 3. Write scenes in a play script format based upon problem solving improvisations. | F3c, F4b |
| ID 4. Write and perform scenes/short plays integrating content and form. | F3c, F4b |
| F. Directing | |
| D 1. Recognize and understand the role and responsibilities of the director. | F4b |
| D 2. Comprehend and respond to the directing process. | F4b |
| I 3. Use the directing process. | F4b |
| G. Technical Elements | |
| R 1. Recognize selected aspects of the real and/or imaginary environment during dramatic play. | F4b |
| D 2. Recognize and explore the effect of selected elements of technical theater in dramatic activities. | F4b |
| D 3. Select elements of technical theater to enhance dramatic activities. | F4b |
| D 4. Recognize the contributions of technical elements in creating theatrical effects. | F4b |
| ID 5. Understand and respond to elements of technical theater as they affect the actor and viewer. | F4b |
| H. Theater Management | |
| 1. The student will recognize the function of management in theater production. | F4b |
| III. RELATE DRAMA/THEATER TO ITS SOCIAL CONTEXT | |
| A. Drama/Theater and Life | |
| R 1. Explore similarities and differences between life and drama/theater. | F4b |
| ID 2. Reflect upon personal and universal meanings in drama/theater. | F4b |
| I 3. Use life to understand theater and theater to understand life. | F4b |
| B. Roles and Careers | |
| R 1. Use role-playing to develop awareness of a variety of social roles and occupations. | F4b |
| D 2. Explore selected occupations in theater. | A2f |
| C. Theater Heritage | |
| R 1. Develop awareness of historical and multicultural concepts through dramatic activities. | F4b |
| D 2. Discover and explore motifs and themes in drama/theater. | F4b |
| I 3. Use theater history and dramatic literature to study cultural, social, and political aspects in theater production. | F4b |

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| IV. FORM AESTHETIC JUDGEMENTS | | |
| A. Dramatic Elements | | |
| R | 1. Explore roles and environments through dramatic activities using selected dramatic elements. | F4b |
| R | 2. Recognize, respond to, and evaluate elements in dramatic literature. | F2a, F4b |
| D | 3. Analyze and evaluate dramatic text as a basis for theater production. | F2a, F4b |
| B. Theater Attendance | | |
| R | 1. Respond to live theater. | F4b |
| D | 2. Analyze live theater. | F2a, F4b |
| ID | 3. Evaluate live theater. | F2a, F4b |
| ID | 4. Expand depth and scope of aesthetic judgement by experiencing theater of diverse styles, modes and genres. | F4b |
| C. Theater and Other Arts | | |
| R | 1. Experience various art forms and relate to drama/theater. | F4b |
| D | 2. Examine relationships between theater and other arts. | F4b |
| ID | 3. Synthesize knowledge of other arts into the creation of theater productions. | F4b |
| ID | 4. Synthesize knowledge of other arts into the creation of theater productions. | F4b |
| D. Aesthetic Response | | |
| R | 1. Recognize and respond to unique qualities of drama/theater. | F4b |
| R | 2. Explore drama/theater in order to understand and appreciate the creative process. | F4b |
| ID | 3. Explore drama/theater in order to respond cognitively to creative products. | F4b |
| ID | 4. Respond affectively to theater art as a way to interpret, intensify, and ennoble human experience. | F4b |
| MUSIC EDUCATION | | |
| GENERAL OUTCOMES | | |
| "A music program should be designed to produce individuals who: | | |
| | 1. Are able to make music, alone and with others; | F4b |
| | 2. Are able to improvise and create music; | F4b |
| | 3. Are able to use the vocabulary and notation of music; | F4b |
| | 4. Are able to respond to music aesthetically, intellectually and emotionally; | F4b |
| | 5. Are acquainted with a variety of music including diverse musical styles and genres; | F4b |
| | 6. Understand the role music has played and continues to play in the lives of human beings; | F4b |
| | 7. Are able to make aesthetic judgements based on critical listening and analysis; | F4b |
| | 8. Have developed a commitment to music; | F4b |
| | 9. Support the musical life of the community and encourage their musical learning independently."* | F4b |
| *School of Music Program: Description and Standards, Reston, VA: Music Educators' Conference, 2nd Ed., 1986, pp. 13-14. | | |
| MUSICAL ATTITUDES AND VALUES | | |
| The development of useful attitudes and values through music should happen over the entire K-12 curriculum in all courses. As the result of an education in music, students should develop the following attitudes and values: | | |
| | 1. Recognize that music plays an important part in everyday life. | F4b |
| | 2. Recognize the interaction of music and society. | F4b |
| | 3. Consider music as a way to interpret human experience. | F4b |
| | 4. Recognize unique qualities inherent in musical expressions of various cultures and traditions. | F4b |
| | 5. Make aesthetic judgements based on musical understanding. | F4b |
| | 6. Become a more discriminating listener and make informed choices about what music to listen to or purchase. | F4b |

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| 7. Examine relationships between music and other arts. | F4b | |
| 8. Seek new musical experiences and attend musical performances. | F4b | |
| 9. Make informed judgements about music. | F4b | |
| 10. Feel a sense of respect for music and its performance and creation. | F4b | |
| 11. Use music as a means of personal expression through singing, playing instruments, or listening. | F4b | |
| 12. Participate in music for enjoyment and during leisure time. | A2, F4b | |
| 13. Seek information about music, musicians and musical activities. | F4b | |
| 14. Involve friends and family members with music. | F4b | |
| 15. Participate in community performing groups. | A2e, F4b | |
| 16. Read articles, books, newspaper accounts and reviews concerning music, musicians and musical topics. | F4b | |
| 17. Value music in the life of the individual, family, and community. | F4b | |
| MUSIC IN HISTORICAL, CULTURAL AND SOCIAL CONTEXTS | | |
| <p>Music can represent and reflect many things about the cultural aspects of societies. Whether one examines cultures from a historical perspective or the many contemporary cultures of our present world, the student can become more sensitive to the differences and similarities of humankind through music. The learner should be aware that:</p> | | |
| 1. Music a part of our everyday lives and lifetime experiences. | F4b | |
| 2. Music conveys messages and communicates ideas. | F4b | |
| 3. Music as a universal language crosses historical, geographical and political boundaries. | F4b | |
| 4. Music is a reflection of the nature of the culture, historical period or social context from which it comes. | F4b | |
| 5. Music of each culture has its own set of aesthetic values. | F4b | |
| 6. The values of a society are reflected in the musical forms created. | F4b | |
| 7. The values of a society determine the status of its creators and performers. | F4b | |
| 8. Musical knowledge enables the development of tolerance and respect for tradition and innovation. | F4b | |
| 9. Composers and performers are artists creating or expressing their ideas through music. | F4b | |
| GOALS AND OBJECTIVES FOR VISUAL ARTS EDUCATION, GRADES 7-9 | | |
| <p>I=INTRODUCTION OF SKILLS OR CONCEPTS D=DEVELOPMENT OF SKILLS OR CONCEPTS R=REINFORCEMENT AND REFINEMENT</p> | | |
| I. HISTORICAL, CULTURAL AND SOCIAL CONTEXTS | | |
| <p>To promote students' understanding and appreciation of artistic and cultural heritage and the role of art in contemporary society.</p> | | |
| A. KNOWLEDGE | | |
| 1. Artists and Their World | | |
| Students Should Know That: | | |
| R | a. humans have always created images in the past and in the present. | F4b |
| R | b. the visual arts have played a role in the development of cultures throughout the world. | F4b |
| R | c. artists generate and express ideas according to their own experience and visions. | F4b |
| R | d. artists have borrowed ideas and received inspiration from works of past artists. | F4b |
| R | e. twentieth century artists have created art works that reflect the technology and mobility of a modern world. | F4b |
| D | f. art reflects, records and influences history. | F4b |
| D | g. artists react to trends and events within their environment. | F4b |
| D | h. contemporary artists have an impact on the world. | F4b |

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| D | i. artists have individual styles which may change over time. | F4b |
| 2. The Cultural Heritage | | |
| Students Should Know That: | | |
| D | a. there are a variety of images and art work from contemporary, historic and prehistoric cultures. | F4b |
| D | b. the visual arts have played a significant role in the development of cultures throughout the world. | F4b |
| D | c. the needs of a culture group often determine the art works produced by the group. | F4b |
| D | d. works of art are often created to celebrate or commemorate important events. | F4b |
| R | e. artisans have often relied upon the natural environment as a source of ideas and materials. | F4b |
| R | f. the traditions of creating handcrafted folk art objects have been transmitted from one generation to another. | F4b |
| R | g. many traditionally handcrafted art forms are now mass-produced because of technological advancements. | F4b |
| D | h. visual symbols communicate a universal language crossing historical, geographical and political boundaries. | F4b |
| 3. Contemporary Social Roles | | |
| Students Should Know That: | | |
| R | a. art works can be found in many places: museums, homes, public buildings, parks, films, and books etc. | F4b |
| D | b. artistic people contribute to our society through careers as artists, in advertising, the media, product design, architectural construction, environmental design, landscaping and in numerous other professions. | F4b |
| R | c. popular art forms (cartoons, films, record album covers, posters, etc.) attempt to appeal to a wide segment of society. | F4b |
| R | d. the visual arts are interrelated to other areas of the school curriculum. | F4b |
| D | e. trademarks, brand names, color and shape coding, and other visual symbols are used to convey messages and communicated ideas. | F4b |
| D | f. architecture and environmental design are related to the lifestyles of people. | F4b |
| D | g. art work reflects the time, technology and skills of a society | F4b |
| B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS | | |
| 1. Artists and Their World | | |
| Students Should Be Able To: | | |
| R | a. recognize works of individual artists. | F4b |
| R | b. classify art work according to subjects. (i.e. landscape, portrait, etc.) | F4b |
| R | c. classify art works illustrating specific forms of expression (i.e., photography, graphics, painting, sculpture). | F4b |
| D | d. describe the characteristics of a still life, a portrait, a self-portrait, a landscape, a cityscape. | F4b |
| D | e. classify art works according to styles (expressionistic, realistic, surrealist, etc.) | F4b |
| D | f. recognize recurrent themes in art such as: birth, marriage, death, victory, defeat, love, etc. | F4b |
| I | g. distinguish the differences between art works that are whimsical, analytical, factual, spiritual, or allegorical when similar subject matter is portrayed. | F4b |
| I | h. identify art works from various periods of history. | F4b |
| I | i. recognize that an artist's work can reflect a transition or evolution of style or form. | F4b |
| 2. The Cultural Heritage | | |
| Students Should Be Able To: | | |
| R | a. identify the purpose of an art object. | F4b |
| R | b. identify some of the symbols that different cultures use to convey common themes. | F4b |
| D | c. identify themes from selected works of art from various cultures or groups. | F4b |
| D | d. identify the design sources used in the decoration of handcrafted art objects. | F4b |
| D | e. recognize the similarities and differences between art works of various cultures. | F4b |

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| D | f. compare the media used in art works from different cultures. | F4b |
| I | g. identify factors which have influenced the production of art works from a particular culture. | F4b |
| I | h. explain contemporary style trends in art as reflections of diverse developments in a culture. | F4b |
| 3. Contemporary Social Roles | | |
| Students Should Be Able To: | | |
| R | a. recognize and describe the role of artists within a community. | F4b |
| R | b. recognize and describe ways that people are involved in the visual arts within the community. | F4b |
| R | c. identify symbols, trademarks, emblems, insignia and other visual motifs that are used to identify people's occupations, authority, or interests. | F4b |
| D | d. identify uses of the visual arts in business and industry, including architectural and commercial design, advertising, television, film, and art careers associated with all of these forms. | F4b |
| D | e. identify art works that are displayed in their community. | F4b |
| D | f. recognize "sculptural" art forms created for functional purposes, such as bridges, playgrounds, drinking fountains. | F4b |
| D | g. recognize the differences and similarities between popular art forms and fine art forms. | F4b |
| C. AFFECTIVE EXPERIENCES: ATTITUDES AND VALUES | | |
| 1. Artists And Their World | | |
| R | a. an awareness that artists generate and/or express ideas according to their own personalities and experiences. | F4b |
| R | b. an appreciation of the aesthetic values of others. | F4b, G3a |
| R | c. an emotional awareness and response to the sensory qualities in an artist's work. | F4b |
| R | d. a sensitivity to the expressive qualities in an artist's work. | F4b |
| R | e. a desire to communicate one's own aesthetic values when viewing an artist's work. | F4b |
| D | f. the ability to appreciate a wide variety of different artist's works. | F4b |
| D | g. the ability to define personal preferences in artists works, recognizing the influence of personal beliefs, attitudes and ideas. | F4b |
| 2. The Cultural Heritage | | |
| Students Should Develop: | | |
| R | a. an awareness that all people regardless of when they live, have emotional needs to visually express themselves. | F4b |
| R | b. an appreciation of the art forms from different cultures. | F4b |
| D | c. a sensitivity to the idea that cultural groups use a universal language to communicate beliefs and aesthetic values in visual form. | F4b |
| I | d. the ability to examine the value that people of different cultures place on tradition and innovation. | F4b |
| I | e. the perception that there is a relationship between individual beliefs and a culture's values when defining personal preferences in art works. | F4b |
| 3. Contemporary Social Roles | | |
| Students Should Develop: | | |
| R | a. an awareness that learning about the visual arts is an integral part of the educational process. | F4b |
| R | b. an awareness of how the values of society are expressed in the art forms created. | F4b |
| D | c. sensitivity to the relationship between different cultural forms of artistic expression, such as; body painting, tattoos, masks, cave drawings, and graffiti. | F4b |
| D | d. the ability to compare the qualities of objects that were produced for the same function. | F4b |
| D | e. the ability to analyze the psychological appeal of advertising. | F4b |
| D | f. the ability to recognize that the values of society determine the status of its artists and artisans. | F4b |
| I | g. the perception that social trends influence our emotional reactions while observing | F4b |

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| | art works. | |
| I | h. concern for the issues of censorship and the uses of art for propaganda. | F4b |
| II. CREATING ART AND THE ART PRODUCTION PROCESS | | |
| To provide expressive and creative opportunities for experiences with art tools and materials in a sequential process acknowledging the schematic development of the student. | | |
| A. KNOWLEDGE | | |
| 1. Vocabulary | | |
| Students Should Know: | | |
| R | a. vocabulary related to technical processes. | F4b |
| R | b. vocabulary related to medium/media | F4b |
| R | c. vocabulary related to composition. | F4b |
| R | d. vocabulary related to tools and equipment. | F4b |
| R | e. vocabulary related to design elements and concepts. | F4b |
| R | f. vocabulary related to forms of expression. | F4b |
| 2. Media and Materials | | |
| Students Should Experience: | | |
| D | a. painting | F4b |
| D | b. drawing | F4b |
| D | c. print making. | F4b |
| D | d. mixed media and fibers. | F4b |
| D | e. ceramics. | F4b |
| D | f. sculpture | F4b |
| D | g. computers and electronic media | F4b |
| I | h. jewelry/metal work | F4b |
| I | i. photography and video. | F4b |
| I | j. lettering and calligraphy | F4b |
| 3. Conceptual Strategies | | |
| Students Should Know That: | | |
| R | a. composition is an orderly and planned arrangement of the elements and principles of art. | F4b |
| | b. the process artists use to make art by conceiving an idea, elaborating and refining, and finally giving form with art materials and mediums. | F4b |
| R | c. the creating of art forms can stem from spontaneous expression based on prior knowledge and experience. | F4b |
| R | d. the art medium can serve as a source of inspiration for creative expression. | F4b |
| R | e. ideas can be developed from imagination, dreams and fantasies. | F4b |
| R | f. ideas can be developed from viewing other artist's works, trends or events in our society, nature or man made environments. | F4b |
| R | g. the use of natural and artificial light and its effect on composition. | F4b |
| D | h. concepts and ideas can be developed by creative processes such as brainstorming, thumbnail sketches, etc. | F4b |
| D | i. sequential planning may be necessary for the production of complex art forms. | F4b |
| B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS | | |
| 1. Imaginative and Creative Skills | | |
| Students Should Be Able To: | | |
| R | a. conceive, elaborate and refine new ideas. | F4b |
| R | b. develop ideas from imagination and other visual inspiration. | F4b |
| R | c. be aware of the differences between looking at something and truly seeing it. | F4b |
| R | d. commit time and effort to fully develop an idea. | F4b |
| D | e. use a variety of processes to stimulate creative ideas, i.e., creative problem solving techniques. | F2a, F4b |

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| D | f. utilize current events and the environment for inspiration. | F4b |
| D | g. manipulate the media, format, light and subject to convey varied personal interpretations | F4b |
| D | h. defer judgement as a way to be receptive to a new idea. | F4b |
| D | i. recognize and articulate the interrelationships between the elements and principals of design. | F4b |
| D | j. apply the elements and principles of design in creative and unique ways to solve or resolve visual problems. | F2a, F4b |
| 2. Use and Care of Equipment | | |
| Students Should Be Able To: | | |
| R | a. clean and care for basic art tools and materials. | D3, F4b |
| R | b. demonstrate the ability to use a variety of basic art tools in a safe and appropriate manner. | C2a, F4b |
| D | c. demonstrate the ability to safely use a variety of general hand tools: i.e., pliers, file, wire cutter. | C2a, F4b |
| D | d. demonstrate skill with sharpened tools: i.e., linoleum cutter, stencil knife, X-acto, matte knife. | C2a, F4b |
| ID | e. use power tools safely and appropriately. | C2a, F4b |
| 3. Application of Technical Skills | | |
| Students Should Be Able To: | | |
| a. demonstrate painting skills | | |
| | 1. using and mixing colors: primary, secondary, warm/cool, light/dark, etc. | F4b |
| R | 2. using a variety of tools, i.e., sponges, brushes | F4b |
| R | 3. using a variety of media, i.e., finger paint, tempera, watercolor | F4b |
| R | 4. developing painting techniques, i.e., wet brush, dry brush. | F4b |
| D | 5. varying color applications, i.e., tint, tone, shade | F4b |
| D | 6. using advanced color schemes, i.e., complementary, monochromatic, analogous, neutrals. | F4b |
| D | 7. using framing practices, i.e., matting and mounting | F4b |
| I | 8. using advanced painting media, i.e., acrylics and oils, guache. | F4b |
| b. demonstrate drawing skills by: | | |
| R | 1. using basic shapes and apparent form in an art work | F4b |
| R | 2. making a variety of shapes, "abstract and representational." | F4b |
| R | 3. drawing from direct observation | F4b |
| R | 4. composing art work using a variety of lines, i.e., thick, thin, broken, curved, slanted, etc. | F4b |
| R | 5. creating tactile and apparent textures. | F4b |
| D | 6. the use of spatial relationships, i.e., depth, areas, size relationship, overlap, foreground, middle-ground, background. | F4b |
| D | 7. utilizing both positive and negative space in composition. | F4b |
| D | 8. creating patterns with lines, shapes and textures | F4b |
| D | 9. exhibiting understanding of physical proportions | F4b |
| D | 10. drawing in one- and two-point perspectives | F4b |
| D | 11. using techniques for enlargement and reduction (grid system) | F4b |
| D | 12. creating symmetrically/asymmetrically balanced composition | F4b |
| D | 13. using concepts of composition, i.e., center of interest, point of view, eye path. | F4b |
| D | 14. creating contour and gesture drawings | F4b |
| D | 15. using techniques as varied line, texture, and shading to show implied light and value, i.e. cross hatching or stippling. | F4b |
| c. demonstrate printmaking skills by: | | |
| R | 1. learning basic relief print making techniques | F4b |
| R | 2. learning incised printing processes: styrofoam or found objects. | F4b |
| D | 3. using stencil processes | F4b |
| D | 4. developing multiple color print making processes involving registration techniques, i.e., etching, lithography, silkscreen. | F4b |

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| I | 5. using advanced print making techniques , i.e., etching, lithography, silkscreen | F4b |
| | d. demonstrate skills in mixed media and fibers by: | |
| R | 1. creating 3-D objects from paper, i.e., folding tearing | F4b |
| R | 2. composing an art product using mixed media or found objects. | F4b |
| R | 3. creating collages, assemblages, handmade paper, weavings | F4b |
| D | 4. using basic stitchery procedures, i.e., running stitch, cross stitch, couching | F4b |
| D | 5. doing simple macramé knots | F4b |
| D | 6. using advanced stitchery, i.e., satin, chain, French knot. | F4b |
| D | 7. weaving on a simple loom | F4b |
| D | 8. using basic batik and tie-die methods | F4b |
| D | 9. using basic basketry techniques (wrapping) | F4b |
| I | 10.using textile decoration methods, i.e., paint on silk, silk-screen, bleachout-reverse batik | F4b |
| | e. demonstrate ceramics skills by: | |
| R | 1. the pinch/pull method of construction | F4b |
| R | 2. the coil/slab method of construction | F4b |
| D | 3. using a potters wheel, modeling and slip casting | F4b |
| I | 4. the safe uses of glazes, using stains and colorants | F4b |
| I | 5. assisting in stacking and firing a kiln | F4b |
| | f. demonstrate sculptural skills by: | |
| R | 1. assembling rigid materials by stacking, hammering gluing, i.e., wood, cardboard, styrofoam | F4b |
| D | 2. creating mobiles, stabiles and other contemporary forms of sculptural expression, i.e. environmental, wrapping, etc. | F4b |
| D | 3. creating relief sculpture, i.e., sand casting, curved clay form | F4b |
| I | 4. making an armature out of wire, wood, paper | F4b |
| I | 5. using advanced sculpture techniques, i.e., molds, casting, welding, etc. | F4b |
| | g. demonstrate skills using computers and electronic media by: | |
| D | 1. recognizing that art work can be created using computers and other electronic media | F4b |
| D | 2. reproducing and manipulating images using electronic media | F4b |
| | h. demonstrate skill in jewelry/metalwork by: | |
| R | 1. stringing beads, seeds, or found objects | F4b |
| R | 2. making jewelry with dough, papier maché or clay | F4b |
| D | 3. bending and twisting wire into wearable art | F4b |
| D | 4. using repoussé techniques in flat metal | F4b |
| I | 5. using basic metal working techniques: i.e., cutting, sawing, hammering, soldering, filing, drilling, enameling | F4b |
| I | 6. using advanced jewelry techniques, i.e., casting, cloisonné, forming metal, etc. | F4b |
| | i. demonstrate photographic/video skills by: | |
| D | 1. using simple photography techniques, i.e., sun prints, drawing on slides, pinhole cameras, experimental | F4b |
| D | 2. using simple animation, i.e. flip book | F4b |
| I | 3. using a camera to frame and record an image | F4b |
| I | 4. developing film--various types | F4b |
| I | 5. utilizing video equipment to create an art form | F4b |
| I | 6. using splicing and editing equipment and techniques | F4b |
| | j. demonstrate lettering/calligraphy skills by: | |
| D | 1. drawing and cutting uniform letters | F4b |
| R | 2. using various calligraphy styles, i.e., Gothic, Roman, Chancery cursive, Text | F4b |
| D | 3. developing creative lettering designs | F4b |
| D | 4. utilizing advanced techniques of lettering, i.e., decorative, illuminated, etc. | F4b |
| C. AFFECTIVE EXPERIENCE: ATTITUDES AND VALUES | | |
| Students Should: | | |
| R | 1. Develop an inquisitive mind | F4 |

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| R | 2. Demonstrate confidence and satisfaction in his/her achievements | G2b |
| R | 3. Value his/her capabilities and creative potential | G2 |
| R | 4. Develop a respect and appreciation for the ideas and creations of others | G3a |
| R | 5. Increase awareness of the creative process and multitude of choices available | F4 |
| R | 6. Develop an awareness of the barriers that inhibit or prohibit creative thought | F4 |
| R | 7. Develop the desire to complete a project as specified | D3c |
| R | 8. Demonstrate a willingness to improve art skills | F4 |
| D | 9. Consider the cause and effect of media/material choices | F4b |
| D | 10. Develop a respect for the aesthetic dimensions of art | F4b |
| III. ART ANALYSIS/CRITICISM | | |
| Through talking and writing about art in structure ways that are developmentally appropriate for the student, the learner will gain the ability to observe, describe, analyze, interpret, and make critical judgements about the form and content of art. | | |
| A. KNOWLEDGE | | |
| Students Should Know: | | |
| R | 1. Vocabulary: Students should learn and use words whose meanings relate to or describe a process, characteristics or traits intrinsic to works of art | F4b |
| R | 2. Strategies: Students should gather information in order to recognize, identify and classify works of art. | F4b |
| B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS | | |
| 1. Describe A Work of Art | | |
| Students should be able to: | | |
| R | a. identify objects represented in a work of art | F4b |
| R | b. identify parts, forms, shapes, colors, lines, textures in a work of art. | F4b |
| D | c. identify symbolism, periods, artist's intent, style, cultures. | F4b |
| 2. Analyze A Work of Art | | |
| Students should be able to: | | |
| R | a. use vocabulary to identify or describe an artwork | F4b |
| R | b. discern how and where the formal elements are used by the artist | F4b |
| D | c. identify style, periods, media, cultures in works of art. | F4b |
| C. AFFECTIVE EXPERIENCE: ATTITUDES AND VALUES | | |
| 1. Interpretation of an Art Work | | |
| Students should be able to: | | |
| R | a. discuss visual perception about works of art | F4b |
| R | b. discuss feelings expressed in a work of art | F4b |
| R | c. discuss the artist's use of media, subject matter or theme in expressing intent | F4b |
| D | d. interpret the use of symbols in works of art | F4b |
| D | e. determine the presence of meaning in a work of art. | F4b |
| 2. Judgement | | |
| Students should be able to: | | |
| R | a. look at works of art and discern how it makes the viewer feel and why | F4b |
| D | b. combine knowledge and skills to evaluate works of art | F4b |
| D | c. compare and contrasts the relationship of social and cultural influences on works of art | F4b |
| D | d. consider the importance of works of art to society, careers and history | F4b |
| I | e. explain the work of art using analytical description, being aware of fallacies and prejudices that people bring to a work of art. | F4b |
| I | f. determine artistic merit of any work based on art rules, historical influences and personal experience. | F4b |

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| IV. AESTHETICS: A PHILOSOPHICAL BASIS FOR ART | | |
| An understanding of the nature, meaning and value of art is an important component of art education. The discussion of these philosophical questions sets art apart from the other areas of the curriculum. | | |
| A. KNOWLEDGE: DEFINING PROPERTIES OF AESTHETICS | | |
| Students should know that: | | |
| R | 1. Aesthetics is a branch of philosophy which deals with questions about the nature, meaning and value of art. | F4b |
| R | 2. The ability to perceive and respond to art is unique to human beings | F4b |
| R | 3. Aesthetics is an attempt to explain the reasons why we find certain experiences and objects perceptually interesting and attractive. | F4b |
| R | 4. One's concept of beauty may be different from another individual's concept of beauty. | F4b |
| R | 5. Concepts of beauty may differ from culture to culture | F4b |
| D | 6. Our aesthetic response is dependent upon the quality of our sensory perceptions | F4b |
| D | 7. Our aesthetic is an attempt to articulate why some experiences and objects are valued for their own sake rather than as means to other ends. | F4b |
| D | 8. Aesthetics is an attempt to articulate why some experiences and objects are valued for their own sake rather than as means to other ends. | F4b |
| I | 9. Aesthetics is a critical reflection on the experience and evaluation of art | F4b |
| I | 10. Philosophical inquiry in aesthetics involves weighing sometimes competing and a possibly incompatible ideas about art to achieve some coherent viewpoint | F4b |
| B. PERCEPTUAL, INTELLECTUAL AND PHYSICAL SKILLS | | |
| Students should develop the ability to: | | |
| R | 1. Observe and recall detail related to artistic experience | F4b |
| R | 2. Make discriminations of sensory qualities, i.e., variations in patterns, surface, color form, etc. | F4b |
| R | 3. Be receptive to new ideas | F4b, G |
| R | 4. Adapt to new situations | F4b |
| R | 5. Speculate | F4b |
| D | 6. Analyze the parts for a better perception of the whole | F2a, F4b |
| D | 7. Perceive events and objects holistically | F4b |
| D | 8. Communicate using appropriate vocabulary fro responding to the aesthetic qualities of a work of art. | F1, F4b |
| D | 9. Classify, sequence, compare and contrast aesthetic qualities | F4b |
| D | 10. Distinguish descriptive words from evaluative words | F4b |
| D | 11. Distinguish opinions from logical arguments, and objective statements from subjective statements | F4b |
| D | 12. Discuss and consider the relationship of the values of the culture to the values of the artist and the individual | F4b |
| C. AFFECTIVE EXPERIENCE: ATTITUDES AND VALUES | | |
| R | 1. Be curious and develop a sense of wonder | no match |
| R | 2. Value questions as well as answers | F4 |
| R | 3. Become more open to and aware of sensory qualities in works of art or in natural events | F4b |
| R | 4. Develop an awareness of the use of metaphors and symbols that relate to universal human themes | F4b |
| R | 5. Become more discriminating of and less satisfied with stereotypical images | F4b |
| D | 6. Tolerate ambiguity and uncertainty | F4b |
| D | 7. Become aware of assumptions and their effect on literal and visual phenomena | F4b |
| D | 8. Value the presence of many possibilities and options | F4b |
| D | 9. Value differences in viewpoints and reflective disagreement | F4b, G3 |
| D | 10. Seek the basis or experiential reasons for their attitudes and beliefs | F2a, F4b |

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| ESSENTIAL GOALS AND OBJECTIVES FOR WRITING | NCEC CODE |
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| OBJECTIVES FOR USING THE WRITING PROCESS | |
| PRE-WRITING | |
| Objectives: During the pre-writing part of the writing process, the student will: | |
| read | F3b, F3c |
| draw | F3c, F4b |
| speak | F1a, F3c |
| listen | F1a, F3c |
| dramatize | F3c, F4b |
| brainstorm | F3c, F4 |
| interview | F3c, F4 |
| recall | F3c, F4 |
| research | F3c, F4 |
| classify | F3c, F4 |
| imagine and visualize | F3c, F4 |
| DRAFTING | |
| Objectives: During the drafting part of the process, students will: | |
| choose a topic | D3e, F3c |
| use invented spellings | F3c |
| record experiences, feelings, and ideas on paper | F3c |
| restart | F3c |
| add or delete ideas | F3c |
| create images | F3c |
| connect ideas | F3c |
| consider audience and format | F3c |
| share writing with others | F3c |
| continue reading and researching | |
| REVISING | |
| Objectives: When revising, the student will | |
| add and delete information | F3c |
| seek help | F3c |
| refine purpose | F3c |
| share writing orally with peers | F1a, F3c |
| consider arrangement of sentences and paragraphs | F3c |
| select precise language | F3c |
| use a personal dictionary or thesaurus | F3c |
| evaluate what was written | F2a, F3c |
| project audience reaction | F3c |
| PROOFREADING | |
| Objectives: When proofreading, the student will: | |
| correct sentence fragments and run-on sentences | F3c |
| correct sentence syntax errors | F3c |
| correct errors in usage, such as lack of subject-verb agreement, incorrect verb tense, and so on | F3c |
| correct punctuation and capitalization | F3c |
| correct illegible handwriting | F3c |
| correct format problems, such as irregular margins, missing indentations, and so on | F3c |
| identify and correct misspelled words | F3c |
| PUBLISHING | |
| Objectives: After proofreading, a student will: | |
| prepare corrected copy for publication | F3c |
| add illustrations, if possible | F3c |
| share writing with appropriate audiences | F3c |

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| display writing in the classroom or school building | F3c |
| seek ways to share writing with parents | F3c |
| enjoy the published writing of classmates | F3c |
| ESSENTIAL GOALS AND OBJECTIVES FOR FOREIGN LANGUAGE EDUCATION, GRADES K-12 | |
| <p>PHASE II: During this phase, which may encompass three years at the upper elementary grades or two years at the junior high, emphasis remains on developing listening and speaking skills, but time spent on reading and writing in the foreign language increases. Students begin to develop an awareness of grammatical structures, but formal grammar instruction is kept to a minimum.</p> <p>During This Phase, Students Will:</p> | |
| Give more extended personal information (such as date of birth) and personal information about others. | F4a |
| Respond to visual cues dealing with school, home, city/community, sports, action words, foods. | F4a |
| Make simple inquiries orally to seek information, meet needs or initiate a conversation. | F4a |
| Begin to create with the language to express personal thoughts or needs on simple, familiar topics. | F4a |
| Learn sounds/symbol correspondences of foreign language. | F4a |
| Read stories and other texts for (cultural) information. | F4a |
| Write simple sentences in response to structured questions, to describe objects or people and for self-expression. | F4a |
| <p>PHASE III: This phase follows an articulated K-6 elementary program. Taught in the junior high, students are expected to develop proficiency in each of the four language skills.</p> <p>During This Phase, Students Will:</p> | |
| Learn about the language (grammar) and culture entirely through the medium of the foreign language. | F4a |
| Learn to address individuals in the correct social register. | F4a |
| Recount a sequence of events in the present and past tenses, orally and in writing. | F4a |
| Read and listen to authentic "texts" for information about history, geography and other aspects of the target culture(s). | F1a, F4a |
| Increase the ability to create with the language to express ideas and needs, orally and in writing. | F1a, F3c, F4a |
| THE ESSENTIAL OBJECTIVES FOR READING EDUCATION--3RD GRADE | |
| I. CONSTRUCTING MEANING | |
| A. INTERACTIVE READING | |
| 1. ability to construct meaning under a variety of different reader, text, and contextual conditions. | F3b |
| a. ability to identify and use text factors (i.e., text types, structures, and features) as an aid in constructing meaning | F3b |
| b. ability to select, employ, monitor, and regulate appropriate strategies under varying reader, text, contextual conditions | F3b |
| c. ability to read in a fluent manner, e.g., phrasing, automaticity | F3b |
| d. ability to integrate textual information within sentences, within a whole text, with information outside the text and with information from the reader's knowledge. | F3b |
| B. SKILLS FOR CONSTRUCTING MEANING | |
| 1. ability to use a variety of strategies to recognize words, e.g., predictions context clues, phonics, and structural analysis | F3b |
| 2. ability to use contextual clues to aid vocabulary and concept development | F3b |
| 3. ability to recall/recognize text based information | F3b |
| 4. ability to integrate information with a text | F3b |

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| 5. ability to integrate information from more than one text | F3b |
| 6. ability to evaluate and react critically to what has been read | F2a, F3b |
| 7. ability to construct a statement of a central purpose or theme | F3b |
| 8. ability to identify major ideas/events and supporting information within and across texts | F3b |
| II. KNOWLEDGE ABOUT READING | |
| A. GOALS AND PURPOSES | |
| 1. knowing that the goal of reading is constructing meaning | F3b |
| a. knowing that reading skills are tools for achieving the goal of constructing meaning | F3b |
| 2. knowing that reading is communication | F3b |
| a. knowing that what is read was written by someone who was trying to say something | F3b |
| b. knowing that authors have different intentions and knowing what they are, e.g., entertain, persuade, inform | F3b |
| c. knowing that the reader's adopted purpose(s) influence(s) comprehension | F3b |
| d. knowing that social context influences reading, e.g., peers, home, subculture | F3b |
| B. READER--TEXT--CONTEXTUAL FACTORS THAT INFLUENCE READING | |
| 1. knowing about READER characteristics, e.g., prior knowledge, purpose, interest, attitudes, word recognition and comprehension strategies. | F3b |
| 2. knowing about TEXT factors | F3b |
| a. knowing about how different text structures, e.g., essays, editorials, history, government, ecology, biology | F3b |
| b. knowing about how different text structures, influence reading, e.g., problem solution, superordinate/subordinate | F3b |
| c. knowing about how different text features influence reading, e.g., graphs, marginal notations, imagery, flashback | F3b |
| 3. knowing about CONTEXTUAL FACTORS | F3b |
| a. knowing about how different settings influence reading, e.g., library, club meetings, workplace | F3b |
| b. knowing about how different reading tasks, influence reading, e.g., library research, test preparation, lab reports | F3b |
| 4. knowing how READER, TEXT, and CONTEXTUAL factors interact to influence reading | F3b |
| C. STRATEGIES | |
| 1. knowing about a variety of strategies for identifying words, e.g., predictions, context clues, phonics, and structural analysis | F3b |
| 2. knowing about a variety of strategies to aid comprehension, e.g., notetaking, conceptual mapping, memorizing | F3b |
| 3. knowing when and why to use certain word recognition and comprehension strategies | F3b |
| 4. knowing that it is important to monitor and regulate comprehension | F3b |
| 5. knowing that strategies are employed flexibly, i.e., they are differentiated by reader, text, contextual factors | F3b |
| III. ATTITUDES AND SELF-PERCEPTIONS | |
| A. Developing a positive attitude toward reading | F3b, G2b |
| B. Choosing to read often in their free time both at home and in school | F3b |
| C. Choosing to read a variety of materials for a variety of purposes | F3b |
| D. Developing an understanding of their competencies and limitations in reading | F3b, G2b, G2c |
| E. Developing a positive attitude (image) toward themselves as readers | F3b, G2a, G2b |
| ESSENTIAL GOALS AND OBJECTIVES FOR MATHEMATICS EDUCATION, GRADES 4-6 | |
| WHOLE NUMBERS AND NUMERATION | |
| II. ADDITION | |
| To add whole numbers using manipulative models and computational algorithms | F3a |

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| D. Estimation | |
| 1. To estimate the sum of two, three or more numbers. | F3a |
| IV. MULTIPLICATION | |
| B. Mental Arithmetic | |
| 3. To multiply one-digit and two-digit numbers and find other appropriate special products mentally. | F3a |
| VI. NUMBER PROPERTIES | |
| To recognize and use properties of whole numbers. | F3a |
| A. Conceptualization | |
| 1. To demonstrate and use the meaning of: | F3a |
| d. prime number and prime factorization | F3a |
| e. and scientific notation | F3a |
| B. Computation | |
| 8. To express whole numbers in scientific notation, and conversely. | F3a |
| FRACTIONS, DECIMALS, RATIO AND PERCENT | |
| FRACTIONS (Note: Fractions include mixed numbers and whole numbers where appropriate) | |
| I. MEANING | |
| To demonstrate and use the meaning of fractions. | F3a |
| A. Conceptualization | |
| 1. To relate fractions to concrete models. | F3a |
| 2. To relate fractions to division using the necessary vocabulary. | F3a |
| B. Estimation | |
| 1. To estimate fractions and sizes of regions using easily recognized fractions. | F3a |
| C. Problem Solving And Applications | |
| 1. To solve problems involving the meaning of fractions. | F2a, F3a |
| II. EQUIVALENT FRACTIONS | |
| To find equivalent fractions using concrete models and generalizations for equivalent fractions | F3a |
| A. Conceptualization | |
| 1. To relate concrete models and equivalent fractions. | F3a |
| B. Mental Arithmetic | |
| 1. To find equivalent fractions for easily recognized fractions. | F3a |
| C. Estimation | |
| 1. To estimate fractions using easily recognized fractions. | F3a |
| D. Computation | |
| 1. To find equivalent fractions and mixed number/fraction equivalents. | F3a |
| E. Problem Solving And Applications | |
| 1. To solve problems with equivalent fractions | F2a, F3a |
| III. COMPARE/ORDER | |
| To compare and order fractions. | F3a |
| A. Conceptualization | |
| 1. To compare and order using models and appropriate fractions. | F3a |
| B. Estimation | |
| 1. To estimate fractions using easily recognized fractions. | F3a |
| C. Computation | |
| 1. To compare and order fractions. | F3a |
| D. Calculators | |
| 1. To compare and order fractions using decimal equivalents. | F3a, F5a |
| E. Problem Solving And Applications | |
| 1. To solve problems involving comparing or ordering fractions. | F2a, F3a |

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| IV. ADD/SUBTRACT To add and subtract fractions including combinations with whole numbers. | F3a |
| A. Conceptualization 1. To relate the addition and subtraction operations to models and to each other. | F3a |
| B. Mental Arithmetic 1. To find sums or differences of like fractions mentally. | F3a |
| C. Estimation 1. To estimate sums and differences. | F3a |
| D. Computation 1. To find sums or differences. | F3a |
| E. Problem Solving And Applications 1. To solve problems involving addition and subtraction with fractions. | F2a, F3a |
| V. MULTIPLY/DIVIDE To multiply and divide fractions including combinations with whole numbers. | F3a |
| A. Conceptualization 1. To relate the multiplication and division operations to models and to each other. | F3a |
| B. Mental Arithmetic 1. To find a fractional part of appropriate whole numbers mentally. | F3a |
| C. Estimation 1. To estimate products and quotients. | F3a |
| D. Computation 1. To find products and quotients. | F3a |
| E. Problem Solving And Applications 1. To solve problems involving multiplication and division with fractions. | F2a, F3a |
| DECIMALS | |
| I. MEANING To demonstrate and use the meaning of decimals. | F3a |
| A. Conceptualization 1. To relate decimals to models. 2. To use place value and to read and write decimals to thousandths. | F3a F3a |
| B. Estimation 1. To estimate decimals using whole numbers and models 2. To round decimals to a given place. | F3a F3a |
| C. Problem Solving and Applications 1. To solve problems involving the meaning of decimals. | F2a, F3a |
| II. EQUIVALENT DECIMALS To find equivalent decimals using models and generalizations for equivalent decimals. | F3a |
| A. Conceptualization 1. To identify equivalent decimals using models and generalizations for equivalent decimals. | F3a |
| B. Estimation 1. To use equivalent decimals to make estimates using models or using decimals. | F3a |
| C. Problem Solving and Applications 1. To solve problems with equivalent decimals. | F2a, F3a |
| D. Calculators 1. To interpret calculator displays for decimal equivalents. | F3a, F5a |
| III. COMPARE/ORDER To compare and order decimals. | F3a |
| B. Estimation 1. To estimate decimals using easily recognized fractions. | F3a |
| C. Problem Solving and Applications 1. To solve problems involving comparing or ordering of decimals. | F2a, F3a |

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| IV. ADD/SUBTRACT To add and subtract decimals. | F3a |
| A. Conceptualization 1. To relate the addition and subtraction operations to models and to each other. | F3a |
| B. Mental Arithmetic 1. To add and subtract selected decimals mentally. | F3a |
| C. Estimation 1. To estimate sums and differences. | F3a |
| D. Computation 1. To add and subtract decimals. | F3a |
| E. Problem Solving and Applications 1. To solve problems involving addition and subtraction of decimals. | F2a, F3a |
| F. Calculators 1. To add and subtract decimals. | F3a, F5a |
| V. MULTIPLY/DIVIDE To multiply and divide decimals. | F3a |
| A. Conceptualization 1. To relate the multiplication and division operations to models and to each other. 2. To relate equivalent expressions for the operations, including multiplication of a whole number and a decimal. | F3a F3a |
| B. Mental Arithmetic 1. To multiply and divide with decimals and powers of ten. | F3a |
| C. Estimation 1. To estimate products and quotients. | F3a |
| E. Calculators 1. To find products and quotients. | F3a, F5a |
| F. Problem Solving and Applications 1. To solve problems involving multiplication and division of decimals. | F2a, F3a |
| RATIO AND PROPORTION | |
| I. RATIO To use ratio in practical situations. | F3a |
| A. Conceptualization 1. To determine ratios from models that are part-to-part, part-to-whole, or rates and recognize verbal expressions for ratio. | F3a |
| B. Problem Solving And Applications 1. To solve problems involving ratios. | F2a, F3a |
| II. EQUIVALENT RATIOS/PROPORTION To identify and find equivalent ratios. | F3a |
| A. Conceptualization 1. To demonstrate the meaning of equivalent ratios using models or practical situations. | F3a |
| B. Problem Solving 1. To solve problems involving ratios. | F2a, F3a |
| III. EQUIVALENT RATIOS/PROPORTION To identify and find equivalent ratios. | F3a |
| A. Conceptualization 1. To demonstrate the meaning of equivalent ratios using models or practical situations. | F3a |
| B. Computation 1. To find equivalent ratios and solve proportions. | F3a |
| C. Problem Solving And Applications 1. To solve proportion problems. | F2a, F3a |

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| D. Calculators | |
| 1. To solve proportions with larger numbers and proportion problems with more difficult computation. | F3a, F5a |
| PERCENT | |
| I. MEANING | |
| To demonstrate the meaning of percent as a ratio whose second terms is 100. | F3a |
| A. Conceptualization. | |
| 1. To use models to represent percents. | F3a |
| B. Problem Solving And Applications | |
| 1. To use the meaning of percent in solving practical problems. | F2a, F3a |
| II. PERCENT, FRACTION, DECIMAL EQUIVALENTS | |
| To express ratios as percents, fractions, or decimals and to relate each form to the other two. | F3a |
| A. Conceptualization | |
| 1. To recognize equivalent expressions involving selected fractions, decimals and percents using models or easily recognized fractions. | F3a |
| B. Mental Arithmetic | |
| 1. To use easily recognized fractions and give fraction, decimal and percent equivalents. | F3a |
| C. Estimation | |
| 1. To estimate equivalents for fractions, decimals and percent using easily recognized fractions. | F3a |
| D. Calculators | |
| 1. To express any ratio as a percent or decimal. | F3a, F5a |
| E. Problem Solving And Applications | |
| 1. To solve problems using fraction, percent and decimal equivalents. | F2a, F3a |
| III. USING PERCENT | |
| To find a percent of a number. | F3a |
| A. Conceptualization | |
| 1. To recognize and use the meaning of percent in finding either the part (percentage) or the whole (base) when the percent (rate) is given. | F3a |
| B. Mental Arithmetic | |
| 1. To find selected percents of a number mentally: | F3a |
| a. 1%, 10%, 50%, 100% | F3a |
| b. 200%, 300% and other multiples of 100% | F3a |
| c. 5%, 15%, 20%, 25% | F3a |
| C. Estimation | |
| 1. To estimate the percent of a number using easily recognized fractions. | F3a |
| D. Calculators | |
| 1. To find a percent of a number. | F3a, F5a |
| E. Problem Solving And Applications | |
| 1. To solve percent problems, including percent of increase or decrease. | F2a, F3a |
| MEASUREMENT | |
| I. LENGTH AREA, VOLUME, ANGLES | |
| To measure length, area, volume and angles. | F3a |
| A. Conceptualization | |
| 2. To identify and describe concepts of area, perimeter, volume and angle measure. | F3a |
| 3. To distinguish among situations which call for measuring length, area or volume. | F3a |
| 4. To identify and describe concepts of circumference and surface area. | F3a |
| 6. To measure area (square units) and volume (cubic units) by the process of covering, filling, and counting and to recognize the relative size of standard units. | F3a |
| 7. To measure a given angle and to draw an angle of a given size. | F3a |
| 8. To read various scales such as rulers and protractors. | F3a |

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| B. Estimation | |
| 2. To estimate the area or volume of a familiar object or drawing. | F3a |
| 3. To estimate length, area and volume using all appropriate units of measure. | F3a |
| C. Problem Solving And Applications | |
| 5. To find the area and volume of figures resulting from combining or separating common geometric figures. | F2a, F3a |
| II. CAPACITY, MASS, TIME, TEMPERATURE | |
| To measure and use liquid capacity, mass (weight), time, temperature, monetary value and relationships of the basic metric units. | F3a |
| A. Conceptualization | |
| 6. To recognize and use the characteristics of the measurement process, including selection of appropriate units, derived units, the role of approximation and the conversion-of-units process. | F3a |
| 7. To recognize and use the metric system, including the decimal relationship among the various units and the relationships among cubic units, capacity units and mass units. | F3a |
| 8. To recognize and use the concept of precision of measurement. | F3a |
| B. Estimation | |
| 2. To make estimations of the capacity of various common containers in terms of metric units. | F3a |
| 3. To make estimations of weight in terms of metric units. | F3a |
| C. Problem Solving And Applications | |
| 2. To use a table of equivalents to solve simple problems involving the conversion of units within a system of measurement. | F2a, F3a |
| 3. To solve multi-step verbal problems posed within a measurement context. | F2a, F3a |
| GEOMETRY | |
| I. SHAPE | |
| To recognize and use the shapes in one, two and three dimensions. | F3a |
| A. Conceptualization | |
| 1. To identify and illustrate appropriate geometric shapes. | F3a |
| B. Problem Solving | |
| 1. To solve problems involving appropriate geometric shapes. | F2a, F3a |
| II. SHAPE PROPERTIES | |
| To recognize and use properties of one, two and three dimensional shapes such as equal sides, equal angles and symmetry. | F3a |
| A. Conceptualization. | |
| 1. To identify or illustrate properties of appropriate geometric shapes. | F3a |
| B. Problem Solving And Applications | |
| 1. To solve problems using properties of appropriate geometric shapes. | F2a, F3a |
| III. RELATIONS AMONG GEOMETRIC OBJECTS | |
| To recognize and use the relations of congruence, similarity, intersection, parallelism and perpendicularity for appropriate figures in one, two and three dimensions. | F3a |
| A. Conceptualization | |
| 1. To identify and illustrate appropriate relations among figures. | F3a |
| B. Problem Solving And Applications | |
| 1. To solve problems using the appropriate relations among shapes. | F3a |
| IV. POSITION | |
| To recognize and use informal and formal coordinate systems on lines and planes to specify locations and distances. | F3a |
| A. Conceptualization | |
| 1. To identify and produce points satisfying given conditions. | F3a |

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| B. Estimation | |
| 1. To estimate distances and positions in the coordinate plane. | F3a |
| C. Problem Solving And Applications | |
| 1. To solve problems using position concepts and notation. | F2a, F3a |
| V. TRANSFORMATIONS | |
| To recognize and use the transformations of reflection in a line (flip), translation (slide), rotation about a point (turn), and size change (enlargement and reduction). | F3a |
| A. Conceptualization | |
| 1. To recognize and produce appropriate transformations. | F3a |
| VI. VISUALIZING-SKETCHING-CONSTRUCTING | |
| To visualize, sketch and construct geometric objects. | F3a |
| A. Conceptualization | |
| 1. To visualize, sketch and construct geometric shapes or relationships. | F3a |
| B. Problem Solving And Applications | |
| 1. To solve problems requiring visualizing sketching or constructing geometric shapes or relationships. | F2a, F3a |
| STATISTICS AND PROBABILITY | |
| I. TABLES | |
| To construct, read and interpret tables. | F3a |
| D. Calculators And Computer | |
| 1. To generate tables using calculators and computers. | F3a, F5a |
| II. GRAPHS | |
| To construct, read and interpret graphs. | F3a |
| A. Conceptualization | |
| 1. To read graphs | F3a |
| a. Picture graphs, Bar graphs | F3a |
| b. Line graphs, Line plots | F3a |
| c. Circle graphs | F3a |
| d. Stem-and-leaf plots, Box plots and Scatter plots | F3a |
| B. Estimation | |
| 1. To make comparisons among graphs. | F3a |
| 2. To interpolate on graphs. | F3a |
| 3. To extrapolate on graphs. | F3a |
| 4. To use a fitted line on a scatter plot for prediction. | F3a |
| C. Computation | |
| 1. To determine appropriate scales for graphs. | F3a |
| 2. To construct graphs. | F3a |
| D. Problem Solving And Applications | |
| 2. To determine patterns, see trends, predict outcomes and make wise choices using graphs. | F2a, F3a |
| III. DESCRIPTIVE STATISTICS | |
| To read, interpret, determine and use descriptive statistics. | F3a |
| A. Conceptualization | |
| 1. To define terms: | F3a |
| b. outlier, quartile | F3a |
| B. Computation | |
| 2. To determine mean, median and range. | F3a |
| 3. To determine outlier and quartile. | F3a |
| C. Problem Solving And Applications | |
| 1. To determine patterns, see trends, predict outcomes and make wise choices using descriptive statistics. | F2a, F3a |

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| IV. PROBABILITY To read, interpret, determine and use probabilities. | F3a |
| A. Conceptualization | |
| B. Mental Arithmetic | |
| 1. To determine probabilities of simple events. | F3a |
| 2. To determine the probability an event will not occur, given the probability the event will occur. | F3a |
| C. Computation | |
| 1. To determine probabilities of compound events. | F3a |
| D. Problem Solving And Applications | |
| 1. To use probability devices to simulate real world events. | F3a |
| E. Calculators And Computers | |
| 1. To use calculators to determine probabilities. | F3a, F5a |
| 2. To use computers to simulate compound events. | F3a, F5a |
| ALGEBRAIC IDEAS--VARIABLES | |
| I. EXPRESSIONS To understand and use expressions containing variables. | F3a |
| A. Conceptualization | |
| 1. To recognize and use the concept of variable in expressions. | F3a |
| B. Computation | |
| 1. To evaluate expressions. | F3a |
| C. Estimation | |
| 1. To estimate values of expressions. | F3a |
| D. Calculators | |
| 1. To use calculators to evaluate expressions. | F3a, F5a |
| II. VERBAL, SYMBOL, MODEL RELATIONS To use variables in translating among verbal expressions, symbols, and situations that are pictorial or practical. | F3a |
| B. Problem Solving And Applications | |
| 1. To solve problems represented physically, pictorially, symbolically or verbally. | F2a, F3a |
| III. OPEN SENTENCES To use variables to write and solve open sentences. | F3a |
| A. Conceptualization | |
| 1. To recognize and use the concept of variable in open sentences. | F3a |
| B. Computation | |
| 1. To find solutions to open sentences. | F3a |
| C. Problem Solving And Applications | |
| 1. To find solutions to problems stated verbally. | F2a, F3a |
| REAL NUMBERS AND PROPERTIES | |
| I. DISTRIBUTIVE PROPERTY To recognize and apply the distributive property. | F3a |
| A. Conceptualization | |
| 1. To recognize equivalent manipulative or pictorial representations of the distributive property. | F3a |
| B. Mental Arithmetic | |
| 1. To use the distributive property for mental arithmetic short cuts. | F3a |
| C. Problem Solving And Applications | |
| 1. To apply the distributive property to problems solving situations. | F2a, F3a |
| II. INTEGERS To recognize, use and compute with integers. | F3a |

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| A. Conceptualize | |
| 1. To interpret and compare integers in familiar situations. | F3a |
| B. Computation | |
| 1. To determine the sign of the answer for integer computation. | F3a |
| 2. To compute with integers. | F3a |
| C. Problem Solving And Applications | |
| 1. To use integers in everyday situations. | F2a, F3a |
| III. EXPONENTS, POWERS AND ROOTS | |
| To recognize and use concepts of exponents, powers and roots. | F3a |
| A. Conceptualization | |
| 1. To recognize and use patterns of squares and cubes. | F3a |
| B. Estimation | |
| 1. To estimate square roots. | F3a |
| C. Calculators | |
| 1. To use calculators to find or approximate solutions to exponential equations. | F3a, F5a |
| D. Problem Solving And Applications | |
| 1. To solve problems involving powers and roots. | F2a, F3a |
| FUNCTIONS AND GRAPHS | |
| I. FUNCTIONS | |
| A. Computation | |
| 1. To represent a function with a table of values or a graph. | F3a |
| 2. To recognize, describe, and express in symbols a relationship between two sets. | F3a |
| B. Problem Solving And Applications | |
| 1. To solve problems using functions. | F2a, F3a |
| II. GRAPHS | |
| To identify and interpret graphs representing situations, tables of values or sentences. | F3a |
| A. Conceptualization | |
| 1. To identify an appropriate graph given a table of values or an equation and conversely. | F3a |
| B. Problem Solving And Applications | |
| 1. To use graphs to solve problems. | F2a, F3a |
| PROBLEM SOLVING AND LOGICAL REASONING | |
| I. PATTERNS | |
| To identify, use, and construct patterns. | F3a |
| A. To identify a patterns and determine a missing element. | F3a |
| B. To create a pattern , given a formal rule. | F3a |
| C. To extrapolate by developing a formal rule for a pattern. | F3a |
| II. UNDERSTANDING PROBLEMS | |
| To demonstrate an understanding of a problem | F3a |
| A. To determine what is to be found. | F3a |
| B. To identify necessary information to solve a problem. | F3a |
| C. To determine insufficient information. | F3a |
| D. To formulate appropriate questions. | F3a |
| E. To formulate a problems for mathematical expressions or number sentences. | F3a |
| III. PROBLEM SOLVING STRATEGIES | |
| To select and apply appropriate problem solving strategies. | F2a, F3a |
| A. To identify and use a patterns to solve a problem. | F2a, F3a |
| B. To make an organized list or table to solve a problem. | F2a, F3a |
| C. To make and test to solve a problem. | F2a, F3a |
| E. To make or use a drawing, a graph or a physical model to solve a problem. | F2a, F3a |

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| F. To write an open sentence to solve a problem. | F2a, F3a |
| G. To solve a simpler problem to solve a problem. | F2a, F3a |
| H. To eliminate possibilities to solve a problem. | F2a, F3a |
| I. To select the appropriate operation(s) to solve a one-step or multi-step problem. | F2a, F3a |
| IV. EVALUATING SOLUTIONS | |
| To interpret and evaluate the solution to a problem. | F2a, F3a |
| A. To check the solution(s) with the conditions of the problem. | F2a, F3a |
| B. To find and evaluate alternative processes for solving the problem. | F2a, F3a |
| C. To formulate an extension of the problem. | F2a, F3a |
| D. To formulate a generalization of a given problem. | F2a, F3a |
| V. LOGICAL REASONING | |
| To use logical reasoning. | F2a, F3a |
| A. To determine in the attributes used to classify a set and vice-versa. | F2a, F3a |
| B. To interpret and use statements involving logical operations and quantifiers (and, or, not, if...then, every, all, some, no, at least, at most, each, exactly). | F2a, F3a |
| C. To recognize and draw valid conclusions from given information. | F2a, F3a |
| CALCULATORS | |
| I. CALCULATOR KEYS AND FEATURES | |
| To recognize specific calculator keys and selected calculator features. | F5a |
| A. To recognize specific calculator keys. | F5a |
| B. To recognize appropriate key sequences for automatic constant features. | F5a |
| C. To recognize appropriate calculator keys related to selected terms associated with mathematical operations. | F3a, F5a |
| II. COMPUTATION | |
| To perform appropriate computations with a calculator. | F3a, F5a |
| B. To use a calculator to compute appropriate sums, differences, products and quotients with whole numbers, decimals and fractions. | F3a, F5a |
| C. To use a calculator to compute answers to percent problems including percent of increase or percent of decrease. | F3a, F5a |
| III. LIMITATIONS AND CALCULATOR DISPLAY | |
| To recognize certain common limitations to calculators and be able to interpret selected calculator-displayed symbols. | F3a, F5a |
| A. To recognize and interpret the calculator display. | F3a, F5a |
| B. To recognize the limitations of the calculator regarding decimal numbers display and order of operations. | F3a, F5a |
| ESSENTIAL GOALS AND OBJECTIVES FOR SOCIAL STUDIES EDUCATION, GRADES 7-9 | |
| I=INTRODUCE D=DEVELOP R=REINFORCE | |
| KNOWLEDGE GOALS AND OBJECTIVES | |
| 1. Understand the rights and responsibilities of democratic citizenship. | |
| ID | a. Identify rights and liberties guaranteed in the United States Constitution. |
| ID | b. Understand situations in which rights have been denied. |
| ID | c. Understand that an individuals rights may differ with those of another individual or with the general welfare. |
| D | d. Understand differences between stated rules and actual practices. |

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| R | e. Understand and support the right of all to present different points of view. | F4a |
| D | f. Understand the responsibility of participation in society and governments both as an individual and as a member of a group. human rights. | F4a |
| ID | g. Understand the role and function of responsible dissent in a democracy. | F4a |
| ID | h. Understand statements of basic human rights and responsibility found in oral tradition and documents such as constitutions, declarations, and treaties. | F4a |
| ID | i. Know some of the historical developments that have contributed to or impeded human rights. | F4a |
| D | j. Know the responsibility people have to maintain a democratic society. | F4a |
| | 2. Understand the role and function of law in a democracy. | F4a |
| D | a. Understand the purposes of law. | F4a |
| D | b. Understand how legal and judicial decisions are made. | F4a |
| D | c. Understand how laws can be changed. | F4a |
| D | d. Understand how conflicts in laws are resolved. | F4a |
| D | e. Know the duties of participants in a court of law. | F4a |
| D | f. Understand the factors that might affect justice. | F4a |
| D | g. Understand the development of legal and judicial procedures. | F4a |
| D | h. Understand how the Constitution limits governmental action. | F4a |
| D | i. Understand the dynamic nature of law. | F4a |
| D | j. Understand the limitations of formal legal processes in settling disputes. | F4a |
| I | k. Understand how laws may create conflicting moral obligations. | F4a |
| D | l. Understand that the judicial system provides for both public and private justice. | F4a |
| D | m. Recognize the differing functions of the civil and criminal justice systems. | F4a |
| D | n. Know individual rights within the criminal justice system. | F4a |
| I | o. Identify similarities and differences between the judicial system in the United States and those in other countries. | F4a |
| | 3. Understand persistent global issues. | F4a |
| DR | a. Define global issues which affect people all over the world | F4a |
| DR | b. Understand environmental issues. | F4a |
| DR | c. Understand social issues | F4a |
| DR | d. Understand global economic issues. | F4a |
| DR | e. Understand relationships among global issues. | F4a |
| DR | f. Understand interdependence among nations of the world. | F4a |
| DR | g. Understand that unsolved issues elsewhere in the world often impact upon the United States. | F4a |
| DR | h. Understand that criteria for evaluating personal and social problems may vary from culture to culture. | F4a |
| DR | i. Understand possible worldwide effects of decisions made by individuals, communities and nations | F4a |
| DR | j. Know how to create, analyze and evaluate alternative futures for the world. | F4a |
| I | k. Understand the evolving nature of international law. | F4a |
| DR | l. Understand some of the issues related to food consumption disparity between developed and developing nations. | F4a |
| DR | m. Understand ways that people are interrelated. | F4a |
| | 4. Understand diverse human cultures, customs, beliefs and values systems. | F4a |
| R | a. Understand that people everywhere have the same basic needs, but the manner in which they meet these needs differs according to their culture. | F4a |
| DR | b. Understand that customs and habits differ from one group to another. | F4a |
| R | c. Understand that within a community there may exist one or several cultural, racial, or ethnic groups. | F4a |
| DR | d. Recognize the importance of being objective and fair in regard to cultural, racial, or ethnic groups. | F4a |
| D | e. Understand the components of culture. | F4a |

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| D | f. Recognize that social-cultural change may create varying degrees of resistance and conflict. | F4a |
| I | g. Recognize the importance of using the procedures of analytical thinking in understanding cultural groups other than their own. | F4a |
| I | h. Understand the concept of culture. | F4a |
| | 5. Understand the history and present state of their own and other cultures | F4a |
| | a. Know basic historical facts related to the development of the United States and other cultures. | F4a |
| IDR | b. Understand urban, rural and suburban development. | F4a |
| DR | c. Understand the impact of technology on society. | F4a |
| DR | d. Understand changes in female and male roles. | F4a |
| DR | e. Understand that there are differences in family structures. | F4a |
| DR | f. Understand changes in family, work, and population patterns. | F4a |
| D | g. Identify occupations and career choices. | F4a |
| D | h. Understand the career decision making and planning process. | F4a |
| D | i. Identify methods, processes, and effects of change and continuity. | F4a |
| D | j. Understand changes in racial/ethnic relations. | F4a |
| D | k. Understand persistent social problems. | F4a |
| D | l. Understand the development of educational institutions. | F4a |
| D | m. Understand the development of religious institutions. | F4a |
| D | n. Know historical influences on the development of the governmental system. | F4a |
| D | o. Understand that people view the past differently. | F4a |
| | 6. Understand basic economics and economic systems. | F4a |
| DR | a. Understand basic economic concepts. | F4a |
| DR | b. Understand the role of money in the economy. | F4a |
| DR | c. Understand factors that influence economic behavior. | F4a |
| DR | d. Understand economic concepts as they apply to individual decision-making. | F4a |
| DR | e. Understand the basic functions of an economic system. | F4a |
| DR | f. Understand how a market economy works. | F4a |
| DR | g. Understand the historic and current role of labor in our economic system. | F4a |
| ID | h. Understand the relationships between the factors of production - land, labor, capital, and management in our economic systems. | F4a |
| ID | i. Understand the relationship of government to the economy. | F4a |
| ID | j. Understand the relationship of government to the economy. | F4a |
| ID | k. Understand the relationship between specific economic goals and overall social goals. | F4a |
| I | l. Understand potential conflicts between basic economic goals. | F4a |
| I | m. Identify similarities and differences between the economic system of the United States and that of other countries. | F4a |
| I | n. Understand basic international economic concerns. | F4a |
| I | o. Understand development of labor/management relationships. | F4a |
| | 7. Understand how to be an effective producer and consumer of goods and services. | F4a |
| R | a. Understand factors that influence consumer behavior. | F4a |
| R | b. Give examples of their own listed resources and unlimited wants. | F4a |
| R | c. Demonstrate comparison shopping skills and the use of consumer aids in shopping for various goods and services. | F4a |
| R | d. Identify deceptive sales techniques and practices. | F4a |
| R | e. Recognize the need to conserve energy. | F4a |
| I | f. Identify situations in which cost benefit analysis reveals the nature of public policy decisions on consumer economic issues. | F4a |
| ID | g. Identify various ways in which members of a household must know and use mathematics to make sound consumer decisions. | F4a |
| ID | h. Identify the common causes of consumer complaints and redress procedures. | F4a |
| ID | i. Recognize the relationship between the protection of consumer rights at various levels of government and the exercise of individual responsibility by both consumers and | F4a |

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| | providers of goods and services. | |
| ID | j. Locate reliable sources of information which consumers may use to help them make better informed purchases and help them become more effective in their role as consumer citizens. | F4a |
| ID | k. Recognize that consumer decisions to use or conserve energy resources have both individual and aggregate effects, as well as short and long-term consequences. | F4a |
| ID | l. Recognize that financial institutions and services are in the process of major transition, requiring frequent study and analysis by consumers to be able to protect financial resources. | F4a |
| ID | m. Analyze the relationship between consumer decisions on diet and health care. | F2a, F4a |
| | 8. Understand geographic principles/concepts including relationships between people and the physical environment and the significance of place, location, region, interaction, and diffusion. | F4a |
| R | a. Define the terms environment, place, location, region and interaction. | F4a |
| DR | b. Describe the physical environment. | F4a |
| R | c. Understand how the physical environment is used to meet human needs and wants. | F4a |
| DR | d. Describe how people have responded to the physical environment. | F4a |
| DR | e. Identify the locations and characteristics of major places. | F4a |
| DR | f. Understand why people, things, activities, are located where they are. | F4a |
| R | g. Understand how people change the physical environment. | F4a |
| DR | h. Describe the location and characteristics of major regions. | F4a |
| DR | i. Describe the interaction which take place within the regions and between regions. | F4a |
| R | j. Describe how culture changes as a result of the diffusion of ideas and the migration of people. | F4a |
| | 9. Know the main structure and functions of government. | F4a |
| DR | a. Know the purposes of government. | F4a |
| I | b. Understand the range and importance of decisions make by state and local government. | F4a |
| D | c. Associate governmental actions with the appropriate level of government. | F4a |
| I | d. Understand the basic political principles expressed or implied in the U.S. Declaration of Independence, the U.S. Constitution, court decisions and laws. | F4a |
| I | e. Understand the organization and functions of state and local governments and their relationships to the federal government. | F4a |
| I | f. Understand how decisions made by various levels of government are interdependent. | F4a |
| I | g. Understand the limits on decision-making powers of the government. | F4a |
| I | h. Understand the legislative process. | F4a |
| I | i. Understand voter behavior. | F4a |
| I | j. Understand the role of political parties. | F4a |
| I | k. Associate excerpts from the Declaration of Independence, Bill of Rights, state constitution, and a local city or township charter with the proper document. | F4a |
| I | l. Understand how, when and with what qualifications public officials are nominated, elected, or appointed. | F4a |
| I | m. Understand how public officials can be removed from office. | F4a |
| I | n. Understand registration and voting procedures. | E2a, F4a |
| I | o. Recognize the legality and constitutionality of individual and group actions. | F4a |
| I | p. Understand interpretations of basic political principles in different periods of U.S. history. | F4a |
| I | q. Identify the principles and purposes in the political systems of the United States and other nations. | F4a |
| ID | r. Understand the organization and functions of the executive, legislative, and judicial branches and independent regulatory agencies of the federal government. | F4a |
| ID | s. Understand the changing roles of various levels and branches of government. | F4a |
| I | t. Understand the range and importance of decisions made by the various branches and independent regulatory agencies of the federal government. | F4a |
| ID | u. Identify the forms of government. | F4a |

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| ID | v. Understand influences on governmental decision-making. | F4a |
| I | w. Identify similarities and differences in political decision-making in the United States and other nations. | F4a |
| ID | x. Associate national, state and local problems with appropriate governmental agency or department. | F4a |
| ID | y. Understand the role of interest groups. | F4a |
| | 10. Understand the organization of human societies. | F4a |
| D | a. Compare customs and habits of groups. | F4a |
| R | b. Understand ways groups are interdependent, cooperative, and competitive. | F4a |
| D | c. Understand types of conflicts between groups and ways conflicts are resolved. | F4a |
| D | d. Understand how and why groups differ. | F4a |
| D | e. Understand the decision-making processes used by groups. | F4a |
| D | f. Identify the variety of institutions and groups and the functions of those institutions and groups. | F4a |
| D | g. Understand why human beings form institutions and groups. | F4a |
| D | h. Understand the relationships among institutions, groups, and individuals. | F4a |
| D | i. Understand the changing nature of institutions and groups over time. | F4a |
| | 11. Understand the relationships between individuals and groups. | F4a |
| R | a. Identify the variety of roles one can have within a group. | F4a |
| R | b. Understand that the role within a group may be assigned or achieved. | F4a |
| R | c. Understand reasons why there are different roles within groups. | F4a |
| D | d. Understand the possible advantages and disadvantages of belonging to a variety of groups. | F4a |
| D | e. Understand that multiple loyalties and responsibilities result from belonging to a variety of groups. | F4a |
| D | f. Understand the importance of self-confidence and self-worth in carrying out responsibilities within groups. | F4a |
| D | g. Understand how groups influence behavior. | F4a |
| ID | h. Understand how individual perceptions and actions are influenced by the values and behavior patterns of groups with which individuals identify. | F4a |
| ID | i. Recognize that there are important values and behaviors that develop outside of a group's influence. | F4a |
| ID | j. Understand the ways different groups react to similar social issues. | F4a |
| | 12. Understand the psychology of human behavior. | F4a |
| I | a. Understand the effect of family interaction on a child's development. | F4a |
| I | b. Understand the effects of biological factors on human behavior. | F4a |
| I | c. Understand verbal and non-verbal indicators of attitude. | F4a |
| I | d. Understand the influence of self-concept, perception, role expectations and role conflicts on personal behavior. | F4a |
| I | e. Understand the effects of significant emotional and life stage events on human behavior. | F4a |
| D | f. Understand and accept one's own value system and the value systems of others. | G2, G3a, G3b |
| D | g. Understand and develop the interpersonal skills needed to interact with others. | G1, G4 |
| D | h. Understand and accept the responsibility and consequences of personal and group decisions. | D1a, D3 |
| D | i. Understand the effects of change upon the individual. | F4 |
| DEMOCRATIC VALUES GOALS AND OBJECTIVES | | |
| | 1. Develop awareness and concern for the rights and well-being of others. | G3a |
| R | a. Show concern for the well-being of others' rights. | G3a |
| R | b. Show concern for the dignity of others. | G3a |
| R | c. Be aware of the distinctive characteristics of others. | G3b |
| | 2. Develop a positive self-concept, which includes an awareness of one's self worth, values, ethnic background, and culture. | G2a |
| R | a. Recognize the way in which activities reflect one's own personal values. | F4a |

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| R | b. Become aware of family and peer values. | F4a |
| R | c. Respect for their own heritage and background. | G2, G3 |
| R | d. Realize how personal behavior and learning experiences contribute to a positive self-concept. | G2a |
| R | e. Recognize acceptable criteria for judging individual actions in a democracy. | F4a |
| | 3. Develop an understanding of the values, ethnic background and cultures of people from a variety of racial/ethnic/cultural groups. | F4a |
| R | a. Recognize that ethnic backgrounds and culture determine people's values. | F4a |
| R | b. Be aware of positive attributes individuals worthy of emulation from a variety of cultural groups, including groups which make up the American society. | F4a |
| R | c. Recognize behaviors which hurt others. | F4a |
| R | d. Recognize commonalities and differences among beliefs, values, and behaviors of people from a variety of racial/ethnic/cultural groups. | F4a |
| R | e. Be aware of ways of positively interacting with others of varying backgrounds. | F4a, G4 |
| D | f. Show respect for the dignity and worth of those who belong to a variety of cultural, racial, or ethnic groups. | G3b |
| D | g. Recognize the effects of cultural diversity in society. | F4a |
| D | h. Recognize relationships and conflicts among beliefs, values, and behaviors of other persons and groups. | F4a |
| | 4. Develop a reasoned commitment to the principles and value which sustain a democracy. | E |
| D | a. Accept the rights and responsibilities of democratic citizenship. | E1a |
| R | b. Respect the right of all to present different points of view in the classroom. | G3a |
| R | c. Respect the right of all to present different points of view in the community. | G3a |
| R | d. Respect and support the role and function of laws in a democracy. | E1a |
| D | e. Respect and support the role and function of responsible dissent in a democracy. | E |
| | 5. Develop a commitment to participate in society and governments both as an individual and as a member of a group. | A2e, D1a, E1a, E3 |
| D | a. Be aware of responsibilities people have to maintain a democratic society. | D, E |
| D | b. Recognize characteristics of good leader. | F4 |
| R | c. Recognize examples of equity. | F4 |
| R | d. Recognize examples of injustices. | F4 |
| R | e. Defend rights and liberties of all people. | E |
| D | f. Support equal opportunity. | E, G3b |
| D | g. Recognize and encourage ethical and lawful behavior in others. | E |
| I | h. Comply with local, state and federal laws. | E1 |
| I | i. Work toward elimination of "unjust" and "unworkable" laws and regulations. | E |
| D | j. Recognize that individual civic action is important. | E |
| D | k. Work for improvement of conditions by applying personal skills. | E3c |
| D | l. Participate in government. | E3a |
| SKILLS, GOALS AND OBJECTIVES | | |
| | 1. Gather, interpret, analyze, summarize, synthesize and evaluate information. | F4 |
| R | a. Use a variety of senses to obtain information. | F4 |
| R | b. Choose appropriate sources for information desired. | F4 |
| DR | c. Obtain desired information from a variety of sources. | F4 |
| DR | d. Group data into appropriate categories. | F4 |
| R | e. Recognize that people may interpret the same objects or events differently. | F4 |
| DR | f. Identify cause and effect relationships. | F4 |
| DR | g. Distinguish between fact and opinion. | F4 |
| R | h. Formulate predictions based on factual information. | F4 |
| R | i. Translate information from one form to another. | F4 |
| DR | j. Draw inferences from a variety of sources. | F4 |

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| DR | k. Identify specific sub-topics of major topics. | F4 |
| DR | l. Detect bias in data presented. | F4 |
| DR | m. Compare and contrast information. | F4 |
| R | n. Select main ideas from information. | F4 |
| DR | o. Arrange information in usable forms. | F4 |
| R | p. Draw conclusions. | F4 |
| D | q. Formulate hypotheses. | F4 |
| D | r. Determine different outcomes if events were changed. | F4 |
| D | s. Propose a new plan. | F4 |
| D | t. Decide if information is significant to the topic. | F4 |
| D | u. Evaluate the quality of information. | F4 |
| D | v. Test hypotheses and revise as needed. | F4 |
| | 2. Make Decisions | F4 |
| D | a. Recognize the occasion and need for decisions. | F2a, F4 |
| D | b. Analyze the problem. | F4 |
| D | c. Identify possible alternative courses of action. | F4 |
| D | d. Project long and short term consequences of possible alternative courses of action. | F4 |
| D | e. Identify and evaluate consequences of possible alternative courses of action. | F4 |
| D | f. Choose and develop strategies to carry out the decision. | F4 |
| D | g. Apply the strategies in implementing a decision or solving a problem. | F4 |
| D | h. Re-evaluate and reformulate the process if goals are not met or new information is introduced. | F4 |
| | 3. Develop the skills necessary for participation in society and governments both as an individual and as a member of a group. | F4 |
| DR | a. Present own ideas. | F1 |
| D | b. Paraphrase what has been heard and obtain agreement from the speaker that the paraphrasing is correct. | F1a |
| D | c. Listen and respond appropriately. | F1a |
| D | d. Solicit clarification from others when needed. | F1 |
| DR | e. Encourage others to express themselves. | no match |
| D | f. Recognize that divergent roles exist within a group. | F4 |
| D | g. Recognize emotions and feelings operating within a group and allow for their expression | G4c |
| D | h. Recognize and permit the expression of different values, beliefs and ideas within a group. | G3c |
| DR | i. Remain open to change. | G |
| D | j. Use conflict resolution strategies. | G4c |
| | 4. Reading/Study skills in the social studies. | F3b, F4a |
| R | a. Use word analysis skills. | F3b, F4a |
| DR | b. Use context clues to gain meaning. | F3b |
| D | c. Use appropriate late sources to gain meaning of essential terms and vocabulary. | F3b |
| R | d. Recognize, define and appropriately use social studies terms. | F3b |
| R | e. Obtain literal meaning from written materials. | F3b |
| R | f. Obtain interpretive and implied meaning from written materials. | F3b |
| R | g. Identify and use various parts of a book and other written material. | F3b |
| R | h. Read for a variety of purposes. | F3b |
| R | i. Adjust reading to suit various purposes. | F3b |
| R | j. Use resources and services that the library provides. | F4 |
| R | k. Apply computer operational skills to run a software program. | F5a |
| | 5. Map and globe skills. | F4a |
| R | a. Identify that globes and maps are models. | F4a |
| R | b. Orient a map and note directions. | F4a |
| R | c. Locate places on maps and globes. | F4a |
| DR | d. Use scale and compute distances. | F4a |
| R | e. Identify, interpret and use map symbols. | F4a |
| DR | f. Compare and contrast maps. | F4a |

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| ESSENTIAL GOALS AND OBJECTIVES FOR SCIENCE EDUCATION, MIDDLE SCHOOL | NCEO CODE |
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| <p>Constructing New Scientific Knowledge (objectives for grade levels) Objective 7. Generate scientific questions about the world, based on observation. 8. Design and conduct simple investigations. 9. Investigate toys/simple appliances and explain how they work using instructions and appropriate safety precautions. 10. Use measurement devices to provide consistency in an investigation. 11. Use sources of information to help solve problems. 12. Write and follow procedures in the form of step-by-step instructions, recipes, formulas, flow diagrams, and sketches.</p> | <p>F4a F4a F4a F4a F4a F3c, F4a</p> |
| <p>Reflecting on Scientific Knowledge (objectives for grade levels) Objective 6. Evaluate the strengths and weaknesses of claims, arguments, or data. 7. Describe limitations in personal knowledge. 8. Show how common themes of science, mathematics, and technology apply in selected real world contexts. 9. Describe the benefits and risks of new technologies or patterns of human activity. 10. Recognize the contributions made in science by cultures and individuals of diverse backgrounds.</p> | <p>F2a, F4a G2c F4a F4a F4a</p> |
| <p>USING SCIENTIFIC KNOWLEDGE TO UNDERSTAND LIFE SCIENCE Cells (objectives for grade levels)</p> | <p>F4a F4a F4a</p> |
| <p>Objective 2. Describe similarities/differences between single-celled and multicellular organisms. 3. Explain why specialized cells are needed by plants and animals. 4. Explain how cells use food as a source of energy.</p> | <p>F4a F4a F4a</p> |
| <p>Living Things (objectives for grade levels) Objective 6. Compare and classify organisms into major groups on the basis of their structure. 7. Describe the life cycle of a flowering plant. 8. Describe evidence that plants make and store food. 9. Explain how selected systems and processes work together in animals and plants.</p> | <p>F4a F4a F4a F4a</p> |
| <p>Heredity (objectives for grade levels) Objective 2. Describe how the characteristics of living things are passed on through generations. 3. Describe how heredity and environment may influence/determine characteristics of an organism.</p> | <p>F4a F4a</p> |
| <p>Evolution (objectives for grade levels) Objective 3. Describe how biologists might trace possible evolutionary relationships among present and past life forms.</p> | <p>F4a</p> |
| <p>Ecosystems (objectives for grade levels) Objective 6. Describe common patterns of relationships among populations. 7. Predict the effects of changes in one population in a food web on other populations. 8. Describe how all organisms in an ecosystem acquire energy directly or indirectly from sunlight. 9. Describe the likely succession of a given ecosystem over time. 10. Identify some common materials that cycle through the environment. 11. Describe ways in which humans alter the environment. 12. Explain how humans use and benefit from plant and animal materials.</p> | <p>F4a F4a F4a F4a F4a F4a F4a</p> |
| <p>USING SCIENTIFIC KNOWLEDGE TO UNDERSTAND PHYSICAL SCIENCE MATTER AND ENERGY (objectives for grade levels) Objective 8. Measure physical properties of objects or substances (mass, weight, temperature, dimensions, area, volume).</p> | <p>F4a</p> |

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| 9. Describe when length, mass, weight, area, or volume are appropriate to describe the size of an object or the amount of substance. | F4a |
| 10. Classify substances as elements, compounds, or mixtures. | F4a |
| 11. Describe matter as consisting of extremely small particles (atoms) that bond together to form molecules. | F4a |
| 12. Describe the arrangement and motion of molecules in solids, liquids, and gases. | F4a |
| 13. Describe energy and the many common forms it takes (mechanical, heat, light, sound, electrical, magnetic, chemical, nuclear). | F4a |
| 14. Describe how common forms of energy can be converted, one to another. | F4a |
| 15. Describe electron flow in simple electrical circuits. | F4a |
| 16. Use electric currents to create magnetic fields. | F4a |
| Changes in Matter (objectives for grade levels) | |
| Objective 4. Describe common physical changes in materials: evaporation, condensation, thermal expansion and contraction. | F4a |
| 5. Describe common chemical changes in terms of properties of reactants and products. | F4a |
| 6. Distinguish between physical and chemical changes in natural and technological system. | F4a |
| 7. Describe how waste products accumulating from natural and technological activities create pollution. | F4a |
| 8. Explain physical changes in terms of the arrangement and motion of atoms and molecules | F4a |
| Motions of Objects (objectives for grade levels) | |
| Objective 4. Qualitatively describe and compare motions in three dimensions. | F4a |
| 5. Relate changes in speed or direction to unbalanced forces in two dimensions. | F4a |
| 6. Describe the forces exerted by magnets, electrically charged objects, and gravity. | F4a |
| 7. Design strategies for moving objects by means of the application of forces, including the use of simple machines. | F4a |
| Waves and Vibrations (objectives for grade levels) | |
| Objective 6. Explain how sound travels through different media. | F4a |
| 7. Explain how echoes occur and how they are used. | F4a |
| 8. Explain how light helps us to see. | F4a |
| USING SCIENTIFIC KNOWLEDGE TO UNDERSTAND EARTH AND SPACE SCIENCE | |
| Geosphere (objectives for grade levels) | |
| Objective 7. Describe and identify surface features using maps. | F4a |
| 8. Explain how rocks and minerals are formed. | F4a |
| 9. Explain how rocks and fossils are used to determine the age and geological history of the earth. | F4a |
| 10. Explain how rocks are broken down, how soil is formed, and how surface features change | F4a |
| 11. Explain how technology changes the surface of the earth. | F4a |
| Hydrosphere (objectives for grade levels) | |
| Objective 5. Describe various forms that water takes on the earth's surface and conditions under which they exist. | F4a |
| 6. Describe how rain water in Michigan reaches the oceans. | F4a |
| 7. Describe the origins of pollution in the hydrosphere. | F4a |
| Atmosphere and Weather (objectives for grade levels) | |
| Objective 5. Describe the composition and characteristics of the atmosphere. | F4a |
| 6. Describe patterns of changing weather and how they are measured. | F4a |
| 7. Explain the water cycle and its relationship to weather patterns. | F4a |
| 8. Describe health effects of polluted air. | F4a |
| Solar System, Galaxy, and Universe (objectives for grade levels) | |
| Objective 3. Compare the earth to other planets in terms of supporting life. | F4a |
| 4. Describe, compare, and explain the motions of planets, moons, and comets in the solar system. | F4a |
| 5. Describe and explain common observations of the day and night skies. | F4a |
| 6. Explain how the solar system formed. | F4a |

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Document Utilized

Montana School Accreditation Standards and Procedures Manual, Appendix A, Model Learner Goals (August, 1993)

Background

In 1989, the state board of education adopted accreditation standards. These program-area standards are mandatory for districts, but the norm-referenced assessment required in the accreditation standards is not tied to performance levels. Although the standards are currently in place, the state has begun to examine and revise them under the *Goals 2000: Educate America Act*. The current program-area standards do not contain grade groupings; the standards apply to K-12. The model learner goals contain goals for the primary level, intermediate level, and upon graduation.

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| MODEL LEARNER GOALS | NCEO CODE |
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| COMMUNICATION ARTS: INTERMEDIATE | |
| GENERAL COMMUNICATION ARTS LEARNER GOALS | |
| 1. In the study of languages, students shall be given the opportunity to: | |
| a. Learn how languages function, evolve, and reflect cultures | F4a |
| b. Learn how context- topic, purpose, audience- influences the structure and use of language. | F4a |
| c. Have the opportunity to develop second-language proficiency. | F4a |
| 2. In the study of literature, students shall be given the opportunity to: | |
| a. Read, listen to, view, and study a variety of classical, contemporary, and multicultural literature, at all grade levels. Literature shall include poetry, fiction and nonfiction, and drama. | F4b |
| b. Respond to literature through writing, speaking, and through media and the fine arts. | F1a, F3c, F4b |
| c. Gain insights from literature, recognizing it as a mirror of human experience. | F4b |
| d. Learn about their own and other cultures and recognize that literature is a reflection of culture. | F4b |
| e. Experience literature as a way to appreciate the rhythms and beauty of language. | F4b |
| 3. In the study of communication skills, five interwoven strands: listening, speaking, reading, writing, and using media, students shall be given the opportunity to: | |
| a. Understand and practice the process of listening: perceiving, discriminating, attending, assigning meaning, evaluating, responding, and remembering. | F1a, F2a, F3b, F3c |
| b. Speak effectively, formally and informally, in all five basic communication functions: expressing feelings, utilizing social conventions, imagining, informing, and controlling. | F1a, F3b, F3c |
| c. Read for both pleasure and information and approach reading as search for meaning. | F3b |
| d. Write clearly and effectively to express themselves and to communicate with others. | F3c |
| e. Use, view, and understand print and electronic media and be aware of the impact of technology and the media on communication. | F5a |
| 4. In the study of thinking, students shall be given the opportunity to: | |
| a. Think creatively, exploring unique insights, points of view, and relationships. | F4 |
| b. Think logically, testing the validity of arguments and detecting fallacies in reasoning. | F2a |
| c. Think critically, asking questions, making judgements, and evaluating messages. | F2a |

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| ENGLISH LANGUAGE MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Understand that words are arbitrary, culturally-based symbols for objects and ideas that change over time and through usage. | F4a |
| b. Recognize that people gain identity through their language, including pronunciation, word, choice, and nonverbal communication. | F4a |
| c. Analyze the ways that language changes to accommodate subject, audience, and purpose. | F4a |
| SECOND LANGUAGE MODEL LEARNER GOALS | |
| 1. An intermediate program in second language shall give the student the opportunity to: | F4a |
| a. Experience oral and literary traditions of the second language culture. | F4a |
| b. Expand cross-cultural understanding. | F4a |
| c. Speak and understand more complex ideas and information in directed activities, both formal and informal. | F4a |
| d. Use reading and writing skills in the second language in a variety of meaningful activities. | F4a |
| LITERATURE MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Expand experiences with classical, contemporary, and multicultural literature. | F4b |
| b. Respond to literature on the basis of his/her own insights and respect the different responses of others. | F4b, G3a |
| c. Recognize and understand the interrelationships among the elements in a literary works. | F4b |
| d. Begin to recognize how culture influences literary works and to compare and contrast that culture with his/her own experiences. | F4b |
| e. Appreciate and understand how language enhances meaning in literature and how meaning is enhanced by sensory and figurative language; by literary devices such as metric patterns and imagery (e.g., simile, metaphor); and by an author's semantic and connotative qualities. | F4b |
| f. analyze and evaluate elements of literary works, including character, setting, plot, theme, and imagery. | F2a, F4b |
| g. Create and share original pieces of literature in a variety of genres that use characters, setting, plot, theme, and imagery. | F4b |
| LISTENING MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Discriminate between emotional and unemotional speaking and between spontaneous and scripted speaking and acting. | F1a |
| b. Increase attentiveness by expanding attention span, predicting and rehearsing ideas, and being aware of factors that affect attention. | F1a |
| c. Recognize a variety of speaking purposes and patterns of organization. | F1a |
| d. Distinguish fact from opinion, information from persuasion, and logic from emotion. | F1a |
| e. Respond to what is heard by controlling emotions, asking questions, and giving appropriate feedback. | F1a |
| f. Expand memory through note-taking and relating new material to old. | F1a |
| SPEAKING MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Use words, figures of speech, and nonverbal factors to enhance oral presentation. | F1a |
| b. Organize and expand oral and nonverbal skills to suit the level of communication (interpersonal, intrapersonal, group, public, and mass) | F1a |
| c. Become increasingly aware of audience feedback during the speech. | F1a |
| d. Increase confidence and effectiveness as a speaker in all five functions of speaking. | F1a, G2b |
| READING MODEL LEARNING GOALS | |
| 1. Use appropriate strategies to identify words and their meanings. | F3b |
| 2. Refine his/her use of word attack and context clues which aid comprehension within a word, | F3b |

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| <p>sentence, paragraph, or an entire work.</p> <p>3. Adapt fluency, rate, and style of reading to the purpose of the material.</p> <p>4. Read for information and continue to develop study skills.</p> <p>5. Read as a leisure activity.</p> | <p>F3b F3b F3b</p> |
| <p>WRITING MODEL LEARNER GOALS</p> | |
| <p>1. By the end of the intermediate level, the student shall have had the opportunity to:</p> <p>a. Write frequently, using varied formats, for a variety of purposes and audiences.</p> <p>b. Understand and use spelling, punctuation, capitalization, handwriting, an usage as part of total effectiveness in writing.</p> <p>c. Select a topic, generate and organize ideas, and choose appropriate language for his/her writing purpose.</p> <p>d. Respond to, revise, and edit his/her own and others' writing.</p> | <p>F3c F3c F3c F3c</p> |
| <p>MEDIA USE MODEL LEARNER GOALS</p> | |
| <p>1. By the end of the intermediate level, the student shall have had the opportunity:</p> <p>a. Understand and respond to media performances and presentations.</p> <p>b. Incorporate media in oral and written presentations.</p> <p>c. Understand that media convey messages.</p> <p>d. Use a wide variety of print and nonprint media in leisure time, classroom, and library for information and entertainment.</p> | <p>F3b F3b F3b F3b</p> |
| <p>THINKING SKILLS MODEL LEARNER GOALS</p> | |
| <p>1. By the end of the intermediate level, the student shall have had the opportunity to:</p> <p>a. Respond to and evaluate intentions and messages of speakers, writers, presenters, and media.</p> <p>b. Differentiate between fact and opinion, recognize logical/illogical sequences, create and hypothesis, and predict outcomes.</p> <p>c. Expand creativity, inventiveness, and logical/critical thinking.</p> | <p>F2a F2a F2a</p> |
| <p>FINE ARTS: MODEL LEARNER GOALS: INTERMEDIATE</p> | |
| <p>FINE ARTS: GENERAL GOALS Through the Fine Arts, students develop critical and creative thinking and perceptual abilities applicable to all areas of life.</p> | |
| <p>1. A basic program in fine arts gives the student the opportunity to:</p> <p>a. Understand the principal sensory, formal, technical, and expressive qualities of each of the fine arts.</p> <p>b. Identify processes, materials, tools, and disciplines required to produce the visual, performing, and literary arts.</p> <p>c. Apply their knowledge of concepts, elements, principles, theories, and processes in the fine arts.</p> <p>d. Develop their intuitive and creative thought processes as a balance to learning in the cognitive and psychomotor domains.</p> <p>e. Make informed judgements about the fine arts and about their relationships to the history, culture, and environments of the world's people.</p> <p>f. Understand the relevance of their education in the fine arts to the range of fine arts professions and to a lifetime of aesthetic pleasure.</p> <p>g. Use materials, tools, and equipment safely.</p> | <p>F4b F4b F4b F4b F4b F4b F4b C2a, F4b</p> |
| <p>VISUAL ARTS MODEL LEARNER GOALS</p> | |
| <p>1. By the end of the intermediate level, the student shall have been given the opportunity to:</p> <p>a. observe the sensory and formal applications used by artists.</p> <p>b. Identify art processes, forms, and materials from many cultures and historical periods.</p> <p>c. Appreciate art in a variety of settings (home, community, classroom, and studio)</p> <p>d. Identify materials, tools, and techniques used by artists for expressive purposes.</p> <p>e. Understand the elements and principles of art used by the artist to express creative ideas,</p> | <p>F4b F4b F4b F4b F4b</p> |

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| moods, and feelings. | |
| f. Know the vocabulary required to describe the sensory, formal, technical, and expressive qualities of art. | F4b |
| g. Understand the role of galleries and museums in preserving and transmitting art heritage and contemporary culture. | F4b |
| h. Understand the role of galleries and museums in preserving and transmitting art heritage and contemporary culture. | F4b |
| i. Discover and discriminate among the methods of expressing imagination, interpreting experience, and selecting materials and techniques. | F4b |
| j. Demonstrate the ability to solve visual and technical problems in art. | F2a, F4b |
| k. Analyze, compare, contrast, and distinguish art work from a variety of styles and periods using formal viewing criteria. | F2a, F4b |
| l. Experience a sense of accomplishment and pleasure from experimentation, innovation, and skill development. | F4b |
| LITERARY ARTS: INTERMEDIATE | |
| DRAMA MODEL LEARNER GOALS | |
| 1. If offered at the intermediate level, a course of study in drama shall give the student the opportunity to: | |
| a. Identify historical, cultural, and environmental elements in a variety of dramatic works. | F4b |
| b. Apply knowledge of dramatic principles and techniques to enhance enjoyment of reading and viewing dramatic works. | F4b |
| c. Understand plot, character, setting, and theme. | F4b |
| d. Recognize the expressive and technical qualities of dramatic work through study, interpretation, and enactment in planned and improvised solo or group presentations. | F4b |
| e. Evaluate a variety of dramatic works. | F2a, F4b |
| MUSIC MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Be increasingly aware of music as an important part of everyday life; enjoy music through listening, singing, and playing instruments. | F4b |
| b. Sing with free vocal production, becoming more accurate in pitch. | F4b |
| c. Add to the repertoire of songs learned at the primary level. | F4b |
| d. Participate in vocal and/or instrumental ensembles. | F4b |
| e. Understand basic music notation and terminology. | F4b |
| f. Refine his/her understanding of the basic elements of music theory. | F4b |
| g. Recognize and evaluate various types of music and music of various periods and styles, using recorded and live examples. | F2a, F4b |
| h. Experiment with variations in tempos, timbres, and phrasing for expressive purposes with voice or instruments. | F4b |
| i. Discuss personal responses to music. | F1a, F4b |
| CREATIVE MODEL GOALS | |
| 1. If offered at the intermediate level, a course of study in creative movement shall give the student the opportunity to: | |
| a. Be aware of the thoughts and images evoked by major dance forms. | F4b |
| b. Develop efficient movements and body awareness for dance and creative movement. | F4b |
| c. Enjoy freedom of creative and uninhibited movement in a variety of dance experiences. | F4b |
| d. Participate in various dance forms of other cultures and historical periods. | A2a, F4b |
| e. Use appropriate vocabulary to show understanding of basic dance concepts. | F1a, F4b |
| f. Improvise a short study around a mood, message, tool or material, using dance and creative movement. | F4b |
| g. Develop criteria for forming opinions about dance performances. | F2a, F4b |
| h. Evaluate the mood or message conveyed by a dance performances. | F2a, F4b |

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| HEALTH ENHANCEMENT: MODEL LEARNER GOALS: INTERMEDIATE | |
| HEALTH ENHANCEMENT MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to demonstrate: | |
| a. A variety of physical skills that influence individual physical development, including but not limited to skills practice and lead-up games, rhythms and dance, and individual dual, or team sports. | C1b, C3 |
| b. An appropriate level of physical fitness in cardiorespiratory function, body composition, and musculoskeletal function. | C3a |
| c. Positive interpersonal relationships and self-concept. | G2a, G4a |
| d. An understanding of the importance of regular and sustained physical activity throughout life. | G2b |
| e. An ability to identify roles, responsibilities, contributions, and life cycles in a family structure. | D1a |
| 2. By the end of the intermediate level, the student shall have had the opportunity to understand: | |
| a. Substance use and abuse and their effects on the individual and society. | C2d |
| b. Health problems, including diseases and their etiology, the identification of symptoms of a variety of health problems, and prevention of health problems. | C2c |
| c. The functions and maintenance of body systems, including knowledge of the reproductive system. | F4 |
| d. The need for and use of consumer health services and products. | F4 |
| e. Basic nutrition and its application. | C1a |
| f. Cultural, environmental, social, and ethical issues which affect healthy lifestyles. | C1, F4a |
| g. Interrelationships between physical health and mental well-being. | F4 |
| MATHEMATICS: MODEL LEARNER GOALS: INTERMEDIATE | |
| MATHEMATICS MODEL LEARNER GOALS: PROBLEM SOLVING | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Recognize, formulate, and solve problems in mathematical and real-life situations. | F2a, F3a |
| b. Apply a variety of strategies to solve one-step, multi-step, and nonroutine problems. | F2a, F3a |
| c. Verify and interpret the results with respect to the original problem situation and generalize to new problem situations. | F2a, F3a |
| MATHEMATICS MODEL LEARNER GOALS: COMMUNICATION | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Model situations in a variety of ways (e.g., verbal, concrete, pictorial, graphical, algebraic) | F1a, F3a |
| b. Read, interpret, and evaluate mathematical expressions of ideas. | F3a, F3b |
| c. Discuss mathematical ideas and situations, and make convincing arguments. | F3a |
| MATHEMATICAL MODEL LEARNER GOALS: REASONING | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Recognize examples of deductive and inductive reasoning. | F2a |
| b. Make and validate conjectures using models, known facts, properties, and relationships. | F3a |
| c. Apply proportional reasoning in problem solving and in discovering mathematical concepts. | F2a, F3a |
| NUMERATION, COMPUTATION, AND ESTIMATION MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Represent and use equivalent forms of numbers (fraction, decimal, percent, exponential, and scientific notation) in real world and mathematical situations. | F3a |
| b. Apply relationships between fractions, decimals, and percents. | F3a |
| c. Apply ratio, proportion, and percent. | F3a |

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| d. Represent numerical relationships in one- and two-dimensional graphs. | F3a |
| e. Demonstrate operations, order relations, and number sense for whole numbers, fractions, decimals, and integers. | F3a |
| f. Apply basic number theory concepts. | F3a |
| g. Analyze, explain, and use procedures for addition, subtraction, multiplication, and division of whole numbers. | F3a |
| h. Select and use an appropriate method for computing from among mental arithmetic, paper and pencil, calculator, and computers. | F3a, F5a |
| i. Analyze, explain, and use estimation techniques. | F2a, F3a |
| j. Use estimation to check reasonableness of results. | F3a |
| MEASUREMENT MODEL LEARNER GOALS: | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Estimate, make and use measurements to describe, compare, or contrast objects in real world situations. | F3a |
| b. Select appropriate units and tools to measure to a level of accuracy required in a particular setting. | F3a |
| c. Use the customary and metric systems of measurement. | F3a |
| d. Demonstrate the concepts of perimeter, area, and volume through concrete experiences. | F3a |
| e. Apply procedures and formulas to determine area and volume. | F3a |
| GEOMETRY MODEL LEARNER GOALS: INTERMEDIATE | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Identify, describe, construct, and compare plane and solid geometric figures. | F3a |
| b. Understand geometric relationships and their consequences. | F3a |
| c. Demonstrate an intuitive understanding of transformational geometry. | F3a |
| d. Use geometry to describe the physical world. | F3a |
| STATISTICS AND PROBABILITY MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Systematically collect, organize, and describe data. | F3a, F4 |
| b. Construct, read, and interpret tables, charts, and graphs such as stem-leaf, line, and box-whisker plots. | F3a, F4 |
| c. Draw inferences and construct and evaluate arguments based on data analysis. | F2a, F3a |
| d. Devise and carry out simulations involving probability. | F3a |
| e. Construct sample spaces and determine the theoretical and experimental probabilities of events. | F3a |
| f. Make predictions based on experimental results or mathematical probabilities. | F3a |
| ALGEBRA MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Use the concepts of variable, expression, and equation. | F3a |
| b. Represent concrete situations and number patterns with tables, graphs, verbal rules, and equations. | F3a |
| c. Analyze tables and graphs to identify properties and relationships. | F2a, F3a |
| d. Solve linear equations using concrete, informal, and formal methods. | F2a, F3a |
| e. Use models to demonstrate inequalities and non-linear equations. | F3a |
| f. Use calculators and computers to explore algebraic concepts. | F3a, F5a |
| SCIENCE: MODEL LEARNER GOALS: INTERMEDIATE | |
| GENERAL SCIENCE MODEL LEARNER GOALS: INTERMEDIATE | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Develop a positive attitude toward science. | F4a |
| b. Use basic scientific skills to solve problems and answer questions about the environment. | F2a, F4a |

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| c. Work independently in groups in the classroom, laboratory, and in the field. | F4a, G4b |
| d. Identify and state a problem and use scientific processes to resolve it. | F2a, F4a |
| e. Use tools and equipment for observations and measurement in a safe and appropriate manner. | F4a |
| f. Gather and convey information through oral, written, and graphic communication. | F1a, F3c, F4a |
| g. Be aware of the basic concepts in the life, physical, earth, and environmental sciences. | F4a |
| h. Be aware of careers in the sciences and the skills needed for jobs in science related fields. | A2f, F4a |
| i. Cite and investigate scientific and technological issues which affect our lives. | F4a |
| j. Properly care for living organisms and show respect for life and property. | F4a |
| k. Be aware of the need for conservation, preservation, and the wise use of natural resources. | F4a |
| LIFE SCIENCE MODEL LEARNER GOALS | |
| 1. A course of study in life science, offered at the intermediate level, shall give the student the opportunity to: | |
| a. Appreciate all living things and their relationships to one another and the environment. | F4a |
| b. Observe, describe, compose, conclude, infer, and record from classroom, laboratory, and field experiences. | F1a, F2a, F3c, F4a |
| c. Be aware of some of the contributions of scientists working in life science and of careers in life science. | F4a |
| d. Demonstrate knowledge of kingdoms of living things and their basic characteristics, functions, diversity, and economic importance. | F4a |
| e. Understands levels of biological organizations, growth and development. | F4a |
| f. Demonstrates knowledge of reproductive processes, genetics, and heredity of living things. | F4a |
| g. Demonstrate knowledge of local flora and fauna. | F4a |
| h. Demonstrate knowledge and understanding of human growth and development, including the nine body systems and their functions, heredity and population genetics, behavior, and social and emotional growth. | F4a |
| i. Be familiar with laboratory tools and techniques used in life science. | F4a |
| j. Understand the interdependence of biological systems as they affect social issues. | F4a |
| PHYSICAL SCIENCE MODEL LEARNER GOALS | |
| 1. A course of study in physical science, offered at the intermediate level, shall give the student opportunity to: | |
| a. Understand and use basic measurements in science, including charting, graphing, and interpreting measurable data. | F4a |
| b. Design and carry out experiments that demonstrate physical and chemical changes. | F4a |
| c. Identify physical and chemical characteristics of various types of matter. | F4a |
| d. Understand and explain models of atoms, molecules, compounds, and mixtures. | F4a |
| e. Understand physical, chemical, and nuclear changes using the laws of conservation of matter and energy. | F4a |
| f. Understand the basic characteristics of light, sound, and mechanical waves. | F4a |
| g. Understand the scientific principles and technological applications of the laws of motion | F4a |
| h. Understand the interrelationships of solar and galactic systems and of the earth-moon-sun system. | F4a |
| i. Demonstrate a workable knowledge of electricity and electronics and understand their importance to our human environment. | F4a |
| j. Apply basic physical and chemical principles to describe changes in common substances and devices. | F4a |
| k. Understand the effects of science and technology on humans and the environment. | F4a |
| l. Be aware of careers in the physical sciences. | A2f, F4a |
| EARTH SCIENCE MODEL LEARNER GOALS | |
| 1. If offered, a course of study in earth science shall give the student the opportunity to: | |
| a. Understand the basic concepts of each science, including astronomy, geology, oceanography, and paleontology. | F4a |
| b. Understand the basic motions in the solar system and how they affect the earth's environment | F4a |

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| c. Understand the earth's history through the rock and fossil record and scientific dating methods. | F4a |
| d. Understand the earth's tectonic and structural forces. | F4a |
| e. Understand the earth's internal and surface processes, including weathering, erosion, volcanism, and deformation. | F4a |
| f. Understand the use of aerial photos, topographic and geologic maps, and survey systems. | F4a |
| g. Understand the earth's composition, including rocks and minerals. | F4a |
| h. Understand the physical and compositional changes of the earth's weather and climate. | F4a |
| i. Understand the oceans and their characteristics and development. | F4a |
| j. Understand surface water and ground water systems. | F4a |
| k. Understand that the flow of energy is basic to all earth science disciplines. | F4a |
| l. Use the tools and methods employed by earth scientists, through field and laboratory experiences. | F4a |
| m. Demonstrate how earth science relates to careers, personal uses, and social needs. | A2f, F4a |
| BIOLOGY MODEL LEARNER GOALS | |
| 1. If offered a course of study in biology shall give the student the opportunity to: | |
| a. Use scientific methods to investigate biological phenomena. | F4a |
| b. Relate field experiences to an understanding of ecological principles. | F4a |
| c. Use microscopes, balances, and other biological instruments. | F4a, F5a |
| d. Apply biological principles to situations in daily life. | F4a |
| e. Understand the characteristics processes which define life. | F4a |
| f. Understand the relationship between organic compounds and the physiological needs of living organisms. | F4a |
| g. Understand the relation and interdependence of cell respiration and photosynthesis to food chains. | F4a |
| h. Understand the concepts of homeostasis in cells, individuals, populations, communities, and ecosystems. | F4a |
| i. Understand cellular transport, cell structure, and cell functions. | F4a |
| j. Understand sexual and asexual reproduction and their relationship to ecological balances. | F4a |
| k. Understand heredity and the application of modern technology in medical genetics. | F4a |
| l. Understand the structure of DNA, its relationship to protein synthesis, and its role in living systems. | F4a |
| m. Understand the theory of evolution and its relationship to adaptation and speciation. | F4a |
| n. Categorize organisms representing the various kingdoms according to phyla. | F4a |
| o. Understand the relationship between structure and function as they relate to living things. | F4a |
| p. Trace the developments of the major live functions through the various kingdoms. | F4a |
| q. Understand the importance of microbes and their relationship to other organisms. | F4a |
| r. Understand the importance of current issues in biology. | F4a |
| s. Be aware of careers in biology. | A2f, F4a |
| t. Use appropriate safety techniques when handling chemicals, equipment, and organisms. | C2a, F4a |
| CHEMISTRY MODEL LEARNER GOALS | |
| 1. If offered, a course of study in chemistry shall give the student the opportunity to: | |
| a. Be competent in laboratory skills, including setting up equipment and using materials and chemicals safely. | C2a, F4a |
| b. Understand atomic structure and periodicity. | F4a |
| c. Understand the phases and properties of matter, including solids, liquids, and gases. | F4a |
| d. Understand the mole concept and stoichiometry and demonstrate their practical use in the laboratory. | F4a |
| e. Understand bonding and energy relationships. | F4a |
| f. Use formulas and equations competently. | F4a |
| g. Understand acids, bases, solubility, and chemical equilibrium. | F4a |
| h. Understand the basic principles of thermodynamics and kinetics. | F4a |
| i. Understand oxidation and reduction. | F4a |

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| j. Understand basic organic, nuclear, and radiochemistry. | F4a |
| k. Understand the role of chemistry in society and technology. | F4a |
| l. Be able to apply chemistry principles to situations in daily life. | F4a |
| m. Be aware of careers in chemistry and related fields. | A2f, F4a |
| PHYSICS MODEL LEARNER GOALS | |
| 1. If offered, a course of study in chemistry shall give the student the opportunity to: | |
| a. Solve problems in physics, using mathematics and critical thinking skills. | F2a, F4a |
| b. Collect, analyze, and interpret physical data. | F4a |
| c. Use the appropriate instruments to measure physical quantities in a laboratory setting. | F4a |
| d. Understand the historic, social, and scientific events that contributed to the developments of physics. | F4a |
| e. Understand that physics is a dynamic field in which concepts change as new data and new relationships are discovered. | F4a |
| f. Understand the character and central role of conservation principles such as momentum, energy, and electric charge. | F4a |
| g. Cite similarities and differences of wave and particle phenomena in nature. | F4a |
| h. Demonstrate a basic knowledge of modern physics concepts such as relativistic effects, nuclear radioactivity, and wave-particle duality. | F4a |
| i. Understand the basic principles of electricity and magnetism and their application to common occurrences. | F4a |
| j. Cite accepted explanations for common terrestrial and celestial observations, using the laws of motion. | F4a |
| k. Understand that the flow of energy is basic to all physical phenomena. | F4a |
| l. Understand the basic concepts of geometric and physical optics. | F4a |
| m. Understand the basic character of the, temperature, and internal (thermal) energy. | F4a |
| n. Evaluate the impact of discoveries in physics. | F4a |
| o. Be aware of careers in physics and related fields. | A2f, F4a |
| p. Understand the importance of physics in current social issues and its application to the other sciences. | F4a |
| q. Be able to apply physics principles to situations in daily life. | F4a |
| SOCIAL STUDIES: MODEL LEARNER GOALS: INTERMEDIATE | |
| HISTORY AND WORLD CULTURE MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Explain how technology, economic activities, and learner patterns of behavior, such as prejudice, discrimination, conformity, and acceptance influence culture. | F4a |
| b. Demonstrate knowledge of the dynamics of preindustrial, transitional, industrial, and postindustrial societies. | F4a |
| c. Explain how the characteristics of culture are manifested in history, economics, government, arts, sciences, and religion. | F4a |
| d. Detail how invention, diffusion, and adaptation influence cultural change. | F4a |
| e. Explain the biological, affectual, economic, and social functions of families. | F4a |
| f. Demonstrate a knowledge of Montana history and of the state's diverse cultures. | F4a |
| LAW AND LEGAL RIGHTS MODEL LEARNER GOAL | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. List the functions of the three branches of government. | F4a |
| b. Explain the need for and function of separation of powers and checks and balances. | F4a |
| c. List the individual rights protected by the first ten amendments to the U.S. Constitution. | F4a |
| d. Give reasons why the Bill of Rights was added to the Constitution. | F4a |
| e. Explain how constitutional change is made. | F4a |
| f. Discuss the characteristics of federalism. | F4a |
| g. Identify how laws emanate from various authorities. | F4a |

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| h. Explain the need for and provision of due process of law. | F4a |
| k. Discuss the fundamental principles of American democracy. | F4a |
| l. Continue his/her involvement in community groups, organizations, or services. | A2e, E3c |
| ECONOMICS MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Discuss the importance of economic goals, such as growth, employment, and efficiency. | F4a |
| b. Discuss the importance of economic problems such as scarcity, credit, and resource allocation. | F4a |
| c. Detail the relationship between specialization and careers and occupations. | F4a |
| d. List the basic resources of production. | F4a |
| e. Explain market interrelationships, such as cost/benefit, trade-offs, and distribution of goods and services. | F4a |
| f. Detail the characteristics of market and command economic systems and traditional economies. | F4a |
| GEOGRAPHY MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Discuss the interrelationships of environments, cultures, and weather and how people adapt to them. | F4a |
| b. Explain the relationship of the earth and sun. | F4a |
| c. Locate geographic positions, using latitude, longitude, strategic sites, and maritime and time zones. | F4a |
| d. Detail the effects of ocean currents, wind, mountains, and other physical and climatic elements on weather. | F4a |
| e. Explain the impact of geography on human settlement patterns. | F4a |
| f. Detail and discuss the characteristics of Montana geography and locate critical sites. | F4a |
| SOCIAL INSTITUTIONS MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Discuss and give examples of the reasons for socialization. | F4a |
| b. Explain how basic differences between individual values and group norms impact social problems. | F4a |
| c. Explain the relationship of economics, politics, science, and religion to social institutions. | F4a |
| d. List examples of social interaction, such as peer pressure, group dynamics, assimilation, and accommodation. | F4a |
| e. Discuss how societies implement social control. | F4a |
| CRITICAL THINKING, PROBLEM SOLVING, AND DECISION MAKING MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Summarize information by combining critical concepts into statement of conclusions and by stating a hypothesis. | F2a |
| b. Synthesize information by proposing a new plan or system and reinterpreting events in terms of what might have happened. | F2a |
| c. Use social and political participation skills to communicate effectively, recognize mutual relationships, set goals, plan, organize, and make decisions; keep informed, cooperate, negotiate, compromise, and accept responsibility. | A2, C, D, F2a, G4b |
| STUDY AND RESEARCH SKILLS MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Skim, outline, review, and take notes. | F4 |
| b. Use the library and other resources for research, refine topic selection and organize and present information in written formats to verify data. | F3c, F4 |
| c. Use technology appropriately, including databases. | F5a |

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| <p>VOCATIONAL/PRACTICAL ARTS: MODEL LEARNER GOALS: INTERMEDIATE</p> | |
| <p>GENERAL VOCATIONAL/PRACTICAL ARTS MODEL LEARNER GOALS</p> | |
| <p>1. By the intermediate level, the student shall have had the opportunity to:</p> | |
| <p>a. Be aware of wide variety of careers and postsecondary experiences.</p> | A2f |
| <p>b. Have a working knowledge of the skills, responsibilities, and applications of vocations.</p> | A2f |
| <p>c. Build technical literacy skills.</p> | F4 |
| <p>d. Develop a work ethic, which includes an understanding of the importance of health, time, money, and scarce resource management to life an work.</p> | C1, F4 |
| <p>e. Understanding and appreciate the values of cooperation and positive attitude in the world of work and an appreciation for quality workmanship.</p> | G4b |
| <p>f. Demonstrate the relationship between academic knowledge and practical application.</p> | F |
| <p>g. Consistently demonstrate basic concepts, skills, attitudes, and values in traffic education.</p> | F4 |
| <p>PERSONAL/ADULT LIVING SKILLS MODEL LEARNER GOALS</p> | |
| <p>1. If offered, a course of study in personal/adult living skills shall give the student the opportunity to:</p> | |
| <p>a. Identify the responsibilities and privileges that characterize adulthood; recognize various roles of adults; and recognize skills and processes essential to functioning as an adult.</p> | F4 |
| <p>b. Given a problem situation, describe how the decision would be made if each of the processes and rules of decision making were followed.</p> | F2a, F4 |
| <p>c. Given a description of how decisions were made in allocating resources, identify principles of resource use applied in the decision.</p> | F2a, F4 |
| <p>d. List personal motivational sources and explain how they relate to personal management.</p> | F4 |
| <p>e. Describe the benefits of a positive self-concept.</p> | F4 |
| <p>f. Identify lifestyle choices as they exist today.</p> | F4 |
| <p>g. Identify and describe stages of individual development and analyze family function in relation to that stage.</p> | F4 |
| <p>h. Identify legal and moral commitments in beginning and ending a relationship.</p> | F4 |
| <p>i. Explain the social and psychological forces involved in mate selection.</p> | F4 |
| <p>j. Analyze male and female roles in a marriage.</p> | F4 |
| <p>k. Identify issues and individual and his/her future mate should discuss prior to marriage.</p> | F4 |
| <p>l. Describe family roles, functions, and interactions.</p> | F4 |
| <p>m. Recognize the normalcy and function of conflict in marriage and assess the resources available to help couples resolve conflict.</p> | F4 |
| <p>n. Describe the effect of employment of family life.</p> | F4 |
| <p>o. Interpret his/her attitude toward divorce as it will affect attitudes toward marriage.</p> | F4 |
| <p>p. Identify several factors involved in the decision to parent.</p> | F4 |
| <p>q. Describe child abuse and neglect; analyze causes and effects of child abuse and neglect; and identify services and legal aid available to the abused and abuser.</p> | F4 |
| <p>r. Interpret the role patters of foster, adoptive, and step-parents.</p> | F4 |
| <p>s. Describe reasons for one-parent families.</p> | F4 |
| <p>t. Describe the growth and development of infants and children.</p> | F4 |
| <p>u. Describe the important influences on prenatal development.</p> | F4 |
| <p>v. Identify problem behavior in children in an effort to determine the goal of misbehavior and suggest positive techniques for guiding children's behavior.</p> | F4 |
| <p>w. Identify personal and family crises and describe resources which can help in coping with crisis.</p> | F4 |
| <p>x. Analyze the wise use of credit.</p> | F4 |
| <p>y. Design a budget for managing income and expenses.</p> | F4 |
| <p>z. Identify the financial services available to manage personal income.</p> | F4 |
| <p>aa. Appraise his/her need for life, health, auto, and property insurance.</p> | F4 |
| <p>bb. Evaluate housing choice based on personal needs.</p> | F4 |

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| AGRICULTURAL EDUCATION MODEL LEARNER GOALS | |
| 1. If offered, a course of study in agriculture shall give the student the opportunity to: | |
| a. Be able to select self-employment or an appropriate career in the area of agricultural business and production. | F4 |
| b. Display leadership, citizen, and cooperation developed through membership and participation in civic and vocational organizations. | A2a, A2b, E1a |
| c. Demonstrate knowledge, skills, attitudes, and practical experience as determined through task analysis for self-employment in: | A2f, F4 |
| i. Basic soils management; plant growth and reproduction; field crop production, marketing, and management; range management; horticulture; and forestry. | A2f, F4 |
| ii. Selection, breeding, and rearing of commercially important species of livestock; animal nutrition, health, and care; and the profitable management and marketing of livestock. | A2f, F4 |
| iii. Agricultural mechanization, including safety and care of hand and power tools, welding equipment, basic electricity, basic and applied power farm machinery. | A2f, F4 |
| iv. Agricultural management, marketing, and economic principles; and business financial planning, including leasing, credit, depreciation, and machinery economics. | A2f, F4 |
| v. Propagation, management, and marketing of economically important horticulture crops. | A2f, F4 |
| vi. Forestry production, transportation, processing, marketing, and distribution. | A2f, F4 |
| BUSINESS AND OFFICE EDUCATION MODEL LEARNER GOALS | |
| 1. If offered, a course of study business and office education shall give the student the opportunity to: | |
| a. Demonstrate the skills needed to apply for and obtain employment in one of the appropriate occupational areas (accounting, bookkeeping, banking, data processing, office supervision and management, secretarial, typing, general office, word information processing, electronic communications, general business, and related occupations). | F4 |
| b. Demonstrate knowledge of society's business economy and consumer systems. | F4 |
| c. Use equipment and technology that is currently used by industry. | F4, F5a |
| d. Demonstrate the knowledge, skills, and attitudes necessary and appropriate for the business world. | F4 |
| e. Adapt and adjust to the changing needs and requirements of his/her occupation and of the business world in general, using tools such as employment projections and predictions. | F4 |
| f. Display leadership, citizenship, and cooperation developed through membership and participation in civic and vocational organizations. | A2a, A2b, E1a |
| g. Develop an understanding of the importance of lifelong learning and continued acquisition of appropriate skills. | F4 |
| HOME ECONOMICS AND HOME ECONOMICS WAGE EARNING MODEL LEARNER GOALS | |
| Home economics education provides skills for home and family living and prepares students for home economics wage earning occupations. | |
| Consumer and homemaking programs help students establish and maintain a successful home and family life. Students learn management, priority setting, and interpersonal relationships skills in child development, family relations, clothing and textiles, foods and nutrition, housing, and consumer education. | |
| Wage earning income home economics provides education for gainful employment in an occupation related to home economics. Wage earning programs are offered through secondary coursework and on-the-job experience. | |
| 1. If offered, a course of study in home economics shall give the student the opportunity to: | |
| a. Be able to use skills which improve the quality of individual and family life. | F4 |
| b. Apply effective strategies for his/her future roles as employee/employer and home manager. | F4 |
| c. Use technology to meet personal and family needs. | F4, F5a |
| d. Use applied learning to develop transferable job skills. | F4 |
| e. Develop an awareness of careers related to home economics. | A2f, F4 |

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| f. Understand the world of work through entrepreneurship. | F4 |
| g. Understand the role of home economics and the family in economic development and worker productivity. | F4 |
| h. Develop consumer competence. | F4 |
| i. Develop leadership through civic and vocational organizations. | D, E, F4 |
| PREVOCATIONAL INDUSTRIAL/TECHNOLOGY EDUCATION MODEL LEARNER GOALS | |
| 1. If offered, a course of study in prevocational industrial/technology education shall give the student the opportunity to: | |
| a. Be able to make informed and meaningful career and education choices relating to careers in construction, manufacturing, communication, and power/transportation. | A2f |
| b. Understand the importance of technology as it affects work and daily life, including the use of tools, how science and technology are related, and the ethical, sociological, and environmental issues technology has raised. | F4, F5a |
| c. Understand that technology influences the future and requires personal and occupational adjustment. | F4 |
| d. Work with tools, materials, processes, and technical concepts safely and efficiently. | C1a, F4 |
| e. Make wise consumer decisions. | F4 |
| VOCATIONAL INDUSTRIAL EDUCATION MODEL LEARNER GOALS | |
| 1. If offered, a course of study in vocational industrial education shall give the student the opportunity to: | |
| a. Perform entry-level tasks and possess the skills and knowledge of current technology necessary to succeed in a trade or industrial occupation equivalent to a second-year apprentice level. | A2f, F4 |
| b. Use tools and equipment safely and promote a work environment that reduces hazard. | C1a, F4 |
| c. Demonstrate knowledge of the related science and math concepts and communication skills. | C1a, F3a, F4, F4a |
| MARKETING EDUCATION MODEL LEARNER GOALS | |
| Marketing education gives student the training and direct experiences needed for meaningful work and lifelong learning in whole sale and retail marketing. It prepares students to improve marketing practices; contribute to their community's economic development; and understand the value and responsibilities of entrepreneurship. | |
| 1. If offered, a course of study in marketing shall give the student the opportunity to: | |
| a. Identify careers in marketing and in the interests, aptitudes, personal qualities, and other information necessary to make informed career choices. | F4 |
| b. Demonstrate the skills needed to successfully obtain and maintain employment in marketing occupations. | D, F4 |
| c. Identify the basic features of the American economic system and their impact on business practices. | F4 |
| d. Understand the purpose and use of marketing research. | F4 |
| e. Identify the main types of business ownership and the elements needed for a successful business venture. | F4 |
| f. Apply fundamental mathematics skills to problems encountered in marketing occupations. | F3a, F4 |
| g. Understand how to purchase goods for resale and the terminology used by product buyers. | F4 |
| h. Understand merchandise handling and inventory procedures used in businesses. | F4 |
| i. Apply the elements of design and principles of arrangement to the sales promotion areas of advertising and display. | F4 |
| j. Demonstrate how to satisfy customer needs through the use of selling techniques. | F4 |
| k. Complete and record sales transactions accurately. | F4 |
| l. Apply management theories to business situations. | F4 |
| TRAFFIC EDUCATION MODEL LEARNER GOALS | |
| 1. Traffic education shall be an integrated K-12 curriculum that develops the concepts, skills, | C2d, F4 |

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| attitudes and values needed for a lifetime of safe, drug-free, courteous, and efficient use of roadways, as a passenger, pedestrian, bicyclist, or motor vehicle operator. | |
| 2. If offered, a course study in traffic education shall give the student the opportunity to: | |
| a. Demonstrate an awareness that one's physical, emotional, and mental health are essential to the proper use of streets and highways. | F4 |
| b. Use the fundamental processes learner in earlier years. | F4 |
| c. Understand how to use road maps, how to read and interpret instructions, and how to compute speed and stopping distances; understand the laws of motion. | F4 |
| d. Understand that a person who can operate a vehicle safely and efficiently is a worthy family member, since American families depend on the automobile for a variety of occupational and recreational uses. | F4 |
| e. Be prepared to use motor vehicle for occupational and recreational purposes. | F4 |
| f. Develop a good citizenship by complying with laws; by exercising civic responsibility for improving laws through legislation; and by practicing the habits of fair play, courtesy, and maintenance of property. | F4 |
| g. Understand a driver's responsibility for the safety of others and exercise a respect for road ethics and the law. | E1, F4 |
| LIBRARY/MEDIA: MODEL LEARNER GOALS: INTERMEDIATE | |
| INFORMATION ACCESS MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have been given the opportunity to: | |
| a. Be aware of the types of libraries and of the unique nature of libraries in a free society. | F4 |
| b. Locate materials which fulfill assignments and satisfy personal interests. | F4 |
| c. Be aware of types of basic reference sources (encyclopedias, dictionaries, almanacs, atlases, periodical indexes, subject encyclopedias, subject dictionaries and data bases). | F4 |
| d. Gather, analyze, select, and use materials. | F2a, F4 |
| e. Select a topic, find a variety of information sources on that topic, summarize, paraphrase, evaluate, synthesize, and present the information in a new form while citing sources. | F2a, F4 |
| f. Identify sources of information in the community. | F4 |
| INFORMED AND CREATIVE USE OF MEDIA AND TECHNOLOGY MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |
| a. Request information in a variety of formats and from a variety of technologies; select formats appropriate for his/her learning style. | F5a |
| b. Use technology for the creative expression of ideas. | F5a |
| c. Begin to evaluate appropriate print and nonprint media for accuracy, relevance, and bias. | F2a |
| d. Appreciate aesthetically a variety of media. | F4b |
| e. Understand that many people, such as authors, illustrator, and publishers, collaborate in the production of books and other media and own the material through copyrights. | F4b |
| GUIDANCE: MODEL LEARNER GOALS: INTERMEDIATE | |
| GUIDANCE: PERSONAL DEVELOPMENT MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to develop: | |
| a. A sense of conscience, morality, personal value, and self-worth. | E, G2a |
| b. A positive and realistic self-concept. | F2a |
| c. An acceptance of sexuality and physical image. | F4 |
| d. Self-direction and independence. | D1, D3e |
| e. Appropriate ways to express feelings. | G1a, G1b |
| f. Strong decision-making skills and an acceptance of responsibility for his/her decisions. | D |
| GUIDANCE: SOCIAL DEVELOPMENT MODEL LEARNER GOALS | |
| 1. By the end of the intermediate level, the student shall have had the opportunity to: | |

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| <ul style="list-style-type: none"> a. Gain a sense of social recognition. b. Have the opportunity to establish close peer relationships. c. Recognize and respect the fact that different people have different values and systems of values. | <p>G4a G4a G3b</p> |
| <p>GUIDANCE: EDUCATIONAL DEVELOPMENT MODEL LEARNER GOALS</p> | |
| <ul style="list-style-type: none"> 1. By the end of the intermediate level, the student shall have had the opportunity to develop: <ul style="list-style-type: none"> a. Skills with which to form goals. b. An awareness of the need for lifelong learning. c. Motivation for achievement of personal goals. | <p>D3e, F4 F4 D3e</p> |
| <p>GUIDANCE: CAREER DEVELOPMENT MODEL LEARNER GOALS</p> | |
| <ul style="list-style-type: none"> 1. By the end of the intermediate level, the student shall have had the opportunity to: <ul style="list-style-type: none"> a. Assess individual values, interests, aptitudes, and abilities and their relationship to career development. b. Increase his/her understanding of the components of career planning. c. Begin in-depth exploration of career fields and specific occupations. | <p>A2f A2f A2f</p> |

Nebraska

Documents Utilized

Mathematics and Science Frameworks for Nebraska Schools (March, 1994)
Nebraska Schools Accountability Commission's Draft Report (revised February, 1994)

Background

The state department of education began developing curriculum frameworks in the fall of 1994. Content standards have been completed in agricultural education, business education, mathematics, and science. Standards are in draft form or being written in family and consumer science, foreign languages, industrial technology, social studies, and the visual and performing arts. The goal is to have all currently funded frameworks completed by fall 1996. Standards in language arts and marketing will be developed when funding is available. The curriculum frameworks describe student learning for grades pre-K-5, 6-8, and 9-12 and are voluntary. There are no state assessments.

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| MATHEMATICS AND SCIENCE FRAMEWORKS | NCLEO CODE |
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| OVERVIEW OF K-12 SCIENCE, MIDDLE LEVEL | |
| MATTER | |
| PATTERNS OF CHANGE: | |
| Compare and contrast properties of reactants and their compounds. | F4a |
| ENERGY: | |
| Experiment to discover that energy is involved in chemical and physical changes. | F4a |
| Relate energy of motion to phases. | F4a |
| SYSTEMS & INTERACTIONS: | |
| Predict chemical interactions using the periodic table. | F4a |
| Investigate effect of temperature and pH on reaction rates. | F4a |
| SCALE & STRUCTURE: | |
| Compare atomic/molecular structure with their properties. | F4a |
| FORCE AND MOTION | |
| PATTERNS OF CHANGE: | |
| Investigate inertia. | F4a |
| Explore gravitational force. | F4a |
| ENERGY: | |
| Investigate transformation and ways to conserve energy. | F4a |
| SYSTEMS & INTERACTIONS: | |
| Investigate the interaction between electricity and magnetism. | F4a |
| SCALE & STRUCTURE: | |
| Construct simple and compound machines. | F4a |
| UNIVERSE | |
| PATTERNS OF CHANGE: | |
| Map Nebraska weather patterns. | F4a |
| Analyze human effect on the environment. | F4a |
| ENERGY: | |
| Demonstrate effect of solar energy on seasons, climate, and life on earth. | F4a |
| SYSTEMS & INTERACTIONS: | |
| Model movements of the solar system. | F4a |
| Research and debate possibility of life on other planets. | F4a |
| SCALE & STRUCTURE: | |
| Model sedimentary rock formation. | F4a |
| Estimate distance to moon and sun. | F4a |

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| DIVERSITY | |
| PATTERNS OF CHANGE: | |
| Quantify change over time. | F4a |
| Construct and use a dichotomous key. | F4a |
| ENERGY: | |
| Predict consequences of availability/location of natural resources. | F4a |
| SYSTEMS & INTERACTIONS: | |
| Analyze food webs in various environments. | F2a, F4a |
| Investigate the effect of habitat destruction and resources on diversity. | F4a |
| SCALE & STRUCTURE: | |
| Compare structure and function of life forms. | F4a |
| Differentiate between similar organisms. | F4a |
| CELLS AND HEREDITY | |
| PATTERNS OF CHANGE: | |
| Investigate significance of selective breeding. | F4a |
| Discover similarities of normal and abnormal cell division. | F4a |
| ENERGY: | |
| Investigate transfer of energy in living things. | F4a |
| SYSTEMS & INTERACTIONS: | |
| Relate specific traits and environmental conditions to survival. | F4a |
| Demonstrate how materials move in and out of cells. | F4a |
| SCALE & STRUCTURE: | |
| Observe different kinds of cells and discuss similarities and differences. | F4a |
| Relate cell structure to function. | F4a |
| INTERDEPENDENCE | |
| PATTERNS OF CHANGE: | |
| Investigate the impact of forces that change the earth. | F4a |
| Predict and illustrate significance of cycles to life on earth. | F4a |
| ENERGY: | |
| Compare energy flow in various ecosystems. | F4a |
| SYSTEMS & INTERACTIONS: | |
| Investigate the relationship of abiotic and biotic factors and their effect on population. | F4a |
| SCALE & STRUCTURE: | |
| Relate biomes to ecosystems. | F4a |
| OVERVIEW OF K-12 MATHEMATICS, MIDDLE LEVEL/7-8 | |
| NUMBER SENSE | |
| ESTIMATION: | |
| Verify and apply number properties (communicative, associative, and distributive). | F3a |
| PROBLEM SOLVING: | |
| Explore proportional relationships to solve problems. | F2a, F3a |
| Record shortcuts and hints for problem solving. | F2a, F3a |
| TECHNOLOGY: | |
| Use technology to explore scientific notation, exponents, and order of operation. | F3a, F5a |
| COMMUNICATIONS: | |
| Describe, evaluate, and record relationships between various numerical representations. | F2a, F3a |
| CONNECTIONS: | |
| Use appropriate numerical representations and symbols for information gathered from all disciplines. | F3a |
| REASONING/LOGIC: | |
| Explore absolute values, order of operations, and number properties. | F3a |
| MEASUREMENT | |
| ESTIMATION: | |
| Analyze precision in measurement. | F3a |

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| Estimate measure of angles, line segments, and curved surfaces. | F3a |
| Choose appropriate units. | F3a |
| PROBLEM SOLVING: | |
| Create concrete models as a tool to solve problems. | F2a |
| TECHNOLOGY: | |
| Select and use appropriate tools. | F3a |
| Investigate the effects of measurement changes using technology. | F3a |
| COMMUNICATIONS: | |
| Present various methods of solving measurement problems using standard and nonstandard units of measurement. | F3a |
| CONNECTIONS: | |
| Demonstrate mapping skills. | F3a |
| Investigate historical use of measurement. | F3a |
| Select and use appropriate units to measure quantities in other disciplines. | F3a |
| REASONING/LOGIC: | |
| Justify chosen unit of measurement. | F3a |
| SPATIAL RELATIONSHIPS/GEOMETRIC TOPICS | |
| ESTIMATION: | |
| Predict and compare properties of geometric models. | F3a |
| Estimate square roots. | F3a |
| Estimate perimeter, area, and volume. | F3a |
| PROBLEM SOLVING: | |
| Use transformations to visualize spatial relationships. | F2a, F3a |
| Calculate distances and classify triangles. | F3a |
| Explore and apply perimeter, area, and volume. | F3a |
| TECHNOLOGY: | |
| Explore and create constructions using software. | F3a, F5a |
| Calculate and compare perimeter, area, and volume. | F3a |
| COMMUNICATIONS: | |
| Use relevant geometric vocabulary and properties. | F3a |
| Classify geometric shapes including polyhedra. | F3a |
| Justify the logic of constructions. | F3a |
| Use geometry to describe the physical world. | F3a |
| CONNECTIONS: | |
| Relate formulas to models. | F3a |
| Investigate contributions of Pythagoras and Euclid. | F3a |
| Use geometry to describe physical world. | F3a |
| REASONING/LOGIC: | |
| Recognize flips, slides, and turns. | F3a |
| Use spatial relationship to make comparisons. | F3a |
| DATA ANALYSIS | |
| ESTIMATION: | |
| Estimate the probability of events. | F3a |
| Predict graphic representations of data. | F3a |
| PROBLEM SOLVING: | |
| Experiment with probability. | F2a, F3a |
| Make predictions. | F2a, F3a |
| Collect, organize, represent, and describe data. | F1, F3a |
| TECHNOLOGY: | |
| Explore and produce graphic representations of data using calculators and computers. | F3a, F5a |
| Calculate, analyze, and measure central tendency (mean, median, mode, range). | F3a, F5a |
| COMMUNICATIONS: | |
| Describe data using graphic representations. | F3a |
| Read tables and form conclusions. | F3a |
| Record and present relationships and results of data analysis. | F3a |

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| CONNECTIONS: | |
| Systematically collect, organize, interpret, and explore data in all disciplines. | F3a |
| Determine implications and consequences of the displayed data. | F3a |
| REASONING/LOGIC: | |
| Investigate concepts of probability. | F3a |
| Verify and interpret data. | F3a |
| Explore concepts of randomness. | F3a |
| PATTERNS AND FUNCTIONS | |
| ESTIMATION: | |
| Formulate and test hypotheses. | F2a, F3a |
| PROBLEM SOLVING: | |
| Apply Venn diagrams to objects and groups for classification. | F2a, F3a |
| Create tables of values to determine patterns. | F2a, F3a |
| Develop efficient networking schemes to solve problems. | F2a, F3a |
| TECHNOLOGY: | |
| Use graphic utilities and numeric processing software to verify function values and investigate patterns. | F3a, F5a |
| COMMUNICATIONS: | |
| Investigate relationships between functions and their graphs. | F3a |
| Describe functions and patterns. | F3a |
| Recognize and describe patterns found in the world. | F3a |
| CONNECTIONS: | |
| Explore use and formation of tessellations. | F3a |
| Explore functions and patterns in art and other disciplines. | F3a |
| Explore networks in other disciplines. | F3a |
| REASONING/LOGIC: | |
| Interpret Venn diagrams. | F3a |
| Discover and develop formulas. | F3a |
| ALGEBRAIC TOPICS | |
| ESTIMATION: | |
| Check reasonableness of solutions. | F3a |
| PROBLEM SOLVING: | |
| Solve basic linear equations form practical applications. | F2a, F3a |
| Solve systems of equations by graphing. | F2a, F3a |
| Perform polynomial operations with manipulatives. | F2a, F3a |
| TECHNOLOGY: | |
| Use appropriate tools to show relationships between quantities. | F3a, F5a |
| Verify results of substituting variables. | F3a, F5a |
| COMMUNICATIONS: | |
| Discuss relationships between quantities (time vs. speed). | F3a |
| Use proper symbols and terminology. | F3a |
| CONNECTIONS: | |
| Determine relationships between quantities (direct vs. inverse). | F3a |
| REASONING/LOGIC: | |
| Apply inequalities. | F3a |
| Explore multiple solutions. | F3a |
| DISCRETE MATHEMATICS | |
| Foundations are laid for many advanced topics in the middle level. These topics include, but are not limited to, right angle trigonometry (sine, cosine, tangent) and graphing calculators. | F3a |
| ADVANCED TOPICS | |
| Foundations are laid for many advanced topics in the middle level. These topics include, but are not limited to, right angle trigonometry (sine, cosine, tangent) and graphing calculators. | F3a, F5a |

New Hampshire

Document Utilized

The CRM Student Outcome Information System (printed by the Center for Resource Management; no date)

Background

In 1993, the legislature passed the New Hampshire Educational Improvement and Assessment Act. The law required the state to define what students should know and be able to do in language arts and mathematics in elementary school, and in language arts, math, science and social studies in middle and high schools. The Center for Resource Management, Inc., a private agency in partnership with the New Hampshire Department of Education Bureau of Special Education Services, has developed the Student Outcome Information System that may be used by New Hampshire public schools. The student-level profiles are designed to help school administrators and instructional staff identify the specific students who are experiencing success or who are at risk.

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| THE CRM STUDENT OUTCOME INFORMATION SYSTEM | NCEO CODE |
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| SCHOOL-LEVEL OUTCOME PROFILES | |
| All of the outcome profiles described below can be produced for the total or a sample of the school population as well as specific populations such as special education students, Chapter 1 students, or students participating in special programs. Outcome results can also be displayed by grade level and for groupings related to gender, ethnicity, disability, ability level, or academic placement. | |
| ABSENCE, SUSPENSION, RETENTION, AND DROPOUT PROFILES | |
| Annual absence rates (average number of students absent each day) | A1a |
| Number and percent of students with more than maximum allowed absences. | A1a |
| Annual suspension rates--total school and each grade level. | E1b |
| Number and percent of students suspended (in-school and out-of-school) | E1b |
| Number of suspension incidents (in-school and out-of-school) | E1b |
| Average length of suspension (in-school and out-of-school) | E1b |
| Average number of suspensions per student | E1b |
| Number and percent of students suspended two or more times | E1b |
| Annual retention rates (number and percent of students retained in grade or lacking sufficient credits to advance) | F3e |
| Annual dropout rates (number and percent of students dropping out of school) | A1 |
| GRADE PERFORMANCE PROFILES | |
| Number and percent of students receiving satisfactory or above satisfactory grades in each subject area | F |
| Number and percent of students receiving below satisfactory grades in each subject area | F3e |
| Number and percent of students receiving two or more As across subject areas | F3d |
| Number and percent of students receiving two or more Ds across subject areas | F3e |
| Number and percent of students receiving two or more Fs across subject areas | F3e |
| TEST AND ASSESSMENT PROFILE | |
| Student progress and achievement on specific tests and assessments. | A2c |

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| <p>LONGITUDINAL OUTCOME REPORTS (second year and thereafter) Annual comparisons of absence, suspension, retention, and dropout rates Annual comparisons of student grade performance for each subject area and each grade level. Annual comparisons of anticipated and achieved percentiles on standardized tests.</p> | <p>no match no match no match</p> |
| <p>STUDENT-LEVEL OUTCOME REPORTS The Student-Level Profiles are designed to help school administrators and instructional staff identify the specific students who are experiencing success or who are at risk. Student outcome data can be sorted to produce individual student lists representing specific populations- grade level, gender, disability, special program, ability level, or academic grouping.</p> | |
| <p>INDIVIDUAL STUDENT LISTS Students with maximum number of allowed absences Students involved in two or more disciplinary actions or suspension incidents Students with above satisfactory grades in two or more subject areas Students with below satisfactory grades in two or more subject areas Students who withdrew from school by reason for withdrawal Students retained in grade/lacking sufficient credits to advance by grade level Students performing above the level anticipated on tests/assessments Students performing below the level anticipated on tests/assessments.</p> | <p>A1a E1b F3d F3e A1 F3e F3d F3e</p> |

New Mexico

Document Utilized

New Mexico Competency Frameworks (September, 1992)
New Mexico Standards for Excellence Student Outcomes Literacies and Competency Frameworks
 (no date)

Background

In September 1992, the state board of education adopted competency frameworks that spell out, in broad terms, what students should know and be able to do in key subjects at the end of 12th grade. In November 1992, the state board also adopted "standards for excellence" that broadly define the literacies, attitudes, and attributes students should know and be able to do upon graduation. Both the competency frameworks and standards for excellence are mandatory and are part of state board of education regulations. The competency frameworks apply to grades K-12; they do not describe student learning at specific grades. The state is currently developing benchmarks for grades 4 and 8. The standards for excellence describe student learning at grade 12.

New Mexico

| STANDARDS FOR EXCELLENCE: STUDENT OUTCOMES LITERACIES (MARCH 1993) AND COMPETENCY FRAMEWORKS. (SEPT 1992) | NCEO CODE |
|---|---------------------------------|
| <p>The standards for Excellence Student Outcomes comprises both literacies and attitudes/attributes. The competency frameworks (in brown [plain text]) are correlated to literacy outcomes (in blue [bold type]). It is our belief that the attitudes and attribute outcomes are embedded through the curriculum.</p> | |
| <p>KNOWLEDGE, UNDERSTANDING AND APPLICATION OF THE STRUCTURE AND USE OF THE ENGLISH LANGUAGE AS WELL AS OTHER LANGUAGES; Develop decision-making and communication skills, including the ability to express choices related to health.</p> | F1, F3, F4 |
| <p>Speak and write using the conventions of correctness, and for a variety of audiences and purposes.</p> | C1, F1a |
| <p>Use writing, reading, speaking and listening as tools for learning in all subject areas.</p> | F1a, F3c |
| <p>Learn to communicate mathematically, Students should learn to use mathematical language to clarify, refine, and consolidate their thinking so that they can read, write and discuss ideas.</p> | F1a, F3b, F3c F3a |
| <p>Communicate proficiently in the language studied, through listening, speaking, reading, and writing in a variety of situations and for a variety of purposes.</p> | F4a |
| <p>Demonstrate an awareness that the means of expressing ideas and feelings differ from language to language, reflecting the attitudes of a culture.</p> | F4a |
| <p>Understand that music is a vehicle for communication and self-expression.</p> | F4b |
| <p>Develop and use communication skills.</p> | F1a, F3 |
| <p>KNOWLEDGE, UNDERSTANDING AND PRACTICAL APPLICATION OF TECHNOLOGY, SCIENCE, MATHEMATICS, SOCIAL STUDIES, THE HUMANITIES, AND THE PRACTICAL ARTS AND THEIR INTERCONNECTIONS THROUGH THE MODES OF READING, WRITING, OBSERVING, SPEAKING, LISTENING, MOVEMENT, AND THE ARTS;</p> | F3a, F3b, F3c, F4a, F4b, F5a |
| <p>Demonstrate media skills through manipulation of various materials and techniques, through care of tools, familiarity with a wide variety of artistic materials and techniques, and safety in the classroom.</p> | C2a, F4b |
| <p>Read, write, and perform arithmetic and mathematical operations, listen and speak in the medium in which business is conducted.</p> | F1a, F3a, F3b, F3c |

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| | NCEO CODE |
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| Learn to value mathematics. Students need experiences related to the cultural, historical, scientific, and technological evolution of mathematics so that they can appreciate the role of mathematics in the development of a society and explore, apply and exhibit relationships among mathematics and the physical and life sciences, the social sciences and the humanities. | F3a |
| 5-8 number sense and relationships, number systems and number theory, computation and estimations, patterns and functions, algebra, statistics, probability, geometry, and measurement. | F3a |
| Understand relationships between music and history. | F4a, F4b |
| Using topics from all science disciplines: | |
| Understand energy as it applies to potential sources, forms, conversions, living systems, applications and their effects. | F4a |
| Understand balance and change through time in natural entities and systems, including different kinds of change. | F4a |
| Understand structure, for example kinds of structure, organization, relationships among parts and how at different scales different properties are revealed. | F4a |
| Understand systems and interactions between systems, within systems and subsystems, and among objects. | F4a |
| Understand that our society and its values are affected by science and technology. | F4a |
| CREATIVE AND HIGHER ORDER THINKING SKILLS AND PERSONAL ATTITUDES AND ATTRIBUTES LEADING TO ETHICAL DECISION MAKING TO MEET THE CHALLENGES OF LIFE; | E, F2a |
| Develop the capacity to make thoughtful judgements in art. | G4b |
| Understand complex interrelationships. | F2a |
| Recognize the power to reach one's personal potential by making positive health and life choices. | C1 |
| Value family relationships and appreciate the role of each person in creating a positive family environment. | D1a |
| Value the role of moderation in avoiding excess or deficiency states, including food and exercise. | C1, C3 |
| Understand that every individual human being is valuable and unique. | G3a |
| Respond personally, analytically and critically to written and spoken language. | F1a, F2a, F3b |
| Recognize, analyze and respond to propaganda. | F2a |
| Learn to reason mathematically. Students need to make conjectures, gather evidence, and build arguments to support fundamental mathematical concepts. | F3a |
| Evaluate another culture fairly and from an informed knowledge base. | F4a |
| Apply knowledge of musical elements (rhythm, melody, harmony, dynamics, tone, color, form and style) when learning and performing music. | F4b |
| Use critical thinking skills to discuss and evaluate music. | F2a, F4b |
| Evaluate and accept the risks and safety factors that may affect physical activity as an important part of one's lifestyle. | C2b, C3 |
| Commit to physical activity as an important part of one's lifestyle. | C1b, C3 |
| Understand, apply and evaluate scientific principles (i.e., biomechanical, psychological, and physiological) to learn and improve skills and participate successfully. | F4a, F4b |
| Demonstrate an understanding from which informed attitudes are developed about the potential benefits and hazards associated with various technologies. | F4a |
| Demonstrate creative approaches to problem-solving. | F2a |
| Develop individual responsibility for the democratic system. | E1a |
| INTEGRATING PREVIOUS EXPERIENCES AND KNOWLEDGE WITH NEW EXPERIENCE AND KNOWLEDGE: | F4 |
| Develop the capacity to personalize and experience art. | F4b |
| Understand the role of art in history and in various cultures. | F4b |
| Manage change and diversity. | G1, G3b |

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| | NCEO CODE |
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| Use a variety of reading and listening strategies and understand when each is appropriate. | F1a, F3b |
| Take risks, knowing that making errors is part of learning. | F |
| Develop music skills through singing, moving, playing instruments, listening, creating, reading and writing music. | F4b |
| Develop aesthetic sensitivity through music. | F4b |
| Demonstrate knowledge of skill performance, rules, strategy, and terminology for at least three sports and activities. | C1b, F4 |
| Demonstrate intermediate or advanced competence in at least one activity from three of the six categories: aquatics, dance, outdoor pursuits, individual activities/sports, and team sports. | F4 |
| Demonstrate science information and skills as applied to real world problems and situations. | F4a |
| Understand historical connections among past, present and future. | F4a |
| IDENTIFYING, ACCESSING, EVALUATING, AND UTILIZING INFORMATION; | F4 |
| Develop visual awareness and work with principles and elements of design. | F4b |
| Self-assess and self-correct. | G |
| Analyze tasks, adjust tasks. | F2a |
| Identify, organize, plan and allocate resources. | F4 |
| Acquire knowledge of history and philosophy, of rules and terminology; assess strategy and tactics of the activity. | F4a |
| Develop skills in making nutritious choices when buying, preparing, and eating food. | C1a |
| Develop skills in emergency care and in the prevention of intentional and unintentional injuries. | C2a, C2c |
| Locate and use information for specific purposes and from a variety of sources. | F4 |
| Read and listen for a variety of purposes, including the gathering of information, the extending of experience and the achievement of pleasure. | F1a, F3b |
| Become mathematical problem solvers. To develop these abilities, students need the experience of working with diverse problem-solving situations. | F2a, F3a |
| Recognize and respond to a variety of music. | F4b |
| Develop and understanding of and respect for various cultures through music. | F4b, G3b |
| Establish personal fitness goals using the results of fitness assessments to establish goals in a personal program of physical activity. | F2b, F3 |
| Accept differences between personal characteristics and the idealized body images and elite performance levels portrayed in the media. | G3b |
| Feel empowered to maintain and improve physical fitness motor skills and knowledge about physical activity. | C2b, C3a |
| Develop a multicultural perspective that respects the dignity and worth of all people. | G2a, G2b |
| Interpret and use map and globe skills, graphs, charts, time-lines, and diagrams. | F4a |
| Understand the environment as a complex and fragile system, with limited resources, which is impacted by human decision and activity. | F4a |
| Demonstrate science process skills. | F4a |
| KNOWLEDGE AND UNDERSTANDING OF THE SOCIAL VALUE, DIGNITY, AND NECESSITY OF EARNING A LIVING; | D, E, F |
| Manage career decisions/goal setting. | A2f |
| Demonstrate work ethics. | E1a |
| Think creatively, make decisions and solve problems in work situations. | F2a |
| Value cooperation and responsible competition in learning, play and work. | G4b |
| Develop and practice appropriate ethics, self-control, self-discipline, commitment and self-esteem. | D, E |
| Acquire responsibility for one's self in all situations. | D, E, G2a |
| Understand vocational and avocational possibilities. | A2f |
| WORKING COOPERATIVELY AND ASSUMING RESPONSIBILITIES AS MEMBERS OF A TEAM; | G4b |

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| | NGEO CODE |
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| Respect individual expression and express one's self through art. | F4b, G3a |
| Participate in or lead a group process. | A2a, F4b |
| Teach others new skills. | E3b |
| Work without supervision. | D3e |
| Negotiate toward agreements. | G4c |
| Understand the roles of participant and spectator in an activity. | C1b, G |
| Practice respect for self, team, opponents, officials, sponsors, coaches, school staff and faculty. | D, E |
| Demonstrate cooperation, sportsmanship, and proper perspective under "competitive" conditions. | G4 |
| Generate a pride in achievement, appreciation of self and team effort (cooperation) in achievement--hard work and fair play--and respect for the ability of others. | D, E, G3a, G3b |
| Use language to share experiences and gain insight into their own and others lives. | F1a |
| Demonstrate an appreciation for their own and other languages. | F1a, F4a |
| Demonstrate a respect for differences, such as cultural, linguistic, societal, and individual diversity. | G3b |
| Actively participate in making music alone and with others. | A2a, F4b |
| Exhibit socially desirable and acceptance behaviors in the areas of respect for others, assuming responsibility, leadership, and contributing to the group. | G3a, G4 |
| Demonstrate appropriate and safe laboratory skills and practices. | C2a |
| Understand what is required of citizens in a democracy. | E2a, F4a |
| Develop social and political participation skills. | A2e, E1a, E3a, E3c, G4 |
| MANAGING PERSONAL AND FINANCIAL RESOURCES APPROPRIATELY; | F |
| Work with a variety of technologies and systems to communicate. | F1a, F5a |
| Develop the ability to set short-range goals. | D3e |
| Integrate/evaluate the value of lifetime applications of an activity. | F2a |
| Become confident in their own ability. Students should view themselves as capable of using their growing mathematical power to make sense of new problem situations in the world around them. | G2b |
| Select and participate in appropriate physical activities by analyzing personal characteristics. | C1b, C3 |
| Willingly participate in a progression of physical activities which contribute to the attainment of personal goals and the maintenance of wellness. | C3a |
| Understand relationships between society, its laws, and institutions. | F4a |
| Demonstrate economic literacy. | F4 |
| UNDERSTANDING OF THE HISTORICAL EVOLUTION OF THE DEMOCRATIC PRINCIPLES OF THE CONSTITUTIONAL GOVERNMENT OF THE UNITED STATES; | E2, F4 |
| Display responsibility, self-esteem, sociability, integrity and honesty. | D, E, G2a, G4 |
| Apply concepts in consumer health, including the effects of consumer demands and advertising on health. | C1 |
| Use other languages to understand and appreciate all aspects of a culture, including literature, philosophy, the arts, geography, social customs, history, government, and the sciences. | F4a |
| Develop an understanding of worldwide relationships of all sorts between and among nations. | F4a |
| APPLICATION OF THE PRINCIPLES AND PROCESSES OF OUR REPRESENTATIVE FORM OF GOVERNMENT AND UNDERSTANDING HOW THEY AFFECT INDIVIDUALS, COMMUNITIES, TRIBES, STATE, NATIONS, AND THE WORLD; | E2, F4 |
| Act to promote a healthy school and community through school projects and partnerships with community agencies. | A2a, A2e, E1a, E3a, E3c |
| Act to create a healthy global environment. | E1a |
| Act to respect differences in mental and physical abilities of people due to various handicapping conditions. | G3b |

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| | NCEC CODE |
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| Appreciate and respect one's own language, culture, and literature and the languages, cultures and literatures of others. | F4a, G3b |
| Demonstrate an understanding of the effects that language can have on behavior and behavior on language. | F4a |
| Understand the complex nature of culture. | F4a |
| Demonstrate geographic understanding using the five fundamental themes of geography (location, place, movement, human interaction with environment, and regions). | F4a |
| UNDERSTANDING OF THE DIFFERENCES AMONG VARIOUS FORMS OF GOVERNMENT; | F4a |
| Recognize the importance of multilingualism and multiculturalism in a global economy. | F4a |
| Develop and use research and study skills. SS | F4 |
| Develop a knowledge base of United States and New Mexico history, geography, economy, politics and arts. | F4a |
| UNDERSTANDING AND APPLICATION OF THE BASIC ELEMENTS OF HEALTH MAINTENANCE; | C1, C2c |
| Know how to maintain one's own health, including concepts of personal hygiene, rules of safety, injury prevention, rehabilitative methods, and use of medical products. | C2a, C2c |
| Understand the physical, mental, emotional, and social aspects of human growth and development, including stages of development, human sexuality, child care and parenting, and aging. | F4 |
| Understand health practices that contribute to lifelong wellness and prevention of conditions such as heart and lung diseases, diabetes, high blood pressure, and cancer. | C1 |
| Understand how to protect oneself and others from infectious diseases, including HIV/AIDS. | C2e |
| Understand how to protect oneself and others from harmful effects of alcohol, tobacco, and other legal and illegal drugs. | C2d |
| Develop stress management, coping and refusal skills, and the ability to handle peer pressure. | F4, G1 |
| Demonstrate, practice and enjoy exercises that promote lifelong fitness, including cardiovascular fitness, muscular endurance and strength, and flexibility. | C1b, C3 |
| Learn and understand the concepts of safety, sportsmanship, nutrition and health to maintain an acceptable level of physical fitness essential for participation. | C1a, C1b, C2b, C3 |
| Develop large and small motor skills needed for making music through body movements. | C3 |
| Exhibit greater self confidence, self respect, self awareness, and self esteem. | G2a, G2b |
| Demonstrate and practice critical thinking, problems resolution and decision making skills. | F2a, G4c |
| STANDARDS FOR EXCELLENCE: STUDENT OUTCOMES, ATTITUDES AND ATTRIBUTES | |
| New Mexico students are successful, productive members of society as demonstrated by: | |
| a. A desire to learn and perform at their full potential; | F4 |
| b. A positive self concept as evidenced by constructive expression of one's own physical, emotional, and mental uniqueness, and capabilities, strengths, talents, goals, and aspirations. | G2a |
| c. A respect for self and others, based on the recognition of individual similarities and differences, opinions, cultures, and concerns of others; | G3a, G3b |
| d. A respect for the authority, responsibilities, and privileges protected by the United States Constitution and Bill of Rights; | E1 |
| e. An appreciation of the world's literature, art, music, and cultural attributes, particularly those that make our state and nation great and unique; | F4b |
| f. Personal and interpersonal skills necessary to function successfully as responsible members within families, workplace, communities, tribes, nations, and the world; | G1, G3, G4 |
| g. A willingness to strive toward the attainment of positive personal and academic goals; | F |
| h. Assuming personal responsibility for shaping their own future; | F |
| i. Making decisions which promote good health; and | C1 |
| j. A respect for life and the environment based on the recognition that all life is interdependent. | F |

New York

Document Utilized

Learning Centered Curriculum and Assessment for New York State (1991)

Background

The *Learning Centered Curriculum and Assessment for New York State* specifies student skills, characteristics, and capabilities that are to be incorporated in curriculum frameworks. These curriculum frameworks (expected to be completed in 1995) will not be developed by grade level; instead they will specify standards that are developmentally appropriate for broad levels of student learning at the elementary, middle, and commencement or graduation levels. The frameworks will include: areas of study (kinds of knowledge to be acquired), core concepts (major ideas to be understood), key competencies (important skills to be developed), and performance indicators (illustrations of how students can demonstrate their knowledge, skills, and understanding). The board of regents has yet to decide whether the frameworks will be mandatory or voluntary.

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| GOALS | NCPO CODE |
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| 1. Each student will master communication and computation skills as a foundation to: | F1a, F3a |
| 1.1 Think logically and creatively. | F2a |
| 1.2 Apply reasoning skills to issues and problems. | F2a |
| 1.3 Comprehend written, spoken, and visual presentations in various media. | F1a, F3b |
| 1.4 Speak, listen to, read, and write clearly and effectively in English. | F1a, F3b, F3c |
| 1.5 Perform basic mathematical calculations. | F3a |
| 1.6 Speak, listen to, read, and write at least one language other than English. | F4a |
| 1.7 Use current and developing technologies for academic and occupational pursuits. | F5a |
| 1.8 Determine what information is needed for particular purposes and be able to use libraries and other resources to acquire, organize, and use that information for those purposes. | F4 |
| 2. Each student will be able to apply methods of inquiry and knowledge learned through the following disciplines and use the methods and knowledge in interdisciplinary applications: | F4 |
| 2.1 English language arts. | F4a |
| 2.2 Science, mathematics, and technology. | F4a |
| 2.3 History and social science. | F4a |
| 2.4 Arts and humanities. | F4b |
| 2.5 Language and literature in at least one language other than English. | F4 |
| 2.6 Technical and occupational studies. | F4 |
| 2.7 Physical education, health, and home economics. | F4 |
| 3. Each student will acquire knowledge, understanding, and appreciation of the artistic, cultural, and intellectual accomplishments of civilization, and develop the skills to express personal artistic talents. Areas include: | F4b |
| 3.1 Ways to develop knowledge and appreciation of the arts. | F4b |
| 3.2 Aesthetic judgements and the ability to apply them to works of art. | F4b |
| 3.3 Ability to use cultural resources of museums, libraries, theaters, historic sites, and performing arts groups. | F4b |
| 3.4 Ability to produce or perform works in at least one major art form. | F4b |
| 3.5 Materials, media, and history of major arts forms. | F4b |
| 3.6 Understanding of the diversity of cultural heritage's. | F4b |

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| | NCEO CODE |
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| 4. Each student will acquire and be able to apply knowledge about political, economic and social institutions and procedures in this country and other countries. Included are: | F4a |
| 4.1 Political, economic, and social processes and policies in the United States at national, State and local levels. | F4a |
| 4.2 Political, economic, and social institutions and procedures in various nations; ability to compare the operation of such institutions; and understanding of the international interdependence of political, economic, social, cultural and environmental systems. | F4a |
| 4.3 Roles and responsibilities the student will assume as an adult, including those of parent, home manager, family member, worker, learner, consumer and citizen. | F4a |
| 4.4 Understanding of the institution of the "family," respect for its function, diversity, and variety of form, and the need to balance work and family in a bias-free democratic society. | F4a |
| 5. Each student will respect and practice basic civic values and acquire and use the skills, knowledge, understanding, and attitudes necessary to participate in democratic self-government. Included are: | E1a, F4a |
| 5.1 Understanding and acceptance of the values of justice, honesty, self-discipline, due process, equality, and majority rule with respect for minority rights. | E, F4a |
| 5.2 Respect for self, others, and property as integral to a self-governing, democratic society. | G2, G3a |
| 5.3 Ability to apply reasoning skills and the process of democratic government to resolve societal problems and disputes. | F2a, F4a |
| 6. Each student will develop the ability to understand, appreciate, and cooperate with people of different race, sex, ability to understand, appreciate, and cooperate with people of different race, sex, ability, cultural heritage, national origin, religion, and political, economic, and social background, and to understand and appreciate their values, beliefs, and attitudes. | G3b, G4b |
| 7. Each student will acquire knowledge of the ecological consequences of choices in the use of the environment and natural resources. | F4a |
| 8. Each student will be prepared to enter upon post-secondary education and/or career-level employment at graduation from high school. Included are: | A2f |
| 8.1 The interpersonal, organizational, and personal skills needed to work as a group member. | G, G4b |
| 8.2 The ability to use the skills of decision making, problem solving, and resource management. | F2a |
| 8.3 An understanding of ethical behavior and the importance of values. | D |
| 8.4 The ability to acquire and use the knowledge and skill to manage and lead satisfying personal lives and contribute to the common good. | D, E, F, G |
| 9. Each student will develop knowledge, skills and attitudes which will enhance personal life management, promote positive parenting skills, and enable functioning effectively in a democratic society. Included are: | D, E, G |
| 9.1 Self-esteem | G2a |
| 9.2 Ability to maintain physical, mental, and emotional health. | C1, G |
| 9.3 Understanding of the ill effects of alcohol, tobacco, and other drugs and of other practices dangerous to health. | C2d |
| 9.4 Basic skills for living, decision making, problem solving, and managing personal resources to attain goals. | D, F2a |
| 9.5 Understanding of the multiple roles adults assume, and the rights and responsibilities of those roles. | F4 |
| 9.6 Basic skills for parenting and child development. | F4 |
| 10. Each student will develop a commitment to lifetime learning and constructive use of such learning, with the capacity for undertaking new studies, synthesizing new knowledge and experience with the known, refining the ability to judge, and applying skills needed to take ethical advantage of technological advances. | F |

New York

| ESSENTIAL SKILLS AND DISPOSITIONS | NCEO CODE |
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| <p>A person who is prepared to live well, to work productively, and to participate effectively in civic and political life in a democracy exhibits the following skills and dispositions. An effective curriculum develops these essential skills and dispositions in every student across all subject areas.</p> | |
| <p>A. Managing Resources</p> | F4 |
| <p>Resources include time, fiscal and material means, and human qualities and endeavors which are needed to carry out activity.</p> | F4 |
| <p>1. Identifies, organizes, plans, and allocates resources--time, fiscal, material, and human--to accomplish goals.</p> | D3e, F4 |
| <p>2. Monitors, reflects upon, and assesses one's own progress and performance.</p> | F2a, G2a, G2c |
| <p>B. Managing Information</p> | F4 |
| <p>Information management focuses on the ability to access and use information from various sources, such as other people, libraries, museums and other community resources.</p> | F4 |
| <p>1. Acquires and evaluates information using a wide variety of sources and technologies.</p> | F2a, F4 |
| <p>2. Manages, organizes, interprets and communicates information for different purposes.</p> | F1, F2a, F4 |
| <p>3. Accesses and processes information acquired from data bases, computer networks and other emerging information systems.</p> | F5a |
| <p>4. Appreciates and gains understanding of new developments in information technology.</p> | F5a |
| <p>5. Selects and analyzes information and communicates the results to others using written, graphic, pictorial, or multimedia methods.</p> | F1a, F3c, F4 |
| <p>C. Developing Personal Competence</p> | |
| <p>Personal competence includes values, self-management, and the ability to plan, organize, and take independent action.</p> | D1a, D3 |
| <p>1. Exhibits integrity and honesty.</p> | E1 |
| <p>2. Takes initiative and personal responsibility for events and actions.</p> | D, D3e |
| <p>3. Exhibits ethical behavior in home, school, workplace, and community.</p> | E |
| <p>4. Regards oneself with esteem and others with respect, with intelligent and humane regard for cultural differences and different abilities.</p> | G2a, G3a, G3b |
| <p>5. Balances personal, family, and work life.</p> | no match |
| <p>D. Developing Interpersonal and Citizenship Competencies</p> | |
| <p>1. Can analyze new group situations.</p> | G4 |
| <p>2. Participates as a member of a team. Works cooperatively with others and contributes to the group with ideas, suggestions, and effort.</p> | G4b |
| <p>3. Teachers others. Helps others learn.</p> | E3b |
| <p>4. Exercises leadership. Communicates through feelings and ideas to justify a position; encourages, persuades, convinces, or otherwise motivates an individual or group.</p> | F |
| <p>5. Negotiates and works toward agreements that may involve exchanging resources or resolving divergent interests.</p> | G4c |
| <p>6. Understands, uses, and appreciates multiple perspectives. Works will with males and females and with people from a variety of ethnic, social, or educational backgrounds.</p> | G3b, G4b |
| <p>7. Joins as an informed participant in community, civic, and political life.</p> | A2e, E1a |
| <p>E. Working With Systems And Technology</p> | |
| <p>Systems skills include the understanding and ability to work with and within natural and constructed systems. Technology is the process and product of human skill and ingenuity in designing and making things out of available resources to satisfy personal and societal needs and wants.</p> | F5a |
| <p>1. Understands systems. Knows how social, organizational, biological, and technological systems work and operates effectively within them.</p> | F5a |
| <p>2. Monitors and corrects performance. Distinguishes trends, predicts impact of actions (inputs) on system operations, uses output to diagnose deviations in the functions (processes) of a system, and takes the necessary action (feed-back) to correct performance.</p> | F2a, F5a |

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| 3. Designs and improves systems. Makes suggestions to improve existing systems and develops new or alternative ones. | F5a |
| 4. Selects technology. Judges which set of procedures, tools, apparatus, or machines, including computers and their programs, will produce the desired results. | F5a |
| 5. Applies technology to tasks. Understands the overall intent and the proper procedures for using tools, setting up and using apparatus, and operating machines, including computers and their programming systems. | F5a |
| F. Developing Entrepreneurial Skills Entrepreneurial skills include both the cognitive abilities needed to make informed judgements, leading to creative and effective activity, and the disposition to meet challenges as varied as public speaking, musical performance, physical activity, and many more. Such skills include exploring the unknown and challenging conventions. | F2a |
| 1. Makes considered and informed judgements. | F2a |
| 2. Meets and accepts challenges. | D3e |
| 3. Makes considered and informed assertions; makes commitments to personal visions. | D3e |
| 4. Acts appropriately when the outcome is uncertain. | no match |
| 5. Responsibly challenges conventions and existing procedures or policy. | G1 |
| 6. Uses self-evaluation to adjust and adapt. | F2a |
| 7. Experiments creatively. | F |
| G. Thinking, Solving Problems, Creating The thinking and problem-solving category includes observing, experimenting, and drawing upon elements listed under the other essential skills categories. Creatively can be expressed through different types of intelligences such as logical/sequential, visual/spatial, musical, kinesthetic, and interpersonal. | F2a |
| THINKING | |
| 1. Makes connections; understands complex relationships and interrelationships. | F2 |
| 2. Views concepts and situations from multiple perspectives in order to take account of all relevant evidence. | F2a |
| 3. Synthesizes, generate, evaluates, and applies knowledge to diverse, new, and unfamiliar situations. | F2a |
| 4. Applies reasoned action to practical life situations. | F2a |
| 5. Imagine roles not yet experienced. | no match |
| SOLVING PROBLEMS | |
| 6. Designs problem-solving strategies and seeks solutions. | F2a |
| 7. Asks questions and frames problems productively, using methods such as defining, describing, gathering evidence, comparing and contrasting, drawing inferences, hypothesizing, and posing alternatives. | F1a, F2a |
| 8. Re-evaluates existing conventions, customs, and procedures in solving problems. | F2a |
| 9. Imagines, plans, implements, builds, performs, and creates, using intellectual, artistic, dexterous, and motor skills to envision and enact. | F2a |
| 10. Chooses ideas, procedures, materials, tools, technologies, and strategies appropriate to the task at hand. | F2a |
| 11. Adjusts, adapts, and improvises in response to the cues and restraints imposed by oneself, others, and the environment. | F2a |
| 12. Makes decisions and evaluates their consequences. | F2a |
| CREATING | |
| 13. Translates cognitive images and visions into varied and appropriate communication of ideas and information, using the methods of one or more disciplines--Imagining | F4b |
| 14. Originates, innovates, invents, and recombines ideas, productions, performances, and/or objects--Creating. | F4b |
| 15. Responds aesthetically--Appreciating. | F4b |

North Carolina

Documents Utilized

- Circle of Childhood* (August, 1990)
- Appendix C, Communication Skills Proficiencies: Grade Level Benchmarks* (1993)
- Overview: Mathematics K-8* (no date)
- Competency Goals and Objectives, Information Skills* (revised 1992)
- Competency Goals and Objectives, Computer Skills* (revised 1992)

Background

Since 1990, the state has had mandatory standards (called the "standard course of study") in computer skills, English/language arts, healthful living, information skills, mathematics, science, social studies and vocational education. The standards are grade-specific for grades K-12. Benchmarks in different skill areas have been developed as developmentally appropriate indicators of progress toward proficiency in these goals and objectives. The benchmarks are designed to enable teachers to assess student progress over time and in a variety of situations rather than to make promotion decisions. In 1989, the State Board of Education approved the piloting of a new curriculum, *Circle of Childhood*, that includes goals and objectives for children ages 3-5.

North Carolina

| NCEO CODE | |
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| MATHEMATICS PROFICIENCIES, EIGHTH GRADE | |
| Demonstrates understanding and uses of numbers in academic and real-world situations | F3a |
| Defines and uses number properties and elementary algebraic skills to solve problems | F2a, F3a |
| Analyzes data, and applies understanding of more complex mathematical concepts | F2a, F3a |
| Substitutes in formulas and solves for one unknown | F3a |
| Solves problems that involve geometric and measurement concepts | F2a, F3a |
| Integrates understanding of patterns and geometric concepts with visualization skills to solve problems and complete tasks | F2a, F3a |
| Applies mathematics reasoning in solving problems and making decisions | F2a, F3a |
| Uses organize approaches and variety of strategies to solve problems and make predictions | F2a, F3a |
| Represents problems and solutions verbally, numerically, graphically, geometrically, and symbolically | F1a, F3a |
| Employs statistical processes in gathering, organizing, displaying, and interpreting data | F3a |
| Demonstrates an understanding of the relevance and value that mathematics has for all citizens | F3a |
| COMPETENCY GOALS AND OBJECTIVES INFORMATION SKILLS | |
| GOAL 1: The learner will experience a wide variety of reading, listening, and viewing resources to interact with ideas in an information-intensive environment. | F1a, F3b |
| Objective 1.1: The learner will explore reading, listening, viewing sources and formats. | F1a, F3b |
| FOCUS: | |
| Participate in read-aloud, storytelling, and booktalking experiences | A2a, F1a, F3b |
| Identify characteristics of various genres | F4b |
| Acknowledge ownership of ideas in a variety of formats | F4b |
| Identify elements of composition | F4 |
| Identify characteristics of various media formats | F4 |
| Investigate potential sources of information outside the school | F4 |
| Select and use sources and formats independently | D1, F4 |

North Carolina

| | NCEC CODE |
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| Objective 1.2: The learner will identify criteria for excellence in design, content, and presentation of information and formats. | F2a, F4 |
| FOCUS: | |
| Identify standards of excellence for judging media resources | F2a, F4 |
| Apply identified standards to a variety of resources | F2a, F4 |
| Develop and support personal standards for selecting resources for information needs and enjoyment | F2a, F4 |
| Objective 1.3: The learner will critique information sources and formats | F2a, F4 |
| FOCUS: | |
| Analyze the merits of literary and design presentations | F2a, F4b |
| Assess reliability, relevance, and integrity of resources | F2a, F4 |
| Recognize the power of the media to influence | F2a, F4 |
| Determine usefulness of resources for instructional and personal needs | F2a, F4 |
| Objective 1.4: The learner will relate ideas and information to life experiences | F4 |
| FOCUS: | |
| Describe own cultural heritage and environment | F4a |
| Collect information about diverse cultures, environments, and peoples | F4a |
| Relate similarities and differences to personal life experiences | F4 |
| Identify contributions of individuals and cultures | F4a |
| Recognize how the presentation of information and ideas is influenced by social, cultural, political, and historical events | F4a |
| Objective 1.5: The learner will communicate reading, listening, and viewing experiences | F1a, F3b |
| FOCUS: | |
| Apply communications processes effectively | F1a |
| Produce media in various formats based on reading, listening, viewing experiences | F1a, F3b, F4 |
| Credit sources used in communicating reading, listening, viewing experiences | F1a, F4 |
| GOAL 2: The learner will identify and apply strategies to access, evaluate, use, and communicate information for learning, decision-making, and problem-solving | F1a, F2a |
| Objective 2.1: The learner will explore research processes that meet information needs. | F4 |
| FOCUS: | |
| Acknowledge that there are a variety of reasons for seeking information--curricular pursuits, personal interests, problem-solving and decision making | F4 |
| Explore print, electronic, human, and community reference sources | F4 |
| Recognize that a systematic approach is more productive than a random approach | F4 |
| Describe several research process models | F4 |
| Objective 2.2: The learner will engage in research process to meet information needs. | F4 |
| FOCUS: | |
| Develop a search strategy: | |
| define and analyze the task | F4 |
| determine format of the end product | F4 |
| identify known and unknown information | F4 |
| establish personal goals for the task | F4 |
| select the most appropriate model for the task | F4 |
| prepare a plan | F4 |
| Access Information: | |
| identify resources | F4 |
| gather information | F4 |
| credit sources | F4 |
| Critique Information: | |
| verify reliability of the sources | F2a, F4 |
| analyze and synthesize information | F2a, F4 |
| determine further needs, if any | F2a, F4 |
| revise/restructure the search | F2a, F4 |
| outline information to be used | F2a, F4 |

North Carolina

| | NCEO CODE |
|---|--|
| Use Information: follow a prescribed procedure of developing products create, produce and/or present a final product credit sources of information | F4 F4 F4 F4 |
| Evaluate the Process and the Product: assess the extent to which the process was appropriate appraise the technical quality of the product determine how well the product communicated information to the audience | F2a, F4 F2a, F4 F2a, F4 F2a, F4 |
| COMPETENCY GOALS AND OBJECTIVES: COMPUTER SKILLS, GRADE LEVEL: EIGHT | |
| GOAL 1: The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology. | E, F4a, F5a |
| 1.1 Identify technological skills required for various careers. | A2f, F4a |
| 1.2 Distinguish between different types of data as to which are public and which are private. | F4a |
| 1.3 State the need for protection of software and hardware from computer viruses. | F4a, F5a |
| GOAL 2: The learner will demonstrate knowledge and skills in using computer technology. | F5a |
| 2.1 Revise word processed text to be a simple desktop published document. | F5a |
| GOAL 3: The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information. | F5a |
| 3.1 Given a prepared database, use sorting and searching techniques to solve a specific problem. | F2a, F5a |
| 3.2 Enter and edit data into a prepared spreadsheet to test "What if?" statements. | F5a |
| COMMUNICATION SKILLS PROFICIENCIES: GRADE LEVEL BENCHMARKS | |
| READING, GRADE EIGHT | |
| CHARACTERISTICS OF THE READER: EXHIBITS THE ATTITUDES, HABITS, AND DISPOSITIONS OF A READER. | F3b |
| Recognizes that reading can change attitudes and behaviors. | F3b |
| Expresses emotional reactions and personal opinions and relates personal values to a selection or experience. | F3b |
| Acknowledges that there are many reasons for seeking information such as curricular pursuits, personal interests, or consumer needs. | F2a |
| Compares and offers critical analysis of materials presented in the media. | F2a |
| READING STRATEGIES: USES ONE OR MORE OF THE FOLLOWING STRATEGIES AS APPROPRIATE TO CONSTRUCT MEANING FROM TEXT. | |
| Uses knowledge of word formation, sentence structure, or other context clues. | F3b |
| Maps out the plots and character developments in novels and other literary texts. | F3b |
| Supports argument or opinion by reference to evidence presented in sources outside the text. | F3b |
| Assesses own performance relative to material and purpose. | F3b |
| Manages identified resources need to complete reading tasks. | F3b |
| Formulates questions about a subject based on prior knowledge. | F3b |
| Uses print and electronic catalogs and indices to locate materials. | F3b |
| READING COMPREHENSION: CONSTRUCTS MEANING FROM LITERARY, INFORMATIONAL, AND PRACTICAL TEXTS. | |
| Reads literary material with complex characters, settings, and episodes independently. | F3b |
| Reads informational and practical materials with complex vocabulary, concepts, and formats independently. | F3b |

North Carolina

| | NCEO CODE |
|---|------------------|
| Recognizes the characteristics of argumentative (persuasive) text. | F3b |
| Recognizes coherence, logic, and organization in argumentative (persuasive) text. | F3b |
| Recognizes relatedness and sufficiency of details in argumentative (persuasive) text. | F3b |
| Extracts ideas embedded in complex passages of text. | F3b |
| Synthesizes the author's bias. | F3b |
| Evaluates appropriateness of persuasive techniques such as personality, tradition, rhetoric, and reason. | F3b |
| Analyzes and formulates a critical opinion about literary and informational material. | F2a, F3b |
| Recognizes how sound, diction, symbolism, and figurative language interact to communicate multiple interpretations. | F1, F3b |
| Discusses ways language and visuals bring characters and events to life. | F1a, F3b |
| WRITING, GRADE EIGHT | |
| CHARACTERISTICS OF THE WRITER: POSSESSES THE ATTITUDES, HABITS, AND DISPOSITIONS OF A WRITER. | |
| Appreciates writing as a major source for learning through note taking, brainstorming, listing, or writing journals or learning logs. | F3c |
| Works collaboratively on a written product that expresses a response to a selection or experience. | F3c, G4b |
| Writes with ease in both short passages and extended writing. | F3c |
| COMPOSING PROCESS: USES ONE OR MORE OF THE FOLLOWING STRATEGIES TO WRITE LITERARY, INFORMATIONAL, AND PRACTICAL TEXTS. | |
| Understands and uses stages in the writing process independently. | F3c |
| Writes on a variety of topics and in more than one genre and mode. | F3c |
| Assesses own performance relative to audience and purpose. | F3c |
| Manages identified resources needed to complete writing tasks. | F3c |
| Revises vocabulary, organization, and tone as appropriate for audience and purpose. | F3c |
| Chooses organization and layout appropriate for audience. | F3c |
| Uses literary devices and design elements as appropriate to describe, support an opinion, or persuade an audience. | F3c |
| Selects vocabulary as appropriate to reduce ambiguities and to indicate shades of meaning. | F3c |
| Uses grammatical terms necessary for conferencing when revising and editing. | F3c |
| *Edits work for errors in sentence formation, usage, mechanics, and spelling. (*See editing proficiencies for Grade 8). | F3c |
| COMPOSING PRODUCTS: WRITES LITERARY, INFORMATIONAL, AND PRACTICAL TEXTS TO CONVEY MEANING, TO LEARN, AND TO CLARIFY THINKING. | |
| Writes arguments that have coherent, logical, and organized structure. | F2a, F3c |
| Writes arguments that provide sufficient, related, elaborated reasons to persuade an audience to adopt a position. | F3c |
| Writes practical texts such as letters of request and complaint, application forms, or written directions. | F3c |
| Offers critical opinions or analysis of reading and expresses an alternate point of view of author by writing in learning log. | F2a, F3c |

Ohio

Documents Utilized

Prekindergarten Through Grade 12 Standards for Ohio Schools (March, 1994)

Background

In 1989, the legislature required the state board of education to establish a model competency-based education program for grades 1-12 in math, reading, and writing. Science and social studies were added later. The law permitted the state board to develop standards for other subjects. Ohio has developed curriculum frameworks for mathematics, reading, science, social studies, and writing. Standards in comprehensive health and physical education, fine arts, and second languages are under development. These frameworks are voluntary for school districts, but are tied to a new statewide testing system.

Ohio

| LEARNING OUTCOMES FOR NINTH GRADE | NCEO CODE |
|--|-----------|
| READING | |
| Given a fictional selection, the student will demonstrate an integrated understanding of the language, elements of plot, possible themes, likely motives and traits of characters, and the effect of setting, by responding to items regarding: | F3b, F4b |
| the meaning of an unfamiliar word (i.e., uncommon or low-frequency word) | F3b |
| the meaning of a multiple-meaning word. | F3b |
| details (e.g., who, what, where, how, or problem/solution) | F3b |
| sequence of time, places, events, and ideas. | F3b |
| stated or implied main ideas. | F3b |
| most-probable outcomes. | F3b |
| cause-and-effect relationships. | F3b |
| the difference between statements based on fact and statements based on inference. | F3b |
| predictions about whether certain information is likely to be included in material. | F3b |
| the identification of questions that will demonstrate comprehension of the main ideas and supporting details. | F3b |
| Given a nonfictional selection, the student will demonstrate an integrated understanding of the major concepts, the evidence that supports those concepts, the possible application for the concepts, and the possible purposes the selection might serve, by responding to items regarding: | F3b |
| details (e.g., who, what, when, where, how, or problem/solution) | F3b |
| stated or implied main ideas. | F3b |
| cause-and-effect relationships. | F3b |
| the difference between statements based on fact and statements based on inference. | F3b |
| whether a statement is a fact or an opinion. | F3b |
| predictions about whether certain information is likely to be included in material. | F3b |
| details that either support or do not support the main idea. | F3b |
| the author's purpose for writing the selection. | F3b |
| the best summary for a specific audience. | F3b |
| the authors attitude toward a topic. | F3b |
| Given everyday/functional reading materials, the student will identify, locate, and use information in items regarding: | F3b |
| directions of two or more steps. | F3b |
| the selection and use of appropriate reference sources and illustrative materials. | F3b |
| Examples of reference sources/illustrative materials would be dictionary, encyclopedia, almanac, atlas, telephone book, card catalog, periodical/newspaper, schedule, table of | F3b |

Ohio

| | NCEO CODE |
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| <p>contents, and index. Examples of skills/processes would be using alphabetical order; skimming and scanning, reading charts, tables, diagrams, graphs, maps, labels, and signs. the meaning of vocabulary words used on an application form. the use of propaganda.</p> | <p>F3b F3b F3b</p> |
| WRITING | |
| <p>The student will produce a piece of writing that: conveys a message related to the prompt (topic or description of a situation) includes supporting ideas or examples. follows a logical order. conveys a sense of completeness. exhibits word choice appropriate to the audience, the purpose, and the subject. includes clear language. contains complete sentences and may contain purposeful fragments. exhibits subject-verb agreement. contains standard forms of verbs and nouns. exhibits appropriate punctuation. exhibits appropriate capitalization. contains correct spelling. is legible.</p> | <p>F3c F3c F3c F3c F3c F3c F3c F3c F3c F3c F3c F3c F3c</p> |
| MATHEMATICS | |
| <p>The student will: compute with whole numbers, fractions, and decimals. compare, order, and determine equivalence of fractions, decimals, percents, whole numbers, and integers. solve and use proportions. round numbers to the nearest thousand, hundred, ten, one, tenth, and hundredth. solve problems and make applications involving percentages. select and compute with appropriate standard or metric units to measure length, area, volume, angles, weight, capacity, time, temperature, and money. convert, compare, and compute with common units of measure within the same measurement system. read the scale on a measurement device to the nearest mark and make interpolations where appropriate. read the scale on measurement device to the nearest mark and make interpolations where appropriate. recognize, classify, and use characteristics of lines and simple two-dimensional figures. find perimeters (circumference) and areas of polygons (circles) find surface areas and volumes of rectangular solids. read, interpret, and use tables, charts, maps, and graphs to identify patterns, note trends, and draw conclusion. use elementary notions of probability. computer averages. solve simple number sentences and use formulas. evaluate algebraic expressions (simple substitutions)</p> | <p>F3a F3a F2a, F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F3a F2a, F3a F3a</p> |
| CITIZENSHIP | |
| <p>The student will: identify the major significance of the following historic documents: Northwest Ordinance, Declaration of Independence, Constitution, Bill of Rights.</p> | <p>F4a</p> |

Ohio

| | NCEO CODE |
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| know that many different peoples with diverse backgrounds (cultural, racial, ethnic, linguistic) make up our nation today. | F4a |
| identify various symbols of the United States: flag, national anthem, Pledge of Allegiance, Independence Day. | F4a |
| locate the United States, the nation's capital, the state of Ohio, and Ohio's capital on appropriate maps of the nation, hemisphere, or world. | F4a |
| demonstrate map-reading skills, including finding directions, judging distances, and reading the legend. | F4a |
| know the following economic concepts: | F4a |
| All levels of the U.S. government assess taxes in order to provide services. | F4a |
| Individuals and societies make choices to satisfy wants with limited resources. | F4a |
| Nations become interdependent through trade. | F4a |
| identify the main functions of each branch of government (executive, legislative, judicial) at the national, state, and local levels. | F4a |
| identify major economic systems: capitalism, socialism, communism. | F4a |
| demonstrate an understanding of the concept of federalism by identifying the level of government (local, state, national) responsible for addressing the concerns of citizens. | F4a |
| distinguish the characteristics, both positive and negative, of various types of government: representative democracy, monarchy, dictatorship. | F4a |
| describe the process for making, amending, or removing laws. | F4a |
| know how law protects individual in the United States. | F4a |
| Give examples of the rights and freedoms guaranteed in the Bill of Rights. | F4a |
| Apply the concept of justice, including due process and equity before the law. | F4a |
| Know the importance of learning or work environment free of discrimination against individual differences. | F4a |
| Identify legal means of dissent and protest against violation of rights. | F4a |
| understand the major role of political parties in a democracy is to provide a choice in governmental leadership (i.e., candidates and platforms) | F4a |
| understand the role of public officials in government. | F4a |
| Distinguish between elected and appointed officials. | F4a |
| Describe the ways officials can be elected or appointed. | F4a |
| Evaluate the actions of public officials on the basis of a given set of criteria. | F4a |
| know that voting is both a privilege and a responsibility of U.S. citizenship. | F4a |
| Recognize that property ownership, race, gender, literacy , and certain tax payments no longer affect eligibility to vote. | F4a |
| Identify the qualifications for voting. | F4a |
| demonstrate the ability to use information that enables citizens to make informed choices. | F4a |
| Use more than one source to obtain information. | F4a |
| Identify points of agreement and disagreement among sources. | F4a |
| Evaluate the reliability of available information. | F4a |
| Draw conclusions by reading and interpreting data presented in charts and graphs. | F4a |
| Identify and weigh alternative viewpoints. | F4a |
| identify opportunities for involvement in civic activities. | E3c |

Oklahoma

Document Utilized

Priority Academic Student Skills--P.A.S.S. (September, 1993)

Background

The Education Reform and Funding Act, passed in April 1990, called for the development of a core curriculum in six core areas: the arts, language arts, languages, mathematics, science, and social studies. There are also content standards in four other areas: instructional technology; technical education; health, safety, and physical education; and hands-on career exploration and information skills. In the fall of 1993, the state did an extensive revision of the standards in all areas. Each subject is organized differently, but all include standards for grades K-12. Schools are required to include the state's core curriculum in their local curriculum, but districts can choose how to implement the standards. Criterion-referenced tests are under development to assess mastery of the standards in grades 5, 8, and 11.

Oklahoma

| PRIORITY ACADEMIC STUDENT SKILLS | NCEO CODE |
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| LANGUAGE ARTS READING: GRADES 6-8 | |
| 1. The student will exhibit positive reading habits and view reading as important. The Student Will: | F3b |
| a. Choose to read independently sustained periods of time. | F3b |
| b. Read for a variety of purposes such as for entertainment and for information. | F3b |
| c. Demonstrate use of functional print including, but not limited to , schedules, letters, catalogs, directories, charts, maps, graphs and directions. | F3b |
| d. Demonstrate appropriate use of informational sources including, but not limited to, trade books, almanacs, atlases, encyclopedias, dictionaries, thesauruses, magazines and newspapers. | F3b |
| 2. The student will read with fluency in order to understand what is read. The Student Will: | F3b |
| a. Identify technical and specialized terms and determine meanings of multiple meaning words using a variety of strategies (prediction, context, structural analysis and phonics). | F3b |
| b. Identify narrative and expository text. | F3b |
| c. Use story structure to organize, recall and make inferences about the story (setting, characters, goal, plot, conflict and resolution). | F3b, F4b |
| d. Determine a statement of the key concept(s), actual or implied, or theme. | F3b |
| e. Identify details that support or describe a key concept. | F3b |
| f. Evaluate and respond to reading materials through the arts, discussion, writing and/or further reading. | F2a, F3b |
| g. Make inferences and draw conclusions from the evidence presented in the reading material. | F2a, F3b |
| h. Recognize and interpret relationships in text such as comparison/contrast, cause/effect, problem/solution and sequential order. | F2a, F3b |
| j. Interpret meaning from the author's use of figurative language. | F3b |
| k. Use background knowledge and questioning to evaluate issues and propaganda within reading material. | F2a, F3b |
| 4. The student will know the goal for reading is constructing meaning and will use effective strategies to aid comprehension. The Student Will: | F3b |
| a. Expect the reading material to make sense and use correction strategies when the meaning is not clear. | F3b |
| b. Make predictions and verify or revise thinking while reading. | F3b |

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| | NCEO CODE |
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| c. Generate questions to clarify meaning. | F3b |
| d. Adjust reading rate according to the purpose for reading. | F3b |
| e. Use appropriate strategies for studying and learning from the text such as outlining, webbing/clustering, skimming and summarizing. | F3b |
| f. Summarize text by identifying and organizing relevant material. | F3b |
| g. Relate dictionary definitions to the context of the reading in order to aid understanding. | F3b |
| h. Determine strategies appropriate to text and context. | F3b |
| LANGUAGE ARTS: GRADES 6-8 | |
| PROGRAM SKILLS | |
| 1. Use thinking skills to acquire and process written and auditory information for a variety of purposes | F1a, F2a, F3b |
| 2. Effectively express ideas in oral and written modes for a variety of purposes and audiences. | F1a, F3c |
| 3. Recognize major literary and cultural traditions and use them as a foundation for effective communication. The Student Will: | F1, F4b |
| a. Listen for a variety of purposes (e.g., enjoying, recalling, interpreting, applying, evaluating directions or concepts). | F1a |
| b. Expand strategies to comprehend oral and written materials (e.g., "strategic reading," class discussion, note-taking, clustering or outlining information). | F1a, F3b |
| c. Understand fact, opinion and fantasy in print and nonprint media (e.g., literature, electronic media, advertising, propaganda). | F3b, F4b |
| d. Use techniques of writing to learn (e.g., note-taking, outlining, cubing, interviewing, journals, learning logs). | F3c |
| e. Communicate through a variety of written forms, on paper and on a computer screen (e.g., paragraphs, compositions, poetry, stories, friendly and business letters). | F3c, F5a |
| f. Demonstrate thinking skills in listening, speaking, reading and writing (e.g., focusing, gathering, organizing, analyzing, synthesizing, generating, evaluating print and nonprint information). | F1a, F2a, F3b, F3c |
| g. Express ideas and opinions orally and in writing (e.g., writing or performing plays, dialogues, reports). | F1a, F3c |
| h. Expand vocabulary through word study, literature and class discussion (e.g., word origins, roots and affixes, meaning in context, levels of usage). | F4a |
| i. Utilize the writing process to develop and refine composition skills (e.g., prewriting, drafting, revising, editing or proofreading, publishing or sharing). | F3c |
| j. Demonstrate use of appropriate conventions in written composition (e.g., edit for usage, mechanics, and spelling). | F3c |
| k. Compose a variety of types of paragraphs, each containing a topic sentence, supporting sentences and a concluding sentence (e.g., narrative, descriptive, expository, persuasive). | F3c |
| l. Communicate for a variety of audiences and purposes (e.g., to inform, to entertain, to persuade, to express ideas). | F3c |
| m. comprehend and use figurative language and sound devices in speaking and writing (e.g., metaphor, simile, personification, rhythm, rhyme, alliteration, onomatopoeia). | G1a, F3c |
| n. Demonstrate a knowledge of literary elements and how they affect the development of literary work (e.g., plot, character, setting, theme, conflict, symbolism, point of view). | F4b |
| o. Demonstrate a knowledge of and appreciation for various forms (genres) of literature (e.g., short story, novel, drama, narrative and lyric poetry, essay, biography). | F4b |
| p. Demonstrate awareness of literature from other cultures (e.g., fables, legends, myths, nonfiction articles). | F4b |
| MATHEMATICS: GRADES 6-8 | |
| PROCESS SKILLS | |
| 1. Mathematics as Problem-Solving. The Student Will: | |

Oklahoma

| | NCEO CODE |
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| a. Develop and test strategies to solve practical, everyday problems which may have single or multiple answers. | F2a, F3a |
| b. Use technology to generate and analyze data to solve problems. | F2a, F3a, F5a |
| c. Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations. | F2a, F3a |
| d. Evaluate results to determine their reasonableness. | F2a, F3a |
| e. Apply a variety of strategies (e.g., trial and error, diagrams, making the problem simpler) to solve problems, with emphasis on multistep and nonroutine problems. | F2a, F3a |
| f. Use oral, written, concrete, pictorial, graphical and/or algebraic methods to model mathematical situations. | F1a, F3a, F3c |
| 2. Mathematics as Communication. The Student Will: | |
| a. Translate a mathematical idea from one form to another (e.g., oral, written, pictorial, concrete, graphical, algebraic). | F3a |
| b. Use listening, reading and visual skills to discuss, interpret and evaluate mathematical ideas. | F1a, F2a, F3a, F3c |
| c. Reflect on and justify his/her reasoning in mathematical problem-solving (e.g., convince, demonstrate, formulate). | F2a, F3a |
| d. Select and use appropriate terminology when discussing mathematical concepts and ideas. | F3a |
| 3. Mathematics as Reasoning. The Student Will: | |
| a. Identify and extend patterns and use experiences and observations to make suppositions. | F3a |
| b. Use counterexamples to disprove suppositions (e.g., 2 to the 4th is equal to 4 squared but 3 squared is not equal to 2 cubed.) | F3a |
| c. Use given facts, models and logical arguments to validate a supposition. | F3a |
| 4. Mathematics as Connections. The Student Will: | |
| a. Apply mathematical strategies to solve problems that arise from other disciplines. | F2a, F3a |
| b. Demonstrate the ability to relate one area of mathematics to another. | F3a |
| 5. Number Sense and Number Theory: The Student Will: | |
| a. Estimate and then solve applications. | F2a, F3a |
| b. Use ratio and proportions to solve a variety of problems. | F2a, F3a |
| 7. Patterns and Functions: The Student Will: | |
| a. Discover, describe, extend, analyze and create a wide variety of patterns using tables, graphs, rules and models. | F2a, F3a |
| b. Discover special characteristics of relationships (e.g., relationships among area, perimeter and volume; relationships between operations on integers and operations on whole numbers; relationships between negative exponents and place value) using concrete materials and technology. | F3a, F5a |
| 8. Algebraic Concepts: The Student Will: | |
| a. Solve linear equations using concrete, informal and formal methods. | F2a, F3a |
| b. Graph linear functions on a coordinate plane. | F3a |
| c. Solve a simple inequality and graph the solution on a number line. | F2a, F3a |
| 9. Statistics: The Student Will: | |
| a. Distinguish between the basic use and misuse of statistical representations and inferences. | F3a |
| b. Select and apply appropriate formats in the presentation of collected data. | F3a |
| c. Calculate and determine the most appropriate statistic among the mean, median, mode and range. | F3a |
| 10. Probability: The Student Will: | |
| a. Predict possible outcomes through experiments or simulations. | F3a |
| b. Use permutations and combinations in applications of probability. | F3a |
| 11. Geometry The student will incorporate congruence, similarity and transformation into problem solving skills. | F2a, F3a |
| 12. Measurement: The Student Will: | |
| a. Integrate measurement into other areas of mathematics. | F3a |
| b. Use the concept of rate (e.g., distance in relation to time, pay in relation to hours worked). | F3a |

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| <p>SCIENCE: GRADES 6-8</p> | |
| <p>The Priority Academic Student Skills should be presented throughout grade eight are to be learned with Earth/Space, Life and Physical Science applications.</p> | |
| <p>1. Observing and Measuring: Observing is the first action taken by the learner to acquire new information about an object or event. Opportunities for observations are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The Student Will:</p> | |
| <p>a. Identify similar or different characteristics in a given set of objects, organisms or events.</p> | F4a |
| <p>b. Select descriptive (qualitative) or numerical (quantitative) observations in a given set of objects, organisms or events.</p> | F4a |
| <p>c. Identify qualitative and quantitative changes given conditions before, during and after an event.</p> | F4a |
| <p>d. Select the appropriate unit to measure objects, organisms or events. (When applicable, use System International units).</p> | F4a |
| <p>2. Classifying: Classifying establishes order. Objects, organisms and events are classified based on similarities, differences and interrelationships. The Student Will:</p> | |
| <p>a. Identify properties by which a set of objects, organisms or events could be ordered.</p> | F4a |
| <p>b. Select a sequential order for each property within a set of objects, organisms or events.</p> | F4a |
| <p>c. Identify the properties on which a given classification system is based.</p> | F4a |
| <p>d. Use observable properties to classify a set of objects, organisms or events.</p> | F4a |
| <p>e. Place an object, organism or event into a classification system.</p> | F4a |
| <p>3. Experimenting: Experimenting is the sequential method of discovering information. It requires making observations and measurements to test ideas against facts. The Student Will:</p> | |
| <p>a. Arrange the steps of a scientific problems in the proper sequential order.</p> | F4a |
| <p>b. Identify a simple variable and/or control in an experimental set-up.</p> | F4a |
| <p>c. Identify a hypothesis for a given problem.</p> | F4a |
| <p>4. Interpreting: Interpreting is the process of making predictions and hypotheses using data collected in an investigation. With these skills students will develop conclusions. The Student Will:</p> | |
| <p>a. collect and report data in an appropriate method when given experimental procedure or information.</p> | F4a |
| <p>b. Predict data points not included on a given graph.</p> | F4a |
| <p>c. Interpret line, bar and circle graphs.</p> | F4a |
| <p>d. Select the most logical conclusion for given experimental data.</p> | F4a |
| <p>e. Accept or reject hypotheses when given results of an investigation.</p> | F4a |
| <p>5. Communicating: Communicating is the process of describing, recording and reporting experimental procedures and results to others. Communications may be oral or written and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations and mathematical equations. The Student Will:</p> | |
| <p>a. Describe the properties of an object or event in sufficient detail so another person can identify it.</p> | F1, F4a |
| <p>b. Complete or create and appropriate graph or chart from collected data.</p> | F1, F4a |
| <p>6. Safety in the Science Classroom: Safety is an essential part of any science activity. Safety in the classroom and care of the environment are individual and group responsibilities. The Student Will:</p> | |
| <p>a. Recognize potential hazards within a given activity.</p> | C2a |
| <p>b. Practice safety procedures in all science activities.</p> | C2a |
| <p>SOCIAL STUDIES: GRADES 6-8</p> | |
| <p>CIVICS The Student Will:</p> | |
| <p>1. Evaluate the impact that individuals have upon their surroundings and analyze the influences of economic principles on the system of government of the United States.</p> | F4a |

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| 2. Identify and explain the basic rights and responsibilities of citizenship. | F4a |
| a. Identify individual rights found in the Constitution including its amendments. | F4a |
| b. Identify the need for law and government and explain the beliefs on which democratic government is based. | F4a |
| 3. Describe the characteristics of local, state and national governments and how they compare to other governments. | F4a |
| a. Identify the interrelationship of federal, state, county and municipal governments. | F4a |
| b. Evaluate the impact of government on the lives of Oklahomans and how Oklahomans can effect change in governments. | F4a |
| c. Define the concept of separation of powers and describe its effect upon our three branches of government. | F4a |
| 4. Evaluate how the political process works and describe the election process involved in national, state and local governments including the role of political parties in the United States. | F4a |
| 5. Describe the ethnic and cultural diversity of the population of the United States and analyze the ways that different ethnic and cultural groups are protected under the Constitution. | F4a |
| 6. Use the skills of critical thinking necessary for analysis of governmental concepts. | F2a, F4a |
| a. Make a distinction among propaganda, fact and opinion; identify cause and effect relationships; and draw conclusions. | F2a, F4a |
| b. Interpret and analyze political cartoons, graphs and charts. | F4a |
| ECONOMICS | |
| The Student Will: | |
| 1. Explain economic beliefs that served as a foundation for the development of the economic system of the United States and explain the role of the government in the economy. | F4a |
| 2. Describe wise economic choices using economic situations involved in everyday life and describe a citizen's role in society as both producer and a consumer. | F4a |
| 3. Describe major features of the modified market economy. | F4a |
| a. Describe how the forces of supply and demand interact to determine the prices of goods and services. | F4a |
| b. Explain how money is used as a medium of exchange. | F4a |
| UNITED STATES HISTORY | |
| The Student Will: | |
| 1. Identify the political growth, major events and personalities affecting the development of the United States. | F4a |
| a. Identify and analyze major events, causes, effects and the role of significant personalities of the Revolutionary War. | F4a |
| b. Trace the growth of sectional conflict between 1820 and the Civil War: Missouri Compromise, the Compromise of 1850, the Kansas-Nebraska Act and the Dred Scott Decision. | F4a |
| c. Analyze the significance of the Civil War and Reconstruction. | F4a |
| 2. Analyze the creation and judicial interpretations of the historical documents on which our government is founded and examine documents which contributed to the establishment and growth of the United States government. | F4a |
| 3. Identify and describe events, trends and movements which shaped social and cultural development in the United States. | F4a |
| a. Identify major ethnic groups in the United States (including African Americans, Asian Americans, European Americans, Hispanic Americans, Native Americans) and trace their political, economic and cultural contributions throughout the history of the United States. | F4a |
| b. Describe the role of women in the development of the United States. | F4a |
| 4. Analyze events and identify personalities that influenced the development of United States foreign policy and explain how Manifest Destiny determined the territorial expansion of the United States in the Louisiana Purchase, the Texas Annexation, the Mexican Cession and Oregon Territory. | F4a |

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| 5. Identify and describe the characteristics and major factors contributing to the growth of the American economy. | F4a |
| a. Recognize the economic conflict between the industrial North and the agrarian South which led to the Civil War. | F4a |
| b. Describe the growth of the West and analyze its effect on the American way of life. | F4a |
| c. Explain the impact of the Industrial Revolution on the United States. | F4a |
| WORLD GEOGRAPHY | |
| The Student Will: | |
| 1. Identify and describe the physical patterns and processes of the biosphere, the layer of the earth in which life exists. | F4a |
| a. Identify forces beneath the crust that shape the earth, explaining the processes and agents that shape the physical features on the earth. | F4a |
| b. Identify various biomes (the community of plants and animals that live in a particular climate) of the world. | F4a |
| c. Determine the major weather phenomena of the world and the effect of latitude, elevation, prevailing wind and proximity to bodies of water on climate. | F4a |
| 2. Assess the impact of humans on the biosphere. | F4a |
| a. Relate human population growth to world atmospheric changes. | F4a |
| b. Give an example of the effects of industrialization and transportation on the environment. | F4a |
| 3. Locate and describe world culture patterns. | F4a |
| a. Describe common characteristics of the major regions of the world: United States and Canada, Latin America, Europe and the former Soviet Union, North Africa and the Middle East, Sub-Saharan Africa, South Asia, East Asia, Southeast Asia and Oceania. | F4a |
| b. Analyze demographic and cultural characteristics of the major regions. | F4a |
| c. Compare and contrast the ways of living in developed and developing countries relative to economic, political and technological systems. | F4a |
| 4. Analyze contemporary world issues. | F4a |
| a. Identify the major natural resources that support industrial societies and describe their world distribution, international trade patterns and future availability. | F4a |
| b. Compare and contrast population growth rates of industrialized and non-industrialized countries. | F4a |
| c. Recognize ethnic diversity within political units and major cultural regions. | F4a |
| 5. Identify and use maps, graphs and statistical sources. | F4a |
| a. Identify and draw conclusions from different kinds of maps, charts, graphs or pictorial materials based on geographical data. | F4a |
| b. Identify and locate the fifty states of the United States, capitals, major cities and countries of the world. | F4a |
| c. Identify basic landforms and water bodies, given definitions or pictorial representations. | F4a |
| 6. Read and interpret geographic information, using a variety of sources, and communicate that information in both written and oral form. | F4a |
| a. Collect data about geographic issues from a variety of sources, formulate conclusions and present findings. | F4a |
| b. Evaluate different solutions to geographic problems. | F4a |
| WORLD HISTORY | |
| The Student Will: | |
| 1. Evaluate the impact of geography on civilizations of the world and describe the effect of geography on economic and political systems and on the movements of people and ideas. | F4a |
| 2. Analyze the major conflicts, events and contributions of individuals and describe the impact of major historical events and figures on past and present societies. | F4a |
| 3. Identify and describe the world's major economic and political systems and the impact of major technological revolutions and identify the impact of significant scientific and technological changes on society. | F4a |
| 4. Identify and describe events, trends and movements which have shaped the social and cultural | F4a |

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| developments of the major nations of the world and identify major contributions of world civilizations in art, music, architecture and literature. | |
| 5. Trace the development and influence of various religious, moral and philosophical ideologies and identify major world religions and how they influenced the development and growth of nations. | F4a |
| VISUAL ART: GRADES 6-8 | |
| The Student Will: | |
| a. Express individual ideas while making original art, using a variety of art materials (media) | F4b |
| b. Develop skills and techniques in using a wide variety of art media, tools and processes. | F4b |
| c. Recognize and utilize a variety of sources of ideas and content for his/her own art work, e.g., observation, memory, imagination. | F4b |
| d. Depict the three-dimensional qualities indicated by overlapping planes, vertical position, size, and color intensity. | F4b |
| e. Analyze and begin to evaluate the principles of design: rhythm, balance, contrast, movement, variety, center of interest, and repetition in his/her own work and the of others. | F2a, F4b |
| f. Analyze and begin to evaluate the relationship of the elements of design: line, color, form, shape, texture and space in his/her own work and the works of others. | F2a, F4b |
| g. Compare works which are similar in expressive quality, composition and style. | F4b |
| h. Demonstrate knowledge of and express opinions about works of art of different forms, media and styles and begin to justify choices. | F4b |
| i. Explain the purposes of art and its relationship to society. | F4b |
| j. Recognize and describe the cultural and ethnic traditions which have influenced the visual arts. | F4b |
| k. Compare and contrast the development of art throughout history. | F4b |
| l. Explain the role of art and artists in society and in the local community. | F4b |
| m. Identify the variety of art forms used in business and industry, including possible vocations and professions that may be associated with such art forms. | F4b |
| n. Analyze the relationship that exists between visual art and other art forms such as music, dance and drama. | F4b |
| o. Evaluate and adjust his/her own art work in progress based on an understanding of the elements and principles of design. | F4b |
| p. Recognize and compare two- and three- dimensional forms that are natural and man-made. | F4b |
| q. Analyze and demonstrate uses of the visual arts in today's world including the popular media of advertising, television and film. | F2a, F4b |
| GENERAL MUSIC: GRADES 6-8 | |
| The Student Will: | |
| a. Participate in music through singing and/or playing instruments. | A2a, F4b |
| b. Sing with an acceptable tone quality throughout his/her singing ranges or play an instrument with an acceptable tone quality throughout an appropriate range. | F4b |
| c. Sing or play a varied repertoire (selections) of folk, ethnic, classical and contemporary musical pieces. | F4b |
| d. Perform musical pieces in at least two parts. | F4b |
| e. Play a variety of rhythmic or melodic instruments. | F4b |
| f. Employ pitch syllables, numbers or letter names to perform melodic passages. | F4b |
| g. Employ rhythm syllables to perform rhythmic passages. | F4b |
| h. Perform simple melodies in treble or bass clef at sight. | F4b |
| i. Use standard notation (pitch, form, rhythm, articulation, dynamics) to perform a musical piece. | F4b |
| j. Demonstrate appropriate concert behavior (i.e., sitting still, listening quietly, etc.). | F4b |
| k. Compose simple music using traditional and/or nontraditional sound sources, including electronic. | F4b |

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| 1. Experiment with and demonstrate understanding of variation in tempo (speed), timbre (sound quality), dynamics (degree of loudness) and phrasing for expressive purposes. | F4b |
| m. Notate short melodies (both pitch and rhythm) presented aurally (while listening). | F4b |
| n. Follow a single line of standard notation (written representation of music) while listening to music. | F4b |
| o. Listen to and evaluate his/her own music performances and progress using appropriate musical terminology. | F4b |
| p. Analyze and discuss music performed and heard in terms of musical elements (pitch, rhythm, texture, form and basic chord progressions). | F4b |
| q. Employ an appropriate vocabulary of musical terms to analyze music. | F4b |
| r. Analyze, compare, and contrast music from a variety of styles, periods and cultures. | F4b |
| s. Identify a variety of composers and music, and make historical connections (styles, periods and cultures) to the music. | F4b |
| LANGUAGES: PROFICIENCY LEVEL--INTRODUCTORY | |
| At the end of the Introductory Proficiency Level of studying a language in its cultural context, students will recognize some similarities and differences between the target culture and their own. | |
| 1. Speaking: At the Introductory Level, repetition, frequent pauses and production errors can be expected. The Students Will: | |
| a. Use isolated words and learned phrases (two or three words at a time). | F4a |
| b. Use vocabulary which is sufficient for handling classroom situations and basic needs. | F4a |
| c. Express basic courtesies. | F4a |
| 2. Listening/Comprehending: At the Introductory Level, repetition, rephrasing, slow rate of speech may be needed for comprehension. The Student Will: | |
| a. Understand short, learned statements, questions, commands and courtesies. | F4a |
| 3. Reading/Interpreting: At the Introductory Level, phrases and sentences may require a second reading. The Student Will: | |
| a. Identify learned words and phrases including cognates (words recognizable in two languages and having similar meaning) and borrowed words. | F4a |
| 4. Writing: At the Introductory Level, practical writing skills for communication will be minimal. The Student Will: | |
| a. Copy or transcribe familiar words or phrases and reproduce some from memory. | F4a |
| PROFICIENCY LEVEL--BEGINNING I | |
| At the end of the Beginning I Proficiency Level of studying a language in this cultural context, students will recognize similarities and differences between the target culture and their own. | |
| 1. Speaking: At the Beginning I Level, pronunciations may still show strong first language influences. Errors may still be frequent. The Student Will: | |
| a. Ask simple questions. | F4a |
| b. Make statements using learned material. | F4a |
| c. Express basic courtesies. | F4a |
| d. Use vocabulary which is sufficient to handle classroom situations and basic needs. | F4a |
| 2. Listening/Comprehending: At the Beginning I Level, repetition, rephrasing, slow rate of speech may be needed for comprehension. The Student Will: | |
| a. Understand sentence-length expressions, particularly when in context and delivered with clear, audible speech. | F4a |
| 3. Reading/Interpreting: At the Beginning I Level, short paragraphs may require a second reading. Reading may still be limited to learned vocabulary. The Student Will: | |
| a. Read standardized messages, phrases or expressions, such as some items on menus, schedules, timetables, maps and signs. | F4a |
| 4. Writing: At the Beginning I Level, usage of symbols (letters, characters, accent marks) may be partially correct. The Student Will: | |

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| a. Write simple fixed expressions and limited memorized material. | F4a |
| b. Write simple autobiographical information (e.g., name, age, address, telephone number), as well as some short phrases and simple lists(e.g., foods, classroom objects, household items). | F4a |
| c. Compose short sentences with guidance. | F4a |
| PROFICIENCY LEVEL--BEGINNING II | |
| At the end of beginning II Proficiency Level of studying a language in its cultural context, students will recognize similarities and differences between the target culture and their own. | |
| 1. Speaking: At the Beginning II Level, the student is usually understood by other target language speakers. Repetition may be needed to avoid misunderstandings. The Student Will: | |
| a. Ask and answer common questions. | F4a |
| b. Respond to simple statements. | F4a |
| c. Initiate and sustain limited conversation in social situations. | F4a |
| d. Express basic needs, such as introducing self, ordering a meal, asking directions and making purchases. | F4a |
| 2. Listening/Comprehending: At the Beginning II Level, understanding may be inconsistent. Repetition and rewording may be necessary. The Student Will: | |
| a. Participate in spontaneous face-to-face conversation about simple autobiographical information (e.g., name, age, address, telephone, school activities), social conventions and routine tasks, such as getting meals and receiving simple instructions and directions. | F4a |
| 3. Reading/Interpreting: At the Beginning II Level, some misunderstandings will occur, particularly with details. The Student Will: | |
| a. Read and comprehend main ideas and/or facts from simple materials dealing with basic needs, such as information in advertisements or articles of interest in relevant magazines. | F4a |
| 4. Writing: The Student Will: | |
| a. Create basic statements and questions about learned materials. | F4a |
| b. Write short, simple letters, messages, postcard, telephone messages. | F4a |
| PROFICIENCY LEVEL--INTERMEDIATE | |
| At the end of Intermediate I Proficiency Level of studying language in its cultural context, students will recognize similarities and differences between the target culture and their own. | |
| 1. Speaking: The Student Will: | |
| a. Talk about familiar topics (e.g., school, weather, food, special interests) in basic conversation. | F4a |
| b. Ask and answer questions about basic needs as well as familiar topics (e.g., leisure time activities). | F4a |
| 2. Listening/Comprehending: The Student Will: | |
| a. Understand sentence length speech on a variety of basic topics. | F4a |
| b. Understand content dealing with more complex topics, such as lodging, transportation, shopping, personal interests and activities. | F4a |
| c. Understand directions and instructions more clearly. | F4a |
| d. Understand short routine telephone conversations, simple messages. | F4a |
| 3. Reading/Interpreting: The Student Will: | |
| a. Understand main ideas and facts from materials dealing with basic needs, individual interests and knowledge and learned materials. | F4a |
| 4. Writing: At the Intermediate I Level, writing may contain sentences and sentence fragments and may lack organization, but is generally understandable. The Student Will: | |
| a. Write simple letters using information based on personal experience, daily routine and everyday events. | F4a |
| b. Compose simple original material on a given topic using present tense and at least one other tense as appropriate to the target language. | F4a |
| PROFICIENCY LEVEL--INTERMEDIATE II | |
| At the end of the Intermediate II Proficiency Level of studying a language in its cultural context, students will recognize similarities and differences between the target culture and | |

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| <p>their own.</p> <p>1. Speaking: At the Intermediate II Level, hesitation while speaking may occur. Repetition may be required. The Student Will:</p> <p>a. Initiate, sustain and close a general conversation.</p> <p>2. Listening/Comprehending: At the Intermediate II Level, listening tasks are assumed to take place in an authentic environment at a normal rate of speech. Understanding may be inconsistent. The Student Will:</p> <p>a. Understand more information during longer periods of conversation or listening activities/ b. Comprehend more main ideas and/or details on a variety of topics.</p> <p>3. Reading/Interpreting: At the Intermediate II Level, authentic, legible reading materials are recommended. Some misinterpretation may occur based on the complexity of the grammar. The student may have to read material several times for comprehension. The Student Will:</p> <p>a. Read simple, connected texts about basic needs, materials of personal interest and/or knowledge. b. Comprehends some main ideas and information from higher-level reading materials.</p> <p>4. Writing: The Student Will:</p> <p>a. Create some original written materials. b. Write simple letters, summaries of biographical data, work and school experience. c. Take notes on familiar topics.</p> | <p>F4a</p> <p>F4a F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a F4a F4a</p> |
| <p>PROFICIENCY LEVEL--ADVANCED</p> <p>At the end of the Advanced Proficiency Level of studying a language in its cultural context, students will recognize similarities and differences between the target culture and their own.</p> | |
| <p>1. Speaking: At the Advanced Level, the student can be understood without difficulty by native or fluent speakers. The Student Will:</p> <p>a. Communicate facts and talk casually about topics of current public and personal interest, using general vocabulary. b. Satisfy the requirements of everyday conversation, routine school and work situations. c. Narrate and describe (e.g., events, objects, activities) with some details. d. Participate in spontaneous, face-to-face conversation involving more complicated skills and social situations, such as elaborating, complaining and apologizing.</p> <p>2. Listening/Comprehending: At the Advanced Level, comprehension may be inconsistent due to linguistic and cultural factors, such as tenses, personal space, unfamiliar gestures, slang. The Student Will:</p> <p>a. Understand main ideas and most details of oral presentations and conversations (e.g., prepared speeches, news broadcasts, interviews, short lectures).</p> <p>3. Reading/Interpreting: At the Advanced Level, the student understands the main ideas and facts but misses some details. The Student Will:</p> <p>a. Read authentic materials, such as selected short stories, poetry and other literary works, articles, personal correspondence and simple technical material written for the general reader.</p> <p>4. Writing: At the Advanced Level, writing may resemble literal translations from the student's first language. The Student Will:</p> <p>a. Write about a variety of topics (e.g., letters, simple notes, summaries and reports) with significant precision and detail.</p> | <p>F4a</p> <p>F4a F4a F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> |
| <p>INSTRUCTIONAL TECHNOLOGY: ELEMENTARY LEVEL, GRADES 6-8</p> | |
| <p>The Student Will:</p> <p>1. Identify primary functions of an operating system.</p> <p>2. Investigate applications of computers in career areas such as industry, business, medicine, government, entertainment and education.</p> <p>3. Describe legal and ethical issues related to computers including such areas as computer copyright material, privacy, and computer viruses.</p> <p>4. Describe the growth and development of technology and information systems.</p> <p>5. Describe the use of application software including database, spreadsheet, telecommunication</p> | <p>F5a A2f, F4</p> <p>F4</p> <p>F4 F5a</p> |

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| and word processor. | |
| 6. Access, organize and utilize information with computers. | F5a |
| 7. Participate in the design of project using multimedia computer technology (e.g., computer, graphics, sound, video) and/or publishing software. | F5a |
| HEALTH/SAFETY EDUCATION: GRADES 6-8 | |
| The Student Will: | |
| a. Demonstrate basic first aid skills. | C2c |
| b. Examine how social pressures affect participation in risk-taking activities (e.g., using inhalants, starvation dieting, using steroids) | C2d |
| c. Identify individual and community responsibilities for protecting the environment and promoting community health. | C, E |
| d. Describe the dangers of prescription medication abuse. | C2d |
| e. Describe healthy leisure-time activities (e.g., family outings, sports, board games). | C1 |
| f. Explain the importance of analyzing food labels for content and nutritional value. | C1a |
| g. Interpret physical and mental consequences of a poorly balanced diet and explain how diet choices, based upon food fads, may provide inadequate nourishment. | C1a |
| h. Explain the relationship between caloric intake and level of activity in weight management and describe safe methods of weight control. | C2, C3 |
| i. Describe the risks and destructive effects of alcohol, tobacco, steroids, and other drugs on body systems. | C2d |
| j. Describe the effects of drug abuse on the individual, family, community and society. | C2d |
| k. Identify and demonstrate the steps of effective goal setting and decision making. | D3e |
| l. Describe techniques for coping with personal loss. | G1 |
| m. Review ways to protect oneself from abuse. | C2 |
| n. Identify effective ways to resolve problems and prevent violence. | G4c |
| o. Discuss the interrelationship of the body systems: circulatory, muscular, nervous, reproductive, respiratory and skeletal. | F4 |
| p. Discuss the responsibilities of adolescent parenthood and its effect on future goals. | F4 |
| q. List prevention methods and risk factors (i.e., alcohol, tobacco, stress, poor nutrition, physical inactivity) that directly contribute to noncommunicable disease including cancer, diabetes and other diseases affecting cardiovascular and respiratory systems. | C1, C2c, C2d |
| r. Identify, define and discuss chronic disease (i.e., arthritis, Alzheimer's) as it affects the aging population. | F4 |
| HIV/AIDS PREVENTION EDUCATION: GRADES 7-12 | |
| School districts shall make the curriculum and materials that will be used to teach AIDS prevention education available for inspection by the parents and guardians of the students that will be involved with the curriculum and materials. Furthermore, the curriculum must be limited in time frame to deal only with factual medical information for AIDS prevention. The school districts, at least one (1) month prior to teaching AIDS prevention education in any classroom, shall conduct for the parents and guardians of the students involved during weekend and evening hours at least one presentation concerning the curriculum and materials that will be uses for such education. 70 O.S. § 11-103.3. | |
| <i>No student shall be required to participate in AIDS prevention education if a parent or guardian objects in writing to such participation. 70 O.S. § 11-103.3</i> | |
| The Student Will: | |
| a. Research and discuss current information about HIV/AIDS in order to differentiate related facts, opinions and myths. | C2e |
| b. Discuss and explain the importance of sexual abstinence in adolescent relationships. | C2e |
| c. Demonstrate refusal skills (saying "no"), negotiation skills and peer resistance skills related to sexual health. | C2e |

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| d. Explain the transmission and methods of prevention for sexually transmitted disease (STD) and Human Immunodeficiency Virus (HIV). | C2e |
| e. Identify risk behaviors and situations involving possible exposure to HIV. | C2e |
| f. Discuss the relationships between injecting drug use (IDU) and contact with contaminated blood products and the transmission of HIV. | C2e |
| g. Analyze the efficiency of artificial means of birth control in preventing the spread of HIV and other sexually transmitted diseases. | C2e |
| PHYSICAL EDUCATION: GRADES 6-8 | |
| <p>It is important to realize many activities and skills can fall under each of the topic headings. A small number have been selected to demonstrate the appropriateness of what is expected at the various age levels. Please note the progression of the skills listed as the child's physical development progresses. Some areas have been repeated because of the need for emphasizing those skills.</p> | |
| 1. The student will design and perform rhythmic activities involving physical movement with or without music, encompassing a variety of multicultural forms of movement and/or manipulative objects (e.g., tinkling, jump rope, creative movement). The Student Will: | F4b |
| a. Design smooth sequences demonstrating traveling, jumping, rolling, balancing and weight transfer with intentional changes in direction, speed and flow. | C3 |
| b. Design sequences demonstrating rhythmic movement incorporating the manipulation of objects. | C3 |
| 2. The student will continue to recognize the importance of and demonstrate health-related fitness components, i.e., muscular strength and endurance, flexibility, cardiorespiratory endurance and body composition. The Student Will: | C2b |
| a. Describe principles of training and conditioning for specific activities. | F4 |
| b. Correctly demonstrate various weight-training techniques. | F4 |
| c. Analyze and categorize activities and exercise according to potential fitness benefits. | F4 |
| d. Evaluate the roles of exercise and other factors in weight control. | C2, F4 |
| e. Design and participate in an individualized fitness program. | C1b |
| f. Evaluate the time and effort needed to be given to practice if skill improvement and fitness benefits are to be realized. | F4 |
| g. Identify long-term physiological, psychological and cultural benefits that may result from regular participation in physical activity. | C1b, C2b |
| 3. The student will continue to demonstrate locomotor, nonlocomotor and handling skills at the appropriate level. The Student Will: | C3 |
| a. Design and play small group games that involve cooperating with others using basic offensive and defensive strategies. | C1b, G4b |
| b. Combine skills competently participate in modified versions of team and individual sports. | C1b |
| c. Use and analyze offensive and defensive strategies in physical education games and activities. | F4 |
| d. Explore introductory outdoor activities (e.g., orienteering, hiking, cycling). | C |
| 4. The student will apply rules and etiquette in physical activities. The Student Will: | C, G4 |
| a. Demonstrate appropriate conduct as an individual and as part of a group. | E, G4b |
| b. Apply appropriate safety rules and precautions inherent to physical education. | C2a |
| c. Participate with and show respect for persons of like and different skill levels. | A, G3a |
| d. Respect physical and mental limitations of self and others. | G3a |
| e. Accept and respect the decisions made by game officials, whether they are fellow students, teachers or volunteers. | E1 |

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Document Utilized

Curriculum Content Framework for Oregon Public Schools (March 1994)

Background

The Oregon Educational Act for the 21st Century, passed by Oregon lawmakers in 1991, identified 36 content goals. The state now is developing curriculum frameworks based on those goals. In grades K-3, the standards will be interdisciplinary. In grades 4-12, they will be by subject area: the arts, civics and government, economics, English/language arts, geography, health and physical education, history, mathematics, science, second languages, and technology. The state is also developing performance standards at grades 3, 5, 8, and 10 for 11 outcomes that students must meet to earn a Certificate of Initial Mastery. Upon completion these C.I.M. standards will likely include grade 12. The C.I.M. standards are mandatory. The state board will decide whether the content standards are mandatory or voluntary for districts.

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| 1. The use of diverse and emerging technologies to access and process information across the instructional areas | F5a |
| 2. The study of technology systems, their influence on individuals and society; their development and use in various fields | F4 |
| 3. The study of the dynamics of language as central to thought and expression, giving voice to thought in conceptualizing, shaping, and representing human experience, including: | |
| a. Various levels of language (e.g., formal, information, colloquial, slang); | F4a |
| b. The structure and function of language as a symbol system; | F4a |
| c. Issues of stereotyping and bias in language; and | F4a |
| d. Understanding how language is used to influence, manipulate, and control | F4a |
| Identification and use of appropriate levels of language (e.g., formal, informal, colloquial, slang) in appropriate situations | F1a, F4a |
| Recognition of how our perceptions of differences among people (e.g., cultural, racial, ability level, gender) may enrich our lives or may lead to stereotyping, miscommunication, discrimination and the denial of human rights | G3 |
| Separating between relevant and irrelevant information used to draw conclusion | F2a, F4a |
| Recognition of language used to manipulate, coerce, or control (e.g., propaganda and other persuasion techniques) and use language as an effective response to such attempts | F1a, F4a |
| Understand the metaphorical nature language and thought | F1a, F4a |
| Recognition of how clichés, euphemisms, and stereotypes are used to control thought | F4a |
| Recognition that varieties of English usage are shaped by social, cultural, and geographical differences | F4a |
| 4. The view of reading, using a variety of strategies to: | |
| a. Construct meaning from a range of text and multimedia sources; | F3b |
| b. Make connections with one's own life; | F3b |
| c. Monitor and evaluate one's own comprehension; and | F3b |
| d. Analyze and reflect | F2a, F3b |
| Increasing level of functional vocabulary | F3b |
| Constructions/synthesis of meaning from within text and from a range of text and multimedia sources (e.g., recognition of cohesiveness of text and extension of themes and concepts to other texts) | F3b |
| Reading critically to analyze, synthesize and evaluate information and arguments in text and media (e.g., identification of authors bias, explanation of complex ideas form text, identification of issues beyond the text) | F2a, F3b |

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| Purposeful management of comprehension (e.g., use of before, during and after reading strategies) and the ability to adapt reading strategies to meet different purposes; (e.g.; scanning, skimming or careful reading, as appropriate) | F3b |
| 5. The development of writing as a tool for learning, reflecting, and conveying meaning in a variety of forms and modes for a range of purposes and audiences, including the use of multiple media for publication and presentation | F3c |
| Use of multi-step process (e.g., generating ideas, planning, drafting, revising, editing, proofreading, and publishing/sharing) when communicating in oral, written and visual forms (e.g., learning logs, business letters, plays, says, multimedia presentations) | F3c |
| Writing to convey meaning through selection of appropriate modes (e.g., narrative, descriptive, expository, persuasive, and imaginative) and the incorporation of elements of more than one mode within a single piece | F3c |
| Communication with diverse audiences which shows and understanding of human experiences, empathy for others and growing capacity to analyze and respond to abstract issues | F2a, F3c, G3a |
| Purposeful management of writing skills through the analysis of writing traits (e.g., ideas and content, organization, voice, word choice, sentence fluency and conventions) | F3c |
| 6. The development of speaking as a means for oral exchanges of information, including using language to: | F1a |
| a. Deliver presentations and demonstrate effective skills relevant to the audience; | F1a |
| b. Ask and answer questions; and | F1a |
| c. Communicate ideas effectively in group situations | F1a, G4b |
| Use of a Multi-step process (e.g., gather and organize information, draft and make notes, plan presentation) when making formal presentation in a variety of settings (e.g., assembly, debates, drama, Multi-media presentations) | F1a |
| Adapting presentations to fit diverse audiences, showing a growing capacity to use questioning strategies and interview techniques and to summarize conclusions from various points of view | F1a |
| Purposeful management through the use of speaking traits (e.g., delivery, both verbal and nonverbal; language; content; organization) | F1a |
| Participating in group discussion and achievement (e.g., making proposals, justifying ideas, respecting others, working toward consensus while adjusting to diverse points of view | A2a, F1a, G4b |
| 7. The development of listening as a way of obtaining meaning through oral messages presented in a variety of media, including: | F1a |
| a. Identifying the purpose of an oral message; | F1a |
| b. Analyzing and evaluating verbal and nonverbal messages and the way they are delivered; | F1a |
| c. Using empathetic and appreciative listening skills to enrich understanding; and | F1a |
| d. Engaging in verbal and nonverbal interaction with a speaker to ensure effective communication | F1a |
| Discussing information heard and its purpose (e.g., dialogue, news item, report) and giving personal opinions based on what was said | F1a |
| Interacting with speaker to ensure effective communication (e.g., asking speaker for background information or clarification of ambiguities; considering opinions from others) | F1a |
| Interpretation of messages by asking connections through recurring interaction with the media or situation and use of verbal/nonverbal cues; elaboration on major contradictions within information | F1a |
| 8. The study of how works of literature reflect, record, communicate, and influence the interpretation of human experience, including learning to: | F4b |
| a. Make informed analysis of the purpose and meaning of literary works; | F4b |
| b. Evaluate how the form and content of a literary work contributes to its message and impact; | F4b |
| c. Understand how literature defines and binds us as a national and global community | F4b |

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| Analyze several pieces of literature written by American authors and pieces that represent diverse cultures and time periods | F4b |
| Identification of various literary forms (e.g., poetry, drama, biography, autobiography) | F4b |
| Comparing elements of fiction among literature selections and roles of figurative language in literature | F4b |
| Relating literature to own life and to broader human concerns, issues and possibilities, and demonstrating ways that literature form different cultures (e.g., ethnic, religious, linguistic, national groups) gives voice to both common and distinctive values, experiences, struggles, and contributions | F4b |
| Informed interpretations of the purpose and meaning of literary works | F4b |
| 9. The development of the technical and problem-solving skills and knowledge necessary for creative communication and personal expression through creating and performing in the literary, visual, and performing arts (i.e., music, dance, drama) | F2a, F4b |
| DANCE | |
| Effectively demonstrate the difference between pantomiming and abstracting a gesture. | F4b |
| Observe and explain how different accompaniment (such as a sound, music, spoken text) can affect the meaning of a dance. | F4b |
| Demonstrate and/or explain how lighting and costuming can contribute to the meaning of a dance. | F4b |
| Create a dance that successfully communicates a topic of personal significance. | F4b |
| DRAMA | |
| Script writing by the creation of improvisations and scripted scenes based on personal experience and heritage, imagination, literature, and history | F4b |
| Acting by developing basic acting skills to portray characters who interact in improvised and scripted scenes | F4b |
| Designing by developing environments for improvised and scripted scenes | F4b |
| Directing by organizing rehearsals for improvised and scripted scenes | F4b |
| MUSIC | |
| Sing accurately and with good breath control throughout their singing ranges, alone, and in small and large ensembles. | F4b |
| Perform on at least one instrument accurately and independently, alone and in small and large ensembles, with good posture, good playing position, and good breath, bow, or stick control. | F4b |
| Improvise simple harmonic accompaniments and rhythmic and melodic variations. | F4b |
| Compose short pieces within specified guidelines, demonstrating how the elements of music are used to achieve unity and variety, tension and release, and balance. | F4b |
| Read whole, half, quarter, eighth, sixteenth, and dotted notes and rests in 2/4, 3/4, 4/4, 6/8, 3/8, and alla breve meter signatures. | F4b |
| VISUAL ARTS | |
| Select media, techniques, and process; analyze what makes them effective or not effective in communicating ideas; and reflect upon the effectiveness of their choices. | F2a, F4b |
| Intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas. | F4b |
| Generalize about the effects of visual structures and functions and reflect upon these effects in their own work. | F4b |
| Employ organizational structures and analyze what makes them effective or not effective in the communication of ideas. | F2a, F4b |
| Select and use the qualities of structures and functions of art to improve communication of their ideas. | F4b |
| Integrate visual, spatial, and temporal concepts with content to communicate intended | F4b |

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| meaning in their artworks. Use subjects, themes, and symbols that demonstrate knowledge of contexts, values, and aesthetics that communicate intended meaning in artworks. | F4b |
| LITERARY ART Recognition and practice with models of poetry | F4b |
| 10. The study of how works of literary, visual and performing (i.e., music, dance, drama) art and artists reflect, record, communicate, influence, and change cultural values | F4b |
| DANCE Competently perform folk and/or classical dances from various cultures; describe similarities and differences in steps and movement styles. | F4b |
| Competently perform folk, social and/or theatrical dances from a broad spectrum of 20th Century America. | F4b |
| Learn form resources in their own community (such as people, books, videos) a folk dance of a different culture or a social dance of a different time period and the cultural/historical context of that dance; effectively sharing the dance and its context with their peers. | F4b |
| Accurately describe the role of dance in at least two different cultures or time periods. | F4b |
| DRAMA Researching by using cultural and historical information to support improvised and scripted scenes | F4b |
| Understanding context by analyzing the role of theater, film, television, and electronic media in the community and in other cultures | F2a, F4b |
| MUSIC Describe distinguishing characteristics of representative music genres and styles from a variety of cultures. | F4b |
| VISUAL ARTS Know and compare the characteristics of artworks in various eras and cultures. | F4b |
| Describe and place a variety of art objects in historical and cultural contexts. | F4b |
| Analyze, describe, and demonstrate how factors of time and place (such as climate, resources, ideas, and technology) influence visual characteristics that give meaning and value to a work of art. | F2a, F4b |
| LITERARY ART Recognition of ways oral traditions/legends/folk tales illustrate the cultural heritage of various groups | F4b |
| Recognition of myth as metaphor--narrative patterns which give meaning, provide direction, and make possible a sense of community | F4b |
| 11. The study of how to make informed critical and aesthetic judgements about works of literary, visual and performing (i.e., music, drama, dance) art, based on criteria and the ongoing development of personal taste and values | F2a, F4b |
| DANCE Create a movement problem and demonstrate multiple solutions; choose the most interesting solutions and discuss the reasons for their choice. | F2a, F4b |
| Demonstrate appropriate audience behavior in watching dance performances; discuss their opinions about the dances with their peers in a supportive and constructive way. | F4b, G4b |
| Compare and contrast two dance compositions in terms of space (such as shape and pathways), time (such as rhythm and tempo), and force/energy (such as movement qualities). | F4b |

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| Identify possible aesthetic criteria for evaluating dance (such as skill of performers, originality, visual and/or emotional impact, variety and contrast). | F4b |
| DRAMA | |
| Comparing and incorporating art forms by analyzing methods of presentation and audience response for theater, dramatic media (such as film, television, and electronic media), and other art forms | F4b |
| Analyzing, evaluating, and constructing meetings from improvised and scripted scenes and from theater, film, television, and electronic media productions | F2a, F4b |
| MUSIC | |
| Analyze the uses of elements of music in aural examples representing diverse genres and cultures. | F2a, F4b |
| Develop criteria for evaluating the quality and effectiveness of music performances and compositions and apply the criteria in their personal listening and performing. | F4b |
| Compare in two and more arts how the characteristic materials of each art that is, sound in music, visual stimuli in visual arts, movement in dance, human interrelationships in theater) can be used to transform similar events, scenes, emotions, or ideas into works of art. | F2a, F4b |
| VISUAL ART | |
| Compare multiple purposes for creating works of art. | F4b |
| Analyze contemporary and historic meanings in specific artworks through cultural and aesthetic inquiry. | F2a, F4b |
| Describe and compare a variety of individual responses to their own artworks and to artworks from various eras and cultures. | F4b |
| 12. The study of numeration: A strong sense constructed through the understanding of number systems, their properties, number theory, and their relationship to each other | F3a |
| Understand, represent, and use numbers in a variety of equivalent forms integer, fraction, decimal, percent, exponential and scientific notation). | F3a |
| Develop numbers sense of whole numbers, fraction, decimals, integers and rational numbers. | F3a |
| Understand and apply ratios, proportions, and percents in wide variety of situations. | F3a |
| Investigate relationships among fractions, decimals, and percents. | F3a |
| Represent numerical relationships in one- and two-dimensional graphs. | F3a |
| Extend understanding of whole number operations to fractions, decimals, integers, and rational numbers. | F3a |
| 13. The study of measurement—selecting appropriate attributes, units, and tools to measure length, capacity, weight, area, volume, time, temperature, and angle while developing formulas and procedures to solve problems | F2a, F3a |
| Extend understanding of the process, structure and use of systems of measurement. | F3a |
| Select appropriate units and tools to measure to the degree of accuracy required in a particular situation. | F3a |
| Extend understanding of the concepts of perimeter, area, volume, angle measure, capacity and weight, and mass. | F3a |
| 14. The study of statistics and probability: collecting, organizing, displaying, and analyzing information; using numerical data to predict events | F2a, F3a |
| Model probability situations concretely (pictorially). | F3a |
| Carry out probability experiments and simulations. | F3a |
| Compare and make predictions using experimental and theoretical probability. | F3a |
| Construct, read, interpret tables, charts and graphs. | F3a |
| Make inferences and convincing arguments that are based on data analysis. | F3a |

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| Evaluate arguments that are based on data analysis. Systematically collect organize and describe data. | F2a, F3a F3a |
| 15. The study of mathematical procedures--operating with whole numbers, fractions, decimals, integers and rational numbers; selecting, using, and inventing appropriate methods for computing including mental computation, pencil and paper calculation, calculators, computers or other technology; and interpreting results while linking physical models to procedures Use estimation to check the reasonableness of the results. Develop, analyze and explain procedures for computation and techniques for estimation. Compute with whole numbers, fractions, decimals, integers and rational numbers. Use estimation to check the reasonableness of results. Select and use an appropriate method for computing from among mental arithmetic, paper and pencil, calculator, and computer methods. | F3a F3a F2a, F3a F3a F3a F3a, F5a |
| 16. The study of patterns, functions, relationships, and algebra: Studying patterns to make conjectures about relationships; graphically representing functions to make connections within mathematics (most often using graphing calculators and computers); and using algebra (the language of mathematics) to do mathematics while exploring relationships and developing generalizations Describe, extend, analyze and create a wide variety of patterns. Use tables, graphs, and rules to describe and represent relationships. Explain how a change in one quantity results in a change in another. Show an understanding of the concepts of variable, expression and equation. Explore the interrelationship in number situations and number patterns with tables, graphs, verbal rules and equations. Display confidence in solving linear equations using concrete, informal and formal methods. | F3a F3a F3a F3a F3a F3a, G2b |
| 17. The study of geometry: Exploring shape, area, and volume to build a foundation of geometrical thinking; and using models to develop spatial visualization and extend the understanding of location, distance, patterns in space, symmetry, and coordinate geometry Identify, describe, compare and classify geometric figures. Visualize and represent geometric figures including developing spatial sense. Explore transformations of geometric figures. Represent and solve problems using geometric models. Apply geometric properties and relationships. | F3a F3a F3a F3a F3a F3a |
| 18. The study of science facts, concepts, principles and theories from physical systems, earth and space systems, and life systems that provide a foundation for understanding and applying science Recognize that evolution is the process of change over time. Recognize states of matter and energy. Demonstrate that energy is required to change states of matter. Recognize that the interaction of energy and matter determine the nature of the environment. Demonstrate an understanding of the effect that one of the life processes has on another life process. Predict and explain the outcome of situations where forces interact. Relate types of symmetry to function in natural systems. | F4a F4a F4a F4a F4a F4a F4a F4a |
| 19. The study of science as inquiry, a set of interrelated processes by which scientists pose questions, investigate phenomena, and cultivate deeper understanding about the natural world Define and give examples of theories. Identify examples of historic changes in scientific theories. Compare examples of theories which have changed over time. Judge strengths and weaknesses of theories. | F4a F4a F4a F4a F2a, F4a |

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| Hypothesize to explain relationships between several events or objects. | F4a |
| Recognize a system and compare interactions among the parts of a system. | F4a |
| Classify input and output within a system. | F4a |
| Explain interrelationships of the components of systems. | F4a |
| Identify factors which may influence the outcome of an experiment. | F4a |
| Recognize the controlled variables in an experiment and the variables being tested. | F4a |
| Identify the importance of replicating experiments. | F4a |
| 20. The study of connections among and within the natural sciences, between science and mathematics, and between science and technology/engineering | F4a |
| Recognize scientific principles, concepts and theories that apply across science disciplines. | F4a |
| Investigate science based relevant issues using multiple science disciplines. | F4a |
| Determine appropriate units of measurement for scientific investigation. | F4a |
| Determine the location of an object relative to another object using appropriate measurements and units. | F4a |
| Design tables, graphs and charts to show investigative results. | F4a |
| Develop a historical perspective of the interrelationship between scientific understanding and advancement in technology. | F4a |
| 21. The study of how science and technology are influenced by and, in turn, influence the culture and context in which they operate | F4a |
| Develop an understanding of how scientific knowledge influences societies attitudes. | F4a |
| Develop an understanding of how individual wants and needs are positively and negatively influenced by technology. | F4a |
| Identify scientific and technological developments which have positively and negatively affected society. | F4a |
| 22. The study of history, including: | F4a |
| a. The development and changing character of human societies; | F4a |
| b. The economic and technological development of human societies in the quest to sustain and improve life; | F4a |
| c. People's development of their understanding of themselves, their place in the universe, and | F4a |
| d. The development of political theories, organizations, and institutions | F4a |
| CHRONOLOGICAL THINKING | |
| Explain patterns of historical continuity and change in the historical succession of related events unfolding over time. | F4a |
| In developing historical narratives, including biographies, historical arguments, and stories, impose temporal structure upon their data: working forward from some initiating event to follow its development and transformations, to some outcome over time; working backward from some issue, problems or even to explain its causes, arising from some beginning and developing through subsequent transformations over time. | F4a |
| HISTORICAL COMPREHENSION | |
| Read and understand primary sources such as the United States Declaration of Independence. Recognize that understanding requires not only what the words say, but where such ideas arose and how they evolved from earlier ideas. | F4a |
| Determine the causes and consequences of events and demonstrate their understanding through various techniques. | F4a |
| HISTORICAL ANALYSIS AND INTERPRETATION | |
| Determine an author's frame of reference in primary and secondary sources and form analytical questions to examine the data and to determine bias in documents and historical narratives. | F4a |
| Consult multiple sources reflecting differing interpretations of a historic event or individual. | F4a |

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| HISTORICAL ISSUES, ANALYSIS, AND DECISION-MAKING | |
| Identifying factors which led to a historical issue, define the problems involved in its resolution, and explain the motives, values, and varying perspectives surrounding the problem. Explore various attitudes regarding these policy decisions, the factors which led to their enactment, and form warranted value judgements regarding the timing and the scope of these decisions | F2a, F4a |
| Assume the role of an individual and explain a policy issue from the perspective of that individual within the context of time and place. | F4a |
| Analyze individual decisions and grapple with the personal dilemmas encountered in pursuing a course of action. | F2a, F4a |
| In reaching value judgements regarding the course of action taken by individuals in history, students should be able to weigh the influence of attitudes, values, and alternative options of that particular time and place. | F2a, F4a |
| Analyze the historical circumstances and reach warranted ethical judgements concerning such events. | F2a, F4a |
| HISTORICAL RESEARCH | |
| In researching topics, students should be able to formulate questions to guide and focus research. | F4a |
| Draw from a variety of primary and secondary sources including diaries, letters, periodicals, literature, oral histories, artifacts, art, and documentary photographs and films in historical research. | F4a |
| U.S. HISTORY, ERA 1 (BEGINNING TO 1620): THREE WORLDS MEET | |
| The basic characteristics of societies in the Americas, Western Europe, and West Africa that increasingly interacted after 1450 | F4a |
| Early European exploration and colonization, and the resulting cultural and ecological interactions | F4a |
| U.S. HISTORY, ERA 2 (1585-1763): COLONIZATION AND SETTLEMENT | |
| The early arrival of Europeans and Africans in the Americas and how these people interacted with Native Americans | F4a |
| How political institutions and religious freedom emerged in the North American colonies | F4a |
| How the values and institutions of European economic life took root in the colonies and how slavery reshaped both European and African life in the Americas | F4a |
| U.S. HISTORY, ERA 3 (1754-1820S): REVOLUTION AND THE NEW NATION | |
| The causes of the American Revolution, the ideas and interests involved in forging the revolutionary movement, and the reasons for the American victory | F4a |
| How the American Revolution affected the social and economic relations among the new nation's many groups and regions | F4a |
| U.S. HISTORY, ERA 4 (1801-1861): EXPANSION AND REFORM | |
| United States territorial expansion between 1801 and 1861 and how it affected relations with external powers and Native Americans | F4a |
| How the industrial revolution, the rapid expansion of slavery and the settlement of the West in the first half of the 19th century changed the lives of Americans and led toward regional tensions | F4a |
| The extension, restriction and reorganization of political democracy after 1800 | F4a |
| The sources and character of religious, social and political reform in the antebellum period and what the reforms accomplished or failed to accomplish | F4a |
| U.S. HISTORY, ERA 5 (1850-1877): CIVIL WAR AND RECONSTRUCTION | |
| The causes of the Civil War | F4a |
| The course and character of the Civil War and its effect on the American people | F4a |

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| Reconstruction plans and their successes and failures | F4a |
| U.S. HISTORY, ERA 6 (1870-1900): THE DEVELOPMENT OF THE INDUSTRIAL U.S. | |
| The transformation of American life by the rise of big business, heavy industry, and mechanized farming | F4a |
| Massive immigration after 1870 and the new social patterns, conflicts, and ideas of national unity amidst growing cultural diversity | F4a |
| Rise of the American labor movement and the political issues which reflected the social and economic changes of the era | F4a |
| Federal Indian policy and United States foreign policy that emerged after the Civil War | F4a |
| U.S. HISTORY, ERA 7 (1890-1930): THE EMERGENCE OF MODERN AMERICA | |
| Attempts to address the problems of a modern, urbanizing industrial society by Progressives and others | F4a |
| The changing roles of the United States in world affairs during the progressive era through World War I | F4a |
| How the United States changed from the end of World War I to the eve of the Great Depression | F4a |
| U.S. HISTORY, ERA 8 (1929-1945): THE GREAT DEPRESSION & WORLD WAR II | |
| The causes and consequences of the Great Depression | F4a |
| The Roosevelt presidency, the New Deal, the transformation of American federalism, and the development of the welfare state | F4a |
| The origins and course of World War II, the character of the war at home and abroad, and its reshaping of the U.S. role in the world affairs | F4a |
| U.S. HISTORY, ERA 9 (1945-EARLY 1970S): POST-WAR UNITED STATES | |
| Economic and social change in postwar America | F4a |
| Major postwar political decision from Truman to Johnson | F4a |
| The Cold War and the Vietnam conflict in domestic and international policies | F4a |
| Issues concerning racial and gender equality and civil liberties | F4a |
| U.S. HISTORY, ERA 10 (1968-PRESENT): CONTEMPORARY UNITED STATES | |
| Major developments in United States foreign and domestic policies in the Nixon, Ford, and Carter administrations | F4a |
| Conservative resurgence under Reagan and Bush and the end of the Cold War | F4a |
| The continuing struggle for equality amid a new era of immigration | F4a |
| WORLD HISTORY, ERA 1: THE BEGINNINGS OF HUMAN SOCIETY | |
| The biological and cultural processes that gave rise to the earliest human communities | F4a |
| The processes that led to the emergence of agricultural societies around the world | F4a |
| WORLD HISTORY, ERA 2 (4000-1000 BCE): EARLY CIVILIZATIONS AND THE RISE OF PASTORAL PEOPLES | |
| The major characteristics of civilization and how civilization emerged in Mesopotamia, Egypt, and the Indus valley | F4a |
| Agrarian societies spread and new states emerge in the third and second millennia BCE | F4a |
| The political, social, and cultural consequences of population movements and militarization in Eurasia in the second millennium BCE | F4a |
| WORLD HISTORY, ERA 3 (1000 BCE-300 CE): CLASSICAL TRADITIONS, WORLD FAITHS, AND EXTENSIVE EMPIRES | |
| Empire-building, trade, and migrations contribute to increasingly complex relations among peoples of the Mediterranean basin, Africa, and Central Asia, 1000-600 BCE | F4a |

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| The rise of Aegean civilization and the interrelations that developed between Hellenism and the cultural traditions of Southwest Asia and Egypt, 600-200 BCE | F4a |
| The rise of large-scale empires in the Mediterranean basin, China, and India 600 BCE--300 CE | F4a |
| The rise of early agrarian civilizations in Mesoamerica | F4a |
| WORLD HISTORY, ERA 4 (300-1000 CE): EXPANDING ZONES OF EXCHANGE AND ENCOUNTER | |
| Imperial crises and their aftermath, 300-700 CE | F4a |
| Causes and consequences of the rise of Islamic civilization between the seventh and tenth centuries | F4a |
| Major developments in East Asia in the era of the Tang dynasty, 600-900 CE | F4a |
| The search for political and social order in Europe, 500-1000 CE | F4a |
| The spread of agrarian populations and rise of states in Africa south of the Sahara | F4a |
| The rise of centers of civilization in Mesoamerica and Andean South America in the first millennium C | F4a |
| WORLD HISTORY, ERA 5 (1000-1500 CE): INTENSIFIED HEMISPHERIC INTERACTIONS | |
| The maturing of an interregional system of communication, trade, and cultural exchange in an era of Chinese economic power and Islamic expansion | F4a |
| The rise of European society and culture, 1000-1300 CE | F4a |
| The rise of the Mongol empire and its importance for Afro-Eurasian peoples, 1200-1350 | F4a |
| The growth of states, towns, and trade in Sub-Saharan Africa between the 11th and 15th centuries | F4a |
| Patterns of crisis and recovery in Afro-Eurasia, 1300-1450 | F4a |
| The expansion of states and civilizations in the Americas, 1000-1500 | F4a |
| WORLD HISTORY, ERA 6 (1450-1770): GLOBAL EXPANSION AND ENCOUNTER | |
| How the trans-oceanic interlinking of all major regions of the world in the 1450-1600 period led to important global transformations | F4a |
| How European society experienced political, economic, and cultural transformations in an age of global intercommunications, 1450-1750 | F4a |
| How large territorial empires dominated much of Eurasia between the 16th and 18th centuries | F4a |
| Economic, political, and cultural interrelations among peoples of Africa, Europe, and the Americas, 1500-1750 | F4a |
| How Asian societies responded to the challenges of expanding European power and forces of the world economy | F4a |
| WORLD HISTORY, ERA 7 (1750-1914): THE AGE OF REVOLUTIONS | |
| The causes and consequences of political revolutions in the late 18th and 19th centuries | F4a |
| The causes and consequences of the agricultural and industrial revolutions, 1700-1850 | F4a |
| The transformation of Eurasian societies in an era of global trade and rising European power, 1750-1850 | F4a |
| Patterns of nationalism, state-building, and social reform in Europe and North America, 1830-1914 | F4a |
| Patterns of global change in the era of Western military and economic domination, 1850-1914 | F4a |
| WORLD HISTORY, ERA 8: THE TWENTIETH CENTURY | |
| The causes and global consequences of World War I | F4a |
| The search for peace and stability in the years between the wars | F4a |
| The causes and global consequences of World War II | F4a |
| How new international power relations took shape following World War II | F4a |

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| Promises and paradoxes of the second half of the 20th century | F4a |
| 23. The study of geography, including the where and why of location, the physical and human-environment interactions and global connections and interdependence | F4a |
| The characteristics of maps, globes and other geographic tools and techniques | F4a |
| How to use latitude and longitude to plot locations of physical and human sites | F4a |
| Concepts of axis, major parallels, seasons, rotation, revolution, great circles | F4a |
| The purposes and distinguishing characteristics of different map projections, including distortion on flat map projections | F4a |
| The advantages and disadvantages of maps, globes and other geographic tools to illustrate specific data | F4a |
| How to use different types of scales | F4a |
| How to use thematic maps | F4a |
| When to use alternate units of measure to compute and compare distance between places | F4a |
| The location of places, geographic features and patterns of the environment | F4a |
| The location of major seas and gulfs | F4a |
| The location of key physical features (e.g., mountain ranges, desert, forest, rain forest) of the Earth | F4a |
| The location of states and provinces of the United States and Canada | F4a |
| The location of major cultural features of the world (e.g., Great Wall of China) | F4a |
| The characteristics and uses of spatial organization of the Earth's surface | F4a |
| Distribution of physical and human occurrences with respect to observable patterns, association, and densities (why some areas are more densely settled than others; relationships and patterns in the kind and number of links between settlements) | F4a |
| Factors that influence location decisions (retailers may be influenced by location near customers, next to a busy store, or on a heavily traveled street; jobs and climate influence people's decision about where to live; locations of certain economic activities are influenced by natural resources, transportation, and labor) | F4a |
| Patterns of land use in urban, suburban and rural areas (land uses that are frequently nearby and others not frequently adjacent to one another; dominant land-use patterns in city centers and peripheral areas) | F4a |
| The different ways that places are connected and how these connections demonstrate interdependence, accessibility, or factors related to distance (e.g., where classmates were born and now live; where sports teams travel to play; imports and exports at different seasons of the year; regions and countries American depend on for resources and manufactured goods) | F4a |
| The patterns and processes of diffusion (spread of language, religion and customs from one culture to another; spread of a contagious disease through a population; diffusion patterns of animals, insects, and plants) | F4a |
| The physical and human characteristics of place | F4a |
| Human characteristics of places (e.g., cultural characteristics such as religion, language, politics, technology, family structure, gender; population characteristics ; land uses, level of development) | F4a |
| Physical characteristics of places (e.g., soils, land forms, vegetation, wildlife, climate, natural hazards) | F4a |
| How the interaction of human activities and natural environments produces distinctive places (e.g., variations in culture, economic activities, topography, climate, population, technology) | F4a |
| The concept of regions | F4a |
| Regions at various scales (e.g., hemispheres, regions within continents, within countries, within cities) | F4a |

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| Criteria that give a region identity (e.g., central focus of a region, physical and cultural characteristics) | F4a |
| The effects of regional change (e.g., regions that were characterized in a particular ways at an earlier time have very different characteristics today; results of regional change in the daily lives of people) | F4a |
| Regional subdivisions (how continents, countries, states or provinces, metropolitan areas, suburbs, or neighborhoods are divided based on human or physical characteristics) | F4a |
| The influences and effects of particular regional labels and images (e.g., the Gold Coast neighborhood of Chicago, the South, the Midwest, the Middle East, South West Asia, "developing" vs. "less-developed" regions, "have" vs. "have-not" regions) | F4a |
| Ways regional systems are interconnected (e.g., watersheds and river systems, regional connections through trade, cultural times between regions) | F4a |
| That culture and experience influence people's perception of places and regions | F4a |
| How people's values (based on culture, previous experience, and economic circumstances) affect their perception of places and regions (e.g., cities as safe or unsafe places; the Great Plains as barren or beautiful; places or regions as symbols of freedom or oppression) | F4a |
| Physical processes that shape patterns on Earth's surface | F4a |
| The major processes that shape patterns in the natural environment (e.g., weather; gravity; erosion; ocean currents; tectonic processes such as those that produce earthquakes and volcanoes; earth movements such as landslides, alluvial fans, sand dunes, barrier islands, moraines) | F4a |
| The processes that produce renewable and non-renewable resources (e.g., fossil fuels, hydroelectric power, soil fertility) | F4a |
| Terms that relate to physical patterns and processes (system, boundary, force, circulation, threshold, equilibrium) | F4a |
| Fundamental concepts of physical geography that explain physical processes (e.g., deposition sediments on flood plains; formation of canyons, gorges, water falls; landslides, avalanches; global circulation systems of the atmosphere and oceans) | F4a |
| Characteristics of ecosystems on Earth's surface | F4a |
| Components and functions of natural cycles (e.g., water, nutrients) and relationships among them | F4a |
| Ecosystems (e.g., plant and animal life) in various parts of the world | F4a |
| Ecological concepts (e.g., energy, cycles, diversity, community, interrelationship, change, adaptation) and how they are evident in the world's biomes | F4a |
| Local to global ramifications of changes in an ecosystem (consequences of building a dam on a free-flowing rive in relation to wildlife habitats, vegetation cover, and the control of flooding downstream; effects of major natural events, such as storms and floods, on the lives of individuals and communities; effect of climate on people in different areas of the world) | F4a |
| The environment has limited capacity to absorb the impacts of human activity (habitats) of endangered species and causes of species endangerment; why governments impose laws that regulate human use of preserved areas and animals; effects of human activate on the flora and fauna of a community | F4a |
| The nature, distribution, migration and movement of human population on Earth's surface | F4a |
| Demographic concepts and how they are related to population characteristics of a country or region (e.g., birth rates, death rates, population growth rate, doubling time, life expectancy, average family size, average age) | F4a |
| Factors that influence patterns of rural-to-urban and intra-urban migration (e.g., urban commuting; effects of technology on transportation, communication, and people's mobility; barriers that impede the flow of people, goods, and ideas) | F4a |

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| Concepts related to migration such as "push and pull" (political, economic, religious forces), "opportunities", and "obstacles" | F4a |
| The ever-changing nature of population patterns and the effects of these changes (e.g., environmental change; positive and negative consequences for a place; the spread of culture traits and diseases) | F4a |
| The nature and complexity of Earth's cultural mosaics | F4a |
| The world's major culture regions and the cultural criteria used to influence regional boundaries (e.g., cultural phenomena, land use, language, technology, economic activity, population density in specific regions) | F4a |
| The adjustments traditional and modern societies make to their physical environments (the increased use of coal as an industrial fuel in 19th century Europe and the U.S. significantly altered landscapes in Wales, the Appalachians, and the Ruhr Valley) | F4a |
| How human occupants patterns differ in similar physical environments (e.g., the adaptations of the Lapps and Inuit to similar Arctic landscapes, or the uses of desert regions by Mongolian nomads in the Gobi and Berbers in the Sahara) | F4a |
| The role of technology in helping to define a human group's style of life (the impact of the auto, perceptions of resources) | F4a |
| The patterns and networks of economic interdependence on Earth's surface | F4a |
| Patterns of primary economic activity in the U.S. and elsewhere (e.g., national and global markets, the relationship between agricultural regions and food-processing industries, governmental economic programs) | F4a |
| How geography, the factors of production, and economic theories have played a role in the location of American industry (rise and persistence of American "Manufacturing Belt," evolution of <i>maquiladoras</i> ; the many American industrial jobs that have been exported to other countries; the choice of other countries to move industrial operations to the U.S.) | F4a |
| The relationship between economic factors and national and global migration patterns (slaves, guest workers, seasonal or migrant labor) | F4a |
| The structure, function, and issues of cities and other settlement types with respect to provision of goods and services (e.g., gentrification, ghetto, poverty, public transportation, hierarchy of central places, concentric growth) | F4a |
| The primary causes of major elements in the system of world trade (e.g., comparative advantage, tariffs, protectionism, free trade) | F4a |
| Historic and contemporary patterns of origin-and-destination networks (e.g., triangular trade routes of the 16th and 17th centuries; migration patterns; economic relationships between colonies and motherlands) | F4a |
| Historic and contemporary systems of transportation and communication (e.g., canals, major world ports, air freight, telegraph, satellites), how they have changed and improved over time, and how they have affected patterns of economic interaction | F4a |
| Issues related to economic development which involve the technologically advanced and developing worlds (e.g., population growth, consumption and waste generation patterns, environmental quality) | F4a |
| The patterns of human settlement and their causes | F4a |
| Ways that urban and rural planning (e.g., zoning and other government rules and regulations, property owner's rights, people's preferences) influence patterns of settlement | F4a |
| The relative advantage of certain locations for the growth of cities (fertile flood plains in the middle latitudes and on the coastal plains) | F4a |
| Similarities and differences in various settlement patterns of the world (residential areas, rural and urban areas, transportation arteries, industrial and commercial areas, recreational areas, similarities to his/her own community) | F4a |
| Forces of cooperation and conflict that shape the divisions of Earth's surface | F4a |

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| The location of major political conflicts | F4a |
| Factors that contribute to cooperation (e.g., religion, language, a regional planning commission) or conflict (e.g., resources, political beliefs, cultural differences, desire for self rule) within and between regions and countries | F4a |
| Divisions of the earth's surface that result from cooperation or conflict among people. | F4a |
| Social, political, and economic divisions on Earth's surface at local, state, national, and international levels (e.g., world religions; political alliances; franchises, branches, and regional districts within large economic organizations) | F4a |
| How Earth's physical and human systems are connected and interact. | F4a |
| That humans depend on and get feedback from natural and physical systems. | F4a |
| The effects of physical events (earthquakes, volcanic eruptions, hurricanes, tornadoes) on humans and on their perceptions of the environment | F4a |
| Different natural environments in terms of opportunities and constraints for different groups at various levels of technology and economic development | F4a |
| Major kinds of land and resource use associated with agriculture, manufacturing, forestry, mining, urbanization, and transportation (distribution of the land use, major factors influencing its location, resources the land use depends upon) | F4a |
| Factors that cause physical and human systems to change over time (land use, technology, economic systems, population growth, etc. have led to changes in the atmosphere; urban-to-rural migration changes the number and density of people in the city) | F4a |
| The influence of the natural environment on urban development (the relationship between soil type and land form and building-type, or between earthquake hazard and construction practice) | F4a |
| The consequences of the interactions between human and physical systems (2 & 3 only) | F4a |
| How contemporary land use and other human activity affect physical systems (the effects of farming, forestry, fishing, and transportation on air land, water, and vegetation; and other species; and the effects of population on waste generation and disposal; effects of war) | F4a |
| The positive and negative effects of human interaction with physical systems (effects of industrialization and agribusiness on quality of life; intended and unintended outcomes of technological changes such as automobiles, freeways, nuclear energy, steel-tipped plows), and ways these effects could be ameliorated | F4a |
| The consequences of changes in a physical system on a human system or another physical system (changes in climatic system in mid-latitude grasslands;ands causes drought and threaten human uses of the environment; building a dam on a free-flowing river affects wildlife habitats, vegetation, and the need for water or control of flooding downstream; how environmental changes in one part of the world can impinge on other parts of the world | F4a |
| The changing meaning and importance of resources | F4a |
| The role resources have played in opening new territories and changing settlement patterns (the California Gold Rush, creation of ghost towns in the American West; the fur trade that lured the French and British to the American Northwest; the early development of Pittsburgh, Pennsylvania; the Soviet expansion into Siberia) | F4a |
| Strategies for wise management and use of renewable, flow, and nonrenewable resources (wise management of agricultural soils, fossil fuels, and alternative energy sources; community programs for recycling or reusing materials) | F4a |
| The advantages and disadvantages of various forms of energy development (hydroelectricity, nuclear energy, fossil fuels, alternative energy sources) | F4a |
| How major events and national attention affect the use and misuse of resources (the book <i>Silent Spring</i> by Rachel Carson; the annual Earth Day celebration; major oil spills such as Exxon Valdez; nuclear accidents such as Chernobyl and Three Mile Island; battle between Love Canal and the Hooker Chemical Company over the disposal of toxic wastes) | F4a |

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| Reasons for conflicting viewpoints regarding how resources should be used (attitudes regarding how resources have improved quality of life; attitudes regarding species extinction; attitudes regarding environmental outcomes of extracting resources; attitudes regarding the position, "the greatest good for the greatest number of people") | F4a |
| How geography is used to interpret the past | F4a |
| Geographical concepts relating to the opening of territory and settlement patterns in the United States (Manifest Destiny, frontier, wilderness, metes and bounds, township land survey, long lots, "staking a claim") | F4a |
| The territorial evolution of the united States (extent of the 13 colonies and territories, areas added to the United States until the present-day boundaries were achieved; outcomes of territorial acquisitions such as the Louisiana Purchase and the Treaty of Guadeloupe Hidalgo) | F4a |
| The role of great explorers and mappers in opening new territories in the United States (Zebulon Pike, John Wesley Powell, the Lewis and Clark expedition) | F4a |
| Global development and environmental issues | F4a |
| The strengths and weaknesses of the used to classify uneven development in different regions (developed, developing, underdeveloped; rich and poor; industrialized and non-industrialized; commercial economy and subsistence economy; modern and traditional; First, Second, third, and Fourth Worlds; theory of demographic transition). | F4a |
| Ways in which development can be measured (gross national product, literacy rate, employment trends) | |
| The term sustainable government and how it is related to environmental and resource management (human attempts to limit stress on ecosystems such as local ordinances that establish criteria for strip mall development, privately funded planning grants to study the location of an international airport, crop rotation, preservation of open space, maintaining constant stocks of renewable resources). Ways in which local behavior can affect other parts of the world over time | F4a |
| 24. The study of economics, including: | |
| a. How economic systems function to address issues of resource allocation, income distribution, and economic stability and growth; | F4a |
| b. The kinds and functions of economic institutions; and | F4a |
| c. Concepts for evaluating economic actions and policies | F4a |
| How the scarcity of productive resources (human, capital, technological and natural) requires the development of economic systems to ma decisions about how goods and services are to be produced and distributed | F4a |
| How different values and beliefs affect different economic decisions | F4a |
| The differences between private and public goods and services | F4a |
| Examples of the various institutions which make up economic systems such as households, business firms, banks, government agencies, labor unions, and corporations | F4a |
| The role of specialization and exchange in the economic process | F4a |
| The role that supply and demand, price incentives, and profits play in determining what is produced and distributed in a competitive market system | F4a |
| How to differentiate among different forms of exchange and money | F4a |
| How economic systems compare in regard to who determines what is produced, distributed, and consumed | F4a |
| How to use economic concepts to help explain both historical and current social issues | F4a |
| How to use economic reasoning to compare different proposals for dealing with a contemporary social issues such as unemployment, acid rain and high quality education | F4a |
| 25. The study of comparative civics and government, including: | |
| a. The purposes of government and the role of law in societies; | F4a |
| b. The foundation of the American political system; | F4a |

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| c. How the government established by the Constitution embodies the principles and purpose of American democracy; | F4a |
| d. The relationship of American politics and government to world affairs; and | F4a |
| e. The roles of the citizen in the American political system | F4a |
| What are the foundations of the American political system? | F4a |
| The fundamental ideas of the American constitutional government and their importance for the protection of individual rights and the promotion of the common good | F4a |
| The meaning and importance of the fundamental values and principles of American constitutional democracy | F4a |
| Common attitudes and beliefs of Americans toward society, politics, and government | F4a |
| The value and challenges of diversity in American life | F4a |
| The importance of shared political values and principles to American society | F4a |
| Dispositions or traits of character which may enhance a person's effectiveness in participating in our constitutional democracy and in promoting its healthy functioning | F4a |
| How does the government established by the Constitution embody the principles and purposes of American democracy? | F4a |
| How the U.S. Constitution delegates power to institutions of the national government | F4a |
| Why the Constitution provides for the sharing of power within the national government | F4a |
| How the Constitution organizes the powers of the national government in order to prevent their abuse | F4a |
| The essential elements of the American federal system and why the Framers adopted this system in which the powers of government are shared by the national and state governments | F4a |
| How domestic policies of the national government affect(ed) a citizen's daily life, protect(ed) individual rights, and provide(d) for the common defense and general welfare | F4a |
| The constitutional basis of the government's authority to levy taxes, the necessity of taxes, and the purposes for which taxes are used | F4a |
| Why states have their own constitutions and the relationship of state constitutions to the federal constitution | F4a |
| The organization and major responsibilities of state and local government | F4a |
| How law is used to protect individual rights and promote the common good | F4a |
| How law is used to manage conflict in American society | F4a |
| How political parties, campaigns, and elections provide opportunities for citizens to participate in the political process | F4a |
| How interest groups, unions, and professional organizations provide opportunities for citizens to participate in the political process | F4a |
| How religious, charitable, service, and civic groups provide opportunities for individuals to participate in the political process | F4a |
| How citizens can acquire and evaluate information about public issues | F4a |
| What is the relationship of American politics and government to world affairs? | F4a |
| How the world is organized politically | F4a |
| How nation-states interact with each other | F4a |
| How United States foreign policy is made and the means by which it is carried out | F4a |
| The role of major international organizations in the world today | F4a |
| The influence of American political ideas on other nations | F4a |
| Proposals for dealing with significant political, demographic, and environmental developments in the world | F4a |
| What are the roles of the citizen in the American political system? | F4a |
| The meaning of citizenship in the United States | F4a |
| How one becomes a citizen of the United States | F4a |
| The importance of citizens fulfilling their personal responsibilities in order for constitutional democracy to flourish | F4a |

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| The importance of citizens fulfilling their public responsibilities | F4a |
| The relationship between participating in public life and the attainment of individual and public goals | F4a |
| The means by which citizens may monitor and influence the formation and implementation of public policy | F4a |
| The importance of political leadership and public service in a constitutional democracy | F4a |
| How to apply criteria to evaluate issues, positions, and actions of political leaders | F4a |
| 26. The study of core ethical values which our society shares and holds important including, but not limited to, respect, responsibility, trustworthiness, caring, honesty, justice and fairness, citizenship, and civic involvement | F4a |
| Models of the core ethical values through literature and history | F4a |
| The importance of the core ethical values to individuals and society | F4a |
| Meanings of the core ethical values at the appropriate developmental level (i.e., what does it mean to be fair? What does it mean to be trustworthy?) | F4a |
| Introduction to values dilemmas (i.e., circumstances in which two or more "good" values come into conflict) | F4a |
| Why it is sometimes difficult to practice the core ethical values (i.e., needs and desires of self versus needs and desires of others) | F4a |
| 27. The study of one's own cultural heritage, our nation's heritage and the diverse cultural traditions and contributions of other peoples and nations to that heritage | F4a |
| The commonalities and differences in the ways groups, societies, and cultures address similar human needs and concerns | F4a |
| How experiences may be interpreted differently by people from diverse cultural perspectives and frames of references | F4a |
| Ways in which language, stories, folktales, music, and artistic creation as expressions of culture influence behavior of people living in a particular culture | F4a |
| Ways in which people from different cultures compare in the ways they think and deal with their physical environments and social conditions | F4a |
| Examples of the importance of cultural unity and diversity within and across groups | F4a |
| The ways family, gender, ethnicity, nationality and institutional affiliations contribute to personal identity | F4a |
| Personal connections to places associated with one's cultural heritage | F4a |
| 28. The study of interactions among diverse individuals, groups (e.g., ethnic, age), institutions (e.g., family, school), and systems (e.g., economic, political) | F4a |
| Concept of role, status, and social class related to interactions of individuals and groups | F4a |
| The various forms institutions take and their interactions with people | F4a |
| Examples of tensions between belief systems and government policies and laws | F4a |
| Examples of tensions between expressions of individuality and group or institutional efforts to promote social conformity | F4a |
| The role of institutions in furthering both continuity and change | F4a |
| Group and institutional influences on people, events, and elements of culture | F4a |
| How to apply knowledge of how groups and institutions work to meet one's personal needs and promote the common good | F4a |
| 29. SEE #10 ABOVE | |
| 30. The development of speaking, listening, reading and writing in a second language (with emphasis on speaking and listening) within the appropriate cultural contexts | F4a |
| Throughout Stage 3 students will develop the ability to: | |
| 1. Perform all the functions described in Stages 1 and 2 plus: | |

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| a. Engage in conversations (Function) in social interaction which is face-to-face (Context) using sentences (Text Type) which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension; | F4a |
| b. Express likes and dislikes (Function) in social interaction which is face-to-face, in lists, surveys, notes, and postcards (Context) using sentences (Text Type) which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension; | F4a |
| c. Provide and obtain specific information (Function) in social interaction which is face-to-face, from letters, ads, tickets, brochures, signs, readings, and video (Context) using questions, polite commands and short sentences (Text Type), which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension; | F4a |
| d. Understand important ideas and a few details (Function) from culturally authentic spoke and written discourse, using visual and written media (Context) at the sentence level in the productive mode and understanding short texts enhanced by visual clues (Text Type), which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension; and | F4a |
| e. Express important ideas and a few details (Function) in face-to-face interaction, notes and letters, short paragraphs (Context), at the sentence level in the oral mode and in simple paragraph form in the written mode (Text Type) which demonstrate increasing proficiency and control of vocabulary with no significant pattern of errors (Accuracy in Familiar Situations). The message will be comprehensible and culturally appropriate but some pattern of error may prevent full comprehension. | F4a |
| 31. The study and practice of individual physical, social, and emotional health strategies, including assessing and managing controllable health risks and safe/healthy environments <u>Controllable Health Risks</u> . The healthy student can identify, understand, assess (physical, emotional, and social strategies) and manage appropriately the following controllable health risks: | C1, C2, C3, F4 |
| a. Tobacco; | C2d |
| b. Alcohol and other drugs; | C2d |
| c. Teen pregnancy, STD, AIDS/HIV; | C2e |
| d. Unintentional/intentional injuries; | C2, C2a |
| e. Obesity; and | C3a |
| f. Physical inactivity. | C3a |
| Examine the role of individual responsibility regarding personal risk behaviors. | C2d |
| Rebut media messages which encourage negative health behaviors. | F4 |
| Evaluate personal health risks. | C1, C2 |
| Demonstrate strategies to improve personal, family, and community health. | A2e, C1, D1a |
| Assess the influence of information from peers, family, and community on current personal health. | F2a, F4 |
| Convey accurate health information and ideas to both individuals and groups. | F1a |
| Analyze situations that require professional health care services. | C2c, F2a |
| Analyze potential impact of common risk behaviors on quality of life. | C2d |
| Examine the role of individual responsibility regarding personal risk behavior. | C2d |
| <u>Safe and Healthy Environments</u> . The healthy student is able to create, support and be supported by safe and healthy environments. | C1, D1a, D3c, D3d |
| Demonstrate skills for resisting abuse or exploitation. | C2 |

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| Demonstrate the methods of avoiding threatening situations involving other people. | C |
| Demonstrate methods to obtain assistance when confronted with dangerous circumstances. | C2, D3c |
| Identify action that can be taken by individuals living in an abusive situation. | F4 |
| Demonstrate refusal and negotiation skills. | F1a |
| Employ positive strategies to prevent conflict in school. | G4c |
| Analyze the impact of the environment on health. | F4 |
| Demonstrate first aid procedures for responding to and preventing further injury. | C2c |
| Demonstrate safety procedures for appropriate natural disasters (earthquake, fire, etc.). | C2a |
| 32. The development of lifetime wellness behaviors including physical strength, flexibility, cardiovascular endurance, and movement skills | C1 |
| <u>Lifetime Wellness.</u> The healthy student understands the importance of living a healthy life for an entire lifetime and develops a commitment to practicing lifetime wellness. | C1 |
| Describe the interrelationships of and the physiological changes in body systems. | F4a |
| Correlate the relationship between positive health behaviors and the prevention of injury, illness, disease, and other health problems. | C1, C2a, C2b, C2c |
| Identify the most common health issues for adolescents. | C2a, F4 |
| Describe how family and peers influence the health of individuals. | F4 |
| Describe the interrelationship of physical, intellectual, emotional, social health during adolescence. | F4 |
| Recognize that most causes of premature death can be prevented by positive health practices and appropriate health care. | C1, C2c |
| Compare health information from a variety of resources for accuracy; analyze the impact of media, technology, and other information sources of health choices. | F2a, F4 |
| Demonstrate the ability to apply a decision-making process to health issues and problems of diverse situations. | C1, C2, F2a |
| Demonstrate skills for building and maintaining positive relationships. | G4a |
| Identify age appropriate ways to express love and affection. | G1b, G4 |
| <u>How to:</u> Explore introductory outdoor pursuits (e.g., backpacking, rock climbing, hiking, canoeing, cycling, ropes courses). | C1b |
| Combine skills competently to participate in modified versions of team and individual sports | A2, C1b |
| Perform a variety of simple folk, country, and creative dances. | F4b |
| Use basic offensive and defensive strategies while playing a modified version of a sport. | C1b |
| Practice in ways that are appropriate for learning new skills or sports on his/her own. | F4 |
| Correctly demonstrate various weight training techniques. | F4 |
| Sustain an aerobic activity, maintaining a target heart rate to achieve cardiovascular benefits. | C3a |
| Improve and maintain appropriate body composition. | C3a |
| 33. The exploration of individual interests, aptitudes, and abilities in relation to career development, including the establishment of educational, career, and other goals related to life roles | A2f |
| <u>Self-Knowledge</u> | |
| The relationship between personal behavior and self concept | F4 |
| How to identify personal interests, aptitudes, abilities, strengths, and weaknesses | F4 |
| How to express feelings, reactions, and ideas in an appropriate manner | G1b |
| How to use peer feedback | F1a |
| Appropriate interpersonal skills in expressing feelings and ideas | G1b |
| How to appreciate the similarities and differences among people | G3b |
| <u>Educational and Occupational Exploration</u> | |
| How to relate academic and technical knowledge and skills to personal interests | F4 |

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| Importance of personal skills and attitudes to career success | F4 |
| Exploring various occupational groups | A2f |
| Influence of changes in supply and demand for workers in different careers | F4 |
| How teaming with others enhances individual performance | G |
| Ways in which work can overcome social and economic problems | G |
| How to identify personal goals that may be satisfied through a combination of work, community, social, and family roles | D3e |
| <u>Career Planning and Decision-Making</u> | |
| How to identify alternatives in decision-making situations | F2a |
| Strategies for managing personal resources to make tentative career and educational goals | F |
| The stereotypes, biases, and discriminatory behaviors that impact opportunities in certain careers | no match |
| Effects of others on career planning | no match |
| 34. The study of (a) family relationships including how families function to meet the needs of their numbers; and (b) human development across the life span with emphasis on child development, parenting education, and aging | F4 |
| WORK IN PROGRESS | |
| 35. The study of individuals and families as producers and consumers of goods and services | F4a |
| WORK IN PROGRESS | |
| 36. The study of the relationship among individuals, families, and community environments in which they live, work, and contribute | F4a |
| WORK IN PROGRESS | |

Pennsylvania

Document Utilized

Regulations of the State Board of Education, 22 Pa. Code Chapter 5 (July, 1993)

Background

In 1991, the state board of education called for Pennsylvania to develop outcomes for what students should know and be able to do. The state has articulated 53 outcomes in nine academic areas: arts and humanities, career education, citizenship, communications (reading and writing), environmental studies, home economics, mathematics, science and technology, and wellness and fitness. The 53 outcomes are grouped into four categories: primary, intermediate, middle, and high school. The outcomes are mandatory, but each district decides which grades fall into each category. The state intends to create voluntary content standards separate from the 53 outcomes.

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| <p>The Student learning outcomes describe the skills and abilities which students will be expected to demonstrate before graduating from a public school.</p> <ol style="list-style-type: none"> 1. High academic achievers. 2. Self-directed, lifelong learners. 3. Responsible, involved citizens. 4. Collaborative, high-quality contributors to the economic and cultural life of their communities. 5. Adaptive users of advanced technologies. 6. Concerned steward of the global environment. 7. Healthy, continuously developing individuals. 8. Caring, supportive family and community members. | <p>F3d D1, F D, E F F5a E1a C1 A2e, D1a</p> |
| <ol style="list-style-type: none"> 1. Self-worth Public schools should help students develop capabilities, talents, self understanding and a feeling of self-worth and acknowledge students for effort and achievement. 2. Information and thinking skills Public schools should help students develop the skills necessary to locate and manage information, solve problems and make decisions, including the processes of analysis, synthesis, creativity and evaluation. 3. Learning independently and collaboratively Public schools should encourage students to become independent life-long learners and to collaborate with others in developing knowledge, skills and new ideas. 4. Adaptability to change Public schools should prepare students to grow and develop in a world in which change is normal and constant. 5. Ethical judgement Public schools should teach students the importance of making ethical judgements for the common good. 6. Honesty, responsibility and tolerance Public schools should convey to students the need for honesty, integrity, individual responsibility and tolerance. | <p>G3a F2a D1, G4b no match E D, G3</p> |
| <ol style="list-style-type: none"> f. The quality school provides instruction throughout the curriculum so that each student may achieve the following academic goals: <ol style="list-style-type: none"> 1. Communications Each student shall become proficient in reading, composition, listening, speech, understanding, interpreting, analyzing and synthesizing information. | <p>F1a, F2a, F3b, F3c</p> |

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| <p>2. Mathematics Each student shall become proficient in the use of varied mathematical process and applications to solve challenging problems and to create new ways of understanding information</p> | F2a, F3a |
| <p>3. Science and Technology Each student shall become proficient in applying the processes of analysis, synthesis and evaluation to the solution of challenging scientific problems and in the application and understanding of technology in society.</p> | F4a, F5a |
| <p>4. Environment and Ecology Each student shall understand the environment and the student's ecological relationship with it in order to recognize the importance of the quality of life in a healthy and balanced environment.</p> | F4a |
| <p>5. Citizenship Each student shall understand local, State and United States history, geography, systems of government and economics and their relationship to the history, geography, systems of government and economics of other countries in the world and shall acquire and have opportunities to practice, in the school and in the community, the skills necessary for active participation in civic life.</p> | A2e, F4a |
| <p>6. Arts and Humanities Each student shall understand and appreciate the breadth of human accomplishment through the arts and humanities and shall have opportunities to practice creativity of thought and action and to demonstrate talent in the arts.</p> | F4b |
| <p>7. Career Education and Work Each student shall explore varied career options and develop the skills and work habits needed to be productive, contributing member of society and the understanding that lifelong learning is necessary to maintain those behaviors, skills and attitudes.</p> | A2f |
| <p>8. Wellness and Fitness Each student shall acquire and use the knowledge and skills necessary to promote individual and family health and wellness.</p> | C1, C2, C3 |
| <p>9. Home Economics Each student shall understand and apply principles of money management, consumer behavior and child health to provide for personal and family needs.</p> | F |
| <p>§ 5.202. Student Learning Outcomes</p> | |
| <p>a. In designing educational programs, school districts shall provide for the attainment of the student learning outcomes under subsection (f) and any other student learning outcomes which they develop and describe in their strategic plans under § 5.203(c) (relating to strategic plans) as requirements for graduation from high school. Achieving the outcomes in this section requires students to demonstrate the acquisition and application of knowledge and appropriate actions. Achieving the outcomes does not require students to hold or express particular attitudes, values or beliefs.</p> | no match |
| <p>b. A school district's curriculum shall be designed to provide all students with focused learning opportunities needed to attain these outcomes.</p> | no match |
| <p>c. As required by § 5.203(c)(3), school districts shall develop outcomes to be attained by students at transition points from one organizational level to another and may develop outcomes to be attained at additional transition points. These transitional outcomes shall be designed to assure that students are making progress toward attainment of the outcomes needed to graduate from high school. The school district assessment plan under § 5.203(c)(5) shall include a description of how the transitional outcomes are measured by the district and how information from the school district assessments is used to assist students having difficulty meeting the transitional outcomes.</p> | no match |
| <p>d. School districts shall develop standard for assessing the attainment of the outcomes under subsection (f) and any other student learning outcomes which they develop and describe in their strategic plans under § 5.203(c) for purposes of high school graduation and strategies for assisting students to attain them.</p> | no match |

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| <p>e. The student learning outcome in subsection (f) shall be attained by students in various ways and shall be assessed by school districts in various ways. Some will result from successful completion of a course; some from successful completion of a series of courses; some from independent study, community service or work experience; some from participation in extracurricular activities. Some students may meet some outcome expectations before they come to school. Exceptional students may meet outcome expectation by completion of their Individualized Education Programs under § 14.32 (relating to IEP). Some outcomes will be assessed by traditional test; some by other forms of assessment under § 5.232 (relating to school district assessment); some by teacher observation of student performance in school; some by attainment of IEP goals. Some students will need more instruction in some areas than other, and school districts are responsible for organizing programs to best accommodate the needs of their students.</p> | no match |
| <p>(f) School district shall prepare all students to attain the following student learning outcomes.</p> | |
| <p>1. Communications</p> | |
| <p>i. All students use effective research and information management skills, including location of primary and secondary sources of information with traditional and emerging library technologies.</p> | F4, F5a |
| <p>ii. All students read and use a variety of methods to make sense of various kinds of complex texts.</p> | F3b |
| <p>iii. All Students respond orally and in writing to information and ideas gained by reading narrative and informational texts and use the information and ideas to make decisions and solve problems.</p> | F1a, F3c |
| <p>iv. All students write for a variety of purposes, including to narrate, inform and persuade, in all subject areas.</p> | F3c |
| <p>v. All students analyze and make critical judgements about all forms of communication, separating fact from opinion, recognizing inconsistencies and judging the validity of evidence.</p> | F1, F2a |
| <p>vi. All students exchange information orally, including understanding and giving spoken instructions, asking and answering questions appropriately and promoting effective group communications.</p> | F1a |
| <p>vii. All students listen to and understand complex oral messages and identify their purpose, structure and use.</p> | F1a |
| <p>viii. All students compose and make oral presentations for each academic area of study that are designed to persuade, inform or describe.</p> | F1a |
| <p>2. Mathematics</p> | |
| <p>i. All students use numbers, number systems and equivalent forms (including numbers, words, objects and graphics) to represent theoretical and practical situations.</p> | F3a |
| <p>ii. All students compute, measure and estimate to solve theoretical and practical problems, using appropriate tools, including modern technology such as calculators and computers.</p> | F2a, F3a, F5a |
| <p>iii. All students apply the concepts of patterns, functions and relations to solve theoretical and practical problems.</p> | F2a, F3a |
| <p>iv. All students formulate and solve problems and communicate the mathematical processes used and the reasons for using them.</p> | F1a, F2a, F3a |
| <p>v. all students understand and apply basic concepts of algebra, geometry , probability and statistics to solve theoretical and practical problems.</p> | F2a, F3a |
| <p>vi. All students evaluate, infer and draw appropriate conclusions from charts, tables and graphs, showing the relationships between data and real-world situations.</p> | F2a, F3a |
| <p>vii. All students make decisions and predictions based upon the collection, organization, analysis and interpretation of statistical data and the application of probability.</p> | F2a, F3a |
| <p>3. Science and Technology.</p> | |
| <p>i. All students explain how scientific principles of chemical, physical and biological</p> | F4a |

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| phenomena have developed and relate them to real-world situations. | |
| ii. All students demonstrate knowledge of basic concepts and principles of physical, chemical, biological and earth sciences. | F4a |
| iii. All students use and master materials, tools and processes of major technologies which are applied in economic and civil life. | F4a, F5a |
| iv. All students explain the relationships among science, technology and society. | F4a |
| v. All students construct and evaluate scientific and technological systems using models to explain or predict results. | F4a |
| vi. All students develop and apply skills of observation, data collection, analysis, pattern recognition, prediction and scientific reasoning in designing and conducting experiments and solving technological problems. | F2a, F4a |
| vii. All students evaluate advantages, disadvantages and ethical implication associated with the impact of science and technology on current and future life. | F4a |
| viii. All students evaluate the impact on current and future life of the development and use of varied energy forms, natural and synthetic materials, and production and processing of food and other agricultural products. | F4a |
| 4. Environment and Ecology. | |
| i. All students understand and describe the components of ecological systems and their functions. | F4a |
| ii. All students analyze the effects of social systems, behaviors and technologies on ecological systems and environmental issues. | F4a |
| iii. All students think critically and generate potential solutions to environment issues. | F2a, F4a |
| iv. All students evaluate the implications of finite natural resources and the need for conservation, sustainable agricultural development and stewardship of the environment. | F4a |
| 5. Citizenship | |
| i. All students demonstrate an understanding of major events, cultures, groups and individual in the historical development of Pennsylvania, the United States and other nations, and describe themes and patterns of historical development. | F4a |
| ii. All students demonstrate understanding of themes and patterns of geography, know the location of major bodies of water, land masses and nations, and describe the relationships between geography and historical, economic and cultural development. | F4a |
| iii. All students describe the development and operations of economic, political, legal and governmental systems in the United States, assess their own relationships to those systems and compare them to those in other nations. | F4a |
| iv. All students examine and evaluate problems facing citizens in their communities, State, nation and world by incorporating concepts and methods of inquiry of the various social sciences. | F4a |
| v. All students develop and defend a position on current issues confronting the United States and other nations, conducting research, analyzing alternatives, organizing evidence and arguments, and making oral presentation. | F1a, F2a, F4a |
| vi. All students explain basic economic concepts and the development and operation of economic systems in the United States and other nations, and make informed decisions about economic issues. | F4a |
| vii. All students demonstrate their skills of communicating, negotiating and cooperating with others. | F1a, G4b |
| viii. All students demonstrate that they can work effectively with others. | G4b |
| ix. All students demonstrate and understanding of the history and nature of prejudice and relate their knowledge to current issues facing communities, the United States and other nations. | F4a |
| 6. Arts and Humanities. | |
| i. All students describe the meanings they find in various works from the visual and performing arts and literature on the basis of aesthetic understanding of the art form. | F4b |

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| ii. All students evaluate and respond critically to works from the visual and performing arts and literature of various individuals and cultures, showing that they understand important features of the works. | F2a, F4b |
| iii. All students relate various works from the visual and performing arts and literature to the historical and cultural context within which they were created. | F4b |
| iv. All students produce, perform or exhibit their work in the visual arts, music, dance or theater, and describe the meanings their work has for them. | F4b |
| 7. Career Education and Work. | |
| i. All students explore the multiple purposes of work and the range of career options, including entrepreneurship, and relate them to their individual interests, aptitudes, skills and values. | A2f |
| ii. All students assess how changes in society, technology, government and the economy affect individuals and their careers and require them to continue learning. | F |
| iii. All students understand and demonstrate the importance of relating their academic and vocational skills - for example, interviewing, creative thinking, decision making, problem-solving, understanding and giving written and oral instructions-to their ability to seek, obtain, maintain and change jobs. | A2f, F |
| iv. All students completing a vocational-technical education program exhibit the skills required to succeed in a particular occupation for which they have prepared. | F |
| 8. Wellness and Fitness | |
| i. All students develop knowledge of injury prevention and treatment and the ability to respond appropriately in emergency situations. | C2a, C2c |
| ii. All students recognize and demonstrate the ability to apply dietary guidelines to meet nutritional needs at various stages of life. | C1a |
| iii. All students demonstrate their knowledge of benefits associated with physical fitness and good personal health habits including health promotion and disease prevention. | C1, C3a |
| iv. All students identify the advantages of avoiding, and develop the skills to avoid, tobacco, alcohol and substance use. | C2d |
| v. All students demonstrate individual development in motor fitness and physical fitness, including aerobic fitness and skills in lifetime sports and outdoor activities, to promote lifelong physical activity. | C1b, C3a |
| vi. All students demonstrate leadership skills and the ability to work cooperatively in team sports or other developmentally appropriate group activities. | G4b |
| 9. Home Economics | |
| i. All students demonstrate their knowledge of principles of consumer behavior as a foundation for managing available resources to provide for personal and family needs. | D1a, F4 |
| ii. All students demonstrate their knowledge of basic child health and child care skills. | F4 |

South Carolina

Documents Utilized

South Carolina Foreign Languages Framework (November, 1993)
South Carolina Visual and Performing Arts Framework (November, 1993)
South Carolina Mathematics Framework (November, 1993)

Note: Other frameworks still under development include science, English/language, arts, health and safety, social studies, and physical education.

Background

In November of 1993, the State Board of Education adopted the first three voluntary frameworks in foreign languages, visual and performing arts, and mathematics. The frameworks present essential components necessary for improving education by setting out broad, circular themes, topics, and objectives in multi-year blocks. It includes clear expectations for all students and programs. Each framework uses different benchmarks. For example, in math, the benchmarks begin with grades K-3. In foreign languages, performance objectives are articulated at the elementary, middle, and high school levels. The state is in the process of revising its achievement assessments and Graduation requirements to incorporate its standards for English, math, and science.

South Carolina

| DANCE EDUCATION | NCES CODE |
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| <p>COMPONENT ONE: AESTHETIC PERCEPTION--MULTISENSORY INTEGRATION/TECHNIQUE AND SKILLS</p> <p>Goals: To develop an awareness of the body as an instrument of expression. To increase movement/dance vocabulary. To promote functional and artistic use of the movement/dance elements: body, space, time, dynamics/effort.</p> <p>Overview: Aesthetic perception encompasses the range of experiences from awareness and exploration of movement potential to the analysis, selection, and application of the Space, Time, Dynamics/Effort factors to create skilled and refined movement. These successful experiences are the foundation for a sensitive dance participant/observer and enhance self esteem.</p> <p>Objectives: Students will be able to: Demonstrate an understanding of the key elements of movement/dance vocabulary. F4b Demonstrate an increased skill level in the use of body in space, in time, and with dynamic fluency. F4b Demonstrate increasing levels of coordination, balance, stamina, elevation, and technique appropriate to age and development. F4b Demonstrate kinesthetic awareness of the body in motion and in stillness. F4b Demonstrate knowledge and use of anatomically and kinesiologically sound movement principles for safety, efficiency, and longevity as a dancer. C2a, F4b</p> | |
| <p>COMPONENT TWO: CREATIVE EXPRESSION--PROCESS AND PRODUCT</p> <p>Goals: To express ideas, feelings, and concepts in dance through the creative process. F4b To apply choreographic tools and composition principles in evaluating dance works of self and others. F4b</p> <p>Overview: Creative expression includes gaining skill in using the tools as the creator of dance, recognizing and experiencing the necessity and the joy of exploration and experimentation as prerequisite to composition, and the process of selecting the significant form, structure, and aesthetic factors as a part of refining the product.</p> | |

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| Objectives: Communicate personal feelings and ideas through movement with originality, individual style, and clarity. | F4b |
| Experience the creative process in dance through experimentation, improvisation, selection and synthesis. | F4b |
| Use abstract concepts and environmental and sensory stimuli as sources for composing dances. | F4b |
| Select and organize movement motifs, phrases, and dance compositions for others in informal and performance settings. | F4b |
| Apply choreographic criteria to assess works in progress and finished pieces by self and others. | F4b |
| COMPONENT THREE: DANCE HERITAGE--HISTORICAL AND CULTURAL | |
| Goals: To acquire knowledge of the historical and cultural significance of dance and of the universality of the dance phenomenon, and to develop an awareness of the significance of dance for society. | F4b |
| Overview: Through participation in a variety of dance styles and through study of print and other visual media, students comprehend universal themes, cultural roots and differences in style, significance of dance in society, and the means for preservation of dance. | |
| Objectives: Understand that dance reflects, records, and shapes history and plays a role in every culture as a universal language. | F4b |
| Become aware that dance takes many forms, is a valid form of expression for males and females, and can present and communicate ideas in many different ways. | F4b |
| Demonstrate cultural and historical similarities and differences among dance forms. | F4b |
| Demonstrate comprehension of a variety of dance styles and proficiency in executing more than one style. | F4b |
| Recognize the role of the dancer in society as an expressive artist, entertainer, and creator of artistic values and accomplishments of civilization. | F4b |
| Identify important dance innovators in past and contemporary cultures. | F4b |
| Identify careers related to dance in contemporary society. | A2f, F4b |
| COMPONENT FOUR: AESTHETIC VALUING | |
| Goals: To appreciate the art of dance as a communication form, both as the participant and the observer. | F4b |
| To value the choreographic process and the choreographic criteria, respectively. | F4b |
| To judge the quality of dance(s) by applying aesthetic principles and choreographic criteria. | F4b |
| To appreciate the relationship of the skill of the performer to the clarity of the performance. | F4b |
| To increase dance vocabulary and expressive language in discussing aesthetic valuing. | F4b |
| Overview: The distinctions between the participant and observer and the process and the product are stressed to keep in proper perspective the importance of the role and impact of each on making judgements of the worth of dance. | |
| Objectives: Recognize the power of dance as nonverbal communication and creative expression, both as observer and participant. | F4b |
| Appreciate the universality of dance and other art forms. | F4b |
| Recognize the traditional great works of dance and their aesthetic values as creative milestones. | F4b |
| Recognize the difference between the process and product. | F4b |
| Recognize the necessity for commitment to a project by dancers and creators. | F4b |
| Apply aesthetic principles and choreographic criteria to judge the quality of dance both as observer and internally as the creator/participant. | F4b |
| Recognize the relationship between the level of choreographic expertise and the aesthetic sophistication of the dance. | F4b |
| Make judgements about anatomical and performance factors basic to the technical and performance skill of the performer. | F4b |

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| Utilize accurate terminology when discussing the technical skill of the performer and aesthetic principles and their application to dance works. | F4b |
| Increase and use correct dance terminology and a variety of synonyms and reference points (historical/cultural) in the discussion of the aesthetics of dance. | F4b |
| Develop a vocabulary for dance criticisms related to the aesthetics of dance styles. | F4b |
| DRAMA EDUCATION | |
| COMPONENT ONE: AESTHETIC PERCEPTION | |
| Goal: To develop understanding and appreciation of theater concepts and the dramatic process. | F4b |
| Objectives: Develop internal and external resources within the theater process. | F4b |
| Understand dramatic concepts through artistic collaboration. | A2a, F4b |
| COMPONENT TWO: CREATIVE EXPRESSION | |
| Goal: To develop and expand communication skills, collaborative problem-solving, and modes for self expression through the drama process. | F1a, F2a, F4b, G4b |
| Objectives: Students will be able to | |
| Expand verbal and non-verbal communication for expressions. | F4b |
| Develop personal involvement and response through artistic collaboration. | F4b |
| Develop creative applications to interpret and express dramatic concepts. | F4b |
| COMPONENT THREE: THEATER HERITAGE--HISTORICAL AND CULTURAL | |
| Goal: To relate and understand the relevance, implications, and consequences of theatre to its social, cultural, and historical context. | F4b |
| Objectives: Understand the role of theatre in different cultures and how theatre reflects, records, and shapes the history of different cultures. | F4b |
| Become aware of and understand different dramatic and literary themes, genres, and theatre conventions among different cultures and time periods. | F4b |
| Appreciate different aesthetic values among individuals and cultures. | F4b |
| Understand how theatre imitates and exaggerates life, and understand similarities and differences between theatre and life. | F4b |
| COMPONENT FOUR: AESTHETIC VALUING | |
| Goal: To develop skills and information to form individual aesthetic judgements in the informal drama process and for formal theater presentations. | F2a, F4b |
| Objectives: Respond to the collaborative process with informed, responsible, and cooperative opinions and judgements. | F2a, F4b |
| Evaluate formal theater experiences with an understanding of dramatic concepts and theater conventions. | F4b |
| Utilize aesthetic judgements to develop, analyze, and improve all aspects of the drama process. | F2a, F4b |
| MUSIC EDUCATION | |
| COMPONENT ONE: AESTHETIC PERCEPTION--CONCEPT DEVELOPMENT | |
| Goals: To develop sensitivity to the expressive qualities of music. | F4b |
| To increase aural awareness. | F4b |
| To encourage musical responsiveness, involvement, and discrimination. | F4b |
| To promote understanding of the nature and structure of music. | F4b |
| Objectives: Demonstrate an understanding of how sound is produced and modified. | F4b |
| Demonstrate an understanding of the elements of music. | F4b |
| Demonstrate an understanding of the structure and form of music. | F4b |
| Demonstrate understanding that will lead to the effective use of written notation. | F4b |

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| COMPONENT TWO: CREATIVE EXPRESSION-SKILLS DEVELOPMENT | |
| Goals: To become sensitive to the expressive qualities of musical sounds. | F4b |
| To develop musical responsiveness, involvement, and discrimination. | F4b |
| To develop skills necessary to become capable and intelligent performers, creators, and consumers of music. | F4b |
| Objectives: Listen to music attentively and respond appropriately. | F4b |
| Perform music using a variety of sound sources. | F4b |
| Communicate musical ideas effectively through the use of notation. | F4b |
| Demonstrate ability to develop and communicate original musical ideas. | F4b |
| COMPONENT THREE: MUSICAL HERITAGE--HISTORICAL AND CULTURAL | |
| Goal: To develop awareness and demonstrate knowledge of the styles, idioms, performance media, and purposes of music that are part of our multicultural heritage. | F4b |
| Objectives: Identify and become familiar with their own musical heritage. | F4b |
| Identify some of the expressive elements in the music of different cultures and ethnic groups. | F4b |
| Describe some of the social and historical situations that have influenced the composition, style, selection, and performance of music. | F4b |
| COMPONENT FOUR: AESTHETIC VALUING--APPLICATION OF KNOWLEDGE AND SKILLS | |
| Goal: To provide a sound basis of musical experiences that can be used in making intelligent judgements of musical value. | F4b |
| Objectives: Demonstrate an understanding of the value and role of music in the lives of individuals and cultures. | F4b |
| Demonstrate an understanding of how the purpose and function of music in a particular situation have influenced compositions, selections, and performances. | F4b |
| Demonstrate an understanding of the ways that the elements of music have been combined to produce characteristic styles and forms. | F4b |
| VISUAL ARTS EDUCATION | |
| COMPONENT ONE: AESTHETIC PERCEPTION-VISUAL AND TACTILE | |
| Goal: To develop and expand aesthetic perception. | F4b |
| Objectives: Increase aesthetic awareness of visual and tactile qualities in works of art, nature, events, and objects within the total environment. | F4b |
| See the world directly and metaphorically perceiving the physical world in terms of visual and tactile qualities and symbols. | F4b |
| COMPONENT TWO: CREATIVE EXPRESSION--ARTISTIC KNOWLEDGE SKILLS | |
| Goal: To develop and expand visual arts knowledge and skills in order to express ideas creatively. | F4b |
| Objectives: Acquire artistic skills to express and communicate responses to experiences. | F4b |
| Recognize the importance of personal experiences and respect the originality in their own visual expressions and in the artwork of others. | F4b |
| Develop manipulative and organizational skills in using art media effectively to translate ideas, feelings, and concepts. | F4b |
| COMPONENT THREE: VISUAL ARTS HERITAGE--HISTORICAL AND CULTURAL | |
| Goal: To acquire knowledge of historical and cultural developments which occur as a result of varying needs and aesthetic points of view. | F4b |

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| <p>Objectives: Study a variety of artworks and accomplishments of contemporary, historic, and prehistoric cultures.</p> <p>Understand that art reflects, records, and shapes history and plays a role in every culture.</p> <p>Gain an understanding of their creative abilities and their heritage within the context of a comprehensive world view.</p> <p>Clarify their own aesthetic values and learn to appreciate differences in the aesthetic values of others.</p> | <p>F4b</p> <p>F4b</p> <p>F4b</p> <p>F4b</p> |
| <p align="center">COMPONENT FOUR: AESTHETIC VALUING--ANALYSIS, INTERPRETATION, AND JUDGEMENT</p> | |
| <p>Goal: To develop a base for making informed aesthetic judgements.</p> | F4b |
| <p>Objectives: Make informed responses to works of art, nature, and other objects within the total environment by using objective criteria for analysis, interpretation, and judgement.</p> <p>Derive meaning and value from experiences by making and justifying judgements about aesthetic qualities in works of art and other objects within the total environment.</p> <p>Use analysis, interpretation, and judgement about visual relationships based on learned aesthetic values to improve art production.</p> | <p>F4b</p> <p>F4b</p> <p>F4b</p> <p>F2a, F4b</p> |
| <p>FOREIGN LANGUAGES FRAMEWORK</p> | |
| <p>PERFORMANCE OBJECTIVES</p> | |
| <p>MIDDLE SCHOOL</p> <p>Tasks in the middle school grades should be essentially the same as those in elementary school, but with age-appropriate activities and topics, increased use of authentic texts and more emphasis on reading and writing.</p> | |
| <p>LISTENING TASKS The student will be able to:</p> | |
| <p>1. understand the main idea of authentic listening texts such as weather reports, news items, etc.</p> <p>2. relay a message from an announcement or phone call</p> | <p>F4a</p> <p>F4a</p> |
| <p>SPEAKING TASKS The student will be able to:</p> | |
| <p>1. participate in and maintain conversations</p> <p>2. give a more extended response to questions</p> <p>3. describe familiar objects and people</p> | <p>F4a</p> <p>F4a</p> <p>F4a</p> |
| <p>READING TASKS The student will be able to:</p> | |
| <p>1. read letters, dialogues and other texts</p> <p>2. read authentic ads and cartoons</p> <p>3. sequence events</p> <p>4. draw conclusions</p> <p>5. answer questions</p> | <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> <p>F4a</p> |
| <p>WRITING TASKS The student will be able to:</p> | |
| <p>1. write letters to friends and pen pals</p> <p>2. write a brief autobiography</p> <p>3. write original dialogue</p> | <p>F4a</p> <p>F4a</p> <p>F4a</p> |
| <p>CULTURAL TASKS The student will be able to:</p> | |
| <p>1. compare American customs, such as handshakes and embraces, to foreign customs</p> <p>2. research and report on landmarks and historical figures</p> | <p>F4a</p> <p>F4a</p> |
| <p>PERFORMANCE OBJECTIVES: LATIN</p> | |
| <p>MIDDLE SCHOOL TASKS</p> <p>The student will be able to:</p> | |
| <p>1. understand the main ideas of a listening passage of simple Latin[listening]</p> | F4a |

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| 2. respond to questions with simple, but complete sentences [speaking] 3. read and comprehend simple prose passages of Latin [reading] 4. compose syntactically correct simple Latin sentences [writing] 5. identify examples of classical architecture in the community (e.g., Doric, Ionic and Corinthian columns) [cultural] | F4a F4a F4a F4a |
| <p>In addition, the middle school student will develop an awareness of classical mythology and its influence on the modern world (e.g., brand names; astronomy: names of planets and stars; cultural customs: Cupid and Valentine's Day).</p> | |
| <p>MATHEMATICS FRAMEWORK</p> | |
| <p>APPENDIX A: STANDARDS</p> | |
| <p>K-12 MATHEMATICS CURRICULUM STANDARDS BY CONTENT STRANDS, GRADES 6-9</p> | |
| <p>STRAND: NUMBER AND NUMERATION SYSTEM</p> | |
| Students will participate in problem-solving activities through group and individual investigations so that they can: extend their development of number sense to include all real numbers; develop and use order relations for real numbers; understand, represent, and use real numbers in a variety of equivalent forms (integers, fractions, decimals, percents, exponentials, and scientific notation) in a variety of real world and mathematical problem situations; understand and apply ratios, proportions, and percents in a wide variety of situations; develop and apply number theory concepts (primes, composites, factors, and multiples) in a variety of real-world and mathematical problem situations; and connect number and numeration systems with other aspects of mathematics and with other disciplines. | A2a, F2a, F3a, G4b F3a F3a F3a F3a F3a F3a |
| <p>STRAND: NUMERICAL AND ALGEBRAIC CONCEPTS AND OPERATIONS</p> | |
| Students will participate in problem-solving activities through group and individual investigations so that they can: use models, patterns, and relationships to construct, explain, and analyze algorithms for operations on integers and explain how the operations relate to each other; develop reasonable proficiency in operations on integers and rational numbers; develop, analyze, and explain techniques for estimation; develop, analyze, and explain procedures for solving problems involving proportions; select and use appropriate methods for computing from among mental arithmetic, paper-and-pencil, calculator, or computer methods; use mental computation, estimation, and calculators to solve problems, predict results, and evaluate reasonableness of results; understand the concepts of variables, expressions, equations, and inequalities and gain confidence in thinking and communicating algebraically; represent situations and number patterns with models, tables, graphs, verbal rules, and equations and make connections among these representations; analyze tables and graphs to identify properties and relationships; solve linear equations using concrete, informal, and formal methods; investigate inequalities and non-linear equations informally; and apply algebraic methods to solve a variety of real-world and mathematical problems. | A2a, F2a, F3a, G4b F3a F2a, F3a F2a, F3a F2a, F3a F3a F2a, F3a, F5a F3a, G2b F3a F2a, F3a F2a, F3a F3a F2a, F3a |
| <p>STRAND: PATTERNS, RELATIONSHIPS, AND FUNCTIONS</p> | |
| Students will participate in problem-solving activities through group and individual investigations so that they can: | A2a, F2a, F3a, G4b |

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| use technology along with concrete, numerical, and abstract models to explore, describe, analyzed, extend, and create a wide variety of patterns; | F2a, F3a, F5a |
| represent, discuss, and describe functional relationships with tables, graphs, and rules; | F3a |
| analyze and predict functional relationships and make generalizations based on observed patterns; | F2a, F3a |
| use models and technology to analyze functional relationships to explain how a change in one quantity results in a change in another quantity; | F3a, F5a |
| use variables, equations, and inequalities to express functional relationships; | F3a |
| make, test, and utilize generalizations about given information as a means of solving real world and mathematical problems; and | F2a, F3a |
| connect patterns, relationships, and functions with other aspects of mathematics and with other disciplines. | F3a |
| STRAND: GEOMETRY AND SPATIAL SENSE | |
| Students will participate in problem-solving activities through group and individual investigations so that they can: | A2a, F2a, F3a, G4b |
| model, identify, describe, classify, and compare two- and three-dimensional geometric figures; | F3a |
| use technology whenever appropriate to explore concepts and applications of geometry; | F3a, F5a |
| develop spatial sense by thinking about, constructing, an drawing two- and three-dimensional geometric figures; | F3a |
| investigate and predict the results of combining, partitioning, and changing shapes, figures, and models; | F3a |
| investigate the results of transformations, including translations, reflections, rotations, and glide reflections, to reinforce concepts such as congruence, similarity, parallelism, perpendicularity, and symmetry; | F3a |
| apply coordinate geometry properties and relationships to solve real-world and mathematical problems; and | F2a, F3a |
| connect geometry and spatial sense to the physical world, to other aspects of mathematics, and to other disciplines. | F3a |
| STRAND: MEASUREMENT | |
| Students will participate in problem-solving activities through group and individual investigations so that they can: | A2a, F2a, F3a, F4b |
| extend their understanding of the concepts and processes of length, capacity, weight (mass), perimeter, area, volume, time, temperature, and angle measure; | F3a |
| estimate, construct, and use measurements to describe and compare phenomena; | F3a |
| use suitable methods of approximations to find areas and volumes of irregular shapes; | F3a |
| understand the structure and use of nonstandard and standard (customary and metric) systems of measurement; | F3a |
| select and use appropriate tools and units to measure to the degree of accuracy required in a particular situation; | F3a |
| develop the concepts of rates and other derived and indirect measurements; | F3a |
| use concrete and graphic models to discover formulas for finding perimeter, area, and volume of common two- and three-dimensional shapes; | F3a |
| use measurements and formulas to solve real-world and mathematical problems; and | F3a |
| connect measurement to other aspects of mathematics and to other disciplines. | F3a |
| STRAND: PROBABILITY AND STATISTICS | |
| Students will participate in problem-solving activities through group and individual investigations so that they can: | A2a, F2a, F3a, G4b |
| model situations by carrying out experiments or simulations to determine probabilities, using technology whenever appropriate ; | F3a, F5a |
| model situations by constructing a sample space to determine probabilities, using technology whenever appropriate; | F3a, F5a |

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| make inferences and convincing arguments based on an analysis of theoretical or experimental probability; | F3a |
| collect, organize, analyze, describe, and make predictions with data, using technology whenever appropriate; | F2a, F3a, F5a |
| construct, read, and interpret tables, graphs, charts, and other forms of displayed data; | F3a |
| evaluate arguments that are based on data analysis; | F2a, F3a |
| develop an appreciation for the pervasive use and misuse of probability and statistical analysis in the real world; and | F3a |
| connect probability and statistics with other aspects of mathematics and with other disciplines. | F3a |

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Document Utilized

South Dakota Mathematics and Science Benchmarks--draft (January ,1994)

Background

In 1991, South Dakota was awarded a grant from the National Science Foundation to develop mathematics and science standards. In October 1994, South Dakota received a grant from the Innovations in Education Fund from the U.S. Department of Education to create standards in the arts, civics, English, foreign languages, geography, and history. Math and science standards describe student learning for grades K-2, 3-4, 5-8, and 9-12. Standards in the other subjects will describe learning in grades 2, 4, 8, and 12. The standards are voluntary; currently no performance or assessment standards relate to the content standards, although the state has had a testing program in place since 1985. Education officials how to create tests to complement the content standards once they are more fully developed.

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| | NCEO CODE |
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| MATHEMATICS | |
| NUMBER SENSE | |
| Number sense is the ability to interpret and use numbers in counting and measurement situations and to sense the reasonableness of computational results. | |
| 5-8 NUMBER SENSE: BENCHMARKS | |
| All Students Will: | |
| 1. represent different forms of numbers and their relationships. | F3a |
| 2. create and model problems in respect to different forms of numbers. | F3a |
| 3. demonstrate order relations in the real number system. | F3a |
| 4. model relationships that transfer whole number operations to other forms of numbers. | F3a |
| 5. utilize the real number system to demonstrate a problem solving strategy through an estimation, computation and proportion procedure. | F3a |
| 6. communicate their thinking processes and justify the appropriateness of an approximation or an exact calculation. | F3a |
| 7. verify the reasonableness of their results. | F3a |
| MEASUREMENT | |
| Measurement is a dimension, quantity, or capacity determined by comparison to a standard unit. The study of measurement shows useful and practical applications of mathematics. | |
| 5-8 MEASUREMENT: BENCHMARKS | |
| All Students Will: | |
| 1. demonstrate competency in the use of both Standard, International and English units. | F3a |
| 2. solve problems using the most appropriate system of measurement while determining the degree of accuracy needed. | F2a, F3a |
| 3. relate measurement concepts to various occupational uses. | F3a |
| PATTERN RELATIONS | |
| Patterns, Relations and Functions: A pattern is an arrangement of objects or symbols in which relationships can be established. | |
| 5-8 PATTERN RELATIONS: BENCHMARKS | |
| All Students Will: | |
| 1. represent patterns and functional relationships in different forms. | F3a |
| 2. extend and analyze a wide variety of patterns. | F2a, F3a |
| 3. communicate and model problems using patterns and functions. | F1a, F2a, F3a |

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| <p>STATISTICS Statistics and Probability: Statistics is a mathematical tool used to analyze data. Probability is the mathematics of chance. 5-8 STATISTICS: BENCHMARKS All Students Will:</p> <ol style="list-style-type: none"> 1. collect and organize sets of meaningful data. 2. formulate convincing arguments based on their interpretations of the data. 3. communicate their conclusions based on their data analysis. | <p>F3a F2a, F3a F1a, F3a</p> |
| <p>ALGEBRA Algebra is a language of symbols used to communicate concepts, relationships and abstract ideas. 5-8 ALGEBRA: BENCHMARKS All Students Will:</p> <ol style="list-style-type: none"> 1. investigate and analyze the algebraic concepts of variable, expression, equation and inequalities. 2. analyze and model properties and interrelationships of algebraic concepts. 3. apply knowledge of algebraic concepts to a variety of problems. | <p>F2a, F3a F2a, F3a F3a</p> |
| <p>GEOMETRY Geometry is a language used to communicate the properties of and relationships between objects. Spatial sense involves insights and intuition about two and three dimensional shapes and their characteristics, interrelationships of shape, and the effects of changes to shapes. 5-8 GEOMETRY: BENCHMARKS All Students Will:</p> <ol style="list-style-type: none"> 1. develop spatial sense by utilizing/using geometric figures. 2. analyze properties of geometric figures. 3. apply transformations to geometric figures. 4. model applications of geometry. | <p>F3a F2a, F3a F3a F3a</p> |
| <p>SCIENCE</p> | |
| <p>NATURE OF SCIENCE The nature of science involves a systematic approach to problem solving through inquiry, observation, validation, experimentation, communication and collaboration. 5-8 NATURE OF SCIENCE: BENCHMARKS All Students Will:</p> <ol style="list-style-type: none"> 1. accurately collect, record and communicate observations. 2. predict patterns based on data. 3. designs and conduct a controlled experiment to investigate a question. 4. communicate the design of a controlled experiment so that the investigation can be replicated 5. state conclusions based on research and investigation. | <p>F1a, F4a F4a F4a F4a F4a</p> |
| <p>SYSTEMS A system is a group of related things and processes functioning as a unit for a defined purpose. 5-8 SYSTEMS: BENCHMARKS All Students Will:</p> <ol style="list-style-type: none"> 1. communicate how the component parts of a system interact. 2. illustrate a model a system. 3. predict possible effects within a system as components are changed. | <p>F1a, F4a F4a F4a</p> |
| <p>MODELS "A model of something is a simplified imitation that we can help us understand it better. A model may be a device, a plan, a drawing, an equation, a computer program, or even just a</p> | |

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| mental image." (<i>Science for All Americans</i> , p. 157) 5-8 MODELS: BENCHMARKS All Students Will: | |
| 1. explain observations using symbolic as well as concrete models. | F4a |
| 2. describe the limitations of using models. | F4a |
| 3. relate the effects of change on a model to the effects of change on the real object/event. | F4a |
| 4. predict changes (to an event) using a model. | F4a |
| PATTERNS OF CHANGE Patterns of change are variations that occur within models or systems. Consistency, defined as equilibrium, stability, or symmetry, is a concept imbedded within patterns of change. | |
| 5-8 PATTERNS OF CHANGE: BENCHMARKS All Students Will: | |
| 1. classify various patterns as steady, cyclic or irregular. | F4a |
| 2. compare the patterns of change within a system or model as constancy is maintained. | F4a |
| 3. make predictions based on patterns of change. | F4a |
| SOUTH DAKOTA INTEGRATED BENCHMARKS | |
| 5-8 NATURE OF SCIENCE/NUMBER SENSE All students will verify the reasonableness of the results of controlled experiment based on numerical data collected. | F3a, F4a |
| 5-8 NATURE OF SCIENCE/MEASUREMENT All students will solve problems and/or conduct investigation that require the appropriate selection and use of measurement systems. | F2a, F4a |
| 5-8 NATURE OF SCIENCE/PATTERN RELATIONS All students will analyze pattern relationships established through the collecting, recording, and comparing of data during controlled experimentation. | F2a, F4a |
| 5-8 NATURE OF SCIENCE/STATISTICS All students will communicate interpretation (s) of data collected during an experiment or investigation. | F1a, F3a, F4a |
| 5-8 NATURE OF SCIENCE/ALGEBRA All students will develop an algebraic statement based on scientific investigation. | F3a, F4a |
| 5-8 NATURE OF SCIENCE/GEOMETRY All students will design geometric transformations and communicate the design so that it can be replicated. | F1a, F3a |
| 5-8 SYSTEMS/NUMBER SENSE All students will communicate how the component parts of a system interact using the properties of real numbers. | F1a, F3a |
| 5-8 SYSTEMS/MEASUREMENTS All students will communicate quantitatively how the component parts of a system interact. | F1, F4a |
| 5-8 SYSTEMS/PATTERN RELATIONS All students will model a system using a variety of patterns. | F4a |
| 5-8 SYSTEMS/STATISTICS All students will predict possible effects within a system using probability. | F3a |
| 5-8 SYSTEMS/ALGEBRA All students will investigate and analyze a system using algebraic concepts. | F2a, F3a |
| 5-8 SYSTEMS/GEOMETRY All students will analyze properties of a system using geometric figures. | F2a, F3a |
| 5-8 MODELS NUMBER SENSE All students will communicate the reasonableness of results when relating the effects of change on a model to the effects of change on the real object/event. | F1a, F3a |
| 5-8 MODELS/MEASUREMENT All students will relate how a scale model is used to solve problems. | F2a, F3a |

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| 5-8 MODELS/PATTERN RELATIONS All students will extend and analyze a wide variety of patterns using models. | F2a, F3a |
| 5-8 MODELS/STATISTICS All students will predict changes using data collected from a model or models. | F3a |
| 5-8 MODELS/ALGEBRA All students will investigate and analyze changes that occur within a model using algebraic concepts. | F2a, F3a |
| 5-8 MODELS/GEOMETRY All students will analyze concrete models using geometric properties and spatial relationships. | F2a, F3a |
| 5-8 PATTERNS OF CHANGE/NUMBER SENSE All students will verify the reasonableness of prediction which were based on patterns of change. | F3a |
| 5-8 PATTERNS OF CHANGE/MEASUREMENT All students will classify patterns of change through measurable attributes. | F3a |
| 5-8 PATTERNS OF CHANGE/PATTERN RELATIONS All students will communicate predictions based on patterns of change. | F1a, F4a |
| 5-8 PATTERNS OF CHANGE/STATISTICS All students will predict patterns of change based on statistical evidence. | F1a, F3a |
| 5-8 PATTERNS OF CHANGE/ALGEBRA All students will apply knowledge of algebraic concepts to make predictions comparing patterns of change. | F2a, F3a |
| 5-8 PATTERNS OF CHANGE/GEOMETRY All students will analyze complex systems as they apply to the solution of occupation related problems. | F2a, F3a |

Utah

Documents Utilized

Elementary Core Curriculum Standards, Levels K-3 (1991)
Elementary Core Curriculum Standards, Levels 4-6 (1991)

Background

In 1989, legislative leaders determined that the state need to develop content standards for students. In 1991, the work of 11 action teams was presented to the state board of education and legislature. The teams articulated a state core curriculum and methods of assessment. Standards have been developed for the arts, language arts, mathematics, reading, science, and social studies in each grade from K-12. The state core is mandatory for districts, but the assessment standards are voluntary.

Utah

| INFORMATION TECHNOLOGY | NCEC CODE |
|---|-----------|
| 2070-01 The students will use each component of a computer (technology) system correctly. | F5a |
| 2070-02 The students will demonstrate proper keyboarding techniques. | F5a |
| 01 Increase keyboarding speed by five words a minute while maintaining accuracy and proper technique. | F5a |
| 02 Identify and demonstrate use of number keys. | F5a |
| 2070-03 The students will understand the major social and ethical issues in the field of information technology. | F4a |
| 01 Demonstrate appropriate conduct during technology work periods. | D, F5a |
| 02 Predict possible future uses of microchip processors. | F4a |
| 03 Identify careers that use technology with the intent of exploring possible career choices. | A2f |
| 04 Discuss the social implications of current technology issues (e.g., privacy, information retrieval, copyright, access, ownership, public domain, licensing, viruses, etc.). | F4a |
| 2070-04 The students will use application software to accomplish a variety of tasks. | F5a |
| 01 Use a word processor to produce documents in content areas. | F5a |
| 02 Demonstrate the proper terminology associated with databases and spreadsheets (e.g., field/category, records, files, cells, columns, rows, alphabetic/labels, numeric, formulas, etc.) | F5a |
| 03 Describe the differences between alphabetic and numeric fields in a database. | F5a |
| 04 Create and save a database. | F5a |
| 05 Produce three different reports using the same database. | F5a |
| 06 Create and save a spreadsheet. | F5a |
| 07 Integrate data from/to a word processor, spreadsheet, and/or database. | F5a |
| 08 Use a graphics program to create a graphic. | F5a |
| 09 Integrate a graphic into a word processor, database, and/or spreadsheet. | F5a |
| 10 Use a modem to access a telecommunications service. | F5a |
| 11 Identify and/or use emerging technologies. | F5a |
| 2070-05 The students will use technology to develop problem-solving skills. | F2a, F5a |
| 01 Use appropriate grade level simulation and problem-solving software. | F2a, F5a |
| 02 Relate computer use to real-life, problem-solving situations at the level of the student's understanding. | F2a, F5a |
| 03 Identify the tasks where information technology can perform better than people (e.g., dangerous or repetitive tasks and manipulation of data). | F4a |
| 04 Create a short program to solve a problem in a content area. | F5a |

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| LIBRARY MEDIA | | NCEO CODE |
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| 4080-01-3 | The students will find, use, and analyze information from the library media center and other locations about a famous contemporary person (listening, speaking, reading, critical thinking, <u>pre-writing</u>). | F2a, F4 |
| 01-3 | Choose a famous, contemporary person. | F4 |
| 02-3 | Read an encyclopedia article for a brief overview of the person's life, habits, education, etc. | F4 |
| 03-3 | Formulate questions to explore the topic. | F4 |
| 04-3 | Determine search terms or key words to locate additional information. | F4 |
| 05-3 | Locate materials by using indexing systems (print or electronic) such as library media catalogs, magazine indexes, newspaper indexes, <u>Current Biography</u> , etc. | F4 |
| 06-3 | Find relevant, current, and accurate information from various sources that answers predetermined questions, using at least one magazine. | F4 |
| 07-3 | Differentiate between fact and opinion in each source. | F4 |
| 08-3 | Evaluate information. | F4 |
| 09-3 | Synthesize information from selected sources. | F4 |
| 10-3 | Define unfamiliar words. | F4 |
| 11-3 | Determine an appropriate audience. | F4 |
| 12-3 | Use prewriting strategies (e.g., outlining, brainstorming, listing, clustering, mapping, etc.). | F3b |
| 4080-02-08 | The students will create a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, critical thinking, <u>writing, responding, revising</u>). | F3b, F4 |
| 01-3 | Produce a comprehensive, factual, and informative project/paper (e.g., brochure, encyclopedia article, magazine article, newscast, editorial script, obituary, etc.). | F4 |
| 02-3 | Capture accurately the contribution of the person. | F4 |
| 03-3 | Use appropriate voice. | F4 |
| 04-3 | Synthesize and organize information. | F4 |
| 05-3 | Use new words correctly. | F3b, F4 |
| 06-3 | Prepare a simple biography. | F3a, F4a |
| | While revising, the students will: | |
| 07-3 | Participate in response groups for peer evaluation. | A2a, G4b |
| 08-3 | Analyze and clarify the paper to improve its meaning and communication. | F3c |
| 09-3 | Make necessary structural, syntactical, and graphic changes for improvement. | F3c |
| 4080-03-3 | The students will produce a final draft of a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, writing, critical thinking, <u>editing, publishing</u>). | |
| 01-3 | Correct fragments and run-ons. | F3c |
| 02-3 | Use adjectives and adverbs correctly. | F3c |
| 03-3 | Use the proper form of pronouns. | F3c |
| 04-3 | Use correct subject-verb agreement. | F3c |
| 05-3 | Create and punctuate more sophisticated sentences. Use sentence combining techniques where applicable. | F3c |
| 06-3 | Use specific words and details. | F3c |
| 07-3 | Eliminate slang and jargon. | F3c |
| 08-3 | Define unfamiliar terms for the audience. | F3c |
| 09-3 | Correct misplaced phrases and clauses. | F3c |
| 10-3 | Punctuate the final draft correctly. | F3c |
| 11-3 | Paragraph the final draft appropriately. | F3c |
| 12-3 | Use transitions between paragraphs. | F3c |
| 13-3 | Use correct capitalization. | F3c |

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| 14-3 Use standard spelling. | F3c |
| 15-3 Eliminate inconsistencies in tense. | F3c |
| 16-3 Correct faulty parallelism. | F3c |
| 17-3 Eliminate redundancies. | F3c |
| 18-3 Share the final draft. | F3c |
| VISUAL ARTS | |
| 1100-01 The students will develop skills vital to making art by composing pictures and rendering structure, value, scale, shapes, gesture, texture, depth, and color in a picture (Participant) | F4b |
| 01 Begin a drawing using simple shapes or gestural line for "blocking in." | F4b |
| 02 Render the scale and proportion of objects (i.e., one object to another or parts to a whole). | F4b |
| 03 Create a more effective use of space by cropping (extending objects beyond the picture plane). | F4b |
| 04 Render variations of lightness and darkness in a drawing. | F4b |
| 05 Use structural lines to define changes in planes or surfaces (i.e., corners, edges, wrinkles, or folds). | F4b |
| 06 Use lines, dots, and shapes to create the illusion of texture. | F4b |
| 07 Create the illusion of depth by using the following: | F4b |
| a. Overlapping | F4b |
| b. Size | F4b |
| c. Placement | F4b |
| d. Contrast | F4b |
| e. Detail | F4b |
| 08 Use linear perspective to create the illusion of depth. | F4b |
| 09 Render an object in the path of light with a light side, a shadow side, and cast shadow. | F4b |
| 1100-02 The students will develop observation skills vital to looking at discussing aesthetic form by describing the use of repetition and emphasis in works of art, by telling how elements are used to create unity, and by relating colors in a composition (Observer/Listener). | F4b |
| 01 Explain how repetition and overlapping can unify a composition. | F4b |
| 02 Demonstrate and understanding of: | F4b |
| a. Color organization (color wheels) | F4b |
| b. Color schemes | F4b |
| c. Tints, shades, and tones. | F4b |
| d. Warm and cool colors | F4b |
| 03 Create harmonious color relationships for specific effects (i.e., happy, dignified, peaceful, chaotic, and tragic). | F4b |
| 04 Use contrast to create emphasis (focal point) in a composition. | F4b |
| 1100-03 The students will study events leading to the development of the modern era of art history and develop skills vital to analyzing and evaluating works of art (Critic). | F4b |
| 01 Identify three events that led to the development of the modern era of art history. This may include a global understanding of four major periods in art history (i.e., Ancient, Middle Ages, Renaissance, and Modern). | F4b |
| 02 Develop skills necessary to critique works of art by: | F4b |
| a. Describing what you see and how elements such as line, shape, color, and texture are used. | F4b |
| b. Explaining how principles such as emphasis, repetition, and contrast affect composition. | F4b |
| c. Interpreting the feelings, mood, or idea communicated in the work. | F4b |
| d. Explaining why a work is considered a success, according to what you have learned in art. | F4b |

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| CERAMICS | | | |
| 1110-01 | The students will develop skills vital to making art by demonstrating proper procedures for forming, drying, decorating, and preparing clay (Participant). | F4b | |
| 01 | Knead ceramic clay so that it has an even consistency without air bubbles and with a correct moisture content. | F4b | |
| 02 | Join clay parts by such methods as adding water, using slip, or scoring surfaces. | F4b | |
| 03 | Form ceramic clay by: | F4b | |
| | a. Pinch method | F4b | |
| | b. Slab method | F4b | |
| | c. Coil method | F4b | |
| 04 | Dry clay objects slowly and evenly. | F4b | |
| 05 | Decorate a clay surface by: | F4b | |
| | a. Applying a glaze | F4b | |
| | b. Creating textural effects and patterns | F4b | |
| 06 | Recycle unfired clay. | F4b | |
| 07 | Create forms which have unity and continuity from any view. | F4b | |
| 1110-02 | The students will develop observation skills vital to looking at and discussing aesthetic form by describing ways in which artists use elements and principles of composition aesthetically, by creating pleasing relationships between function and form and positive and negative space, and by using a ceramic vocabulary (Observer/Listener). | F4b | |
| 01 | Discuss the use of emphasis on three-dimensional objects. | F4b | |
| 02 | Discuss ways in which unity is achieved in three-dimensional objects. | F4b | |
| 03 | Discuss both the positive and negative space in decorating or creating a three-dimensional form. | F4b | |
| 04 | Tell how artists create a pleasing relationship between the size and shape of objects with scale and proportion. | F4b | |
| 05 | Discuss the relationship between function and form. | F4b | |
| 06 | Tell how stains or glazes may be used harmoniously. | F4b | |
| 07 | Tell how the elements of a form relate parts of a composition to each other (i.e., relationships between colors, textures, or shapes.) | F4b | |
| 08 | Identify the parts of a pot (i.e., base, foot, neck, lip, mouth, shoulder, body [belly]). | F4b | |
| 09 | Define basic ceramic terms: | F4b | |
| | stoneware | wedging | leather hard |
| | porcelain | potter's wheel | slip |
| | glossy glaze | dry foot | bat |
| | bisque | earthenware | firing |
| | scoring | matte glaze | ceramic clay |
| | bone-dry | semi-matte glaze | kiln furniture |
| | kiln | greenware | |
| 10 | List the steps involved in forming a clay object: (1) knead clay, (2) form clay, (3) dry clay, (4) bisque fire, (5) glaze or decorate, (6) glaze fire. | F4b | |
| 1110-03 | The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by describing how artists use repetition and balance in ceramics, and by identifying cultures and professions related to ceramics. (Critic) | F4b | |
| 01 | The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by describing how artists use repetition and balance in ceramics and by identifying cultures and professions related to ceramics. (Critic) | F4b | |
| 01 | Tell how potters use the principle of repetition when decorating a surface. | F4b | |
| 02 | Tell how potter artists have created both formal and informal balance in their forms. | F4b | |
| 03 | Describe ways in which decoration has enhanced a ceramic form. | F4b | |
| 04 | Identify examples of pottery from the following cultures: Mediterranean, Oriental, European, and North and South American Indians. | F4b | |

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| 05 | Discuss the role of ceramics in today's culture (i.e., arts and crafts, science, and industry) | F4b |
| JEWELRY | | |
| 1120-01 | The students will develop skills vital to making art by creating a design for an article of jewelry, by selecting a method of construction, and by completing the steps required in fashioning jewelry (Participant). | F4b |
| 01 | Create original designs in which unity and continuity are considered. | F4b |
| 02 | Determine the suitability of the materials selected for the design. | F4b |
| 03 | Determine the appropriateness of the form for the function of the design (e.g., sharp points are not appropriate for a ring, or an earring must not be too heavy). | F4b |
| 04 | Complete the rough finishing of a design. | F4b |
| 05 | Finish the design by polishing and buffing it with appropriate compounds or techniques. | F4b |
| 06 | Select one of the following areas of emphasis and create an article of jewelry: | F4b |
| | a. Lost wax casting | F4b |
| | b. Sand casting, cuttle bone, or similar forms | F4b |
| | c. Wood jewelry | F4b |
| | d. Fabricated jewelry | F4b |
| 1120-02 | The students will develop observation skills vital to looking at and discussing aesthetic form by telling how jewelry designers have used principles of art to enhance the aesthetic quality of their design and by describing the use of positive and negative space relationships in jewelry (Observer/Listener). | F4b |
| 01 | Use visual examples and tell how jewelry designers: | F4b |
| | a. Create a point of emphasis on a three-dimensional object. | F4b |
| | b. Create a feeling of unity. | F4b |
| | c. Use both positive and negative space in decorating forms. | F4b |
| | d. Use scale and proportion to create pleasing relationships between parts of a form. | F4b |
| | e. Relate the elements of a form to each other (i.e., the relationship between textures, colors, or shapes). | F4b |
| 02 | Define basic jewelry terms: | F4b |
| | polish/buff cast funnel | F4b |
| | flux lost wax casting cuttle bone | |
| | mold centrifugal casting chase | |
| | lapidary sprue solder | |
| 1120-03 | The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by discussing the use of repetition, balance, and decoration in jewelry design; and by identifying cultures famous for their fine jewelry (Critic). | F4b |
| 01 | Tell how the principle of repetition is used by jewelers when decorating a surface. | F4b |
| 02 | Tell how jewelry designers create both formal and informal balance in a design. | F4b |
| 03 | Describe how decoration can enhance a form. | F4b |
| 04 | Explain the role of jewelers in today's culture (i.e., mass produced and hand-crafted forms). | F4b |
| 05 | Identify the important role of jewelry in several specific cultures (i.e., Egyptian, Mayan, African, and English). | F4b |
| GENERAL CRAFTS | | |
| 1130-01 | The students will develop skills vital to making art by creating craft forms and by following the steps required in each (Participant). | F4b |
| 01 | Create a craft form from wood (i.e., plaques, containers, and signs). | F4b |
| | a. Identify the limits of wood as a material and how it affects its design potential. | F4b |
| | b. Use the forming process appropriate for the objects selected. | F4b |
| | c. Finish the wood by sanding, staining, or varnishing. | F4b |

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| 02 | Create a craft form with fibers or fabrics. Use the processes involved in one or more art forms: | | F4b |
| | stitchery | tie-dyeing | F4b |
| | weaving | appliqué | F4b |
| | macramé | batik | |
| | | soft sculpture | |
| | | basketry | |
| | | basketry | |
| 03 | Paper craft: Use processes such as cutting, folding, supporting, tearing, scoring, gluing, decorating (where appropriate), pasting, bending, or forming. | | F4b |
| 04 | Glass design: Use processes such as cutting, etching, joining, and staining. | | F4b |
| 05 | Mosaic: Use processes such as cutting and grouting. | | F4b |
| 06 | Tile Murals: Use processes such as wax resistant, painting, firing, and mounting. | | F4b |
| 07 | Mask Making: Use materials such as papier-mâché, plastic, and latex. | | F4b |
| 08 | Metal Design: Use processes such as engraving, embossing, staining, and chasing. | | F4b |
| 1130-02 | The students will develop observation skills vital to looking at and discussing aesthetic form by describing ways in which artists have used emphasis, unity, and proportion in their craft designs, by describing the role of space, function, and decoration in design and by defining basic craft terms (Observer/Listener). | | F4b |
| 01 | Identify ways in which craftsmen create a point of emphasis on a three-dimensional object. | | F4b |
| 02 | Point out ways in which craftsmen create a feeling of unity in a design. | | F4b |
| 03 | Tell how artists use both positive and negative space in decorating or creating a three-dimensional form. | | F4b |
| 04 | Describe how artists use scale and proportion in a design. | | F4b |
| 05 | Identify ways in which craftsmen relate form and function in an object. | | F4b |
| 06 | Tell how texture or pattern is used to enhance a craft object. | | F4b |
| 07 | Point out ways in which color is used effectively in a craft form. | | F4b |
| 08 | Tell how craftsmen effectively relate the elements of their design (i.e., texture, shape, and color). | | F4b |
| 09 | Define basic craft terms: | | F4b |
| | carve | macramé | F4b |
| | additive | appliqué | F4b |
| | subtractive | weaving | |
| | sand casting | stitchery | |
| | knotting | dyeing | |
| | | scoring | |
| | | hooking | |
| | | batik | |
| | | etching (glass) | |
| | | soldering | |
| 1130-03 | The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by discussing ways in which craftsmen use principles of design, and by identifying cultures famous for their crafts. (Critic) | | F4b |
| 01 | Analyze the effective use of both formal and informal balance in a craft design. | | F4b |
| 02 | Look at a series of craft forms and determine whether or not decoration enhances each object. | | F4b |
| 03 | Discuss the role and characteristics of crafts from the following cultures: Egyptian, African, Oriental, European, and North and South American. | | F4b |
| 04 | Discuss the contributions of craft design and craftsmen in industry, art, and science. | | F4b |
| 1140-01 | The students will develop skills vital to making art by creating sculptural forms, both additive and subtractive, and by following the appropriate steps in creating sculpture (Participant). | | F4b |
| 01 | Create sculpture by the additive method, preferably using ceramic clay. | | F4b |
| | a. Create an original design or marquette. | | F4b |
| | b. Construct an appropriate armature and/or base (if needed). | | F4b |
| | c. Create the sculptural form. | | F4b |
| | d. Enhance the surface by texturing, burnishing, etc. | | F4b |
| | e. After firing, select and apply an appropriate patina, stain, or paint to further enrich | | F4b |

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| | the surface of the sculpture (if clay is used). | | | | | | | | | | | | | | | | |
| 02 | Create sculpture by the subtractive method (i.e., using plaster with vermiculite or soapstone). | F4b | | | | | | | | | | | | | | | |
| | a. Create an original design or select an appropriate model. | F4b | | | | | | | | | | | | | | | |
| | b. Carve, scoop, cut, file, or chisel out the sculptured form. | F4b | | | | | | | | | | | | | | | |
| | c. Finish the surface by sanding, texturing, etc. | F4b | | | | | | | | | | | | | | | |
| 1140-02 | The students will develop observation skills vital to looking at and discussing aesthetic form by telling how sculptors have used basic elements and color harmony in their designs, giving attention to special relationships in sculpture and defining basic sculpture terms (Observer/Listener). | F4b | | | | | | | | | | | | | | | |
| 01 | Tell how sculptors have used emphasis in their work. | F4b | | | | | | | | | | | | | | | |
| 02 | Point out examples of unity and continuity in pictures of famous sculpture. | F4b | | | | | | | | | | | | | | | |
| 03 | Describe how a sculptor has used both positive and negative space in decorating or creating a three-dimensional form. | F4b | | | | | | | | | | | | | | | |
| 04 | Tell how a sculptor used scale and proportion. | F4b | | | | | | | | | | | | | | | |
| 05 | Point out ways in which a sculptor relates parts of a composition appropriately (i.e., with texture, line, and repetition). | F4b | | | | | | | | | | | | | | | |
| 06 | Define the following terms: | F4b | | | | | | | | | | | | | | | |
| | <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">stain</td> <td style="width: 33%;">bone dry</td> <td style="width: 33%;">patina</td> </tr> <tr> <td>armature</td> <td>welding</td> <td>marquette</td> </tr> <tr> <td>oil base clay</td> <td>leather hard</td> <td>vermiculite</td> </tr> <tr> <td>water base clay</td> <td>scoring</td> <td>luting</td> </tr> <tr> <td>bisque</td> <td>glaze</td> <td></td> </tr> </table> | stain | bone dry | patina | armature | welding | marquette | oil base clay | leather hard | vermiculite | water base clay | scoring | luting | bisque | glaze | | |
| stain | bone dry | patina | | | | | | | | | | | | | | | |
| armature | welding | marquette | | | | | | | | | | | | | | | |
| oil base clay | leather hard | vermiculite | | | | | | | | | | | | | | | |
| water base clay | scoring | luting | | | | | | | | | | | | | | | |
| bisque | glaze | | | | | | | | | | | | | | | | |
| 1140-03 | The students will develop skills for analyzing and evaluating works of art and studying the artists who produced them by naming three famous sculptors and identifying their work; by describing the role of repetition, surface enrichment, and balance in good sculpture design; and by discussing basic characteristics of sculpture from various cultures and applications of the sculptor's skills (Critic). | F4b | | | | | | | | | | | | | | | |
| 01 | Explain ways in which noted sculptors have used the principle of repetition. | F4b | | | | | | | | | | | | | | | |
| 02 | Point out the use of both formal and informal balance in sculpture. | F4b | | | | | | | | | | | | | | | |
| 03 | Explain how surface enrichment can enhance a form. | F4b | | | | | | | | | | | | | | | |
| 04 | Identify the use of positive and negative space in sculpture. | F4b | | | | | | | | | | | | | | | |
| 05 | Identify characteristics of sculpture from the following cultures: Mediterranean, Oriental, Egyptian, American, and African. | F4b | | | | | | | | | | | | | | | |
| 06 | Identify professions which might use skills similar to the sculptors. | F4b | | | | | | | | | | | | | | | |
| 07 | Describe the historical importance of at least three famous sculptors representing one from the past and one from the present. | F4b | | | | | | | | | | | | | | | |
| | ART HISTORY AND CRITICISM | | | | | | | | | | | | | | | | |
| 1150-01 | The students will develop skills vital to appreciating and discussing the role they may play in viewing art forms, distinguish between the various art forms and explaining ways in which people value art (Participant) | F4b | | | | | | | | | | | | | | | |
| 01 | Describe the differences in the role of observer, participant, and critic as each relates to the visual arts. | F4b | | | | | | | | | | | | | | | |
| 02 | Identify the relationship between natural objects, folk art (objects made by people untrained in art), popular art (magazines, billboards, movies), practical art (architecture and interior design, etc.), and expressive art. | F4b | | | | | | | | | | | | | | | |
| 03 | Describe how the following experiences affect how a person values art: | F4b | | | | | | | | | | | | | | | |
| | a. The setting in which art is viewed. | F4b | | | | | | | | | | | | | | | |
| | b. How a person has learned to "see." | F4b | | | | | | | | | | | | | | | |
| | c. How much is known about the elements and principles of design. | F4b | | | | | | | | | | | | | | | |
| | d. What is known about symbolism in art. | F4b | | | | | | | | | | | | | | | |
| | e. What the art work reminds one of. | F4b | | | | | | | | | | | | | | | |

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| | f. How much is known about the history of the work. | F4b |
| 1150-02 | The students will develop observation skills vital to looking at and discussing aesthetic form by identifying ways in which elements of design have been used by artists and by describing techniques artists use to create moods or feelings in their work (Observer/Listener). | F4b |
| 01 | Look at works of art and identify how the artist: | F4b |
| | a. Used emphasis in the work. | F4b |
| | b. Created movement through repetition. | F4b |
| | c. Created movement through overlapping. | F4b |
| | d. Created balance. | F4b |
| | e. Used elements to give unity. | F4b |
| | f. Created a mood or feeling with color. | F4b |
| | g. Used all of the space effectively. | F4b |
| | h. Maintained aesthetic proportions. | F4b |
| | i. Created a balance between simplicity and detail. | F4b |
| | j. Manipulated the feeling of "flatness" to achieve a certain purpose. | F4b |
| 02 | Classify sculpture under the headings "relief" and "in-the-round." | F4b |
| 1150-03 | The students will develop skills for analyzing and evaluating works of art and studying the artists who produced them by using nontechnical methods to describe works of art to tell how they were created; by identifying themes, styles, symbols, and techniques used by artists; and by identifying common art terms and major periods of art history (Critic). | F4b |
| 02 | Explain ways in which the environment influenced the design of buildings in major cultures around the world. | F4b |
| 03 | Distinguish between paintings, drawings, photographs, and prints of similar subjects (categorizing). | F4b |
| 03 | Explain how an artist's work is a form of nonverbal communication. | F4b |
| 04 | Describe differences among works of art by identifying subject matter, color usage, feelings or mood, and what is seen in the work (i.e., what is happening). | F4b |
| 05 | Identify similarities and differences in the style of various well-known artists. | F4b |
| 06 | Point out examples of experimentation, imagination, and creativity in works of art. | F4b |
| 07 | Point out examples of artists creating a mood or feeling by "keying" the color or value of objects in an art product. | F4b |
| 08 | Point out the use of themes in works of art and similarities and differences in the way the themes are treated. | F4b |
| 09 | Identify examples of symbolism used in art and describe logical interpretations of their usage. | F4b |
| 10 | Describe examples of stylized and representational works of art. | F4b |
| 11 | Tell how the function and the materials of a form influence its structure, shape, or appearance. | F4b |
| 12 | Describe examples of the five major uses of art: | F4b |
| | a. Philosophy or religion | F4b |
| | b. Utility | F4b |
| | c. Documentation or decoration | F4b |
| | d. Self-expression | F4b |
| 13 | Describe art forms in terms like realistic or abstract, geometric or organic, figurative, natural, still life, cityscape, landscape, and nonobjective. | F4b |
| 14 | Identify special techniques used by artists in painting, sculpture, and printmaking (i.e., gouache, graffito, resist, and scumbling). | F4b |
| 15 | Participate in the process of looking at and talking about works of art and the cultures that produced them. This would include discussing the artists and his culture; the tools the artist used; the mood, feeling, or message of the work; the effects of elements and principles of design evident in the work; and the styles or techniques used. | F4b |

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| 16 | Identify the cause and effect relationship of one period on another (or one culture on another [i.e., Neo-Classic on Impressionism, African art on Cubism]). | F4b |
| 17 | Describe the characteristics of six major art periods and identify a major artist representing each. | F4b |
| PHOTOGRAPHY | | |
| 1160-01 | The students will develop skills vital to taking and processing photographs by developing basic camera mastery and essential skills and theory for darkroom work (Participant). | F4b |
| 01 | Explain the functions of the various parts of a camera: body, viewer, lens, shutter, aperture setting. | F4b |
| 02 | Explain how to use lens, aperture, adjustment, and shutter speed for the following situations: | F4b |
| | a. To photograph subjects in various stages of action. | F4b |
| | b. To control the depth of field. | F4b |
| | c. To compensate for restricted light conditions (i.e., when fast action must be photographed under low-light conditions or when a shallow depth of field is required under extreme light conditions). | F4b |
| 03 | Explain the effect light has upon photographic film and paper. | F4b |
| 04 | Describe the sequence of chemicals through which photographic film and paper must be taken in the development process. | F4b |
| 05 | Describe ways to control areas where light strikes the photographic paper (e.g., by dodging, burning, and by the use of negatives, masks, and opaque objects). | F4b |
| 06 | Describe ways to control the chemical reaction of photographic paper through such processes as chemical dodging. | F4b |
| 07 | Explain the appropriate use of natural and artificial light in photography. | F4b |
| 08 | Develop black and white film. | F4b |
| 09 | Make contact prints of the negatives on photographic paper. | F4b |
| 10 | Use the enlarger's film carrier, aperture setting, time, lens, and height adjustment to produce an enlargement of a negative. | F4b |
| 11 | Select appropriate paper according to the characteristics of the negative and light source. | F4b |
| 1160-02 | The students will develop observation skills vital to looking at and discussing aesthetic form by describing well-designed photographs and defining basic terms (Observer/Listener). | F4b |
| 01 | Describe how the point of emphasis (or focal point) in a photograph was created. | F4b |
| 02 | Point out how a photographer creates interesting negative spaces. | F4b |
| 03 | Point out how photographers create harmony or unity in a composition. | F4b |
| 04 | Tell how photographers create both formal and informal balance in a design. | F4b |
| 05 | Tell how a photographer groups the elements of a design to make it more interesting. | F4b |
| 06 | Point out how a photographer manipulates contrast in a negative to create moods or feelings in a photograph. | F4b |
| 07 | Point out how a photographer creates a pleasing relationship between the size and shapes of objects in a photograph. | F4b |
| 08 | Tell how cropping is used to improve the composition of a photograph. | F4b |
| 09 | Describe how a photographer manipulates depth by controlling depth of field, focus, and contrast. | F4b |
| 10 | Define the following photographic terms: | F4b |
| | aperture | fixer |
| | lens | hypo clear |
| | chemical dodging | shutter speed |
| | masking | cropping |
| | depth of field | light dodging |
| | developer | burning |
| | | f/stop |
| | | hypo |
| | | wetting agent |
| | | silver salts |

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| 1160-03 | The students will develop skills vital to analyzing and evaluating works of art and studying the artists who produced them by discussing photography from the view of an art critic, by identifying related careers, and by identifying well-known photographers (Critic). | F4b |
| 01 | Analyze ways in which photographers use various elements to relate parts of a composition to each other (e.g., by overlapping parts or repeating a color or texture). | F4b |
| 02 | Describe ways in which a photographer might use repetition to lead the eye in a predetermined direction, creating illusions of rhythm and movement. | F4b |
| 03 | Identify ways in which a photographer creates pattern to attract attention or provide areas of interest to make a better composition. | F4b |
| 04 | Tell how photographers use overlapping in a picture to improve their composition. | F4b |
| 05 | Discuss the role of photography in business, industry, and art. | F4b |
| 06 | Compare the work of two famous photographers such as Ansel Adams, Mathew Brady, W. Eugene Smith, Edward Steichen, Margaret Bourke White, Irving Pen, and Henri Cartier-Bresson. | F4b |
| MUSIC | | |
| GENERAL MUSIC | | |
| 1600-01 | The students will reinforce and expand vocal techniques and skills related to singing, including a major scale and three-part songs (Participant). | F4b |
| 01 | Produce an acceptable vocal tone by using proper posture, breath support, and diction. | F4b |
| 02 | Recognize when the voice is in tune with other voices. | F4b |
| 03 | Sing a major scale. | F4b |
| 04 | Sing unison, two-part, and three-part songs. | F4b |
| 05 | Sing with expression using proper dynamics, tempo, and style. | F4b |
| 06 | Understand and show tolerance for the changing voice. | F4b, G3a |
| 1600-02 | The students will develop and reinforce techniques and skills related to playing musical instruments, including accompanying songs (Participant). | F4b |
| 01 | Play instruments such as the ukulele, guitar, autoharp, recorder, and percussion instruments, and use them to accompany songs. | F4b |
| 1600-03 | The students will identify musical instruments, voices, and historical periods; understand musical forms; and expand conducting skills (Observer/Listener, Critic). | F4b |
| 01 | Identify band, orchestra, and electronic instruments by sight and sound, recognize the characteristic qualities of the soprano, alto, tenor, and bass voices. | F4b |
| 02 | Identify the Baroque, Classical, Romantic, and Contemporary periods of music. | F4b |
| 03 | Recognize and conduct two-beat, three-beat, and four-beat patterns. | F4b |
| 04 | Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue. | F4b |
| 1600-04 | The students will sight-read simple and rhythmic patterns and melodies using simple notes and rests (Participant, Observer/Listener, Critic). | F4b |
| 01 | Interpret musical symbols, terms, and signs as used in class. | F4b |
| 02 | Read melodies using letter names, numbers, and/or syllables. | F4b |
| 03 | Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures. | F4b |
| 1600-05 | The students will develop skills necessary to create and notate a musical composition (Participant). | F4b |
| 01 | Demonstrate a knowledge of the rules of correct notation. | F4b |
| 02 | Write a major scale. | F4b |
| 03 | Create and notate a simple melody. | F4b |

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| 1600-06 | The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic). | F4b |
| 01 | Describe why certain musical experiences and activities may be preferred to others. | F4b |
| 02 | Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical). | F4b |
| 03 | Demonstrate responsibility as a musician by: | D, F4b |
| | a. Coming prepared to class. | A2a, F4b |
| | b. Caring for music department physical facilities and equipment. | E1a, F4b |
| | c. Reacting appropriately to various music activities. | D1a, F4b |
| 04 | Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music. | F4b |
| 05 | Describe the different ideas and feelings that music can communicate. | F4b |
| BEGINNING CHORUS | | |
| 1620-01 | The students will reinforce and expand knowledge, techniques, and skills involved in singing, including the vocal mechanism, major and chromatic scales, and the relationship of the individual voice to the entire ensemble (Participant). | F4b |
| 01 | Produce an acceptable vocal tone by using proper posture, breath support, and diction. | F4b |
| 02 | Match pitches, sing intervals and melodic lines in tune. | F4b |
| 03 | Understand the vocal mechanism and its function. | F4b |
| 04 | Produce a gradual extension of range with increasing facility and flexibility. | F4b |
| 05 | Understand the relationship of individual voices to the rest of the ensemble (e.g., balance, blend, and timbre). | F4b |
| 06 | Sing a major scale and a chromatic scale. | F4b |
| 07 | Sing with expression using proper dynamics, tempo, and style. | F4b |
| 08 | Sing unison, two-part, and three-part songs. | F4b |
| 09 | Understand and show tolerance for the changing voice. | F4b, G3a |
| 10 | Sing in a small ensemble. | F4b |
| 1620-02 | The students will identify performance problems and historical backgrounds, understand musical forms, and expand conducting skills (Observer/Listener, Critic). | F4b |
| 01 | Analyze performance problems and take appropriate measures to resolve them. | F4b |
| 02 | Identify the historical background of music being studied. | F4b |
| 03 | Recognize and conduct two-beat, three-beat, and four-beat patterns. | F4b |
| 04 | Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue. | F4b |
| 1620-03 | The students will sight-read simple rhythmic patterns and melodies using simple notes and rests (Participant, Observer/Listener, Critic). | F4b |
| 01 | Interpret symbols, terms, and signs used in choral literature. | F4b |
| 02 | Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures. | F4b |
| 1620-04 | The students will develop skills necessary to create and notate a musical composition (Participant). | F4b |
| 01 | Demonstrate a knowledge of the rules of correct notation. | F4b |
| 02 | Write a major scale and a chromatic scale. | F4b |
| 03 | Create and notate a simple melody. | F4b |
| 1620-05 | The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic). | F4b |

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| 01 | Describe why certain musical experiences and activities may be preferred to others. | F4b |
| 02 | Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical). | F4b |
| 03 | Demonstrate responsibility as a musician by: | D, F4b |
| | a. Coming prepared to class. | A2a, F4b |
| | b. Caring for music department physical facilities and equipment. | E, F4b |
| | c. Reacting appropriately to various music activities. | D1a, F4b |
| 04 | Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music. | F4b |
| 05 | Describe the different ideas and feelings that music can communicate. | F4b |
| BEGINNING BAND | | |
| 1640-01 | The students will develop and reinforce techniques and skills related to playing a musical instrument, including playing position, tone production, scales, rudiments, and expression (Participant). | F4b |
| 01 | Identify the parts of the instrument. | F4b |
| 02 | Demonstrate proper embouchure for wind instruments or stick-grip for percussion instruments. | F4b |
| 03 | Demonstrate appropriate posture and hand position for playing the instrument. | F4b |
| 04 | Demonstrate proper breath support for wind instruments. | F4b |
| 05 | Produce an acceptable tone. | F4b |
| 06 | Articulate legato and staccato on wind instruments. | F4b |
| 07 | Play the following snare drum rudiments: single-stroke-roll, long-roll, flam, and ruff (percussionists). | F4b |
| 08 | Play the following major scales: one octave (concert pitch), F, B flat, E flat, A flat. All percussionists will play scales on mallet instruments. | F4b |
| 09 | Perform dynamic levels from piano through forte. | F4b |
| 1640-02 | The students will identify intonation problems, musical elements, understand musical forms, and expand conducting skills (Observer/Listener, Critic). | F4b |
| 01 | Recognize and correct intonation problems at the unison. | F4b |
| 02 | Recognize and conduct two-beat, three-beat, and four-beat patterns. | F4b |
| 03 | Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue. | F4b |
| 04 | Identify the meter, mood, style, tempo, form, and dynamics of the music being studied. | F4b |
| 1640-03 | The students will sight-read simple rhythmic patterns and melodies using simple notes and rests (Participant, Listener/Observer, Critic). | F4b |
| 01 | Interpret the musical symbols, terms, and signs as found in first-year method books. | F4b |
| 02 | Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures. | F4b |
| 1640-04 | The students will develop skills necessary to create and notate a musical composition (Participant). | F4b |
| 01 | Demonstrate a knowledge of the rules of correct notation. | F4b |
| 02 | Write the following scales, including key signatures: F, B ^b , E ^b , and A ^b major. | F4b |
| 03 | Create and notate a simple melody. | F4b |
| 1640-05 | The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic). | F4b |
| 01 | Describe why certain musical experiences and activities may be preferred to others. | F4b |
| 02 | Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical). | F4b |

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| 03 | Demonstrate responsibility as a musician by: | D, F4b |
| a. | Bringing appropriate musical instruments and/or equipment to class. | A2a, F4b |
| b. | Caring for music department physical facilities and equipment. | D, F4b |
| c. | Coming prepared to class. | A2a, F4b |
| d. | Reacting appropriately to various music activities. | D1a, F4b |
| 04 | Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music. | F4b |
| 05 | Describe the different ideas and feelings that music can communicate. | F4b |
| BEGINNING ORCHESTRA | | |
| 1660-01 | The students will develop and reinforce techniques and skills related to playing a string instrument, including playing position, tone production, and expression (Participant). | F4b |
| 01 | Identify the parts of the instrument and bow. | F4b |
| 02 | Demonstrate the correct playing position for the body, instrument, and bow. | F4b |
| 03 | Play with clear tone quality. | F4b |
| 04 | Play the following bowing techniques: | F4b |
| a. | Detach (smooth, separate bows) using half bows and introducing the use of whole bows. | F4b |
| b. | Staccato (short strokes) using half bows. | F4b |
| c. | Legato (slurring) using two or three notes per bow. | F4b |
| 05 | Play the basic finger patterns for half-steps and whole-steps used in major and minor tetrachords (four-note scales). | F4b |
| 06 | Play the finger patterns for the following one octave major scales: | F4b |
| a. | Violin (D, G, A) | F4b |
| b. | Viola and cello (D, G, C) | F4b |
| c. | Bass (D, G) | F4b |
| 07 | Play dynamic levels from piano through forte. | F4b |
| 08 | Play pizzicato. | F4b |
| 1660-02 | The students will identify intonation problems, musical elements, historical backgrounds, understand musical forms, and expand conducting skills (Observer/Listener, Critic). | F4b |
| 01 | Recognize and correct intonation problems. | F4b |
| 02 | Pluck a string and tune it to a given pitch. | F4b |
| 03 | Identify the following musical forms: two part (AB), three-part (ABA, ABC), rondo (ABACAD, etc.), theme and variations, and fugue. | F4b |
| 04 | Identify the meter, mood, style, tempo, form, and dynamics of the music being studied. | F4b |
| 05 | Recognize and conduct two-beat, three-beat, and four-beat patterns. | F4b |
| 1660-03 | The students will sight-read simple rhythmic patterns and melodies using simple notes and rests (Participant, Observer/Listener, Critic). | F4b |
| 01 | Interpret musical symbols, terms, and signs as found in beginning method books. | F4b |
| 02 | Sight-read simple rhythmic patterns in single-pitch exercises and melodies using whole notes, half notes, quarter notes, eighth notes, and corresponding rests in quarter note time signatures. | F4b |
| 1660-04 | The students will develop skills necessary to create and notate a musical composition (Participant). | F4b |
| 01 | Demonstrate a knowledge of the rules of correct notation. | F4b |
| 02 | Write the following scales, including key signatures: C, D, and G major. | F4b |
| 03 | Create and notate a simple melody. | F4b |
| 1660-05 | The students will learn to evaluate musical experiences by demonstrating appropriate behavior and by verbalizing ideas and feelings that music can communicate (Observer/Listener, Critic). | F4b |

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| 01 | Describe why certain musical experiences and activities may be preferred to others. | F4b |
| 02 | Describe ways various types of music have influenced society and how society has influenced music (e.g., jazz, rock, folk, country-western, and classical). | F4b |
| 03 | Demonstrate responsibility as a musician by: | D, F4b |
| a. | Bringing appropriate musical instruments and/or equipment to class. | A2a, F4b |
| b. | Caring for music department physical facilities and equipment. | D, F4b |
| c. | Coming prepared to class. | A2a, F4b |
| d. | Reacting appropriately to various music activities. | D1a, F4b |
| 04 | Describe the contributions of composers, performers, technicians, craftsmen, and others in developing and promoting music. | F4b |
| 05 | Describe the different ideas and feelings that music can communicate. | F4b |
| UTAH STUDIES | | |
| 6100-01 | The students will demonstrate the ability to think critically, through speaking, listening, writing, and reading. | F1a, F2a, F3b, F3c |
| 01 | Use analogies in speech and writing. | F1a, F3c |
| 02 | Distinguish between relevant and irrelevant information in determining solutions to problems. | F2a |
| 03 | Predict outcomes and analyze causal factors. | F2a |
| 04 | Make logical conclusions through speaking and writing. | F1a, F2a, F3c |
| 05 | Construct a timeline. | F4 |
| 06 | Demonstrate note-taking skills. | F4 |
| 07 | Use primary sources (i.e., oral history, manuscripts, on-site investigations, journals, and newspapers) in studying state and local history. | F4a |
| 08 | Examine their own values and compare them to the values of various majority, minority, ethnic, and cultural groups in the community. | F4a |
| 6100-02 | The students will explain that the history of Utah represents its cultural heritage and that the various people and cultures of all historical periods have made contributions to Utah. | F4a |
| 01 | List the contributions of the major Native American groups to Utah's development (307-201, 202, 203). | F4a |
| 02 | List the contributions of the early Spanish explorers to Utah (Escalante, Dominguez, Cardenas, and Rivera) (307-501). | F4a |
| 03 | Analyze contributions made to Utah's history by the mountain men (Jedediah Smith, Peter S. Ogden, Etienne Provost, William Ashley, Jim Bridger, Joseph R. Walker, James Beckworth, and Antoine Robidoux) (307-502). | F4a |
| 04 | List the purposes and contributions made by government explorers such as Fremont, Gunnison, Stansbury, Powell, and Beckwirth (307-503). | F4a |
| 05 | Discuss the influence of the Mormon society and culture on the development of Utah, excluding doctrinal teaching of the Mormon religion (307-504). | F4a |
| 06 | Explain contributions of religious, ethnic, and cultural groups to the development of the state (307-504). | F4a |
| 07 | Demonstrate an awareness of the contributions of the military, industry, and mining to the development of the state (307-505, 6). | F4a |
| 08 | Evaluate our cultural heritage through examining architecture, journals, manuscripts, photography, the arts, and folklore of Utah (307-507). | F4a |
| 09 | Describe the contributions of women to Utah's development (307-303). | F4a |
| 10 | Identify critical, growth-related issues facing Utah in the future (i.e., water, heat, power, taxes, education, jobs, recreation, transportation, etc.) and suggest ways they can assure that Utah will continue to be a favorable place to live (Project 2000) (307-707, 8, 9, 10, 11). | F4a |
| 6100-03 | The students will identify the major geographic features of Utah. | F4a |
| 01 | Locate on a map of Utah the three physiographic provinces (Colorado Plateau, Rocky | F4a |

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| | Mountains, and Great Basin) (307-401). | |
| 02 | Locate on a map of Utah the following major rivers: Colorado, Green, Bear, San Juan, Virgin, Sevier, Provo, Weber, Jordan, and Paria (307-402). | F4a |
| 03 | Locate on a map of Utah the following major mountain ranges: Wasatch, Uintah, Oquirrh, LaSal, and Henry (307-403). | F4a |
| 04 | Locate on a map of Utah the following major bodies of water: Great Salt Lake, Utah Lake, Bear Lake, Lake Powell, Flaming Gorge, Sevier Lake, and the Strawberry Reservoir (307-404). | F4a |
| 05 | Label rainfall, resources, population, and vegetation on a map of Utah. | F4a |
| 06 | Locate on a map of Utah the state's counties and major cities. | F4a |
| 6100-04 | The students will discuss the similarities and differences of Utah's government to the federal government. | F4a |
| 01 | Describe the structure and services of local government in Utah (307-701). | F4a |
| 02 | Describe the structure and function of Utah's state government to include the executive, legislative, and judicial branches (307-702). | F4a |
| 03 | Compare the structure of the federal government with those of state and local governments in Utah (307-703). | F4a |
| 04 | Demonstrate how a citizen can effectively participate in government at the state and federal levels (307-704). | F4a |
| 05 | Identify the major elements of the Utah Constitution and explain how it functions (307-705, 6). | F4a |
| 6100-05 | The students will verbally explain how economic decisions, whether by individuals (microeconomics) or groups (macroeconomics), affect the economy of Utah. | F4a |
| 01 | Explain how an individual choice affects the economy of a geographic area. | F4a |
| 02 | Explain how group decisions affect the economy of a geographic area. | F4a |
| 03 | Explain the effects of geography, natural resources, supply of capital, government decisions, and technology on our economic decision making in the state of Utah (307-601, 2, 3). | F4a |
| 04 | Explain the relationship of the economic resources of the state of Utah (i.e., land, capital, labor, entrepreneurship). | F4a |
| 05 | Describe the interaction and opportunity cost of one economic decision on another (i.e., urban growth, conservation, nuclear storage, environmental protection). | F4a |
| 06 | Cite examples of productivity, work ethic, and specialization of labor that made the state of Utah successful. | F4a |
| 07 | Cite examples from Utah history of a traditional economy, planned economy, and market economy. | F4a |
| | UNITED STATES HISTORY | |
| 6120-01 | The students will demonstrate the ability to utilize critical thinking and decision-making skills in completing social studies activities. | F2a, F4a |
| 01 | Identify their own values and compare them to basic American values. | F4a |
| 02 | State or write possible solutions to an issue/problem. | F2a, F4a |
| 03 | Critically examine and compare current and historical events from various sources (media center, notes, television, radio, newspapers, interviews, etc.). | F4a |
| 04 | Apply law-related and citizenship/character education concepts to events that occurred in United States history. | F4a |
| 05 | Analyze graphs, charts, tables, diagrams, time lines, and cartoons. | F4a |
| 6120-02 | The students will evaluate how the American heritage reflects diverse cultures. | F4a |
| 01 | Describe the role of Native Americans in U. S. history. | F4a |
| 02 | Analyze the various cultures prevalent in the United States. | F4a |
| 03 | Identify the major contributions of religious and ethnic groups to the development of the country (308-301). | F4a |

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| 04 | Analyze the changing role of women in United States history. | F4a |
| 6120-03 | The students will evaluate why the events and acts in American history reflect the development of the beliefs and attitudes of the people of the United States. | F4a |
| 01 | Analyze the major historical, social, economic, religious, and political factors responsible for European exploration of North America (308-502). | F4a |
| 02 | Analyze the discoveries and impact of European explorers to the New World (308-503). | F4a |
| 03 | Compare the social, economic, religious, and political motivations influencing American colonization to 20th century immigration (308-504). | F4a |
| 04 | Relate the origin of American ideals, the concepts of liberty, and freedom to present day applications (308-506). | F4a |
| 05 | Explain how the constitution is the basis for today's legal system. | F4a |
| 06 | Evaluate the causes and outcomes of various wars involving the United States (308-511) | F4a |
| 07 | Evaluate how westward expansion brought both progress and problems for the United States (308-512). | F4a |
| 08 | Describe the social, political, and economic differences between the North and the South before the Civil War (308-513). | F4a |
| 09 | Explain the evolution of the Civil Rights movement (316-511). | F4a |
| 10 | Analyze the industrial and technological development in the United States and discuss their effects on transportation, communication, business, and labor. | F4a |
| 11 | Describe the impact on American life that various historical figures have made. | F4a |
| 12 | Describe how the United States has changed since World War II. | F4a |
| 13 | Trace the relationships of the United States with other leading worlds powers (316-518). | F4a |
| 6120-04 | The students will identify the major geographic features of the United States. | F4a |
| 01 | Locate the great plains, major rivers and bodies of water, and mountain ranges in the United States (308-402). | F4a |
| 02 | Locate the bordering countries, oceans, and natural resources of the United States (308-402). | F4a |
| 6120-05 | The students will describe how economic decisions, experiences, and technology changed America from an agricultural economy to an industrial economy. | F4a |
| 01 | Define economic terms (i.e., scarcity, opportunity cost, demand, supply, market price, etc.) in an agricultural, preindustrial, and industrial economy (316-603). | F4a |
| 02 | Describe how the government's economic policy changed and affected business operations, personal liberty, and the free enterprise system from an agricultural economy to an industrial economy (316-601). | F4a |
| 03 | Identify examples of productivity, work ethic, and benefits in the American economic system as it changed from an agricultural economy to an industrial economy. | F4a |
| 04 | Identify examples of the economic cycles (prosperity/recession) through the history of the United States (308-601, 2). | F4a |
| 05 | Cite examples of America's involvement in international trade. | F4a |
| 06 | Critically examine economic information from various sources (i.e., media center, radio, television, interviews, charts, graphs, cartoons, etc.). | F4a |
| 6120-06 | The students will evaluate why our democratic government was established to provide for the general welfare of its citizens. | F4a |
| 01 | Evaluate the principles expressed in the Declaration of Independence (i.e., equality, natural rights, and responsibility of government, civil disobedience, etc.) (308-701). | F4a |
| 02 | Identify the major elements of the United States Constitution (e.g., Preamble, Articles, and Amendments) and apply them to current issues (308-706, 7). | F4a |
| 03 | Explain how our legal system has been greatly affected by the rights and restraints of the Bill of Rights (308-708, 9). | F4a |
| 04 | Identify the purpose and role of government in a constitutional republic (308-710). | F4a |
| 05 | Discuss the basic constitutional principles in Amendments 11 through 26. | F4a |

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| 5080-01 | The students will demonstrate knowledge of the properties of the real number system. | F3a |
| 01 | Know that for every real number there is a point on the number line which corresponds to it (108-005). | F3a |
| 02 | Know that rational numbers are either terminating or repeating decimals. | F3a |
| 03 | Know that non-terminating, non-repeating decimals are irrational numbers (108-003). | F3a |
| 04 | Know that a real number is a rational or an irrational number (108-004). | F3a |
| 5080-02 | The students will demonstrate knowledge of the real number system. | F3a |
| 01 | Perform the operations of +, -, x, and - on rational numbers. | F3a |
| 02 | Show that those exponents which are positive integers indicate how many times another number (the base) is being used as a repeated factor. | F3a |
| 03 | Evaluate expressions using the order of operations and grouping symbols. | F3a |
| 04 | Know that the square root of a whole number is either a whole number or an irrational number (108-007). | F3a |
| 05 | Know that the square root of a given number is that number which when multiplied by itself yields the given number (108-006). | F3a |
| 06 | Know that the square root of a negative number is undefined for the set of real numbers (108-008). | F3a |
| 5080-03 | The students will demonstrate knowledge of measurement. | F3a |
| 01 | Perform conversions between units of measure within the metric system. | F3a |
| 02 | Perform conversions between units of measure within the U.S. Common System. | F3a |
| 03 | Approximate conversions between units of measure in the metric system and the U. S. Common System. (1 liter is about 1 quart; 1 meter is about 1 yard) | F3a |
| 04 | Compute the volume of a rectangular prism, given a formula (108-015). | F3a |
| 5080-04 | The students will demonstrate ability to solve applied problems using the real number system. | F3a |
| 01 | Solve applied problems with real numbers. | F2a, F3a |
| 02 | Calculate the arithmetic mean, median, and mode for a given set of data (108-021). | F3a |
| 5080-05 | The students will demonstrate knowledge of geometry. | F3a |
| 01 | Know that a regular polygon is a polygon with equal sides and equal angles (108-009). | F3a |
| 02 | Know that in congruent polygons, corresponding sides are congruent and corresponding angles are congruent (108-010). | F3a |
| 03 | Know that the Pythagorean Theorem (property) states that in a right triangle whose legs are lengths A and B, and whose hypotenuse is length C, then $C^2 = A^2 + B^2$ (108-012). | F3a |
| 04 | Know that volume is the measure of the interior region of a three-dimensional figure (108-014). | F3a |
| 05 | Use formulas in computation of volume and surface area of simple three-dimensional figures (108-015). | F3a |
| 5080-06 | The students will demonstrate knowledge of mathematical sentences. | F3a |
| 01 | Know that an equivalent relation is obtained if the same number is added to or subtracted from both sides of the relation (108-016). | F3a |
| 02 | Know that an equivalent relation is obtained if both members of an equation are multiplied by the same number or divided by the same number (divisor not zero) (108-017). | F3a |
| 03 | Solve equations involving ratio and proportion. | F2a, F3a |
| 04 | Solve simple equations using more than one property of equality. | F2a, F3a |
| 05 | Write, translate, and solve equations from simple word problems. | F2a, F3a |
| 5080-07 | The students will demonstrate an understanding of the structure of the Cartesian | F3a |

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| | (coordinate) plane. | |
| 01 | Know that the axes of the rectangular coordinate system separates the plane into quadrants. | F3a |
| 02 | Graph ordered pairs of integers on the Cartesian (coordinate) plane in all quadrants (108-019). | F3a |
| 03 | Derive a table of ordered pairs from an equation of the form $X + Y = K$, where K is constant (108-018). | F3a |
| 04 | Graph linear equations of the form $Y = X + K$ on a rectangular coordinate system (Cartesian plane) (108-020). | F3a |
| ALGEBRA PREPARATION | | |
| 5200-01 | The students will demonstrate a knowledge of set terminology and perform basic set operations. | F3a |
| 01 | Describe a set (116-301). | F3a |
| 02 | Classify sets as finite or infinite (116-302). | F3a |
| 03 | Recognize all subsets of any given set (116-305). | F3a |
| 04 | Define empty set (null set) (116-306). | F3a |
| 05 | Find the union of sets (116-307). | F3a |
| 06 | Find the intersection of sets (116-308). | F3a |
| 07 | Define disjoint sets. | F3a |
| 5200-02 | The students will demonstrate knowledge of the properties, structure, and vocabulary of the rational numbers and ability to perform the basic operations on real numbers. | F3a |
| 01 | Define factoring (116-314). | F3a |
| 02 | Define natural numbers (116-312). | F3a |
| 03 | Partition natural numbers into primes, composites, and the number one. | F3a |
| 04 | Find the prime factorization of a natural number; understand prime factorization is unique (116-315). | F3a |
| 05 | Determine the greatest common factor (GCF) of two natural numbers (116-318). | F3a |
| 06 | Determine the least common multiple (LCM) of two natural numbers (116-319). | F3a |
| 07 | Define relatively prime. | F3a |
| 08 | Define whole numbers (116-320). | F3a |
| 09 | Identify the additive identity element (116-321). | F3a |
| 10 | Know that if any product is the number zero, then at least one of the factors must be the number zero (116-331). | F3a |
| 11 | Define integers (116-322). | F3a |
| 12 | Determine the sum and difference of integers (116-323). | F3a |
| 13 | Determine the product and quotient of integers (116-324). | F3a |
| 14 | Know that the sum of every integer and its additive inverse is the number zero (116-325) | F3a |
| 15 | Define divisibility (116-326). | F3a |
| 16 | Define rational numbers (116-332). | F3a |
| 17 | Classify rational numbers as either a repeating decimal or a terminating decimal (116-333). | F3a |
| 18 | Know that the operations of addition and multiplication are commutative with respect to the rational numbers (116-327). | F3a |
| 19 | Know that the operations of addition and multiplication are associative with respect to the rational numbers (116-334). | F3a |
| 20 | Know that multiplication is distributive over addition with respect to the rational numbers (116-328). | F3a |
| 21 | Define the multiplicative identity element (116-329). | F3a |
| 22 | Define the multiplicative inverse (reciprocal) (116-339). | F3a |
| 23 | Perform the operations of addition, subtraction, multiplication, and division on rational numbers. | F3a |
| 24 | Express a fraction in decimal form (116-333). | F3a |
| 25 | Define the trichotomy principle ($a = b$, ab , or ab). | F3a |

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| 26 | Know that for every real number there is a one-to-one correspondence to a point on the number line. | F3a |
| 27 | Know that a non-terminating, non-repeating decimal is an irrational number (116-335). | F3a |
| 28 | Know that a real number is a rational or an irrational number (116-336). | F3a |
| 29 | Perform the operations of addition, subtraction, multiplication, and division on the real numbers. | F3a |
| 30 | Evaluate expressions using the order of operations and grouping symbols. | F3a |
| 5200-03 | The students will demonstrate knowledge of open sentences and the ability to solve simple linear equalities. | F3a |
| 01 | Define a variable (116-340). | F3a |
| 02 | Know that a mathematical sentence is either true or false or open (116-341). | F3a |
| 03 | Compare the rational numbers using the following symbols: =, ≠, <, >, ≤, ≥ (116-353). | F3a |
| 04 | Define a solution (or root) for a mathematical sentence (116-350). | F3a |
| 05 | Determine a solution set for a mathematical sentence from a given replacement set. | F3a |
| 06 | Know that there is exactly one point on the number line corresponding to any given rational number (116-383). | F3a |
| 07 | Know that on a horizontal number line a given number is greater than any number located to the left of that given number (116-384). | F3a |
| 08 | Find equivalent equations by adding, subtracting, multiplying, and dividing the same rational number relative to both members of an equation (116-343, 344). | F3a |
| 5200-04 | The students will demonstrate knowledge of exponents and radicals. | F3a |
| 01 | Write a number in exponential form (116-374). | F3a |
| 02 | Know that the natural number exponent tells how many times the base is used as a factor (116-375). | F3a |
| 03 | Know that the square root of a given number is that number which multiplied by itself yields the given number (116-379). | F3a |
| 04 | Know that the square root of a negative number is undefined for the set of real numbers (116-380). | F3a |
| 5200-05 | The students will demonstrate knowledge of ratio, proportion, and percent. | F3a |
| 01 | Define and use a ratio (116-370). | F3a |
| 02 | Define a proportion and use proportions to solve problems (116-371). | F3a |
| 03 | Define percent as a rational number. Know that percent is the ratio of a number compared to 100 (116-372). | F3a |
| 04 | Solve simple problems involving percent. | F3a |
| 5200-06 | The students will demonstrate knowledge of simple plane geometry. | F3a |
| 01 | Define perimeter, circumference, area, radius, and diameter. | F3a |
| 02 | Name and classify triangles, quadrilaterals, and circles. | F3a |
| 03 | Find perimeter and area of triangles, quadrilaterals, and circles. | F3a |
| 04 | Use formulas to compute the perimeters and areas of triangles. | F3a |
| 05 | Know that the axes of a rectangular coordinate system separate the plane into quadrants. | F3a |
| 06 | Graph a set of ordered pairs. | F3a |
| 07 | Know that a regular polygon is a polygon with equal sides and equal angles. | F3a |
| 08 | Know that in congruent polygons, corresponding sides are congruent and corresponding angles are congruent. | F3a |
| 09 | Know that the Pythagorean Theorem (property) states that in a right triangle whose legs are lengths A and B, and whose hypotenuse is length C, then $C^2 = A^2 + B^2$. | F3a |
| 10 | Know that volume is the measure of the interior region of a three-dimensional figure. | F3a |
| 11 | Use formulas in the computation of surface area and volume of three-dimensional figures. | F3a |

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| 5200-07 | The students will demonstrate knowledge of measurement. | F3a |
| 01 | Know that measurement is the comparison of things to standard units. | F3a |
| 02 | Measure length, volume, mass, temperature, and time (24-hour clock) using the metric system. | F3a |
| 03 | Measure length, volume, weight, temperature, and time using the U.S. Common System. | F3a |
| 04 | Perform conversions between units of measure within the metric system. | F3a |
| 05 | Perform conversions between units of measure within the U.S. Common System. | F3a |
| 06 | Approximate conversions between units of measure in the metric system and the U.S. Common System. (1 liter is about 1 quart; 1 meter is about 1 yard) | F3a |
| 5200-08 | The students will demonstrate knowledge of graphing on the rectangular coordinate system. | F3a |
| 01 | Derive a table for ordered pairs from an equation of the form $X + Y = K$, where K is constant. | F3a |
| 02 | Graph a set of ordered pairs. | F3a |
| 03 | Graph linear equations of the form $Y = X + K$, where K is constant. | F3a |
| 5200-09 | The students will select three objectives from this course and apply each of these objectives in a job or work setting. | F3a |
| 01 | Describe how each of three selected objectives is applied or used in a job or work setting | F3a |
| 02 | Select a job or work setting and show how the mathematics of this course has changed the manner in which work has been done in that job or setting. | F3a |
| 03 | Solve a problem applied to a job or work setting for each of three objectives from this course. | F2a, F3a |
| ELEMENTARY ALGEBRA | | |
| 5250-01 | The students will demonstrate knowledge of the properties of equalities. | F3a |
| 01 | Know that for any "a," then $a = a$, (reflexive property of equality) (116-411). | F3a |
| 02 | Know that for any "a" and "b," if $a = b$ then $b = a$ (symmetric property of equality) (116-412). | F3a |
| 03 | Know that for any "a," "b," and "c" if $a = b$ and $b = c$, then $a = c$ (transitive property of equality) (116-413). | F3a |
| 04 | Know that multiplication is distributive over addition and subtraction in the set of real numbers (116-420). | F3a |
| 05 | Know that zero is the additive identity for the set of real numbers (116-421). | F3a |
| 06 | Know that the number one is the multiplicative identity for the set of real numbers (116-422). | F3a |
| 07 | Know that the sum of a real number and its additive inverse (opposite) is zero (116-423). | F3a |
| 08 | Know that zero is its own additive inverse in the set of real numbers (116-424). | F3a |
| 09 | Know that the product of a non-zero real number and its multiplicative inverse (reciprocal) is the number one (116-425). | F3a |
| 10 | Know that zero does not have a multiplicative inverse (116-426). | F3a |
| 11 | Know that the product of real numbers is zero if and only if at least one of its factors is zero. | F3a |
| 12 | Define absolute value. | F3a |
| 13 | Define prime number. | F3a |
| 14 | Define composite number (116-429). | F3a |
| 15 | Define relatively prime (116-432). | F3a |
| 16 | Know that every natural number, except the number one, has a unique prime factorization (116-433). | F3a |
| 17 | Find the least common multiple (LCM) of two or more given natural numbers (116-430). | F3a |
| 18 | Find the greatest common factor (GCF) of two or more given natural numbers (16-431). | F3a |
| 19 | Add, subtract, multiply, and divide real numbers. | F3a |

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| 20 | Know that a natural number exponent indicates how many times the base is used as a factor. | F3a |
| 5250-03 | The students will demonstrate knowledge of polynomial and other algebraic expressions | F3a |
| 01 | Identify an algebraic term (116-434). | F3a |
| 02 | Identify an algebraic expression (116-435). | F3a |
| 03 | Classify polynomials by the number of terms or by degree (116-436). | F3a |
| 04 | Know the order of operations (116-437). | F3a |
| 05 | Add, subtract, and multiply polynomials, and divide a polynomial by a monomial (116-438). | F3a |
| 06 | Factor first- and second-degree polynomials. | F3a |
| 07 | Simplify rational algebraic expressions (116-440). | F3a |
| 08 | Know that rational algebraic expressions are reduced when the greatest common factor of both the numerator and the denominator is one (116-441). | F3a |
| 09 | Know that a number can be written in exponential form " a^n " where " a " is the base and " n " is the exponent. | F3a |
| 5250-04 | The students will demonstrate ability to solve simple linear equalities and inequalities. | F3a |
| 01 | Recognize algebraic sentences (equalities and inequalities). | F3a |
| 02 | Solve simple rational algebraic equations. | F2a, F3a |
| 03 | Define root (solution). | F3a |
| 04 | Find the solution set (116-447). | F3a |
| 05 | Know that equivalent open sentences have the same solution set. | F3a |
| 06 | Know that if the same number is added to or subtracted from each member of an inequality, the sense of the inequality is preserved (116-442). | F3a |
| 07 | Know that if each member of an inequality is multiplied or divided by the same positive number, the sense of the inequality is preserved (116-444). | F3a |
| 08 | Know that if each member of an inequality is multiplied or divided by the same negative number, the sense of the inequality is reversed (116-444). | F3a |
| 09 | Solve simple systems of linear equations containing two equations and two variables. | F3a |
| 10 | Solve simple word problems (116-448). | F2a, F3a |
| 5250-05 | The students will demonstrate knowledge of graphing. | F3a |
| 01 | Know that the axes of a rectangular (Cartesian) coordinate system separates a plane into quadrants. | F3a |
| 02 | Know that the rectangular coordinate system establishes a "one-to-one" correspondence between the set of all ordered pairs of real numbers and the set of points in a plane. | F3a |
| 03 | Define a relation (116-450). | F3a |
| 04 | Define abscissa and ordinate (x - coordinate and y - coordinate) (116-451). | F3a |
| 05 | Define the domain and range of a relation (116-452). | F3a |
| 06 | Define and determine slope of a line (116-459). | F3a |
| 07 | Know that when a line rises from left to right, its slope is a positive number (116-460). | F3a |
| 08 | Know that when a line falls from left to right, its slope is a negative number (116-461). | F3a |
| 09 | Know that the slope of a horizontal line is zero (116-462). | F3a |
| 10 | Know that the slope of a vertical line is undefined (116-463). | F3a |
| 11 | Know that the graph of a first-degree polynomial equation in one or two variables on the Cartesian Coordinate System is a straight line (116-455). | F3a |
| 12 | Know that the graph of a linear inequality in one variable on the real number line is a subset of a straight line (116-456). | F3a |
| 13 | Graph the solution set of a linear equation in one or two variables. | F3a |
| 5250-06 | The students will select three objectives from this course and apply each of these objectives in a job or work setting. | F3a |
| 01 | Describe how each of three selected objectives is applied or used in a job or work setting. | F3a |

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| 02 | Select a job or work setting and show how the mathematics of this course has changed the manner in which work has been done in that job or setting. | F3a |
| 03 | Solve a problem applied to a job or work setting for each of three objectives from this course. | F2a, F3a |
| GEOMETRY | | |
| 5300-01 | The students will demonstrate knowledge of the basic terms and definitions of Euclidean geometry. | F3a |
| 01 | Know the undefined terms of geometry: point, line, and plane. | F3a |
| 02 | Know that a definition names the term being defined, classifies the term, describes the term, and is reversible. | F3a |
| 03 | Define a ray. | F3a |
| 04 | Define an angle. | F3a |
| 05 | Define parallel lines. | F3a |
| 06 | Define a transversal. | F3a |
| 07 | Define polygon. | F3a |
| 08 | Define congruency. | F3a |
| 09 | Define a bisector. | F3a |
| 10 | Define similar figures. | F3a |
| 11 | Define a circle. | F3a |
| 12 | Define a sphere. | F3a |
| 5300-02 | The students will demonstrate knowledge of principles of logic. | F3a |
| 01 | Use basic principles of logic. | F3a |
| 02 | Define a logical statement as a statement which is either true or false but not both. | F3a |
| 03 | Know that statements in the "if-then" form are statements of implication (conditional). | F3a |
| 04 | Know that if A implies B, then not A implies not B is the inverse of A implies. | F3a |
| 05 | Know that if A implies B, then not B implies not A is the contrapositive of A implies B. | F3a |
| 06 | Know that if A implies B, then B implies A is the converse of A implies B. | F3a |
| 07 | Know that the phrase "if and only if" refers to biconditional statements. | F3a |
| 08 | Know that a mathematical system is based on a set of unproved statements called assumptions, axioms, or postulates. | F3a |
| 09 | Know that a proof of a theorem is a logical sequence of statements which leads from the hypothesis to the conclusion. | F3a |
| 5300-03 | The students will demonstrate knowledge of the properties of equality and inequality. | F3a |
| 01 | Know that if A is related to A, then the relation is reflexive. | F3a |
| 02 | Know that if A is related to B and B is related to A, then the relation is symmetric. | F3a |
| 03 | Know that if A is related to B and B is related to C implies that A is related to C, then the relation is transitive. | F3a |
| 04 | Know that the equivalence relation is a relation which satisfies the reflexive, symmetric, and transitive properties. | F3a |
| 5300-04 | The students will demonstrate knowledge of relationships between angles. | F3a |
| 01 | Classify an angle as acute, right, obtuse, or straight. | F3a |
| 02 | Define supplementary angles. | F3a |
| 03 | Define complementary angles. | F3a |
| 04 | Calculate the measure of angles in degrees and minutes. | F3a |
| 05 | Define right angles. | F3a |
| 06 | Define perpendicular lines. | F3a |
| 07 | Classify types o angles formed when two lines are intersected by a transversal as alternate interior, corresponding, alternate exterior, and interior angles on the same side of the transversal. | F3a |

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| 08 | Define adjacent angles. | F3a |
| 09 | Define vertical angles. | F3a |
| 5300-05 | The students will demonstrate knowledge of triangles and polygons. | F3a |
| 01 | Define a triangle. | F3a |
| 02 | Define altitudes, median, and angle bisectors of a triangle. | F3a |
| 03 | Classify a triangle according to the measure of its sides or by its largest angle. | F3a |
| 04 | Know that the sum of the measures of the three interior angles of a triangle is 180°. | F3a |
| 05 | Show congruency and similarity of triangles and polygons by use of geometric methods. | F3a |
| 06 | Know that the sum of the measures of two sides of a triangle is greater than the measure of the third side. | F3a |
| 07 | Know the properties of the special triangles: 30-60-90; 45-45-90, and equilateral triangles. | F3a |
| 5300-06 | The students will demonstrate knowledge of the circle and the relationships between circles and lines. | F3a |
| 01 | Identify chords, secants, tangents, radii, and diameters relative to a circle. | F3a |
| 02 | Define an arc. | F3a |
| 03 | Know how the measure of inscribed angles, central angles, angles formed by a tangent and a chord, or angles formed by two intersecting chords are related to the measures of their respective intercepted arcs. | F3a |
| 04 | Know how the measure of the angles formed by two secant lines, two tangent lines, or a tangent line and a secant line are related to the measure of the intercepted arcs of the circle. | F3a |
| 05 | Know that a circle is circumscribed about a figure if each vertex of the figure lies on the circle. | F3a |
| 06 | Know that a circle is inscribed in a figure if each side of the figure is tangent to the circle. | F3a |
| 5300-07 | The students will demonstrate knowledge of length, area, volume, and angle measure of geometric figures. | F3a |
| 01 | Add or subtract the measure of angles. | F3a |
| 02 | Know the Pythagorean theorem. | F3a |
| 03 | Compute areas of triangles, rectangles, parallelograms, trapezoids, and circles by formula. | F3a |
| 04 | Compute surface areas and volumes of cubes, prisms, right circular cylinders, right circular cones, and spheres by formula. | F3a |
| 05 | Determine the distance between two points by formula. | F3a |
| 5300-06 | The students will select three objectives from this course and apply each of these objectives in a job or work setting. | F3a |
| 01 | Describe how each of three selected objectives is applied or used in a job or work setting. | F3a |
| 02 | Select a job or work setting and show how the mathematics of this course has changed the manner in which work has been done in that job or setting. | F3a |
| 03 | Solve a problem applied to a job or work setting for each of three objectives from this course. | F2a, F3a |
| HEALTH EDUCATION | | |
| PERSONAL HEALTH | | |
| 7100-01 | The students will continue to recognize, develop, and practice life skills that are associated with improved personal health and quality of life. | C1 |
| 01 | Demonstrate goal setting and the decision-making process relative to good health choices and life situations. | C1 |
| 02 | Identify verbal and nonverbal communication skills in building healthy relationships. | G4 |

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| 03 | Recognize, identify, and discuss positive, neutral, and negative health practices that are directly affected by a variety of persuasive sources (e.g., peers, media, and advertising). | F4 |
| 04 | Discuss the relationship between positive and negative stress. | F4 |
| 05 | Identify positive coping behaviors in dealing with life situations (e.g., divorce, death, rape, incest, abuse, suicide). | G1 |
| 06 | Discuss the interrelationship of physical, social, and mental health (health triangle). | C1, G |
| 07 | Explain how emotions affect behavior. | F |
| 08 | Identify factors that influence and improve self-image. | G2a |
| 09 | Describe several resistance techniques as they relate to peer persuasion. | C, D |
| 10 | Discuss ways of developing and maintaining friendships. | G4a |
| 11 | Describe the stages of human development (infancy, childhood, adolescence, adulthood) and the unique contribution healthy living makes to each stage. | F4 |
| 12 | Discuss how responsible behavior during adolescence and youth impacts health during middle and old age. | F1 |
| 7100-02 | The students will demonstrate an understanding of human sexuality, its psychological, social, emotional, and physical implications of developing and maintaining a responsible, healthy lifestyle. | C1, F1 |
| 01 | Discuss responsible sexual behavior stressing the short- and long-term benefits of strong families, abstinence, and fidelity. | C2e |
| 02 | Recognize the impact of sexual behavior on one's goals and self-esteem. | F4 |
| 03 | Develop the mindset and skills that promote responsible, principle-centered decision-making when responding to peer, media, societal, and negative family influences that encourage high-risk behaviors. | C, D |
| 04 | Discuss the physical and emotional aspects of relationships and the impact they have on dating, the family, marriage, love, and infatuation. | D1a, F4 |
| 05 | Discuss maturation and the stages of sexual development throughout the life cycle. | F4 |
| 06 | Discuss the anatomy and physiology of the male and female reproductive systems. | F4 |
| 07 | Discuss conception, fetal development, birth defects, the risk factors involved in pregnancy, and the birth process. | C2e, F4 |
| 08 | Recognize the impact teen pregnancies have on quality of life, incidence of child abuse, and changes of lifestyle. | F4 |
| 09 | Discuss the legal, social, and emotional implications associated with pornography, prostitution, sexual abuse, incest, and rape persuasion. | F4 |
| 7100-03 | The students will continue to recognize, develop, and practice positive healthy lifestyles that are associated with improved physical health and quality of life. | C1 |
| 01 | Explain how good nutrition is associated with feeling good and performing well. | C1a |
| 02 | Explain the concept of caloric input and expenditure as it relates to maintaining desired body weight. | C1a |
| 03 | Explain the benefits of exercise, sleep, and relaxation on overall health. | C2, C3 |
| 04 | Explain why specific health practices (cleanliness and grooming) are especially important to the social, physical, and emotional health of middle school students. | C3a |
| 05 | Discuss eating disorders and the consequences of improper nutritional diets (e.g., bulimia, anorexia). | C2 |
| 06 | Recognize and discuss positive and negative health practices that are affected by a variety of persuasive sources (e.g., peers, media, quackery). | C2, F4 |
| 7100-04 | The students will understand factors that lead to high-risk lifestyles, including disease prevention. | C2 |
| 01 | Identify methods of preventing communicable and chronic diseases including sexually transmitted diseases. | C23 |
| 02 | Identify and discuss the immediate and long-term (physical, mental, social) effects that may result from the use of drugs, alcohol, and tobacco products. | C2e |
| 03 | Discuss ways of preventing substance abuse and abuse by teenagers. | C2e |

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| 04 Identify positive alternatives to the use of tobacco, alcohol, and other drugs. | C2e |
| 05 Identify and discuss common myths about the use of alcoholic beverages. | C2e, F4 |
| 06 Describe the physiology of the disease AIDS. | C2e, F4 |
| 07 Identify the modes of HIV transmission . | C2e, F4 |
| 08 Discuss ways in which HIV infection and AIDS can be prevented. | C2e, F4 |
| 09 Discuss the most recent means of treating HIV infection and AIDS. | F4 |
| 10 Recognize the social implications HIV/AIDS has in our society. | F4 |
| 11 Describe strategies for HIV/AIDS prevention such as decision-making skills and refusal skills in responding to negative pressure from peers. | C2e, D |
| 7100-05 The students will demonstrate emergency procedures to include basic first aid. | C2a |
| 01 Identify the emergency telephone numbers in your area and necessary information to be given. | C2a |
| 02 Identify and describe the immediate first aid procedure for the following: | |
| a. shock | C2 |
| b. heart attack or stroke | C2 |
| c. choking | C2 |
| d. cessation of breathing | C2 |
| e. severe bleeding | C2 |
| f. fractures | C2 |
| g. heat exhaustion and heat stroke | C2 |
| 03 Demonstrate the emergency procedure for treatment of minor cuts and abrasions, nosebleeds, pulled muscles, and sprains. | C2 |
| 04 Explain accident prevention measures for seasonal activities (e.g., swimming, boating, cycling, camping, backpacking, hunting, skiing, snowmobiling, tubing). | C2a |
| 05 Discuss how to protect one's self from natural disasters (e.g., windstorms, floods, earthquakes). | C2a |
| 06 Review accident prevention measures for home and school. | C2a |
| MOVEMENT AND FITNESS | C3 |
| 7650-01 The students will continue to develop motor and health related fitness. | C1b |
| 01 Participate in a minimum of three 15-minute aerobic workouts per week. | C3 |
| 02 Perform conditioning exercises for flexibility, strength, agility, balance, speed/reaction time, and endurance. Emphasis will be placed on the following major muscle groups: | C3 |
| a. arm and shoulder | C3 |
| b. abdomen | C3 |
| c. back | C3 |
| d. legs | C3 |
| 03 Understand the basic principles of heart-lung fitness, particularly heart rate and training zone. | C1b, C3 |
| 04 Define muscular endurance, flexibility, heart-lung endurance, strength, aerobic, anaerobic, isotonic, and isometric. | C3 |
| 05 Demonstrate the principles of warm-up and cool-down. | C3 |
| 06 Participate in a standardized test to assess level of fitness (i.e., AAHPERD Youth Fitness Test or AAHPERD Health Related Test). The competency level for each test is the 60th percentile. | C3a |
| 7650-02 The students will continue to develop skill in a variety of core team sports. | C1b |
| 01 Acquire the skills and knowledge of rules and strategies needed to participate in the basic core team sports. | C1b, F4 |
| a. <u>VOLLEYBALL</u> | |
| 1. <u>Overhand Serve</u> : Correctly serve the ball over the net and in bounds at least seven out of ten trials. | F4 |

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| 2. Forearm Bump Pass: Stand four feet from a wall, self-toss the ball and execute the forearm bump pass to a target on the wall at least seven consecutive times. The target area is between a line six feet and ten feet high. | F4 |
| 3. Set/Volley/Overhead Pass: Stand four feet from the wall, overhead pass and set the ball above and eight-foot line with control on ten consecutive hits. | F4 |
| 4. Spike: Using an open hand, spike a stationary ball at least three out of five times into the court. | F4 |
| b. BASKETBALL | |
| 1. Passing: Stand six feet from the wall and chest pass the ball to a three-foot square target on the wall ten consecutive times. | F4 |
| 2. Dribbling: Using correct dribbling techniques, weave through, without error, five obstacles placed three feet apart. | F4 |
| 3. Set Shot: Using the correct one-hand set shot technique, make at least three out of five shots from at least ten feet from the basket. | F4 |
| 4. Lay-Up: Dribble from a 45 degree angle and correctly shoot a lay-up shot making at least three out of five shots. | F4 |
| c. SOCCER | |
| 1. Dribble: Weave in and out three consecutive times without error through a course of five cones three yards apart. | F4 |
| 2. Passing: Four performers form a 12-yard square. The passer must pass the ball to each of the other three performers using correct passing techniques. | F4 |
| 3. Shooting: The shooter stands on the 12-yard penalty line. The feeder faces the shooter and as the shooter moves right, the feeder pushes the ball to the shooter. The shooter runs to the ball and shoots into the goal. The drill continues alternating left and right until six balls are shot. The shooter must score at least four out of six goals. | F4 |
| 4. Goalie Punt: Using correct goalie punting technique, punt a minimum of 25 yards on at least three out of five trials. | F4 |
| 5. Using correct trapping techniques, trap a ball rolled from 15 yards away three out of five times. | F4 |
| d. FLAG FOOTBALL | |
| 1. Passing: Within a 15-yard area, pass successfully three out of five times to a receiving running a down-and-out pattern. | F4 |
| 2. Receiving: Within a 10-yard area, receive a pass successfully four out of five times after executing a down-and-out pattern. | F4 |
| 3. Kicking: Kick the ball from a kicking tee a minimum of 30 yards three out of five times. | F4 |
| 4. Punting: Punt the ball, using correct form, a minimum of 30 yards three out of five times. | F4 |
| 02 Identify, use, and care properly for equipment used in various sports and recreational activities. | D, F4 |
| 03 Avoid unsafe playing conditions and conduct. | C2a |
| 7650-03 The students will continue to expand their knowledge and understanding of cognitive, affective, and psycho-motor dance skills. | F4b |
| 01 Demonstrate a knowledge of appropriate conditioning and preparation for dance. Emphasis should be on strength, flexibility, endurance, and control as integrated into dance vocabulary and aesthetic movement. Fitness principles and maintenance should be emphasized. | C1b, F4b |

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| 02 | Demonstrate competency in the five basic locomotor steps (walk, run, leap, jump, hop) using a variety of simple locomotor combinations. | F4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 03 | Demonstrate a variety of movement combos performed within a rhythmic structure correctly identifying meter, accents, tempo, and duration (cultural dances could be learned and analyzed as part of this objective). | F4, F4b | | | | | | | | | | | | | | | | | | | | | | | | |
| 04 | Demonstrate knowledge of spatial elements by learning, creating, and performing axial and locomotor patterns, varying spatial area, floor patterns, direction, and levels in space (folk dances could be integrated within this objective). | F3, F4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 05 | Create and demonstrate, in a small group, an aerobic dance/exercise routine to music that includes at least three contrasting kinds of energy. | F4b | | | | | | | | | | | | | | | | | | | | | | | | |
| 06 | Demonstrate proficiency in basic steps of two social dances and one folk dance with an emphasis on courtesy, etiquette, and social skills. | F4b | | | | | | | | | | | | | | | | | | | | | | | | |
| 7650-04 | The students will continue to develop leadership, fairness, courtesy, and social skills. | G3a, G4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | Develop leadership skills by serving in two or more positions as a leader, team captain, referee, equipment manager, intramural official, timer, scorekeeper, or student aide. | F | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | Practice fairness and courtesy. | E, G3a | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTICIPATION SKILLS AND TECHNIQUES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7700-01 | The student will develop skills in and knowledge of individual sports, games, and activities. | C1b | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | Acquire the basic skills and knowledge of rules, safety, and etiquette to participate in one racquet sport. | C1b, C2a, F4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | Demonstrate correctly the following skills in one of these racquet sports: | F4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Tennis</td> <td style="width: 33%;">Badminton</td> <td style="width: 33%;">Racquetball</td> </tr> <tr> <td>Grip</td> <td>Grip</td> <td>Grip</td> </tr> <tr> <td>Ready Position</td> <td>Ready Position</td> <td>Ready Position</td> </tr> <tr> <td>Forehand Ground stroke</td> <td>Sort Serve</td> <td>Serve</td> </tr> <tr> <td>Backhand Ground stroke</td> <td>Forehand Clear</td> <td>Forehand</td> </tr> <tr> <td>Overhead Serve</td> <td>Forehand Drop</td> <td>Backhand</td> </tr> <tr> <td></td> <td>Backhand Clear</td> <td></td> </tr> <tr> <td></td> <td>Backhand Drop</td> <td></td> </tr> </table> | Tennis | Badminton | Racquetball | Grip | Grip | Grip | Ready Position | Ready Position | Ready Position | Forehand Ground stroke | Sort Serve | Serve | Backhand Ground stroke | Forehand Clear | Forehand | Overhead Serve | Forehand Drop | Backhand | | Backhand Clear | | | Backhand Drop | | F4 |
| Tennis | Badminton | Racquetball | | | | | | | | | | | | | | | | | | | | | | | | |
| Grip | Grip | Grip | | | | | | | | | | | | | | | | | | | | | | | | |
| Ready Position | Ready Position | Ready Position | | | | | | | | | | | | | | | | | | | | | | | | |
| Forehand Ground stroke | Sort Serve | Serve | | | | | | | | | | | | | | | | | | | | | | | | |
| Backhand Ground stroke | Forehand Clear | Forehand | | | | | | | | | | | | | | | | | | | | | | | | |
| Overhead Serve | Forehand Drop | Backhand | | | | | | | | | | | | | | | | | | | | | | | | |
| | Backhand Clear | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Backhand Drop | | | | | | | | | | | | | | | | | | | | | | | | | |
| 03 | Acquire the basic skills, knowledge or rules, safety, and etiquette to participate in either golf or bowling. | C1b, F4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 04 | Demonstrate correctly the following skills in one of these sports: | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Golf</td> <td style="width: 33%;">Bowling</td> <td></td> </tr> <tr> <td>Grip</td> <td>Grip</td> <td></td> </tr> <tr> <td>Addressing the ball</td> <td>Four-step approach</td> <td></td> </tr> <tr> <td>Stance</td> <td>Release</td> <td></td> </tr> <tr> <td>Swing</td> <td>Follow through</td> <td></td> </tr> <tr> <td>Putting</td> <td></td> <td></td> </tr> </table> | Golf | Bowling | | Grip | Grip | | Addressing the ball | Four-step approach | | Stance | Release | | Swing | Follow through | | Putting | | | C1b, F4 | | | | | | |
| Golf | Bowling | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grip | Grip | | | | | | | | | | | | | | | | | | | | | | | | | |
| Addressing the ball | Four-step approach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stance | Release | | | | | | | | | | | | | | | | | | | | | | | | | |
| Swing | Follow through | | | | | | | | | | | | | | | | | | | | | | | | | |
| Putting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 05 | Acquire the basic skills and knowledge necessary to participate in at least two other lifetime sports, games or activities such as: | C1b, F4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Aerobic</td> <td style="width: 33%;">Cross-Country Skiing</td> <td style="width: 33%;">Ice Skating</td> </tr> <tr> <td>Bowling</td> <td>Downhill Skiing</td> <td>Badminton</td> </tr> <tr> <td>Dance</td> <td>Recreational Games</td> <td>Cycling</td> </tr> <tr> <td>Handball</td> <td>Self-Defense</td> <td>Golf</td> </tr> <tr> <td>Racquetball</td> <td>Tumbling/Gymnastics</td> <td>Jogging</td> </tr> <tr> <td>Tennis</td> <td>Rope Jumping</td> <td>Swimming</td> </tr> <tr> <td>Archery</td> <td>Weight Training</td> <td></td> </tr> <tr> <td>Wrestling</td> <td>Roller Skating</td> <td></td> </tr> </table> | Aerobic | Cross-Country Skiing | Ice Skating | Bowling | Downhill Skiing | Badminton | Dance | Recreational Games | Cycling | Handball | Self-Defense | Golf | Racquetball | Tumbling/Gymnastics | Jogging | Tennis | Rope Jumping | Swimming | Archery | Weight Training | | Wrestling | Roller Skating | | |
| Aerobic | Cross-Country Skiing | Ice Skating | | | | | | | | | | | | | | | | | | | | | | | | |
| Bowling | Downhill Skiing | Badminton | | | | | | | | | | | | | | | | | | | | | | | | |
| Dance | Recreational Games | Cycling | | | | | | | | | | | | | | | | | | | | | | | | |
| Handball | Self-Defense | Golf | | | | | | | | | | | | | | | | | | | | | | | | |
| Racquetball | Tumbling/Gymnastics | Jogging | | | | | | | | | | | | | | | | | | | | | | | | |
| Tennis | Rope Jumping | Swimming | | | | | | | | | | | | | | | | | | | | | | | | |
| Archery | Weight Training | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wrestling | Roller Skating | | | | | | | | | | | | | | | | | | | | | | | | | |

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| 7700-02 | The students will continue to develop skills in and knowledge of team sports. | | C1b |
| 01 | Demonstrate increased skill competency in two team sports. | | C1b |
| 02 | Demonstrate game strategies for two team sports. | | F4 |
| 7700-03 | The students will maintain an acceptable level of physical fitness. | | C3a |
| 01 | Demonstrate motor fitness (i.e., speed, reaction time, agility, balance, and coordination). | | C3 |
| 02 | Demonstrate a level of fitness in each of the following health related areas as prescribed: | | |
| | Health Related | | |
| | | <u>Girls</u> | <u>Boys</u> |
| a. | Cardiovascular | 1-1/2 mile run 15 min. or 12 min. walk/run 2100 yards or 3 mile walk test under 41 min. | 1-1/2 mile run 11 min. 15 sec. or 12 min. walk/run 2650 yards or 3 mile walk test under 39 min. |
| b. | Arm and shoulder strength | Flexed arm hang 8 sec. | Pull-ups 5 |
| c. | Abdominal strength/endorance | Flexed leg sit-ups 38 | Flexed leg sit-ups 45 |
| d. | Flexibility | Sit--Reach 35 | Sit--Reach 29 |
| e. | Recommended that percent body fat be sum of tricep and subscapular skin fold | 18% - 22% 16-29 mm | 15% - 17% 13-17 mm |
| | | | C3 |
| | | | C3 |
| | | | C3 |
| | | | C3 |
| | | | C3 |
| SCIENCE | | | |
| LIFE SCIENCE | | | |
| 3200-01 | The students will demonstrate a knowledge of scientific methods and conduct experiments in a life science. | | F4a |
| 01 | List processes used in solving problems scientifically and identify ways to collect and record data. | | F4a |
| 02 | Differentiate between a hypothesis and a theory. | | F4a |
| 03 | Formulate a hypothesis in life science, based on observing life around them. Test the hypothesis. | | F4a |
| 04 | Define observation, interpretation, and inference. | | F4a |
| 05 | Manipulate a variable in a controlled experiment. | | F4a |
| 06 | Formulate conclusions from a graph or table. | | F4a |
| 07 | Write a scientific report of an experiment. | | F3c, F4a |
| 3200-07 | The students will investigate the ecological relationships between living things and their environments. | | F4a |
| 01 | Illustrate the flow of energy and matter among organisms in food chains, webs, and pyramids through a variety of diagrams, models, and investigations. | | F4a |
| 02 | Explain the relationship among organisms in a biological community by defining the roles (producer, consumer, decomposer) of the organisms and their ecological niches within the habitat. | | F4a |
| 03 | Name the components of the water, carbon, nitrogen, and oxygen cycles and explain the importance of each cycle. | | F4a |
| 04 | Identify the major biomes and examine relationships between abiotic and biotic factors in the biomes (e.g., desert, tropical rain forest, tundra, grassland, coniferous forest, temperature deciduous forest). | | F4a |

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| 3200-08 | The students will investigate ways in which man's impact upon the environment affects living things. | F4a |
| 01 | Explain how increases in the human population affect the environment. | F4a |
| 02 | Distinguish between renewable and nonrenewable resources. | F4a |
| 03 | Give examples of extinct and endangered species of both plants and animals. | F4a |
| 04 | Discuss some conservation practices for wildlife. | F4a |
| 3200-09 | The students will explore the career opportunities in the life sciences. | A2f, F4a |
| 01 | Investigate careers in the life sciences. | A2f, F4a |
| EARTH-SPACE | | |
| 3220-01 | The students will demonstrate a knowledge of scientific methods and will conduct experiments in earth-space science. | F4a |
| 01 | List processes used in solving problems scientifically and identify ways to collect and record data. | F4a |
| 02 | Formulate and test an hypothesis in earth-space science. | F4a |
| 03 | Manipulate a variable in an experiment. | F4a |
| 04 | Plot data from experiments on graphs, charts, or other displays. | F4a |
| 05 | Formulate conclusions based upon the investigation. | F4a |
| 3220-02 | The students will identify rocks and classify them according to origin. | F4a |
| 01 | Define: igneous, metamorphic, and sedimentary. | F4a |
| 02 | Communicate knowledge of the rock cycle through models, diagrams, or demonstrations | F4a |
| 03 | Identify by name some common rocks from local strata. | F4a |
| 04 | Identify some characteristics of common igneous, sedimentary, and metamorphic rocks. | F4a |
| 3220-03 | The students will identify the characteristics, composition, and use of common minerals. | F4a |
| 01 | Define mineral and describe some characteristics of common minerals. | F4a |
| 02 | Use a mineral key to identify some common minerals. | F4a |
| 03 | Demonstrate the following properties of minerals: cleavage, luster, streak, hardness, crystal structure, and specific gravity. | F4a |
| 3220-04 | The students will relate the process of weathering, erosion, and deposition to soil building and water movement. | F4a |
| 01 | Distinguish among weathering, erosion, and deposition. | F4a |
| 02 | Differentiate between chemical and mechanical weathering. | F4a |
| 03 | Identify and describe the effects of erosion caused by water, wind, and glaciation. | F4a |
| 04 | Identify common types of deposition: deltas, moraines, and dunes. | F4a |
| 05 | Describe the effects of weathering, erosion, and deposition on streams and lakes. | F4a |
| 3220-05 | The students will use the plate tectonics theory and the effects of internal forces on the earth to explain the earth's surface features. | F4a |
| 01 | Describe the theory of moving plates within the lithosphere. | F4a |
| 02 | Identify evidence that supports the existence of moving plates. | F4a |
| 03 | Explain the relationship between moving plates and earthquakes. | F4a |
| 04 | Identify the earth's layers and explain how earthquake shock waves travel through each layer. | F4a |
| 05 | Describe how moving plates can cause volcanic activity. | F4a |
| 06 | Infer how structural features such as mountains, plateaus, and faults may form. | F4a |
| 3220-06 | The students will compare renewable and nonrenewable types of energy sources. | F4a |
| 01 | Identify sources of energy as being renewable or nonrenewable. | F4a |
| 02 | Explain how fossil fuels, geothermal, wind, water, and nuclear energy sources result from natural earth processes. | F4a |

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| 03 | Discuss the positive and negative aspects of using the energy sources in number 2. | F4a |
| 04 | Communicate ways to conserve renewable and nonrenewable energy sources. | F4a |
| 3220-07 | The students will investigate geologic history. | F4a |
| 01 | Review how fossils are formed. | F4a |
| 02 | Explain the importance of superposition. | F4a |
| 03 | Discuss the major events of the four geologic eras. | F4a |
| 3220-08 | The students will describe natural factors that determine weather and climate. | F4a |
| 01 | Describe global air masses in terms of air pressure, wind patterns, temperature, and water content. | F4a |
| 02 | Discuss the origin and effects of cold fronts, warm fronts, and occluded fronts. | F4a |
| 03 | Identify causes and effects of local and prevailing winds. | F4a |
| 04 | Describe how mountains and large bodies of water influence the weather and climate. | F4a |
| 05 | Explain how temperature, humidity, and barometric pressure influence the weather and the climate. | F4a |
| 06 | Obtain and interpret readings from weather instruments measuring temperature, humidity, wind velocity and direction, and barometric pressure. | F4a |
| 07 | Identify causes and effects of human activity on the atmosphere and weather (e.g., the greenhouse effect, pollution, albedo). | F4a |
| 08 | Describe ways to avoid dangers related to severe weather conditions. | F4a |
| 3220-09 | The students will investigate the solar system and the universe. | F4a |
| 01 | Identify the relative size and position of stars, planets, the solar system, galaxies, meteoroids, and comets. | F4a |
| 02 | Discuss the orbits and periods of comets. | F4a |
| 03 | Identify the conditions necessary for eclipses to occur. | F4a |
| 04 | Explain the causes and effects of rotation and revolution of bodies in the solar system. | F4a |
| 05 | Demonstrate the causes of the seasons on earth. | F4a |
| 3220-10 | The students will indicate major events in man's exploration of space and explain the important role the events have played in advancing technology. | F4a |
| 01 | Discuss the development and importance of rockets, satellites, the space shuttle, and instruments to explore space. | F4a |
| 02 | Discuss innovations in areas such as radio astronomy, solar energy, medicine, communications, and materials development that have come from the space program. | F4a |
| 3220-11 | The students will explore the career opportunities in earth-space sciences. | A2f, F4a |
| 01 | Investigate careers in the earth-space sciences. | A2f, F4a |
| PHYSICAL SCIENCE | | |
| 3240-01 | The students will demonstrate a knowledge of scientific methods and will conduct experiments in physical science. | F4a |
| 01 | List processes used in solving problems scientifically and identify ways to collect and record data. | F4a |
| 02 | Formulate and test an hypothesis in physical science. | F4a |
| 03 | Manipulate a variable in an experiment. | F4a |
| 04 | Plot data from experiments on graphs, charts, or other displays. | F4a |
| 05 | Formulate conclusions based upon the investigation. | F4a |
| 3240-02 | The students will identify physical and chemical properties of matter. | F4a |
| 01 | Define matter and energy. | F4a |
| 02 | Identify the states of matter and describe ways that matter can change from one state to another. | F4a |

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| 03 Demonstrate chemical properties of matter such as acidity, basicity, combustibility, and reactivity. | F4a |
| 04 Compare physical properties of various substances (e.g., shape, density, solubility, odor, melting point, boiling point). | F4a |
| 05 Demonstrate density. | F4a |
| 06 Describe the characteristics and give examples of : (a) elements, compounds, and mixtures; (b) acids, bases, and salts; and (c) organic and inorganic substances. | F4a |
| 07 Compare physical and chemical changes. Cite examples of each. | F4a |
| 08 Explain how matter and energy are conserved in chemical and physical changes. | F4a |
| 3240-03 The students will explain the structure of an atom. | F4a |
| 01 Discuss the atomic theory of matter. | F4a |
| 02 Draw and explain the Bohr and cloud models of the atom. | F4a |
| 03 Describe the electron, proton, and neutron in terms of their location in the atom, their charge, and their mass. | F4a |
| 04 Illustrate how an element can become a positive ion. A negative ion. In each case, name the element and then the ion. | F4a |
| 05 Define isotope and give examples. | F4a |
| 06 Define nuclear fission and fusion. | F4a |
| 3240-04 The students will use a periodic chart for obtaining information about elements. | F4a |
| 01 Explain the structure of a periodic chart and the arrangement of the elements on it. | F4a |
| 02 Describe the relationship of the elements within periods and families on a periodic chart. | F4a |
| 03 Distinguish in general terms between ionic and covalent bonding. | F4a |
| 04 Using a periodic chart, compare the reactivity of some of the elements. | F4a |
| 3240-05 The students will investigate the basic principles and technological applications of force, motion, and work. | F4a |
| 01 Explain how mass and weight differ. | F4a |
| 02 Describe the effect of gravity on stationary and on moving objects. | F4a |
| 03 Demonstrate and explain Newton's three laws of motion. | F4a |
| 04 Identify conditions when forces are balanced and when they are unbalanced. | F4a |
| 05 Operate the following types of machines and demonstrate how they make work easier: lever, pulley, inclined plane, wedge, screw, wheel, and axle. | F4a |
| 06 Perform calculations using the equation, "work equals forces times distance" and use the correct units. | F4a |
| 07 Distinguish between: (a) speed and velocity, and (b) velocity and acceleration. | F4a |
| 08 Apply the principles of force and motion to powered vehicles, rockets, projectiles, and restraining devices. | F4a |
| 3240-06 The students will demonstrate and describe the properties of sound. | F4a |
| 01 Demonstrate longitudinal (compressional) and transverse waves and discuss their characteristics. | F4a |
| 02 Describe how frequency of sound waves is related to musical sounds. | F4a |
| 03 Demonstrate volume, pitch, and quality of sounds. | F4a |
| 04 Discuss what causes echoes. | F4a |
| 05 Demonstrate and discuss the interference of sound waves. | F4a |
| 06 Explain the term "decibel" and describe the effects on an individual as the decibel level rises. | F4a |
| 3240-07 The students will investigate the basic characteristics of light and its technological applications. | F4a |
| 01 Compare some characteristics of light waves to those of sound waves: relative speed, type of wave, medium required for travel. | F4a |

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| 02 | Use a prism, a diffraction grating, etc., to produce a spectrum. | F4a |
| 03 | Explain what causes the colors to be dispersed. | F4a |
| 04 | Distinguish between colors in terms of wavelength and frequency. | F4a |
| 05 | Demonstrate and describe the images formed in (a) plane mirrors, (b) convex mirrors, (c) concave mirrors. | F4a |
| 06 | Use a ray diagram to show the path of light passing through (a) a convex lens, and (b) a concave lens. | F4a |
| 07 | Compare the characteristics of real and virtual images. | F4a |
| 08 | Describe the use of lenses/mirrors in eyeglasses, cameras, microscopes, telescopes. | F4a |
| 09 | Identify the characteristics of light that make lasers possible. | F4a |
| 3240-08 | The students will explore the career opportunities in the physical sciences. | A2f, F4a |
| 01 | Investigate careers in the physical sciences. | A2f, F4a |
| LANGUAGE ARTS | | |
| ENGLISH | | |
| 4080-01-1 | The students will read and discuss stimulating literature, identifying details which describe people accurately (Literature examples may include poetry.) (listening, speaking, reading, critical thinking, <u>prewriting</u>). | F1a, F3b, F4b |
| 01-1 | Share their own opinions, reactions, and impressions of the literature. | F4b |
| 02-1 | Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing). | F1a |
| 03-1 | Select fiction and nonfiction material which is stimulating and interesting for personal reading and classroom assignments. | F4a, F4b |
| 04-1 | Discuss the physical appearance and character traits of the people in each selection. | F4b |
| 05-1 | Analyze the actions of people. | F2a, F4b |
| 06-1 | Differentiate between important and unimportant details. | F4 |
| 07-1 | Define unfamiliar vocabulary in context. | F4a |
| 08-1 | Choose a familiar person to describe. | F3c |
| 09-1 | Determine an appropriate audience. | F3c |
| 10-1 | Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.). | F3c |
| 4080-02-1 | The students will describe a familiar person (listening, speaking, reading, critical thinking, <u>writing, responding, revising</u>). | F1a, F2a, F3a, F3b |
| 01-1 | Use appropriate voice. | F1a |
| 02-1 | Use specific details and examples of appearance, action, and speech. | F1a, F3c |
| 03-1 | Use specific nouns, action verbs, and vivid adjectives to describe a familiar person. | F1a, F3c |
| 04-1 | Participate in response groups for peer evaluation. | F4, G4b |
| 05-1 | Analyze and clarify the paper to improve its meaning and communication. | F2a, F3c |
| 06-1 | Make necessary structural and syntactical changes for improvement. | F3c |
| 4080-03-1 | The students will produce, through the editing process, a final draft of a character sketch that conforms to standard English (listening, speaking, reading, writing, critical thinking, <u>editing, publishing</u>). | F3c |
| 01-1 | Correct fragments and run-ons. | F3c |
| 02-1 | Use adjectives and adverbs correctly. | F3c |
| 03-1 | Use the proper form of pronouns. | F3c |
| 04-1 | Use correct subject-verb agreement. | F3c |
| 05-1 | Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable. | F3c |
| 06-1 | Use specific words and details. | F3c |
| 07-1 | Eliminate slang and jargon. | F3c |

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| 08-1 Define unfamiliar terms for the audience. | F3c |
| 09-1 Correct misplaced phrases and clauses. | F3c |
| 10-1 Punctuate the final draft correctly. | F3c |
| 11-1 Paragraph the final draft appropriately. | F3c |
| 12-1 Use transitions between paragraphs. | F3c |
| 13-1 Use correct capitalization. | F3c |
| 14-1 Use standard spelling. | F3c |
| 15-1 Eliminate inconsistencies in tense. | F3c |
| 16-1 Correct faulty parallelism. | F3c |
| 17-1 Eliminate redundancies. | F3c |
| 18-1 Share the final draft. | F3c |
| 4080-01-2 The students will recognize that reading selections relate to their own experiences and to the experiences, beliefs, attitudes, commitments, and values of friends and relatives (critical thinking, <u>prewriting</u>). | F3b, F4b |
| 01-2 Share their own opinions, reactions, and impressions of the literature. | F1a, F4b |
| 02-2 Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing). | F1a |
| 03-2 Select stimulating and interesting fiction and nonfiction material for personal reading and classroom assignments. | F3b |
| 04-2 Recognize that reading conveys universal experiences. | F4b |
| 05-2 Discuss the experiences of the character in the anecdote or narrative. | F4b |
| 06-2 Predict the most probably outcome of the selections. | F4b |
| 07-2 Define unfamiliar vocabulary in context. | F3b |
| 08-2 Select an experience of a friend for relative to write about. | F3c |
| 09-2 Determine appropriate audience. | F3c |
| 10-2 Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.). | F3c |
| 4080-02-2 The students will compose narratives based on the experience of a friend or relative (listening, speaking, reading, critical thinking, <u>writing, responding, revising</u>). | F3c |
| 01-2 Use appropriate voice. | F3c |
| 02-2 Develop a short narrative based on a single experience. | F3c |
| 03-2 Describe the character of a friend or relative by showing specific details of appearance, action, and speech. | F3c |
| 04-2 Use precise vocabulary. | F3c |
| 05-2 Participate in peer response groups for peer evaluation. | F3c, G4b |
| 06-2 Analyze and clarify the paper to improve its meaning and communication. | F3c |
| 07-2 Make necessary structural, syntactical, and graphic changes for improvement. | F3c |
| 4080-03-2 The students will produce a final draft of a narrative based on the experience of a friend for relative (listening, speaking, reading, critical thinking, <u>editing, publishing</u>). | F3c |
| 01-2 Correct fragments and run-ons. | F3c |
| 02-2 Use adjectives and adverbs correctly. | F3c |
| 03-2 Use the proper form of pronouns. | F3c |
| 04-2 Use correct subject-verb agreement. | F3c |
| 05-2 Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable. | F3c |
| 06-2 Use specific words and details. | F3c |
| 07-2 Eliminate slang and jargon. | F3c |
| 08-2 Define unfamiliar terms for the audience. | F3c |
| 09-2 Correct misplaced phrases and clauses. | F3c |
| 10-2 Punctuate the final draft correctly. | F3c |
| 11-2 Paragraph the final draft appropriately. | F3c |

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| | 12-2 Use transitions between paragraphs. | F3c |
| | 13-2 Use correct capitalization. | F3c |
| | 14-2 Use standard spelling. | F3c |
| | 15-2 Eliminate inconsistencies in tense. | F3c |
| | 16-2 Correct faulty parallelism. | F3c |
| | 17-2 Eliminate redundancies. | F3c |
| | 18-2 Share the final draft. | F3c |
| | Project/Biographical Sketch of a Famous Contemporary Person | |
| 4080-01-3 | The students will find, use, and analyze information from the library media center and other locations about a famous contemporary person (listening, speaking, reading, critical thinking, <u>prewriting</u>). | F2a, F4 |
| 01-3 | Choose a famous, contemporary person. | F4 |
| 02-3 | Read an encyclopedia article for a brief overview of the person's life, habits, education, etc. | F4 |
| 03-3 | Formulate questions to explore the topic. | F4 |
| 04-3 | Determine search terms or key words to locate additional information. | F4 |
| 05-3 | Locate materials by using indexing systems (print or electronic) such as library media catalogs, magazine indexes, newspaper indexes, <u>Current Biography</u> , etc. | F4 |
| 06-3 | Find relevant, current, and accurate information from various sources that answers predetermined questions using at least one magazine. | F4 |
| 07-3 | Differentiate between fact and opinion in each source. | F4 |
| 08-3 | Evaluate information. | F4 |
| 09-3 | Synthesize information from selected sources. | F4 |
| 10-3 | Define unfamiliar vocabulary in context. | F4 |
| 11-3 | Determine an appropriate audience. | F4 |
| 12-3 | Use prewriting strategies (e.g., outlining, brainstorming, listing, clustering, mapping, etc.) | F3c, F4 |
| 4080-02-3 | The students will create a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, critical thinking, <u>writing, responding, revising</u>). | F3c |
| 01-3 | Produce a comprehensive, factual, and informative project/paper (e.g., brochure, encyclopedia article, magazine article, newscast, editorial script, obituary, etc.) | F3c |
| 02-3 | Capture accurately the contribution of the person. | F3c |
| 03-3 | Use appropriate voice. | F3c |
| 04-3 | Synthesize and organize information. | F3c |
| 05-3 | Use new words correctly. | F3c |
| 06-3 | Prepare a simple bibliography. | F3c |
| 07-3 | Participate in response groups for peer evaluation. | F3c, G4b |
| 08-3 | Analyze and clarify the paper to improve its meaning and communication. | F2a, F3c |
| 09-3 | Make necessary structural, syntactical, and graphic changes for improvement. | F3c |
| 4080-03-3 | The students will produce a final draft of a project/biographical sketch of a famous, contemporary person (listening, speaking, reading, writing, critical thinking, <u>editing, publishing</u>). | F3c |
| 01-3 | Correct fragments and run-ons. | F3c |
| 02-3 | Use adjective and adverbs correctly. | F3c |
| 03-3 | Use the proper form of pronouns. | F3c |
| 04-3 | Use correct subject-verb agreement. | F3c |
| 05-3 | Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable. | F3c |
| 06-3 | Use specific words and details. | F3c |
| 07-3 | Eliminate slang and jargon. | F3c |
| 08-3 | Define unfamiliar terms for the audience. | F3c |

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| | 09-3 Correct misplaced phrases and clauses. | F3c |
| | 10-3 Punctuate the final draft correctly. | F3c |
| | 11-3 Paragraph the final draft correctly. | F3c |
| | 12-3 Use transitions between paragraphs. | F3c |
| | 13-3 Use correct capitalization. | F3c |
| | 14-3 Use standard spelling. | F3c |
| | 15-3 Eliminate inconsistencies in tense. | F3c |
| | 16-3 Correct faulty parallelism. | F3c |
| | 17-3 Eliminate redundancies. | F3c |
| | 18-3 Share the final draft. | F3c |
| | Persuasive Paper Presenting a Case for Meeting the Needs of a Friend or Relative | |
| 4080-01-4 | The students will explore the needs of others through literature study and discussion (listening, speaking, reading, critical thinking, <u>prewriting</u>). | F4b |
| 01-4 | Share their own opinions, reactions, and impressions of the literature. | F4b |
| 02-4 | Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing). | F1a |
| 03-4 | Separate fact from opinion. | F2a |
| 04-4 | Identify, in written and visual works (television and movies), the common persuasive techniques of the following: Band wagon (e.g., "Join the Pepsi Generation.") Card stacking (e.g., "Four out of five doctors recommend...") Transfer (e.g., "Wheaties, the Breakfast of Champions.") | F4 F4 F4 |
| 05-4 | Locate apparent causes and effects and evaluate their validity. | F4 |
| 06-4 | Draw and support conclusions about the intent of the author/speaker. | F4 |
| 07-4 | Define unfamiliar vocabulary in context. | F4 |
| 08-4 | Choose a friend or relative and select one of his/her needs about which he/she feels strongly. | F4 |
| 09-4 | Determine an appropriate audience. | F4 |
| 10-4 | Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.) | F3c |
| 4080-02-4 | The students will present a case for the needs of others in persuasive papers and oral presentations (listening, speaking, reading, critical thinking, <u>writing, responding, revising</u>). | F1a, F3c |
| 01-4 | Take a stand on a particular issue relating to the needs of others. | F1a, F3c |
| 02-4 | Use appropriate voice. | F1a, F3c |
| 03-4 | Express persuasive ideas that lead to a logical outcome. | F1a, F3c |
| 04-4 | Support the case logically and unemotionally with examples or facts. | F1a, F3c |
| 05-4 | Use words the persuade most effectively. | F1a, F3c |
| 06-4 | Anticipate counter arguments and refute them. | F1a, F3c |
| 07-4 | Construct an effective conclusion. | F1a, F3c |
| 08-4 | Participate in response groups for peer evaluation. | F1a, F3c |
| 09-4 | Analyze and clarify the paper to improve its meaning and communication. | F1a, F3c |
| 10-4 | Make necessary structural, syntactical, and graphic changes for improvement. | F1a, F3c |
| 4080-03-4 | The students will produce a persuasive final draft which conforms to standard English (listening, speaking, reading, critical thinking, editing, publishing). | F3c |
| 01-4 | Correct fragments and run-ons. | F3c |
| 02-4 | Use adjectives and adverbs correctly. | F3c |
| 03-4 | Use the proper form of pronouns. | F3c |
| 04-4 | Use correct subject-verb agreement. | F3c |
| 05-4 | Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable. | F3c |

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| | 06-4 Use specific words and details. | F3c |
| | 07-4 Eliminate slang and jargon. | F3c |
| | 08-4 Define unfamiliar terms for the audience. | F3c |
| | 09-4 Correct misplaced phrases and clauses. | F3c |
| | 10-4 Punctuate the final draft correctly. | F3c |
| | 11-4 Paragraph the final draft appropriately. | F3c |
| | 12-4 Use transitions between paragraphs. | F3c |
| | 13-4 Use correct capitalization. | F3c |
| | 14-4 Use standard spelling. | F3c |
| | 15-4 Eliminate inconsistencies in tense. | F3c |
| | 16-4 Correct faulty parallelism. | F3c |
| | 17-4 Eliminate redundancies. | F3c |
| | 18-4 Share the final draft. | F3c |
| | Letter of Request or Response | |
| 4080-01-5 | Students will comprehend the need for letters of request and response (listening, speaking, reading, critical thinking, <u>prewriting</u>). | F4 |
| 01-5 | Practice affective listening skills to become responsive listeners (i.e., paraphrasing, using sequential dialogue, and summarizing). | F1a |
| 02-5 | Identify the various types of request and response letters. | F4a |
| 03-5 | Assess the purpose of the letters. | F4a |
| 04-5 | Differentiate fact from opinion. | F4a |
| 05-4 | Discuss proper format of business correspondence. | F4a |
| 06-5 | Define unfamiliar vocabulary in context. | F3c |
| 07-5 | Select a subject about which to write a letter or request. | F3c |
| 08-5 | Assess the audience for the letter. | F3c |
| 09-5 | Use prewriting strategies (e.g., outlining, brainstorming, listing, mapping, clustering, webbing, etc.) | F3c |
| 4080-02-5 | The students will compose a letter of request or response (e.g., letter of opinion, complaint, request, or compliment) (listening, speaking, reading, critical thinking, <u>writing, responding, revising</u>). | F3c |
| 01-5 | Use appropriate business letter format. | F3c |
| 02-5 | State the purpose of the letter clearly. | F3c |
| 03-5 | Relate the problem, complaint, question, or compliment effectively. | F3c |
| 04-5 | Use precise vocabulary. | F3c |
| 05-5 | Participate in response groups for peer evaluation. | F3c |
| 06-5 | Analyze and clarify the paper to improve its meaning and communication. | F3c |
| 07-5 | Make necessary structural and syntactical changes for improvement. | F3c |
| 4080-03-5 | The students will produce final drafts of a request or response letter that conform to standard English (listening, speaking, reading, writing, critical thinking, <u>editing, publishing</u>). | F3c |
| 01-5 | Correct fragments and run-ons. | F3c |
| 02-5 | Use adjectives and adverbs correctly. | F3c |
| 03-5 | Use the proper form of pronouns. | F3c |
| 04-5 | Use correct subject-verb agreement. | F3c |
| 05-5 | Create and punctuate more sophisticated sentences by using sentence combining techniques where applicable. | F3c |
| 06-5 | Use specific words and details. | F3c |
| 07-5 | Eliminate slang and jargon. | F3c |
| 08-5 | Define unfamiliar terms for the audience. | F3c |
| 09-5 | Correct misplaced phrases and clauses. | F3c |
| 10-5 | Punctuate the final draft correctly. | F3c |

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| 11-5 | Paragraph the final draft appropriately. | F3c |
| 12-5 | Use transitions between paragraphs. | F3c |
| 13-5 | Use correct capitalization. | F3c |
| 14-5 | Use standard spelling. | F3c |
| 15-5 | Eliminate inconsistencies in tense. | F3c |
| 16-5 | Correct faulty parallelism. | F3c |
| 17-5 | Eliminate redundancies. | F3c |
| 18-5 | Share the final draft. | F3c |
| DRAMA EXPERIENCES | | |
| 4080-04 | The students will explore the elements of a story (exposition, development, conflict, climax, denouement, setting, character motivation, etc.) when choosing literature to dramatize (listening, speaking, reading, critical thinking, <u>interpreting</u>). | F4b |
| 01 | Share their own opinions, reactions, and impressions of the literature. | F4b |
| 02 | Read short stories for discussion of the principles of drama (i.e., exposition, development, conflict, etc.) | F4b |
| 03 | Choose a story for dramatic presentation. | F4b |
| 04 | Present stories in practice situations. | F4b |
| 05 | Receive peer evaluation through response groups. | F4b |
| 06 | Make appropriate changes for improvement. | F4b |
| 07 | Present finished story to audience. | F4b |
| 4080-05 | The students will explore and demonstrate their own interpretations of poetry (listening, speaking, reading, critical thinking, <u>conversing</u> , <u>performing</u>). | F4b |
| 01 | Read poetry for discussion of the principles of oral interpretation (i.e., voice quality, variation in presentation, eye contact, stance, etc.) | F4b |
| 02 | Select poems for presentation. | F4b |
| 03 | Interpret poetry for response groups for peer evaluation. | F4b |
| 04 | Make appropriate changes for improvement. | F4b |
| 05 | Present rehearsed interpretation for an audience. | F4b |
| 4080-06 | The students will participate in role-playing to explore drama concepts and skills that apply to real-life problems (listening, speaking, reading, critical thinking, <u>conversing</u>). | F4b |
| 01 | Choose a real-life issue to investigate. | F4b |
| 02 | Research the chosen topic using the library media specialist/teacher as a resource. | F4b |
| 03 | Evaluate the pros and cons of a real-life situation through careful examination of an issue, attentive listening to a partner, etc. | F4b |
| 04 | Role-play in pairs, taking opposite positions on issues. | F4b |
| 05 | Participate in peer response group evaluation for feedback on the level of attentiveness of each partner and their ability to respond to the arguments of a partner. | F4b, G4b |
| 06 | Take the opposite positions on those same topics to learn the principles of refutation. | F4b |
| 4080-07 | The students will learn to evaluate mass media presentations (listening, speaking, reading, critical thinking, <u>conversing</u>). | F4 |
| 01 | Demonstrate an understanding of the negative aspects of mass media as well as the positive aspects. | F4 |
| 02 | Understand how the standards of good drama apply to the materials seen on television. | F4 |
| 03 | Understand the difference between media fantasy and reality. | F4 |
| 04 | Show an understanding of the consequences of media violence and brutality. | F4 |

Virginia

Document Utilized

Outcome Accountability Program: 1994 Interpretive Guide to Reports (1994)

Background

Current revision to the state content standards began in April 1994. The state has developed standards of learning in English/language arts, mathematics, science, and social studies. Standards are organized by grade levels until 8th grade. In high school, the standards are not grade-specific; they are identified by courses. It has not been determined whether the standards will be mandatory for districts. Standards will, however, be tied to graduation requirements and state assessments.

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| 1994 INTERPRETIVE GUIDE TO REPORTS, OUTCOME ACCOUNTABILITY PROJECT | NCEO CODE |
|---|----------------------|
| 1. Community and Student Information: Students Speaking English as a Second Language Definition: Percent of students in the division identified as being Limited English Proficient during the 1992-93 school year. | F4a F4a |
| 2. Community and Student Information: Educational Level of the Community. Definition: Percent of adults in the locality who are high school graduates as reported by the 1990 Census. | no match no match |
| 3. Community and Student Information: Family Poverty Level in the Community. Definition: Percent of families in the locality below the federal poverty level as reported by the 1990 U.S. Census. | no match no match |
| 4. Community and Student Information: Community Income Definition: 1991 Median Adjusted Gross Income in the locality. | no match no match |
| 5. Community and Student Information: Public School Membership. Definition: Average number of students enrolled in the school division during the 1992-93 school year (Average Daily Membership) | no match no match |
| 6. Community and Student Information: Student's Socioeconomic Status Definition: Percent of students in the division with approved applications for free or reduced price lunch during the 1992-93 school year. | no match no match |
| 7. Community and Student Information: Local Ability-to-Pay for Education. Definition: The composite Index of Local Ability-to-Pay is a weighted, division-level measure that includes local adjusted gross income, local sales tax, local value of real property, and reflects both the student population and the local population. | no match |
| OBJECTIVE 1: PREPARING STUDENTS FOR COLLEGE | |
| 3. Indicator Name: Taking Foreign Language Definition: Percent of 8th grade students who took a foreign language prior to the 9th grade. | no match no match |
| 4. Indicator Name: Taking Algebra 1 Definition: Percent of 8th grade students who took Algebra 1 or Algebra 1, Part 1 prior to the 9th grade. | no match no match |
| 8. Indicator Name: 8th Grade Standardized Test Scores. Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized tests under standard conditions whose composite scores were above the national 75th percentile. | no match no match |

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| OBJECTIVE 3: INCREASING THE GRADUATION RATE | |
| 2. Indicator Name: Dropout Rate. Definition: Percent of students in grades 7-12 who dropped out of school. | A1 A1 |
| 3. Indicator Name: Minority Dropout Rate. Definition: Percent of minority students in grades 7-12 who dropped out of school. | A1 A1 |
| 4. Indicator Name: Attendance. Definition: Percent of students in grades K-12 who were absent 10 days or less from school. | A1a A1a |
| 6. Indicator Name: 8th Grade Standardized Test Scores. Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized tests under standard conditions whose composite scores were above the national 25th percentile. | no match no match |
| 8. Indicator Name: Over Age 8th Grade Students. Definition: Percent of 8th grade students who were 15 or more years of age. | no match no match |
| OBJECTIVE 4: INCREASING SPECIAL EDUCATION STUDENTS' LIVING SKILLS AND OPPORTUNITIES. | |
| 1. Indicator Name: Attendance. Definition: Percent of special education students who were absent 10 days or less from school. | A1a A1a |
| 2. Indicator Name: Dropout Rate. Definition: Percent of special education students in grades 7-12 (including ungraded students) who dropped out of school. | A1 A1 |
| OBJECTIVE 6: EDUCATING MIDDLE SCHOOL STUDENTS | |
| 1. Indicator Name: Attendance Definition: Percent of students in grades 6-8 who were absent 10 days or less from school. | A1a A1a |
| 2. Indicator Name: Taking Foreign Language. Definition: Percent of 8th grade student who took a foreign language prior to the 9th grade. | no match no match |
| 3. Indicator Name: Minority Students Taking Foreign Language. Definition: Percent of minority 8th grade students who took foreign language prior to the 9th grade. | no match no match |
| 4. Indicator Name: Taking Algebra 1 Definition: Percent of 8th grade students who took Algebra 1 or Algebra 1, Part 1 prior to the 9th grade. | no match no match |
| 5. Indicator Name: Minority Students Taking Algebra 1. Definition: Percent of minority 8th grade students who took Algebra 1 or Algebra 1, Part 1 prior to the 9th grade. | no match no match |
| 6. Indicator Name: 8th Grade Standardized Test Scores above the 75th Percentile. Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized tests under standard conditions whose composite scores were above the national 75th percentile. | no match no match |
| 7. Indicator Name: 8th Grade Standardized Tests Scores above Median. Definition: Percent of 8th grade students who took the Virginia State Assessment Program standardized test under standard conditions whose composite scores were above the national 50th percentile. | no match no match |
| 8. Indicator Name: Physical Fitness Test. Definition: Percent of 6th, 7th, and 8th grade students who passed all four spring physical fitness tests. (Percent of 6th, 7th, and 8th grade students enrolled in Physical Education who took all four physical fitness tests) | C3a C3a C3a |

Washington

Documents Utilized

Subgroup on Learning, Outcomes, and Assessment - Recommendations to the Governor's Council on Education Reform and Funding (June 1992)
Ready to Learn - Final Recommendations (June 1992)

Background

The Subgroup on Learning, Outcomes, and Assessment, as part of the Governor's Council on Education Reform and Funding, developed a set of recommendations for the Legislature in 1992 that included the specification of a set of student learning goals and demonstrated outcomes. The state is developing content standards in two phases. Goal 1 includes the basics of communication, mathematics, reading, and writing. Goal 2 includes the arts, health and fitness, science, and social studies. Standards describe student learning at three levels that roughly coincide with elementary, middle, and high school. Developmental indicators are used to illustrate mastery. Prototype tasks and sample scoring guides will accompany the standards. The standards will be mandatory for districts by the year 2000 and will be tied to statewide assessments.

Washington

| STUDENT LEARNING GOALS | NCEO CODE |
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| <p>The ultimate goal for Washington's K-12 education system is to enable people to be responsible citizens, to contribute to their own economic well-being and to that of their families and communities and to enjoy productive and satisfying lives. To these ends, schools, together with parents and communities, will help students develop the knowledge, skills and attitudes essential to:</p> | |
| <p>GOAL 1: Communicate effectively and responsibly in a variety of ways and settings.</p> | F1a |
| <p>Demonstrated Outcomes Each Student:</p> | |
| <p>A. gathers information and ideas through listening, observing, participating and reading.</p> | A2a, F1a, F3b |
| <p>B. organizes, analyzes, and applies information and ideas.</p> | F2a |
| <p>C. expresses information, ideas and emotions by using written and oral language and the arts, and by working with materials.</p> | F1a, F3c, F4b |
| <p>D. uses appropriate technology to gather, process and express information and ideas.</p> | F5a |
| <p>GOAL 2: Know and apply the core concepts and principles of mathematics; social, physical and life sciences; arts: humanities; and healthful living.</p> | C1, F3a, F4a, F4b |
| <p>Demonstrated Outcomes Each Student understands and uses:</p> | |
| <p>A. the mathematical principles, structures and concepts.</p> | F3a |
| <p>B. the scientific principles, structures and concepts.</p> | F4a |
| <p>C. the principles, structures and concepts of social, economic and political systems.</p> | F4a |
| <p>D. the principles of democratic living, including an awareness of cultural diversity.</p> | E1a, G3b |
| <p>E. the principles, structures and concepts of the arts and humanities.</p> | F4b |
| <p>F. the elements of healthful living.</p> | C1, C2 |
| <p>GOAL 3: Think critically and creatively and integrate experience and knowledge to form reasoned judgements and solve problems.</p> | F2a |

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| <p>Demonstrated Outcomes Each Student Can:</p> <ul style="list-style-type: none"> A. engage and apply problem solving by: <ul style="list-style-type: none"> 1. identifying problems 2. formulating alternative solutions and consequences. 3. analyzing and evaluating information necessary to solve problems. 4. applying analysis in making informed choices based on information and consequences. 5. selecting and applying appropriate technology to solve problems. B. integrate information, ideas, materials and equipment from multiple disciplines to solve problems. C. make connections between what is already known and new fields of knowledge. D. make connections that have personal relevance and meaning. | <p>F2a F2a F2a F2a F2a F2a F2a F2a F2a</p> |
| <p>GOAL 4: Function as caring and responsible individuals and contributing members of families, work groups, and communities.</p> | <p>A2a, A2e, D1a</p> |
| <p>Demonstrated Outcomes Each Student Demonstrates:</p> <ul style="list-style-type: none"> A. personal attributes of: <ul style="list-style-type: none"> 1. honest and ethical behavior 2. self-directed life long learning 3. adaptability and flexibility in the face of the known and unknown 4. resourcefulness and creativity 5. self-esteem and self-discipline 6. interpersonal and leadership skills B. citizenship through: <ul style="list-style-type: none"> 1. acceptance of rights and responsibilities of self and others 2. civic participation and community involvement 3. a multi-cultural and world view C. employability through: <ul style="list-style-type: none"> 1. ability to seek and obtain employment 2. motivation and persistence 3. positive work habits 4. productive team member skills | <p>E F F F F1c, G3a G4 E1a, G3a A2e, E3b, E3c F A2f D3e F G4b</p> |

West Virginia

Document Utilized

West Virginia Programs of Study: Instructional Goals and Objectives--Early Childhood Education K-4 (July 1992)

West Virginia Programs of Study: Instructional Goals and Objectives--Middle Childhood Education 5-8 (July 1992)

Background

West Virginia educational policy articulates instructional goals (developed at K-4, 5-8, and 9-12) that are mandatory. Instructional objectives, developed for each grade from K-12 are recommended. These programs of study describe student learning in the following areas: art, driver's education, English/language arts, foreign languages, health, mathematics, music, physical education, safety, science, and social studies.

West Virginia

| INSTRUCTIONAL GOALS AND OBJECTIVES | NCEG CODE |
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| ART PROGRAM OF STUDY | |
| AREA OF STUDY: GENERAL ART | |
| At this level learners identify and use analogous color schemes, non-objective and abstract shapes and forms, elements and principles of design. Learners should be guided in the processes of painting, drawing, architectural rendering, lettering, printmaking, crafts and sculpture to develop creative skills, motor skills, art appreciation and making decisions about art. The Learner Will: | |
| 1. Identify split complementary color schemes. | F4b |
| 2. Create art using split complementary color schemes. | F4b |
| 3. Recognize the use of warm or cool, monochromatic, complementary, split complementary, triadic and analogous color schemes. | F4b |
| 4. Recognize the use of organic, geometric, non-objective and abstract shapes and forms. | F2a, F4b |
| 5. Analyze art in terms of elements and principles of design. | F4b |
| 6. Create art emphasizing at least three elements and three principles of design. | F4b |
| 7. Create drawings from live models and/or still life objects. | F4b |
| 8. Evaluate art works from specific historical periods in terms of aesthetic and sensory qualities. | F2a, F4b |
| 9. Analyze and discuss specific styles of art, e.g., Cubism, Impressionism, Realism. | F2a, F4b |
| 10. Create art representative of a specific style. | F4b |
| 11. Describe differences in art media. | F4b |
| 12. Describe differences in techniques within at least two media, e.g., painting: water color, oil, acrylic, egg tempera; sculpture: stone, wood, metal, clay, wire; drawing: pencil, ink, charcoal, oil pastels. | F4b |
| 13. Identify various careers in art. | A2f, F4b |
| 14. Identify at least six artists and a work by each. | F4b |
| 15. Select, title and prepare his/her work(s) for display. | F4b |
| 16. Discuss (verbally or in writing) an art exhibit. | F4b |
| ENGLISH/LANGUAGE ARTS PROGRAM OF STUDY | |
| MIDDLE CHILDHOOD EDUCATION PROGRAM OF STUDY | |
| The middle childhood education program of study continues the integrated approach to the English language arts as the learner grows in reading, writing, spelling, handwriting, speaking, listening, and viewing. English language arts experiences at this level should | |

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| move the student from dependent learning to independent learning through interactive, collaborative language experiences. At this level, the student is also moving from a social use of language to the use of language as a tool. | |
| 8.0 INSTRUCTIONAL GOALS | |
| 8.1 Reading: Students will acquire and use the reading strategies necessary to achieve personal ambitions and to succeed in society. | F3b |
| 8.2 Writing: Students will master writing strategies that provide them with the decision-making skills to address specific audiences and purposes. | F3c |
| 8.3 Spelling: Students will spell and pronounce words correctly. | F4a |
| 8.4 Handwriting: Students will write legibly. | F3c |
| 8.5 Speaking: Students will participate in a variety of speaking opportunities that are integrated into learning activities and that allow students to interact interpersonally. | A2a, F1a, G4 |
| 8.6 Listening: Students will develop listening strategies for their personal, academic, and occupational lives. | F1a |
| 8.7 Viewing: Students will be critical viewers of media. | F2a, F4b |
| 9.0 READING OBJECTIVES (READING, LITERATURE) | |
| 9.1 Students will demonstrate comprehension through the critical thinking skills of summarizing, interpreting, evaluating, critiquing, and analyzing what is read. | F2a, F3b |
| 9.2 Students will read and respond to a wide variety of literary genres. | F3b, F4b |
| 9.3 Students will read for literary experience, pleasure, information, task performance, and problem solving. | F2a, F3b, F4b |
| 9.4 Students will develop lifelong reading habits. | F3b |
| 9.5 Students will use reading strategies across the curriculum. | F3b |
| 10.0 WRITING OBJECTIVES (COMPOSITION, USAGE, MECHANICS, GRAMMAR, JOURNALISM) | |
| 10.1 Students will develop a writing process that allows them to write confidently, fluently, and successfully. | F3c |
| 10.2 Students will use prewriting and drafting strategies (i.e., invented spelling) to generate topics and plan approaches to writing tasks. | F3c |
| 10.3 Students will use writing strategies to address specific writing purposes, such as research, creative, journalistic, and essay. | F3c |
| 10.4 Students will use writing strategies to write for audiences, including peers, teachers, and employers. | F3c |
| 10.5 Students will use revision strategies. | F3c |
| 10.6 Students will edit their writing as well as the writing of others to delete or correct errors in organization, content, usage, mechanics, and spelling. | F3c |
| 10.7 Students will become familiar with different aspects of publishing. | F4 |
| 10.8 Students will critique, model, and experiment with different writing styles. | F4 |
| 10.9 Students will write for pleasure and enjoyment (i.e., journals, friendly letters) | F3c |
| 10.10 Students will select and identify examples of specific parts of speech, phrases, and clauses from their writing. | F3c, F4a |
| 10.11 Students will write and identify different types of sentences, paragraphs, and essays. | F3c, F4a |
| 10.12 Students will write and use writing as an expression of learning across the curriculum. | F3c |
| 11.0 SPELLING OBJECTIVES | |
| 11.1 Students will acquire a written and oral vocabulary from a wide variety of instructional sources and activities. | F4a |
| 11.2 Students will demonstrate accurate spelling and pronunciation in their written and oral communication across the curriculum. | F1a, F3c, F4a |
| 12.0 HANDWRITING OBJECTIVES | |
| 12.1 Students will write legibly in manuscript and cursive forms. | F3c |

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| 12.2 Students will use proper keyboarding techniques in schools and county school districts where the technology and educational resources permit. | F3c, F5a |
| 12.3 Students will follow a teacher, school, or county developed style sheet, or a manuscript format (i.e., MLA Style Sheet) to prepare written communications. | F3c, F4a |
| 13.0 SPEAKING OBJECTIVES (FORMAL, INFORMAL, COMPETITIVE) | |
| 13.1 Students will participate in a variety of speaking activities, e.g., oral interpretation, choral reading, argumentation, debate, and discussion. | A2a, F1a, F3b, F4 |
| 13.2 Students will use conferencing skills to achieve academic goals. | G4b |
| 13.3 Students will identify and correct usage errors in oral communications. | F1a |
| 13.4 Students will exhibit appropriate speaking etiquette, e.g., speaking in turn, using proper telephone skills, demonstrating interpersonal communication. | F1a |
| 13.5 Students will use public speaking strategies to prepare formal and informal speaking presentations across the curriculum. | F1a |
| 14.0 LISTENING OBJECTIVES. | |
| 14.1 Students will listen to oral communications using proper etiquette. | F1a |
| 14.2 Students will listen to oral communications and retell in either oral or written form. | F1a |
| 14.3 Students will listen to oral instructions and successfully complete the task. | F1a |
| 14.4 Students will listen to oral communications and critique, evaluate, and summarize their contents across the curriculum. | F1a, F2a |
| 15.0 VIEWING OBJECTIVES (DRAMA, THEATER, FILM, TELEVISION, COMPUTER TECHNOLOGY) | |
| 15.1 Students will view media for specific purposes, such as performance, pleasure, information, communication. | F4b |
| 15.2 Students will observe, critique, evaluate, and analyze what they view from different perspectives. | F2a, F4b |
| 15.3 Students will differentiate types of information present in media format (propaganda, bias) | F4 |
| 15.4 Students will exhibit appropriate audience etiquette in a variety of viewing experiences. | G3a |
| 15.5 Students will use film, television, video, and computers to reinforce, and enhance classroom instruction across the curriculum. | F4, F5a |
| FOREIGN LANGUAGE PROGRAM OF STUDY | |
| INSTRUCTIONAL OBJECTIVES, AREA OF STUDY: FRENCH, LEVEL I | |
| The Learner Will: | |
| LISTENING COMPREHENSION | |
| 1. Demonstrate recognition of the component parts of the French sound system including phonemes, intonations, stress and rhythm patterns, liaison, and elision. | F4a |
| 2. Identify very basic structure signals such as masculine/feminine (français, française). | F4a |
| 3. Guess the meanings of words from verbal, non-verbal, and contextual clues. | F4a |
| 4. Respond appropriately to simple commands, questions, greetings, statements, and comments given at a slow pace by an educated speaker. | F4a |
| SPEAKING | |
| 5. Reproduce the sound system with reasonable accuracy. | F4a |
| 6. Express simple ideas orally including greetings, naming, asking and responding to basic questions (present tense) | F4a |
| READING | |
| 7. Pronounce written words, phrases, and sentences, with reasonable accuracy. | F4a |
| 8. Demonstrate the ability to guess the meaning of unfamiliar words by using appropriate contextual clues such as cognates, familiar terms, word parts, and word order. | F4a |
| 9. Demonstrate comprehension of the written word including authentic printed materials and short selections containing high-frequency vocabulary and structures. | F4a |

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| WRITING | |
| 10. Copy words and sentences accurately. | F4a |
| 11. Take dictation of familiar material. | F4a |
| 12. Spell high-frequency words accurately. | F4a |
| 13. Write short notes or messages of a personal nature. | F4a |
| 14. Write simple sentences and paragraphs using memorized or very familiar materials. | F4a |
| CULTURE | |
| 15. Demonstrate knowledge of the influence of the French language on English. | F4a |
| 16. Demonstrate awareness that different cultures attach different connotations to commonly used words and phrases. | F4a |
| 17. Begin to compare and contrast francophone and American cultures. | F4a |
| 18. Demonstrate knowledge of the basic geographical features of France and be able to name several French-speaking areas. | F4a |
| 19. Identify or discuss some contributions of French-speaking peoples to the world. | F4a |
| 20. Demonstrate knowledge of non-verbal signals. | F4a |
| 21. Identify career options involving French language skills. | F4a |
| LEVEL II | |
| LISTENING | |
| 1. Demonstrate the ability to discriminate among increasingly subtle phonemic distinctions such as "blond-blanc." | F4a |
| 2. Demonstrate the ability to identify increasingly complex structure signals e.g. (distinction between /upside down e/ and /e/ in "se levait" and "s'est levé") and intonation patterns. | F4a |
| 3. Demonstrate the ability to respond appropriately to increasingly longer statements, questions, and commands communicated at a moderate pace by an educated speaker. | F4a |
| SPEAKING | |
| 4. Orally recombine previously acquired vocabulary and structures by expressing ideas and asking questions on familiar topics (present, past, and future tenses). | F4a |
| 5. Demonstrate greater accuracy in the pronunciation of words, phrases, and sentences with appropriate intonation, stress, and rhythm. | F4a |
| READING | |
| 6. Demonstrate understanding of main ideas, facts, and narratives in textbooks, graded readers, and simple authentic materials dealing with everyday matters. | F4a |
| 7. Skim and scan authentic and prepared materials for enjoyment. | F4a |
| WRITING | |
| 8. Write form dictation recombined familiar materials. | F4a |
| 9. Write short compositions on familiar topics. | F4a |
| CULTURE | |
| 10. Develop knowledge and awareness of major historical events and geographical aspects of France and francophone cultures. | F4a |
| 11. Continue to identify patterns of daily living, values, and attitudes in order to function appropriately in French and francophone cultures. | F4a |
| 12. Identify great French and francophone men and women and their contributions in science, the arts, and politics. | F4a |
| 13. Identify career options involving French language skills. | F4a |
| 14. Choose basic expressions of courtesy appropriate to the social situation. | F4a |
| LEVEL III At Level III and above it is recommended that French be used as the primary means of oral communication in the classroom. The Learner Will: | |
| LISTENING COMPREHENSION | |
| 1. Identify main ideas and some details contained in short explanations or narratives. | F4a |
| 2. Show comprehension of conversations dealing with familiar topics. | F4a |
| SPEAKING | |
| 3. Express basic needs in simple survival/travel/classroom situations and elicit practical information. | F4a |

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| 4. Initiate, sustain, and conclude face-to-face conversations on familiar topics. | F4a |
| 5. State and support preferences and opinions on concrete topics of interest. | F4a |
| READING | |
| 6. Read aloud with increasing speed, accuracy, clarity, and expression. | F4a |
| 7. Expand reading comprehension skills by inferring meaning from unfamiliar authentic materials, graded materials, and selected literary passages. | F4a |
| WRITING | |
| 8. Take dictation at an advanced level. | F4a |
| 9. Express original ideas in various types of writing including dialogue, letters, poetry, and short narratives. | F4a |
| CULTURE | |
| 10. Identify major events and important individuals in French or francophone history. | F4a |
| 11. Demonstrate an awareness of regional and national cultural differences in customs and traditions in France and the francophone world. | F4a |
| 12. Discuss current events and social trends. | F4a |
| 13. Identify individuals, major works, and movements of French and francophone creative arts. | F4a |
| 14. Demonstrate intellectual curiosity about France and francophone cultures and develop empathy toward their people. | F4a |
| LEVEL IV The Learner Will: | |
| LISTENING COMPREHENSION | |
| 1. Identify the main idea expressed by an educated native speaking at moderate rate in newscasts, weather reports, etc. | F4a |
| 2. Identify the main ideas and some details from conversations on a range of topics. | F4a |
| SPEAKING | |
| 3. Narrate present, past, and future events in areas of personal interest with reasonable accuracy. | F4a |
| 4. Initiate spontaneous conversations lasting several minutes. | F4a |
| 5. Express basic needs in simple survival/travel/classroom situations and elicit practical information in greater detail (e.g., requesting a table for two in a quiet corner). | F4a |
| 6. Demonstrate ability to overcome limitations by using an alternate word or phrase. | F4a |
| READING | |
| 7. Read and analyze authentic materials including literary texts. | F4a |
| 8. Use contextual clues, structure signals and previously learned material to deduce meaning in longer unfamiliar passages. | F4a |
| WRITING | |
| 9. Take dictation at an advanced level. | F4a |
| 10. Write short essays using a variety of tenses. | F4a |
| 11. Demonstrate ability to overcome limitations by using alternate words or phrases. | F4a |
| 12. Continue expressive writing of various types. | F4a |
| CULTURE | |
| 13. Read independently French works and authentic materials of some length. | F4a |
| 14. Continue to identify major events and important individuals in French or francophone history. | F4a |
| 15. Identify cultural concepts when they occur in oral, written, or visual authentic materials. | F4a |
| 16. Make culturally appropriate responses in selected francophone situations such as tipping, etc. | F4a |
| INSTRUCTIONAL OBJECTIVES, AREA OF STUDY: SPANISH LEVEL I | |
| The Learner Will: | |
| LISTENING COMPREHENSION | |
| 1. Accurately identify vowel and consonant sounds. | F4a |
| 2. Recognize examples of intonation, stress, rhythm patterns, and the usage of liaison. | F4a |
| 3. Respond appropriately to teacher talk and pre-recorded materials. | F4a |
| 4. React appropriately to classroom instructions and directions. | F4a |
| 5. Respond to words and phrases in face-to-face conversations dealing with learned content areas. | F4a |
| 6. Identify main ideas and key words in familiar materials. | F4a |

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| SPEAKING | |
| 7. Reproduce the sound system with reasonable accuracy including intonation, stress, rhythm patterns, and the use of liaison in meaningful context. | F4a |
| 8. Name/identify people, places, objects, etc. | F4a |
| 9. Give limited response to basic question. | F4a |
| 10. Obtain basic information such as name, date, etc. | F4a |
| 11. Express greetings, descriptions, agreement, disagreement, minimal courtesy, etc. | F4a |
| 12. Relate the sounds of the language to the printed word. | F4a |
| READING | |
| 13. Derive meaning from short selections containing high-frequency structures dealing with everyday matters. | F4a |
| 14. Select main ideas and key words from familiar material. | F4a |
| 15. Read familiar material orally approximating correct pronunciation and intonation. | F4a |
| 16. Interpret symbols of punctuation in the writing system. | F4a |
| WRITING | |
| 17. Copy and take dictation of basic words and simple sentences. | F4a |
| 18. Write familiar material correctly using spelling, capitalization, and punctuation conventions. | F4a |
| 19. Write simple sentences and controlled paragraphs using familiar vocabulary, grammar and syntax. | F4a |
| 20. Supply personal data on simple information forms. | F4a |
| CULTURE | |
| 21. Demonstrate awareness of the contribution of the Spanish language to the English language. | F4a |
| 22. Recognize that within the Hispanic world there exist differences in pronunciation and intonation patterns. | F4a |
| 23. Demonstrate an awareness that different cultures attach different connotations and denotations for commonly used words/phrases. | F4a |
| 24. Recognize the increasing Hispanic presence and influence in the United States today. | F4a |
| 25. Recognize the diversity among the cultures of Hispanic countries and the United States. | F4a |
| 26. Locate the Hispanic countries, capitals and primary geographic features. | F4a |
| 27. Identify a few outstanding contributions of Hispanic peoples to the cultural world (art, music, literature, and popular culture). | F4a |
| 28. Identify the attributes of cultures, races and languages other than his own. | F4a |
| 29. Recognize career opportunities in which the ability to speak Spanish is advantageous. | F4a |
| LEVEL II The Learner Will: | |
| LISTENING COMPREHENSION | |
| 1. Refine listening discrimination skills learned in Spanish I. | F4a |
| 2. Respond to sentence length utterances that consist of recombinations of learned elements in a limited number of vocabulary areas. | F4a |
| 3. Demonstrate comprehension of conversations on learned topics. | F4a |
| 4. Demonstrate comprehension of speech containing high-frequency structures and vocabulary in everyday situations. | F4a |
| SPEAKING | |
| 5. Participate in directed conversations dealing with familiar topics. | F4a |
| 6. Ask and answer information questions. | F4a |
| 7. Satisfy basic personal needs in simple life situations. | F4a |
| 8. Express ideas on familiar topics using high-frequency structures and basic vocabulary. | F4a |
| 9. Summarize events related to daily life with moderate ease. | F4a |
| READING | |
| 10. Determine main ideas and some supporting detail in simple materials dealing with basic personal and social needs. | F4a |
| 11. Comprehend learned materials and their recombinations. | F4a |
| 12. Show comprehension of messages, questions and short notes on everyday topics. | F4a |
| 13. Deduce meaning of unfamiliar materials in context by using word attack skills. | F4a |

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| WRITING | |
| 14. Write compound sentences employing correct vocabulary, grammar, and syntax. | F4a |
| 15. Write short paragraphs on assigned familiar topics using controlled vocabulary, correct grammar, and syntax appropriate to level. | F4a |
| 16. Write short messages, post cards, and letters. | F4a |
| CULTURE | |
| 17. Demonstrate awareness of the contribution of the Spanish language on the English language. | F4a |
| 18. Recognize that within the Hispanic world there exist differences in pronunciation and intonation patterns. | F4a |
| 19. Demonstrate an awareness that different cultures attach different connotations and denotations for commonly used words/phrases. | F4a |
| 20. Recognize the increasing Hispanic presence and influence in the United States today. | F4a |
| 21. Recognize the diversity among the cultures of Hispanic countries and the United States. | F4a |
| 22. Locate the Hispanic countries, capitals and primary geographic features. | F4a |
| 23. Identify a few outstanding contributions of Hispanic peoples to the cultural world (art, music, literature, and popular culture). | F4a |
| 24. Identify the attributes of cultures, races and languages other than his own. | F4a |
| 25. Recognize career opportunities in which the ability to speak Spanish is advantageous. | F4a |
| LEVEL III The Learner Will: | |
| LISTENING COMPREHENSION | |
| At level III and above it is recommended that Spanish be used as the primary means of oral communication in the classroom. | |
| 1. Respond to longer word sequences and more complex structures. | F4a |
| 2. Demonstrate understanding of explanations and conversations of unfamiliar topics. | F4a |
| 3. Determine main ideas in explanations and narratives of moderate length. | F4a |
| 4. Show comprehension of taped or live native speech delivered by native persons familiar with student's level of ability. | F4a |
| SPEAKING | |
| 5. Use Spanish with reasonable accuracy as the primary means of oral communication in the classroom. | F4a |
| 6. Sustain a conversation dealing with familiar topics. | F4a |
| 7. Communicate needs to elicit practical information from native or non-native speakers to satisfy basic travel/survival needs. | F4a |
| 8. Retell familiar materials. | F4a |
| 9. Use alternate means of communicating an idea. | F4a |
| READING | |
| 10. Infer meaning from adapted short stories, poems and abridged works. | F4a |
| 11. Show understanding authentic materials such as newspapers, magazines, signs, and correspondence. | F4a |
| 12. React to the content of the reading material through expression of opinions. | F4a |
| WRITING | |
| 13. Write complex sentences using correct vocabulary, grammar and syntax employing a variety of tenses. | F4a |
| 14. Write paragraphs expressing original ideas and topics of interest. | F4a |
| 15. Take notes in the target language with teacher guidance. | F4a |
| 16. Write compositions on assigned topics. | F4a |
| CULTURE | |
| 17. Recognize societal factors that influence the way people speak and behave. | F4a |
| 18. Demonstrate in-depth knowledge of creative forces in art, literature, music, and their contributions to their own society and the world at large. | F4a |
| 19. Place major Hispanic events and or individuals in historical context. | F4a |
| 20. Recognize the influence of regional folklore in the traditions of Hispanic peoples. | F4a |
| 21. Recognize the economic and political systems of Spain and other Spanish-speaking countries and the impact of these systems on current events. | F4a |

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| 22. Research career opportunities in which comprehensive knowledge of Spanish is advantageous to personal career goals. | F4a |
| LEVEL IV The Learner Will: | |
| LISTENING COMPREHENSION | |
| 1. Demonstrate comprehension of ideas and details in conversations on concrete or abstract ideas | F4a |
| 2. Function with ease in a class conducted primarily in Spanish. | F4a |
| SPEAKING | |
| 3. Use Spanish as the primary means of oral communication in the classroom. | F4a |
| 4. Narrate present, past and future events in areas of personal interest. | F4a |
| 5. Demonstrate spontaneity in language production to satisfy survival needs and social demands. | F4a |
| 6. Integrate different structures and relevant vocabulary when speaking on assigned topics. | F4a |
| 7. Circumlocute with the closet Spanish equivalent when unable to express an idea. | F4a |
| 8. Initiate, sustain and bring to closure a wide variety of communicative tasks, handling difficulties in unexpected events. | F4a |
| READING | |
| 9. Read and understand content and intent of cultural references in authentic materials. | F4a |
| 10. Comprehend with teacher guidance factual information and main ideas in selected unabridged literary material. | F4a |
| WRITING | |
| 11. Accurately express ideas and opinions by employing advanced vocabulary, grammar and syntax using a variety of tenses. | F4a |
| 12. Take notes in target language. | F4a |
| 13. Analyze and interpret authentic materials by writing cohesive summaries. | F4a |
| CULTURE | |
| 14. Recognize societal factors that influence the way people speak and behave. | F4a |
| 15. Demonstrate in-depth knowledge of creative forces in art, literature, music, and their contributions to their own society and the world at large. | F4a |
| 16. Place major Hispanic events and or individuals in historical context. | F4a |
| 17. Recognize the influence of regional folklore in the traditions of Hispanic peoples. | F4a |
| 18. Recognize the economic and government systems of Spain and other Spanish-speaking countries and the impact of these systems on current events. | F4a |
| 19. Research career opportunities in which comprehensive knowledge of Spanish is advantageous to personal career goals. | F4a |
| INSTRUCTIONAL OBJECTIVES, AREA OF STUDY: LATIN | |
| I. READING COMPREHENSION | |
| The Learner Will: | |
| A. Oral Reading | |
| PRONUNCIATION | |
| 1. Reproduce the sounds of Latin. | F4a |
| 2. Relate the sounds of the language to the printed word. | F4a |
| INTONATION/METER | |
| 3. Read aloud with emphasis, intonation, and rhythm appropriate to form and meaning. | F4a |
| B. Vocabulary | |
| 4. Develop an active vocabulary of common Latin words. | F4a |
| 5. Derive meaning of infrequently used vocabulary words from context. | F4a |
| 6. Recognize common Latin roots, prefixes, and suffixes. | F4a |
| C. Structure | |
| 7. Understand that Latin word order is different from English word order. | F4a |
| 8. Understand that Latin meaning is shown by endings rather than by word order. | F4a |
| 9. Read and comprehend Latin sentences through phrasing in natural word order. | F4a |
| D. Verification of Comprehension | |
| 10. Identify the main ideas of a Latin passage. | F4a |

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| 11. Discuss the main ideas of a Latin passage. | F4a |
| 12. Translate a passage from Latin to English. | F4a |
| E. Literary Analysis | |
| 13. Identify literary devices. | F4a |
| 14. Analyze the effect of identified literary devices. | F4a |
| 15. Discuss the effect of other literary elements on meaning. | F4a |
| II. CULTURAL/HUMANITIES | |
| The Learner Will: | |
| A. Language | |
| 16. Recognize that language itself is an expression of culture. | F4a |
| 17. Understand the role of Latin in the development of other languages. | F4a |
| B. Geography | |
| 18. Identify the basic geographical feature of the Mediterranean area. | F4a |
| C. History and Ancient Chronology | |
| 19. Identify the three major periods in Roman history. | F4a |
| 20. Develop a sense of history by placing major events and important individuals in historical context. | F4a |
| D. Political/Economic System | |
| 21. Describe the characteristics of the various political systems operative in Roman history and identify the major political figures of each. | F4a |
| 22. Explain the effect of economics on the political system. | F4a |
| E. Value System | |
| 23. Explain the interrelationship of religious, patriotic and family values. | F4a |
| 24. Compare and contrast his/her own value system with ancient Roman ethical systems. | F4a |
| F. Lifestyles | |
| 25. Compare and contrast ancient Roman and current American lifestyle. | F4a |
| 26. Outline changes in the concept of social classes throughout Roman history. | F4a |
| G. Legend and Mythology | |
| 27. Illustrate the influence of classical mythology on the arts and western civilization. | F4a |
| 28. Distinguish between legend and historical fact. | F4a |
| III. LANGUAGE TRANSFERENCE | |
| The Learner Will: | |
| A. Cognates/Loan Words | |
| 29. Identify words that are common to both Latin and English. | F4a |
| B. Word Derivation | |
| 30. Derive meaning of English words from familiar Latin words. | F4a |
| 31. Use common Latin roots, prefixes, and suffixes to derive meaning of English words. | F4a |
| C. Phrases and Abbreviations | |
| 32. Define and use appropriately Latin phrases and abbreviations in English. | F4a |
| D. Structures | |
| 33. Compare elements of Latin and English structure as a means to improve oral and written communication. | F4a |
| HEALTH PROGRAM OF STUDY | |
| MIDDLE CHILDHOOD EDUCATION | |
| The goal of the Health Education Program of Study in Middle Childhood Education is to prepare students with the skills necessary to make wise health decisions that promote a healthy lifestyle in the following areas: development and personal health, safety, mental health and relationships, consumer and environmental health, drug use prevention, disease prevention, nutrition and fitness. The local school district shall, therefore, provide multiple opportunities for students to: | |
| Know and practice healthful behaviors which can prevent the majority of lifestyles related, | C1, C2a, C2e |

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| <p>diseases, injuries and loss of quality of life from illnesses such as AIDS, other sexually transmitted diseases, cardiovascular diseases, diabetes, cancer, etc.</p> <p>Identify and select appropriate health care resources.</p> <p>Compare the functions and interrelationships of body systems and demonstrate understanding of the physical and emotional aspects of pubescence.</p> <p>Understand the reasons and demonstrate the ability to refuse pressures to engage in risk behaviors such as drug, tobacco or alcohol use, and sexual activity.</p> <p>Demonstrate appropriate coping skills as needed in peer, social and family relationships to benefit mental health.</p> <p>Demonstrate how to avoid and report child abuse.</p> | <p>C2c F4</p> <p>C2d</p> <p>D1a, G1</p> <p>C2a, F4</p> |
| <p>MATHEMATICS PROGRAM OF STUDY, LEVEL 8</p> | |
| <p>Relations among fractions, decimals, ratios, proportions, and percents will be developed through the student's investigation of his/her environment, problem posing, and multistep problem solving. By using manipulations, appropriate measurement tools, and estimation, students will study the interrelations among length, area, and volume. Students will design and perform original probability experiments and prepare graphic representation of statistical data. Graphing in the Cartesian coordinate plane and elementary concepts of algebra are included. The Learner Will:</p> | |
| <p>Problem Solving</p> | |
| <p>1. Use appropriate problem-solving strategies such as acting it out; making a model; guessing and checking; drawing a picture; making a diagram, list, table, or graph; finding a pattern; using a simpler problem; working backwards; checking a solution; making an open sentence; and, generalizing a solution to investigate and understand mathematical content;</p> | <p>F2a, F3a</p> |
| <p>2. Collect and use data in problem solving;</p> | <p>F2a, F3a</p> |
| <p>3. Use a calculator and/or computer for multi-step problems when appropriate;</p> | <p>F3a, F5a</p> |
| <p>4. Use estimation and rounding to recognize reasonable results;</p> | <p>F3a</p> |
| <p>5. Formulate problems from situations within and outside mathematics;</p> | <p>F3a</p> |
| <p>6. Use manipulatives when appropriate in problem solving;</p> | <p>F3a</p> |
| <p>7. Investigate and solve nonroutine and open-ended problems;</p> | <p>F2a, F3a</p> |
| <p>8. Generalize solutions and strategies in problem solving situations;</p> | <p>F2a, F3a</p> |
| <p>9. Acquire confidence in using mathematics through frequent problem solving activities and projects including verifying results, interpreting solutions, and questioning whether a solution makes sense.</p> | <p>F2a, F3a, G2b</p> |
| <p>Communication</p> | |
| <p>10. Model situations using oral, written, concrete, pictorial, graphical, and algebraic methods;</p> | <p>F1a, F3a</p> |
| <p>11. Develop common understanding of mathematical ideas including the roles of definitions;</p> | <p>F3a</p> |
| <p>12. Discuss mathematical ideas, make conjectures and convincing arguments;</p> | <p>F3a</p> |
| <p>13. Use the skills of reading, listening, and viewing to interpret and evaluate mathematical ideas and symbols;</p> | <p>F1a, F3a, F3b</p> |
| <p>14. Reflect on and clarify his/her thinking by writing and discussing mathematical ideas and situations.</p> | <p>F1a, F3a, F3b</p> |
| <p>Reasoning</p> | |
| <p>15. Apply deductive and inductive reasoning;</p> | <p>F2a</p> |
| <p>16. Explain reasoning processes in his/her own words;</p> | <p>F1a</p> |
| <p>17. Understand and apply reasoning with proportions;</p> | <p>F3a</p> |
| <p>18. Make and evaluate mathematical conjectures and arguments;</p> | <p>F2a, F3a</p> |
| <p>19. Draw reasonable inferences and predictions from graphs and tables</p> | <p>F3a</p> |
| <p>Connections</p> | |
| <p>20. Use mathematical ideas to further understand other mathematical ideas;</p> | <p>F3a</p> |

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| 21. Use models to connect concrete and abstract mathematical concepts; | F3a |
| 22. Describe relationships among measurement, computation, and geometric figures; | F3a |
| 23. Apply mathematical thinking and modeling to solve problems that arise in other disciplines; | F3a |
| 24. Describe the role of mathematics in our culture and society. | F3a |
| Number and Number Relationships | |
| 25. Describe the meaning of fractions, decimals, percents, proportions, absolute value, integers, roots, exponents, absolute value, and scientific notation. | F3a |
| 26. Demonstrate equivalence of fractions, decimals, and percents; | F3a |
| 27. Compare and order fractions, mixed numbers, decimals, square roots, integers, and powers of numbers; | F3a |
| 28. Read any real number; | F3a |
| 29. Round numbers when appropriate; | F3a |
| 30. Explore the meaning and application of pi; | F3a |
| 31. Plot and identify points in the Cartesian coordinate plane; | F3a |
| 32. Write a number in expanded form using exponents. | F3a |
| Number Systems and Number Theory | |
| 33. Apply the commutative, associative, identity, and inverse properties for addition and multiplication of rational numbers; | F3a |
| 34. Apply the distributive property; | F3a |
| 35. Explore relationships among the basic arithmetic operations; | F3a |
| 36. Apply the number theory concepts of prime factors and multiples in real-world mathematical problem situations. | F2a, F3a |
| Computation and Estimation | |
| 37. Compute with whole numbers, fractions, decimals, percent, proportions, absolute value, integers, roots, exponents, and scientific notation; | F3a |
| 38. Use a calculator or computer for addition, subtraction, multiplication, and division with numbers having more than three-digits and division with divisors of more than two-digits. | F3a, F5a |
| 39. Select and use an appropriate process for computing from among mental arithmetic, paper-and-pencil, calculator, and computer methods; | F3a |
| 40. Use computation and or estimation to solve problems; | F2a, F3a |
| 41. Use estimation to check the reasonableness of results; | F3a |
| 42. Select appropriate operations, strategies, and methods of solving a variety of application problems using real numbers, justifying the selection; | F3a |
| 43. Demonstrate proficiency with number operations within the context of real-world problems; | F3a |
| 44. Use order of operations to solve multi-step problems, using the calculator when appropriate. | F3a |
| Patterns and Functions | |
| 45. Describe, represent, and apply relationships using tables, graphs and rules, formulas, and functions; | F3a |
| 46. Use patterns, formulas, and functions to represent and solve problems; | F2a, F3a |
| 47. Analyze relationships between two quantities to explain how a change in one affects the other; | F2a, F3a |
| 48. Explore a wide variety of patterns. | F3a |
| Algebra | |
| 49. Apply concepts of variable, expression, and equation; | F3a |
| 50. Represent situations and number patterns with tables, graphs, verbal rules, and equations; | F3a |
| 51. Apply algebraic concepts using physical models, data, and graphs; | F3a |
| 52. Solve linear equations and inequalities; | F2a, F3a |
| 53. Apply algebraic methods to solve a variety of real-world mathematical problems; | F2a, F3a |
| 54. Apply nonlinear equation in a variety of problems solving situations; | F3a |
| 55. Solve a pair of linear equations using graphing. | F3a |

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| Statistics and Probability | |
| 56. Use a calculator or computer for probability and statistical applications; | F3a, F5a |
| 57. Collect, organize and describe data; | F3a |
| 58. Construct, read and interpret tables, charts and graphs; | F3a |
| 59. Draw reasonable inferences and predictions from graphs, tables, and experiments; | F3a |
| 60. Determine experimental probabilities; | F3a |
| 61. Use a probability model to compare experimental results with mathematical expectations; | F3a |
| 62. Find the mean, mode, median, and range of a set of data; | F3a |
| 63. Describe the use of statistics and probability as a powerful method of decision making in the real world; | F3a |
| 64. Apply the Fundamental Counting Principle. | F3a |
| Geometry | |
| 65. Describe, compare, and classify plane and solid geometric figures; | F3a |
| 66. Represent and solve problems using geometric models; | F2a, F3a |
| 67. Understand and apply geometric properties and relationships; | F3a |
| 68. Extend applications of transformations to include stretchers and shrinkers; | F3a |
| 69. Examine geometry as a means of describing the physical world; | F3a |
| 70. Graph equations in the Cartesian plane; | F3a |
| 71. Explore line and point symmetry using various methods; | F3a |
| 72. Inscribe and circumscribe regular polygons; | F3a |
| 73. Apply the Pythagorean theorem; | F3a |
| 74. Construct parallel and perpendicular lines; | F3a |
| 75. Solve problems using concepts of similarity and congruence. | F2a, F3a |
| Measurement | |
| 76. Estimate, measure, and use measurements to describe and compare physical objects and examine the reasonableness of the results; | F3a |
| 77. Select appropriate units and tools, including different types of meters (e.g., water meter, volt meter) for measuring to designated degrees of precision; | F3a |
| 78. Apply the concepts of perimeter, area, surface area, volume, angle measure, capacity, weight/mass, time, and temperature; | F3a |
| 79. Develop and apply formulas and procedures for determining measures to solve problems; | F3a |
| 80. Measure perimeter, area, surface area, and volume of plane and solid shapes; | F3a |
| 81. Apply the concepts of rates and derived measurements. | F3a |
| MUSIC PROGRAM OF STUDY, MIDDLE CHILDHOOD EDUCATION, GRADES 5-8 | |
| AREA OF STUDY: CLASSROOM/GENERAL MUSIC, LEVEL 8 | |
| The Learner Will: | |
| 1. Identify the key of musical excerpts written in C, F, B flat, E flat, G, D and A major. | F4b |
| 2. Improvise four or more measures of music. | F4b |
| 3. Perform melodic minor melodies. | F4b |
| 4. Perform modal melodies. | F4b |
| 5. Select chords to harmonize a melody in C, F or G major. | F4b |
| 6. Demonstrate ability to follow a three part score using bass and treble clefs. | F4b |
| 7. Compare two works representing different style periods. | F4b |
| 8. Perform a notated composition including meter changes involving meters in 5, 7 and 9. | F4b |
| 9. Identify score notation of rhythmic augmentation and diminution. | F4b |
| 10. Create and notate a rhythmic composition. | F4b |
| 11. Explain the use of tempo(s) to provide unity and/or contrast within a composition. | F4b |
| 12. Interpret tempo rubato. | F4b |
| 13. Explain the use of dynamics as a device providing unity and/or contrast in a composition. | F4b |
| 14. Explain the use of timbre to provide unity and contrast within a composition. | F4b |

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| <p>AREA OF STUDY: INSTRUMENTAL MUSIC--STRINGS IV, LEVELS 7/8-12</p> <p>This level of study provides further development of playing skills, e.g., double stops, vibrato, finger positions. The Learner Will:</p> | |
| 1. Play melodies which, because of extended range or convenience of finger patterns, require the use of positions other than first. (These positions are different for the various stringed instruments. Thus they need to be specified for Level IV as follows: | F4b |
| Violin--3rd position | F4b |
| Viola--3rd position | F4b |
| Cello--1/2, 2nd, 3rd, and 4th positions and extensions, | F4b |
| Bass--1/2, 2nd, 3rd and 4th positions and extensions). | F4b |
| 2. Play at sight melodies which, because of extended range or convenience of finger patterns, require the use of positions other than first. (These positions are different for the various stringed instruments. Thus, they need to be specified for Level IV as follows: | F4b |
| Violin- 3rd position | |
| Viola- 3rd position | |
| Cello- 1/2, 2nd, 3rd, and 4th positions and extensions, | |
| Bass- 1/2, 2nd, 3rd and 4th positions and extensions). | |
| 3. Play melodies in major keys up to and including 3 sharps and 3 flats. | F4b |
| 4. Play major scales through 3 sharps and 3 flats. | F4b |
| 5. Play harmonic minor scales through 2 sharps and 3 flats. | F4b |
| 6. Identify harmonic minor melodies. | F4b |
| 7. Play grace notes. | F4b |
| 8. Play unisons and octaves formed with one open string and one string fingered in third position. | F4b |
| 9. Play sixths in first position (exclude basses). | F4b |
| 10. Perform using spiccato bow strokes. | F4b |
| 11. Perform using martelé bow strokes. | F4b |
| 12. Participate in the performance of a round (using first and third positions; cellos and basses in fourth positions). | F4b |
| 13. Identify a rondo. | F4b |
| 14. Perform meter in 5. | F4b |
| 15. Perform meter in 9. | F4b |
| 16. Play syncopated rhythm patterns. | F4b |
| 17. Play at sight pieces marked largo. | F4b |
| 18. Interpret music using contrasting dynamics: <i>pp, p, mp, mf, f, ff</i> . | F4b |
| 19. Play melodies using both resonant and intense tone qualities. | |
| 20. Play melodies with vibrato. | F4b |
| 21. Demonstrate characteristics of good ensemble playing. | F4b |
| 22. Play a melody <i>con sordino</i> . | F4b |
| <p>AREA OF STUDY: INSTRUMENTAL MUSIC--WINDS AND PERCUSSION, LEVELS 7/8-12</p> <p>This level of study provides for the further development of playing skills, e.g., additional fingerings, sight reading, articulation. Ensemble playing is introduced. The Learner Will:</p> | |
| 1. Play at sight melodies in the concert keys of C, G, F, B flat, E flat, and A flat. | F4b |
| 2. Notate and play the concert C, G, F, B flat, E flat and A flat major scales. | F4b |
| 3. Perform at sight a harmonic minor melody. | F4b |
| 4. Notate and play minor scales. | F4b |
| 5. Play a chromatic scale. | F4b |
| 6. Interpret a modulation at sight. | F4b |
| 7. Identify a coda. | F4b |
| 8. Play meter in 5. | F4b |
| 9. Perform at sight music containing syncopation. | F4b |
| 10. Play a flam paradiddle (flamadiddle) (percussion only). | F4b |

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| 11. Play a single drag (percussion only). | F4b |
| 12. Play "Lesson 25" (percussion only). | F4b |
| 13. Play a double drag (percussion only). | F4b |
| 14. Play in tempo adagio and tempo moderato. | F4b |
| 15. Interpret accelerando. | F4b |
| 16. Interpret the dynamic markings pianissimo, piano, mezzo piano, mezzo forte, forte and fortissimo in musical performance. | F4b |
| 17. Demonstrate crescendo and decrescendo. | F4b |
| 18. Demonstrate characteristics of good ensemble playing. | F4b |
| AREA OF STUDY: CHORAL MUSIC II, LEVELS 7-12 | |
| This level of study provides for the further development of music reading skills, vocal techniques and ensemble singing, e.g., balance, blend, intonation, resonance. The Learner Will: | |
| 1. Sing major and perfect intervals. | F4b |
| 2. Sing minor scales. | F4b |
| 3. Perform a minor melody. | F4b |
| 4. Sing with proper use of metrical and textual accents. | F4b |
| 5. Sing at sight a two-part choral composition in a major key. | F4b |
| 6. Sing three-part songs from score notation. | F4b |
| 7. Sing arpeggiated major and minor triads. | F4b |
| 8. Identify major and minor triads presented aurally. | F4b |
| 9. Participate in the performance of a canon. | F4b |
| 10. Describe the construction of a canon. | F4b |
| 11. Participate in the performance of a spiritual. | F4b |
| 12. Identify three characteristics of the spiritual. | F4b |
| 13. Demonstrate the phrase structure of a composition using proper breathing. | F4b |
| 14. Perform at sight rhythm patterns in 6/8 meter. | F4b |
| 15. Perform a syncopated ostinato. | F4b |
| 16. Perform at sight a rhythm pattern containing meter changes with the beat remaining constant. | F4b |
| 17. Demonstrate the tempo markings adagio, moderato and allegretto. | F4b |
| 18. Interpret the marking accelerando (accel.). | F4b |
| 19. Interpret the symbols pp and ff (pianissimo and fortissimo) | F4b |
| 20. Sing a sustained pitch using crescendo and decrescendo. | F4b |
| 21. Demonstrate good tone production in singing two- and three-part songs. | F4b |
| PHYSICAL EDUCATION PROGRAM OF STUDY, MIDDLE CHILDHOOD EDUCATION, LEVEL 8 | |
| This area of study relates to the basic concepts of personal fitness, skills, and knowledge of strategies and rules for (safe) participation in recreational activities, including dance and individual, dual, and team sports. | |
| Learning Outcomes--The Learner Will: | |
| 1. Improve on prior performance on a four component fitness test for flexibility, cardiovascular endurance, strength and body composition. | C3 |
| 2. Develop a personal fitness program. | C1b |
| 3. Demonstrate correct usage of upper body, abdominal and leg strength in relation to personal fitness. | C1b |
| 4. Demonstrate correct usage of flexibility exercises toward personal fitness. | C1b |
| 5. Analyze the relationship between body composition and personal fitness. | C1b |
| 6. Apply cardiovascular endurance activities to personal fitness. | C1b |
| 7. Extend and improve previously learned motor skills and patterns . | C3 |
| 8. Demonstrate skills in individual and dual sports. | C1b |
| 9. Demonstrate knowledge of rules in individual and dual sports. | F4 |
| 10. Perform sequential tumbling routine patterns. | C3 |

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| 11. Demonstrate team sports skills. | C1b |
| 12. Demonstrate knowledge of rules in team sports. | F4 |
| 13. Demonstrate knowledge of more than one defense and offense in team sports. | F4 |
| 14. Perform sequential skills safely while using gym apparatus. | C3 |
| 15. Demonstrate social/contemporary dances. | F4b |
| 16. Demonstrate outdoor recreation skills. | C1b |
| SCIENCE PROGRAM OF STUDY | |
| COORDINATED AND THEMATIC SCIENCE, (COORDINATED SCIENCE) FIFTH--EIGHTH | |
| 1.0 NATURE OF SCIENCE To develop an understanding of the nature of science. | F4a |
| 1.1 Acquire a conceptual framework of scientific principles. Recognize the interdependency of science themes and scientific concepts. Cultivate an appreciation of the relationships among all disciplines. | F4a F4a F4a |
| 1.2 Reflect on and clarify the interrelationships of scientific concepts to everyday life. Make informed decisions using scientific reasoning and knowledge. Make informed choices about careers in science and technology. | F4a F4a A2f, F4a |
| 1.3 Extend their natural curiosity by using scientific attitudes in the critical thinking processes. Apply skepticism, careful methods, logical reasoning, and creativity in investigating the observable universe. Recognize and appreciate the importance of the changing nature of science. | F2a, F4a F2a, F4a F4a |
| 1.4 Create a holistic view of scientific knowledge. Integrate reading, writing, mathematics, and other disciplines with the science curriculum. Recognize that technology evolves through the advancements of science. | F4a F4a F4a F4a |
| 1.5 Stimulate a sense of wonder about the natural world and the joy of discovery. Recognize that the exploration of science is challenging and fulfilling. Establish patterns of lifelong curiosity and learning. | F4a F4a F4 |
| 2.0 SCIENTIFIC ATTITUDES/HABITS OF MIND To cultivate scientific attitudes and values, to develop an understanding of the limits of science, and to evaluate scientific advances and technological applications as they impact society. | F4a |
| 2.1 Becoming actively involved in the joy of discovery. Collaborate and cooperate with others to ask questions, to find answers and solve problems. Appreciate scientific investigations. | A2a, F4a F2a, F4a, G4b F4a |
| 2.2 Be open to new ideas. Build upon their prior experiences and knowledge. Process and integrate new experiences. Formulate new knowledge. | F4a F4a F4a F4a |
| 2.3 Accept the open-endedness of scientific experimentation. Understand that discovery is a change process. Recognize that scientific findings are not always definite or complete. | F4a F4a F4a |
| 2.4 Establish habits of close observation, perseverance, and integrity in gathering data and drawing conclusions. Demonstrate honesty and objectivity. Appreciate logical reasoning and order. Display informed skepticism. | D3e, F4a F4a F4a F4a |
| 3.0 SCIENTIFIC PROCESSES/THINKING SKILLS To develop thinking skills and processes for investigating the world, solving problems, and making decisions. | F2a, F4a |

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| 3.1 Demonstrate the scientific processes including recognition, application, classification, quantification, interpretation, prediction, hypothesis formation, and experimentation. Recognize and apply facts, concepts, laws, and theories to explain phenomena. Classify objects, actions or phenomena according to similarities and differences. Construct charts, graphs, and tables to organize data. Use inferential reasoning to make logical conclusions from collected data. Formulate questions that lead to further investigations. Utilize science projects to learn and demonstrate scientific processes. | F4a F4a F4a F4a F4a F4a |
| 3.2 Develop rational thinking processes that underlie scientific approaches to problem solving. Employ critical-thinking skills in applying scientific knowledge and processes. Use imagination and creativity in solving problems. Utilize science projects to learn and demonstrate scientific processes. | F2a, F4a F2a, F4a F2a, F4a F4a |
| 3.3 Develop fundamental skills in the use of laboratory materials and equipment. Communicate and interpret scientific data and information. Demonstrate proper lab safety. | F4a F1, F4a C2a, F4a |
| 4.0 LABORATORY INVESTIGATIONS/HANDS-ON LEARNING To acquire skills for learning through concrete manipulation of the tools and materials of science. | F4a |
| 4.1 Use scientific instruments and materials to investigate the natural world. Demonstrate the ability to use materials (laboratory, household, natural objects, etc.) to understand and explain science concepts. Conduct explorations and investigations in a variety of settings. | F4a F4a |
| 4.2 Demonstrate safe and proper techniques for handling, manipulating, and caring for science materials and equipment. Develop the proper techniques for handling, manipulating and caring for science materials and living organisms. Practice proper laboratory safety. | F4a C2a, F4a C2a, F4a |
| 4.3 Engage in active inquiries, investigations and hands-on activities for a minimum of 50% of the instructional time. Realize that hands-on activities lead to development of scientific concepts. Participate in open-ended investigations. Regularly participate in hands-on activities that develop laboratory skills. | C2a, F4a A2a, F4a A2a, F4a A2a, F4a |
| 5.0 SCIENCE CONTENT To integrate the fields of science and establish connections with other discipline areas and daily life experiences. | F4a |
| 5.1 Develop through the study of interdependent themes including systems, changes, and models an understanding of biological, earth/space, and physical science concepts. | F4a |
| 5.2 Associate hands-on activities to daily life experiences. | F4a |
| 5.3 Express ideas that illustrate the relevancy of science, technology, and societal issues within the lessons. | F4a |
| 5.4 Experience the developmental continuum of science from elementary to secondary levels. | F4a |
| 5.5 Formulate and internalize the conceptual themes of science through interrelating conceptual patterns. | F4a |
| EIGHTH GRADE SYSTEMS The learner will investigate and apply: Variations in types of skeleton, muscular, and integumentary systems in organisms. Effects of human existence on the biosphere. Properties of elements, compounds and mixtures. Properties of acidity, conductivity and solubility to classify substances. Properties of substances and environmental impact. Newton's Laws of Motion Refraction and reflection of light. | F4a F4a F4a F4a F4a F4a F4a F4a F4a |

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| Criteria to characterize renewable and nonrenewable resources. | F4a |
| Principles of plate tectonics. | F4a |
| Energy transfer in the earth sciences. | F4a |
| Principles governing the quality and quantity of surface and ground water. | F4a |
| Interactions of the atmosphere and oceans. | F4a |
| Societal effects of meteorological phenomena. | F4a |
| Factors of mining resources. | F4a |
| Galactic systems and their components. | F4a |
| CHANGES | |
| The learner will investigate and apply: | F4a |
| Fundamentals of genetics. | F4a |
| Adaptations of organisms to their habitat. | F4a |
| Cyclic role of decomposition and waste disposal. | F4a |
| How waves travel through different materials. | F4a |
| Effects of individual and societal behaviors on environments. | F4a |
| Forces causing the construction and destruction of topographical features. | F4a |
| Weather observations to make weather predictions. | F4a |
| MODELS | |
| The learner will investigate and apply: | F4a |
| Models comparing variations in skeletal, muscular, and integumentary systems of organisms. | F4a |
| Sampling techniques involved in data collection. | F4a |
| Methods of classifying common organisms by observable characteristics. | F4a |
| How to illustrate the path of waves traveling through different materials. | F4a |
| How to represent forces as vectors. | F4a |
| How models illustrate technological principles (communication, construction, manufacturing, and transportation). | F4a |
| Stratigraphic interpretations. | F4a |
| Causes of geological phenomena. | F4a |
| Concerns with the explorations and colonization's of space. | F4a |
| 6.0 SCIENCE HISTORY | |
| To develop relationships between scientific milestones and how these milestones influence current scientific thought. | F4a |
| 6.1 Articulate the historical context in science. | F4a |
| Understand that scientific discoveries are influenced by technological demands, competition, controversy, world events, personalities, and societal issues. | F4a |
| Trace evolution of science concepts. | F4a |
| Identify similarities in the evolution of science concepts. | F4a |
| Understand that scientific discoveries can create global and economic ramifications. | F4a |
| Understand that men and women from diverse cultures have contributed to the development of science. | F4a |
| 7.0 SCIENCE, TECHNOLOGY, AND SOCIETY | |
| To develop an understanding of the relationship of science and technology in the context of society. | F4a |
| 7.1 Personalize the applications of science and technology. | F4a |
| Develop an understanding of the science and technology experienced in daily living. | F4a |
| Utilize their knowledge of science and technology in personal decision making. | F4a |
| Engage in activities to help resolve a local science-technology-society issue. | F4a |
| Evaluate mass media reports of scientific developments and events. | F4a |
| Recognize that science and technology provide skills and tools for dealing with global and local problems. | F4a |

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| <p>7.2 Explore the connections among science, technology, society, and career opportunities. Describe the costs and benefits of new technologies. Recognize that societal decisions influence the advancement and development of science and technology. Recognize that scientific knowledge, thinking processes, and skills are used in careers. Explore careers in science and technology.</p> | <p>A2f, F4a F4a F4a F4a A2f, F4a</p> |
| <p>SOCIAL STUDIES PROGRAM OF STUDY</p> | |
| <p>WEST VIRGINIA STUDIES, LEVEL EIGHT--1ST SEMESTER</p> | |
| <p>The Learner Will:</p> | |
| <p>1. Understand the concept of geographic regions and demonstrate a knowledge of geographical regions within and extending across West Virginia's borders.</p> | <p>F4a</p> |
| <p>2. Describe the influence that geographic features have played in the development of the state.</p> | <p>F4a</p> |
| <p>3. Give characteristics of the various cultures during the Pre-Columbian period.</p> | <p>F4a</p> |
| <p>4. Analyze the political process related to the formation of West Virginia.</p> | <p>F4a</p> |
| <p>5. Demonstrate knowledge of reasons for the development of the West Virginia transportation system.</p> | <p>F4a</p> |
| <p>6. Demonstrate the role of folklore and myths as they relate to culture. Understand the different roles that male and females play in these stories.</p> | <p>F4a</p> |
| <p>7. Analyze the impact of industrial and agricultural development on West Virginia.</p> | <p>F4a</p> |
| <p>8. Explain the development of education in the state.</p> | <p>F4a</p> |
| <p>9. Trace the history of the labor movement in West Virginia and analyze the role of unions. Include, but do not limit to, Hawk's Nest, Battle of Blair Mountain, Matewan Massacre, Mannington and Farmington disasters, provision of medical benefits, black lung legislation, and Mother Jones.</p> | <p>F4a</p> |
| <p>10. Describe the diversity of the population of West Virginia as it relates to religion, arts and crafts, recreation, ethnic origin, and race.</p> | <p>F4a</p> |
| <p>11. Demonstrate a knowledge of the geographic factors promoting the development of the coal, glass, chemical and metallurgical industries.</p> | <p>F4a</p> |
| <p>12. Evaluate present and future career opportunities in West Virginia. Be knowledgeable of the different roles and opportunities which have been available to men and women in the private and public sectors, including both high-tech and service areas such as coal, tourism, and government. Understand what impedes and enhances equality in employment.</p> | <p>F4a</p> |
| <p>13. Give examples of men and women in West Virginia who have made significant contributions both in public and private sectors.</p> | <p>F4a</p> |
| <p>14. Demonstrate knowledge of the interaction of state government and West Virginia citizens in meeting the needs and wants of citizens.</p> | <p>F4a</p> |
| <p>15. Analyze the relationship of West Virginia with the nation and the world.</p> | <p>F4a</p> |
| <p>16. Demonstrate adequate reading and writing skills through exposure to various media resources and techniques.</p> | <p>F3b, F3c, F4a</p> |
| <p>17. Implement a decision making process.</p> | <p>F2a, F4a</p> |
| <p>FOUNDATIONS OF DEMOCRACY, LEVEL EIGHT--2ND SEMESTER</p> | |
| <p>This area of study examines the structure, functions and processes of national, state and local governments and the responsibilities and rights of citizenship. Concepts include political process and structure, democracy, separation of power, checks and balances, executive, legislative and judicial branches. The Learner Will:</p> | |
| <p>1. Identify the weaknesses in the Articles of Confederation and explain how they led to the formation of the Constitution.</p> | <p>F4a</p> |
| <p>2. Relate the development, function, and importance of the Constitution. Illustrate the concept of power of government derived from the governed.</p> | <p>F4a</p> |
| <p>3. Have knowledge of three branches of government: executive, legislative, and judicial, and describe the concepts of "separation of powers," "checks and balances," and "judicial review."</p> | <p>F4a</p> |
| <p>4. Analyze how the Constitution has changed formally and informally over time.</p> | <p>F4a</p> |

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| 5. Compare and contrast the structure and function among national, state, and local governments and analyze the relationship among them. | F4a |
| 6. Analyze the role of special interest groups and lobbyists in government. | F4a |
| 7. Understand issues surrounding censorship and freedom of the press. | F4a |
| 8. Demonstrate the relationship between the media and government in a democracy. | F4a |
| 9. Justify the value and necessity of ethics in the political process of a democracy. | F4a |
| 10. Explain the concept of universal suffrage and the value of participatory democracy; understand the long, and sometimes violent, battle to include blacks and women in the democratic process. | F4a |
| 11. Explain reasons for different types of elections (e.g., primary, general, special, recall, initiative, referendum). | F4a |
| 12. Trace the development of political parties and explain the role they play in a democratic society. | F4a |
| 13. Analyze the relationship between government and economic factors. | F4a |
| 14. Describe the role of government in the formation of domestic and foreign policy. | F4a |
| 15. Demonstrate adequate reading and writing skills through exposure to various techniques and media resources. | F4a |
| 16. Develop an appreciation of the American flag as a symbol of the United States. | F4a |
| 17. Demonstrate knowledge of meaning of symbols of the United States, i.e., flag, seal, Declaration of Independence, Statue of Liberty, and Constitution. | F4a |
| 18. Implement a decision-making process based on research. | F4a |