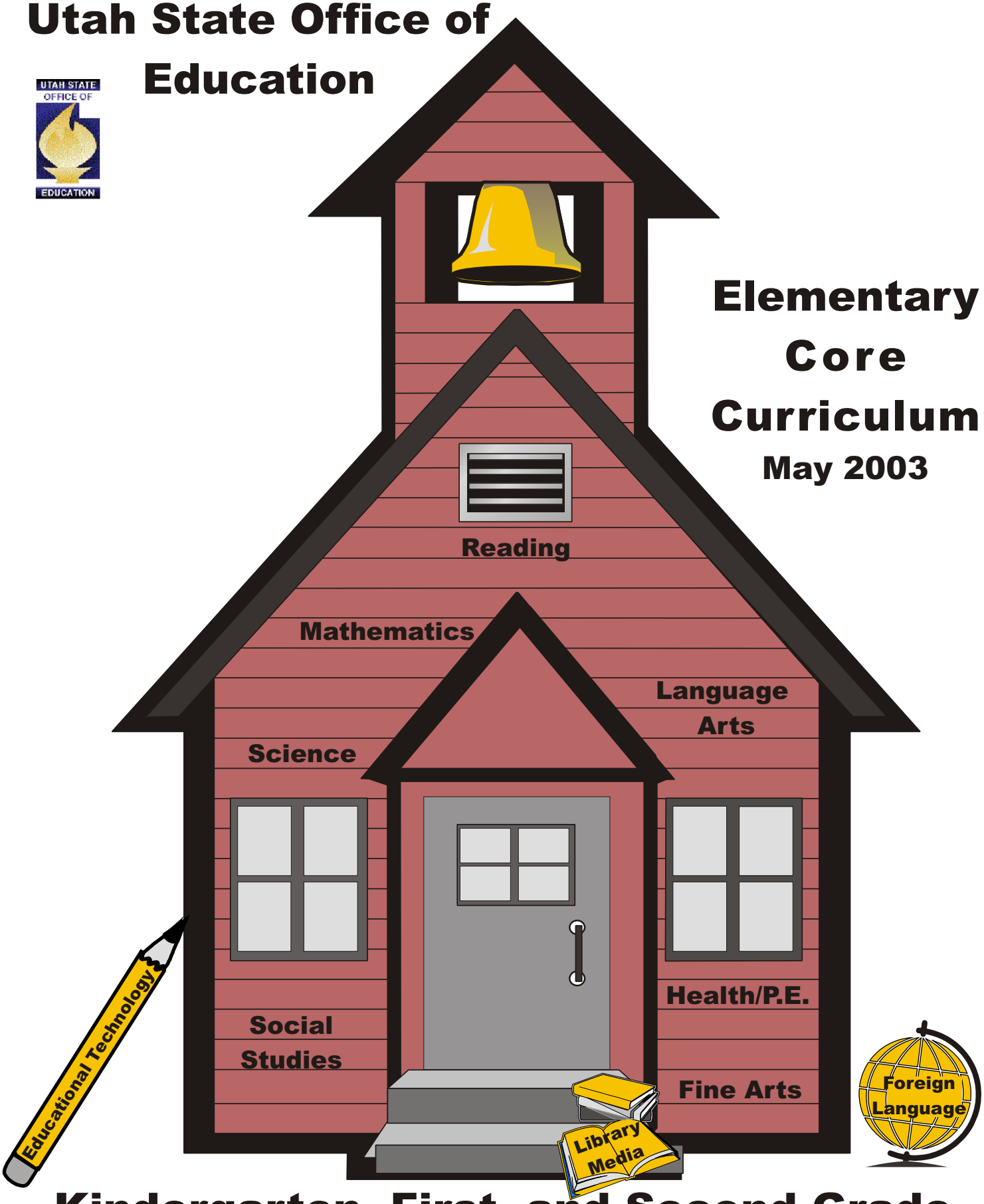
Utah State Office of Education

Elementary Core Curriculum

May 2003



Kindergarten, First, and Second Grade Core Curriculum

ELEMENTARY CORE CURRICULUM

Kindergarten, First, and Second Grade Core Curriculum

UTAH STATE OFFICE OF EDUCATION

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TABLE OF CONTENTS

Introduction vii

R277-700 The Elementary and Secondary Core Curriculum ix

Kindergarten, First, and Second Grade Core Curriculum Introduction 1

Organization of the Kindergarten, First, and Second Grade Core 2

Guidelines Used in Developing the Kindergarten, First, and Second Grade Core 3

Kindergarten Core Curriculum 5

Kindergarten Intended Learning Outcomes 8

Kindergarten Language Arts 11

Kindergarten Mathematics 15

Kindergarten Content 17

First Grade Core Curriculum 19

First Grade Intended Learning Outcomes 22

First Grade Language Arts 25

First Grade Mathematics 31

First Grade Content 35

Second Grade Core Curriculum 37

Second Grade Intended Learning Outcomes 40

Second Grade Language Arts 43

Second Grade Mathematics 47

Second Grade Content 51

K-6 Language Arts Core Curriculum in Table Format.....55

Language Arts Glossary.....109

K-6 Mathematics Core Curriculum in Table Format.....119

K-2 Mathematics Glossary 131

INTRODUCTION

Action by the Utah State Board of Education in January 1984 established a policy requiring the identification of specific Core Curriculum standards, which must be completed by all students K-12 as a requisite for graduation from Utah's secondary schools. This action was followed by three years of extensive work involving all levels of the education family in the process of identifying, trial testing, and refining these Core Curriculum standards for Utah's schools.

The Core Curriculum represents those standards of learning that are essential for all students. They are the ideas, concepts, and skills that provide a foundation on which subsequent learning may be built.

The Core should be taught with respect for differences in learning styles, learning rates, and individual capabilities without losing sight of the common goals. Although the Core Curriculum standards are intended to occupy a major part of the school program, they are not the total curriculum of a level or course.

R277. Education, Administration.
R277-700. The Elementary and Secondary School Core Curriculum.
R277-700-1. Definitions.

A. "Accredited" means evaluated and approved under the Standards for Accreditation of the Northwest Association of Schools and Colleges or the accreditation standards of the Board, available from the USOE Accreditation Specialist.

B. "Applied technology education (ATE)" means organized educational programs or courses which directly or indirectly prepare students for employment, or for additional preparation leading to employment, in occupations, where entry requirements generally do not require a baccalaureate or advanced degree.

C. "Basic skills course" means a subject which requires mastery of specific functions and was identified as a course to be assessed under Section 53A-1-602.

D. "Board" means the Utah State Board of Education.

E. "Core Curriculum content standard" means a broad statement of what students enrolled in public schools are expected to know and be able to do at specific grade levels or following completion of identified courses.

F. "Core Curriculum criterion-referenced test (CRTs)" means a test to measure performance against a specific standard. The meaning of the scores is not tied to the performance of other students.

G. "Core Curriculum objective" means a more focused description of what students enrolled in public schools are expected to know and do at the completion of instruction.

H. "Demonstrated competence" means subject mastery as determined by school district standards and review. School district review may include such methods and documentation as: tests, interviews, peer evaluations, writing samples, reports or portfolios.

I. "Elementary school" for purposes of this rule means grades K-6 in whatever kind of school the grade levels exist.

J. "High school" for purposes of this rule means grades 9-12 in whatever kind of school the grade levels exist.

K. "Individualized Education Program (IEP)" means a written statement for a student with a disability that is developed, reviewed, and revised in accordance with the Utah Special Education Rules and Part B of the Individuals with Disabilities Education Act (IDEA).

L. "Middle school" for purposes of this rule means grades 7-8 in whatever kind of school the grade levels exist.

M. "Norm-referenced test" means a test where the scores are based on comparisons with a nationally representative group of students in the same grade. The meaning of the scores is tied specifically to student performance relative to the performance of the students in the norm group under very specific testing conditions.

N. "State core Curriculum (Core Curriculum)" means those standards of learning that are essential for all Utah students, as well as the ideas, concepts, and skills that provide a foundation on which subsequent learning may be built, as established by the Board.

0. "USOE" means the Utah State Office of Education.

P. "Utah Basic Skills Competency Test" means a test to be administered to Utah students beginning in the tenth grade to include at a minimum components on English, language arts, reading and mathematics. Utah students shall satisfy the requirements of the Utah Basic Skills Competency Test in addition to school or district graduation requirements prior to receiving a basic high school diploma.

R277-700-2. Authority and Purpose.

A. This rule is authorized by Article X, Section 3 of the Utah Constitution, which places general control and supervision of the public schools under the Board; Section 53A-l-402(l)(b) and (c) which directs the Board to make rules regarding competency levels, graduation requirements, curriculum, and instruction requirements; Section 53A-1-402.6 which directs the Board to establish a Core Curriculum in consultation with local boards and superintendents and directs local boards to design local programs to help students master the Core Curriculum; and Section 53A-1-401(3) which allows the Board to adopt rules in accordance with its responsibilities.

B. The purpose of this rule is to specify the minimum Core Curriculum requirements for the public schools, to give directions to local boards and school districts about providing the Core Curriculum for the benefit of students, and to establish responsibility for mastery of Core Curriculum requirements.

R277-700-3. Core Curriculum Standards and Objectives.

A. The Board establishes minimum course description standards and objectives for each course in the required

general core, which is commonly referred to as the Core Curriculum.

B. Course descriptions for required and elective courses shall be developed cooperatively by school districts and the USOE with opportunity for public and parental participation in the development process.

C. The descriptions shall contain mastery criteria for the courses, and shall stress mastery of the course material and Core objectives and standards rather than completion of predetermined time allotments for courses.

D. Implementation of the Core Curriculum and student assessment procedures are the responsibility of local boards of education consistent with state law.

E. This rule shall apply to students in the 2005-2006 graduating class.

R277-700-4. Elementary Education Requirements.

A. The Board shall establish a Core Curriculum for elementary schools, grades K-6.

B. Elementary School Education Core Curriculum Content Area Requirements:

(1) Grades K-2:
(a) Reading/Language Arts;
(b) Mathematics;
(c) Integrated Curriculum.
(2) Grades 3-6:
(a) Reading/Language Arts;
(b) Mathematics;
(c) Science;
(d) Social Studies;
(e) Arts:
(i) Visual Arts;
(ii) Music;
(iii) Dance;
(iv) Theatre.
(f) Health Education;
(g) Physical Education;
(h) Educational Technology;
(i) Library Media.

C. It is the responsibility of the local boards of education to provide access to the Core Curriculum to all students.

D. Student mastery of the general Core Curriculum is the responsibility of local boards of education.

E. Informal assessment should occur on a regular basis to ensure continual student progress.

F- Board-approved CRT's shall be used to assess student mastery of the following:

(1) reading;
(2) language arts;
(3) mathematics;
(4) science in elementary grades 4-6; and
(5) effectiveness of written expression.

G. Norm-referenced tests shall be given to all elementary students in grades 3 and 5.

H. Provision for remediation for all elementary students who do not achieve mastery is the responsibility of local boards of education.

R277-700-5. Middle School Education Requirements.

A. The Board shall establish a Core Curriculum for middle school education.

B. Students in grades 7-8 shall earn a minimum of 12 units of credit to be properly prepared for instruction in grades 9-12.

C. Local boards may require additional units of credit.

D. Grades 7-8 Core Curriculum Requirements and units of credit:

(1) General Core (10.5 units of credit):
(a) Language Arts (2.0 units of credit) ;
(b) Mathematics (2.0 units of credit);
(c) Science (1.5 units of credit);
(d) Social Studies (1.5 units of credit);
(e) The Arts (1.0 units of credit):
(i) Visual Arts;
(ii) Music;
(iii) Dance;
(iv) Theatre.
(f) Physical Education (1.0 units of credit);
(g) Health Education (0.5 units of credit);
(h) Applied Technology Education Technology, Life, and Careers (1.0 units of credit);
(i) Educational Technology (credit optional);
(j) Library Media (integrated into subject areas).

E. Board-approved CRT's shall be used to assess student mastery of the following:

(1) reading;
(2) language arts;
(3) mathematics;
(4) science in grades 7 and 8; and
(5) effectiveness of written expression.

F. Norm-referenced tests shall be given to all middle school students in grade 8.

R277-700-6. High School Requirements.

A. The Board shall establish a Core Curriculum for students in grades 9-12.

B. Students in grades 9-12 shall earn a minimum of 24 units of credit.

C. Local boards may require additional units of credit.

D. Grades 9-12 Core Curriculum requirements required units of credit:

(1) Language Arts (3.0 units of credit);

(2) Mathematics (2.0 units of credit):

(a) minimally, Elementary Algebra or Applied Mathematics I; and

(b) geometry or Applied Mathematics II; or

(c) any Advanced Mathematics courses in sequence beyond (a) and (b) ;

(d) high school mathematics credit may not be earned for courses in sequence below (a).

(3) Science (2.0 units of credit from two of the four science areas):

(a) earth science (1.0 units of credit);

(b) biological science (1.0 units of credit);

(c) chemistry (1.0 units of credit);

(d) physics (1.0 units of credit).

(4) Social Studies (3.0 units of credit):

(a) Geography for Life (0.5 units of credit);

(b) World Civilizations (0.5 units of credit);

(c) U.S. history (1.0 units of credit);

(d) U.S. Government and Citizenship (0.5 units of Credit);

(e) elective social studies class (0.5 units of

(5) The Arts (1.5 units of credit from any of the following performance areas):

(a) visual arts;

(b) music;

(c) dance;

(d) theatre;

(6) Health education (0.5 units of credit)

(7) Physical education (1.5 units of credit):

(a) participation skills (0.5 units of credit);

(b) Fitness for Life (0.5 units of credit);

(c) individualized lifetime activities (0.5 units of credit) or team sport/athletic participation (maximum of 0.5 units of credit with school approval).

(8) Applied technology education (1.0 units of credit);

(a) agriculture;

(b) business;

(c) family and consumer sciences;

(d) technology education;

(h) trade and technical education.

(9) Educational technology:

(a) computer Technology (0.5 units of credit for the class by this specific name only); or

(b) successful completion of state-approved competency examination (no credit, but satisfies the Core requirement).

(10) Library media skills integrated into the curriculum;

(11) Board-approved CRT's shall be used to assess student mastery of the following subjects:

(a) reading;

(b) language arts through grade 11;

(c) mathematics as defined under R277-700-6D(2);

(d) science as defined under R277-700-6D(3); and

(e) effectiveness of written expression.

E. Students shall participate in the Utah Basic Skills Competency Test, as defined under R277-700-1O.

F. Students with disabilities served by special education programs may have changes made to graduation requirements through individual IEPs to meet unique educational needs. A student's IEP shall document the nature and extent of modifications, substitutions or exemptions made to accommodate a student with disabilities.

R277-700.7. Student Mastery and Assessment of Core Curriculum Standards and Objectives.

A. Student mastery of the Core Curriculum at all levels is the responsibility of local boards of education.

B. Provisions for remediation of secondary students who do not achieve mastery is the responsibility of local boards of education under Section 53A-13-104.

C. Students who are found to be deficient in basic skills through U-PASS shall receive remedial assistance according to provisions of Section 53A-1-606(1).

D. If parents object to portions of courses or courses in their entirety under provisions of law (Section 53A-13-101.2) and rule (R277-105), students and parents shall be responsible for the mastery of Core objectives to the satisfaction of the school prior to promotion to the next course or grade level.

E. Students with Disabilities:

(1) All students with disabilities served by special education programs shall demonstrate mastery of the Core Curriculum.

(2) If a student's disabling condition precludes the successful demonstration of mastery, the student's IEP team, on a case-by-case basis, may provide accommodations for or modify the mastery demonstration to accommodate the student's disability.

F. Students may demonstrate competency to satisfy course requirements consistent with R277-705-3.

G. All Utah public school students shall participate in state-mandated assessments, as required by law.

KEY: curricula
March 5, 2002

Art X Sec 3
53A-1-402(1)(b
53A-1-402.6
53A-1-401(3

Kindergarten, First, and Second Grade Core Curriculum

Introduction

Most students enter school confident in their own abilities; they are curious and eager to learn more. They make sense of the world by reasoning and problem solving. Young students are active, resourceful individuals who construct, modify, and integrate ideas by interacting with the physical world as well as with peers and adults. They learn by doing, collaborating, and sharing their ideas. Students' abilities to communicate through language, pictures, sound, movement, and other symbolic means develop rapidly during these years.

Literacy requires an understanding of listening, speaking, reading, writing, and viewing in many forms including print and electronic images. Today, more than ever, students must have the ability to think critically while applying new information to existing knowledge. Therefore, school literacy programs need to involve students in learning to read and write in situations that foster critical thinking and the use of literacy for independent learning in all content areas.

Young students are building beliefs about what mathematics is, about what it means to know and do mathematics, and about themselves as mathematical learners. Mathematics instruction needs to include more than short-term learning of rote procedures. Students must use technology and other mathematical tools, such as manipulative materials, to develop conceptual understanding and solve problems as they do mathematics. Students, as mathematicians, learn best with hands-on, active experiences throughout the instruction of the mathematics curriculum.

Language Arts and Mathematics are the tools for doing work in other areas. These content areas need to be integrated into other curriculum areas to provide students with optimal learning. The curriculum becomes more relevant when content areas are connected rather than taught in strict isolation. For this reason, the content areas of the Fine Arts, Health Education, Physical Education, Science, and Social Studies have been combined to enable teachers to teach more efficiently and students to learn in a real-life context that enhances lifelong learning.

The Kindergarten through Second Grade Core describes what students should know and be able to do at the end of each of the kindergarten, first, and second grade levels. It has been developed, critiqued, and revised by a community of Utah teachers, university educators, State Office of Education specialists, and an advisory committee representing a wide variety of people from the community. The Core reflects the current philosophy of education that is expressed in national documents developed by the International Reading Association, National Council of the Teachers of Mathematics, National Standards for Arts Education, Information Power, National Association for Sport and Physical Education, American Association for the Advancement of Science, National Council for the Social Studies, International Society for Technology and Education, and Early Childhood Standards.

Organization of the Kindergarten, First, and Second Grade Core

The Core is designed to help teachers organize and deliver instruction.

- Each grade level begins with a brief course description.
- The Kindergarten, First, and Second Grade INTENDED LEARNING OUTCOMES describe the goals for students to gain knowledge and understand their world. They are found at the beginning of each grade level, are an integral part of the Core, and should be included as part of instruction.
- The first Core area consists of the Language Arts curriculum.
- The second Core area consists of the Mathematics curriculum.
- The third Core area consists of Fine Arts, Health Education, Physical Education, Science, and Social Studies.
- A STANDARD is a broad statement of what students are expected to understand. Several Objectives are listed under each Standard.
- An OBJECTIVE is a more focused description of what students need to know and be able to do at the completion of instruction. If students have mastered the Objectives associated with a given Standard, they have mastered that Standard at that grade level. Several Indicators are described for each Objective.
- An INDICATOR is a measurable or observable student action that enables one to assess whether a student has mastered a particular Objective. Indicators are not meant to be classroom activities, but they can help guide classroom instruction.

Guidelines Used in Developing the Kindergarten, First, and Second Grade Core

The Core is:

Consistent With the Nature of Learning
The main intent in the early grades is for students to value learning and develop the skills to gain knowledge and understand their world. The Core is designed to produce an integrated set of Kindergarten, First, and Second Grade Intended Learning Outcomes for students, with specific goals in all content areas.

Coherent
The Core has been designed so that, wherever possible, the ideas taught within a particular grade level have a logical and natural connection with each other and with those of earlier grades. Efforts have also been made to select topics and skills that integrate well with one another appropriate to grade level. In addition, there is an upward articulation of concepts, skills, and content. This spiraling is intended to prepare students to understand and use more complex concepts and skills as they advance through the learning process.

Developmentally Appropriate
The Core takes into account the psychological and social readiness of students. It builds from concrete experiences to more abstract understandings. The Core focuses on providing experiences with concepts that students can explore and understand in depth to build the foundation for future learning experiences.

Reflective of Successful Teaching Practices
Learning through play, movement, and adventure is critical to the early development of the mind and body. The Core emphasizes student exploration. The Kindergarten, First, and Second Grade Intended Learning Outcomes are central in each standard. The Core is designed to encourage instruction with students working in cooperative groups. Instruction should recognize the importance of each Core area in the classroom, school, and community.

Comprehensive
The Kindergarten, First, and Second Grade Core does not cover all topics that have traditionally been in the Kindergarten, First, and Second Grade curriculum; however, it provides a basic foundation of knowledge and skills in all content areas. By emphasizing depth rather than breadth, the Core seeks to empower students rather than intimidate them with a collection of isolated and eminently forgettable facts. Teachers are free to add related concepts and skills, but they are expected to teach all the standards and objectives specified in the Core for their grade level.

Feasible
Teachers and others who are familiar with Utah students, classrooms, teachers, and schools have designed the Core. It can be taught with easily obtained resources and materials. A Teacher Handbook is also available for teachers and has sample lessons on each topic for each grade level. The Teacher Handbook is a document that will grow as teachers add exemplary lessons aligned with the new Core.

Useful and Relevant
This curriculum relates directly to student needs and interests. Relevance of content areas to other endeavors enables students to transfer skills gained from one area of instruction into their other school subjects and into their lives outside the classroom.

Reliant Upon Effective Assessment Practices
Student achievement of the standards and objectives in this Core is best assessed using a variety of assessment instruments. Performance tests are particularly appropriate to evaluate student mastery of thinking processes and problem-solving skills. A variety of classroom assessment approaches should be used by teachers in conjunction with the Criterion Referenced Tests (CRT) that are administered to first and second grade students in Language Arts and Mathematics, and with the pre- and post-tests administered in kindergarten. Observation of students engaged in instructional activities is highly recommended as a way to assess students' skills as well as attitudes toward learning. The nature of the questions posed by students provides important evidence of their understanding.

Engaging
In the early grades, children are forming attitudes and habits for learning. It is important that instruction maximizes students' potential and gives them understanding of the intertwined nature of learning. Effective elementary instruction engages students actively in enjoyable learning experiences. Instruction should be as thrilling an experience for a child as seeing a rainbow, growing a flower, or describing a toad. In a world of rapidly expanding knowledge and technology, all students must gain the skills they will need to understand and function responsibly and successfully in the world. The Core provides skills in a context that enables students to experience the joy of learning.

Kindergarten
Core Curriculum

The Kindergarten Core Curriculum

In kindergarten, core concepts should be integrated across all curriculum areas. Reading, writing, and mathematical skills should be emphasized as integral to the instruction in all other areas. Personal relevance of content is always an important part of helping students to value learning and should be emphasized.

Kindergarten students engage in many activities that help them develop oral language and literacy. Kindergarten students take part in language activities that extend their vocabulary, conceptual knowledge, and phonological awareness. Students learn to follow directions and develop the language of schooling.

Within a well-balanced mathematics curriculum, the primary focal points for kindergarten are developing whole-number concepts and using patterns and sorting to explore number, data, and shape. While learning mathematics, students will be actively engaged in using concrete materials and appropriate technologies such as calculators and computers.

In kindergarten, students learn about themselves and their relationship to the classroom, school, family, and community. Students are expected to develop skills in posing simple questions, measuring, sorting, classifying, and communicating information about the natural world. Students learn about their bodies and the behaviors necessary to protect them and keep them healthy. They learn basic body control while beginning to develop motor skills and moving in a variety of settings. Students become aware of strength, endurance, and flexibility in different parts of their bodies. They express their thoughts and ideas creatively, while challenging their imagination, fostering reflective thinking, and developing disciplined effort and problem-solving skills.

Kindergarten Intended Learning Outcomes

The main intent at the early grades is for students to value learning and develop the skills to gain knowledge and understand their world.

The Intended Learning Outcomes described below reflect the belief that kindergarten, first, and second grade education should address the intellectual, social, emotional, physical, and ethical development of children. While the Kindergarten, First, and Second Grade Core Curriculum focuses primarily on content and the intellectual development of children, it is important to create a classroom culture that fosters development of many aspects of a person. By nurturing development in these interrelated human domains, young people will be healthy and discover varied and exciting talents and dreams. They will be socially and civically competent and able to express themselves effectively.

The outcomes identified below are to provide a direction for general classroom instruction, management, culture, environment, and inclusion. These outcomes should be interwoven throughout the Kindergarten, First, and Second Grade Core Curriculum, which offers more specific and measurable standards for instruction.

Beginning in kindergarten and by the end of second grade students will be able to:

1. **Demonstrate a positive learning attitude.**
   a. Display a sense of curiosity.
   b. Practice personal responsibility for learning.
   c. Demonstrate persistence in completing tasks.
   d. Apply prior knowledge and processes to construct new knowledge.
   e. Voluntarily use a variety of resources to investigate topics of interest.

2. **Develop social skills and ethical responsibility.**
   a. Respect similarities and differences in others.
   b. Treat others with kindness and fairness.
   c. Follow classroom and school rules.
   e. Include others in learning and play activities.
   f. Participate with others when making decisions and solving problems.
   g. Function positively as a member of a family, class, school, and community.

3. **Demonstrate responsible emotional and cognitive behaviors.**
   a. Recognize own values, talents, and skills.
   b. Express self in positive ways.
   c. Demonstrate aesthetic awareness.
   d. Demonstrate appropriate behavior.
   e. Express feelings appropriately.
   f. Meet and respect needs of self and others.

4. **Develop physical skills and personal hygiene.**
    a. Respect physical similarities and differences in self and others.
    b. Learn proper care of the body for health and fitness.
    c. Develop knowledge that enhances participation in physical activities.
    d. Display persistence in learning motor skills and developing fitness.
    e. Use physical activity for self-expression.

5. **Understand and use basic concepts and skills.**
    a. Develop phonological and phonemic awareness.
    b. Decode, read, and comprehend written text and symbols.
    c. Develop vocabulary.
    d. Develop reasoning and sequencing skills.
    e. Demonstrate problem-solving skills.
    f. Observe, sort, and classify objects.
    g. Make and interpret representations, graphs, and models.
    h. Recognize how content ideas interconnect.
    i. Make connections from content areas to application in real life.

6. **Communicate clearly in oral, artistic, written, and nonverbal form.**
    a. Share ideas using communication skills.
    b. Predict an event or outcome based on evidence.
    c. Use appropriate language to describe events, objects, people, ideas, and emotions.
    d. Listen attentively and respond to communication.
    e. Use mathematical concepts to communicate ideas.
    f. Use visual art, dance, drama, and music to communicate.

Kindergarten Language Arts

Standard 1 (Oral Language) Students develop language for the purpose of effectively communicating through listening, speaking, viewing, and presenting.

Objective 1: Develop language through listening and speaking.

a. Listen attentively.
b. Listen and demonstrate understanding by responding appropriately (e.g., follow two-step directions).
c. Speak clearly and audibly with expression in communicating ideas.
d. Speak in complete sentences.

Objective 2: Develop language through viewing media and presenting.

a. View a variety of media presentations attentively.
b. Use a variety of formats (e.g., show and tell, drama, sharing of books) in presenting with various forms of media.

Standard 2 (Concepts of Print): Students develop an understanding of how printed language works.

Objective 1: Demonstrate an understanding that print carries "<u>the</u>" message.

a. Recognize that print carries different messages.
b. Identify messages in common environmental print (e.g., signs, boxes, wrappers).

Objective 2: Demonstrate knowledge of elements of print within a text.

a. Identify front/back, top/bottom, left/right of text/book.
b. Discriminate between upper- and lower-case letters, numbers, and words in text.
c. Show the sequence of print by pointing left to right with return sweep.
d. Identify where text begins and ends on a page.
e. Identify punctuation in text (i.e., periods, question marks, exclamation points).

Standard 3 (Phonological and Phonemic Awareness): Students develop phonological and phonemic awareness.

Objective 1: Demonstrate phonological awareness.

a. Count the number of words in a sentence.
b. Identify and create a series of rhyming words orally (e.g., cat, bat, sat, _____).
c. Recognize words beginning with the same initial sound in an alliterative phrase or sentence (e.g., Six snakes sold snacks and sodas).

Objective 2: Recognize like and unlike word parts (oddity tasks).

a. Identify the word that does not rhyme in a series of words (e.g., bat, cat, sat, <u>pig</u>).
b. Identify the words with same beginning consonant sound in a series of words (e.g., man, <u>s</u>at, <u>s</u>ick) and ending consonant sound (e.g., ma<u>n</u>, sat, the<u>n</u>).

Objective 3: Orally blend word parts (blending).

a. Blend syllables to make words (e.g., /ta/.../ble/, table).
b. Blend onset and rimes to make words (e.g., /p/…/an/, pan).
c. Blend individual phonemes to make words (e.g., /s/…/a/…/t/, sat).

Objective 4: Orally segment words into word parts (segmenting).

a. Segment words into syllables (e.g., table, /ta/…/ble/).
b. Segment words into onset and rime (e.g., pan, /p/…an).
c. Segment words into individual phonemes (e.g., sat, /s/…/a/…/t/).

Objective 5: Orally manipulate phonemes in words and syllables (manipulation).

a. Substitute initial sound (e.g., replace the first sound in mat to /s/, say <u>sat</u>).
b. Substitute initial sound to create new words (e.g., replace the first sound in <u>mat</u> with letters of the alphabet).

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective 1: Demonstrate an understanding of the relationship between letters and sounds.

a. Name all upper- and lower-case letters of the alphabet in random order.
b. Match consonant and short vowel sounds to the correct letter.
c. Blend simple cvc sounds into one-syllable words.

Objective 2: Use knowledge of structural analysis to decode words. See first and second grades.

Objective 3: Spell words correctly.

a. Hear and write letters to represent single sounds in words.
b. Spell a small number of grade level words (e.g., you, the, to, is).
c. Spell first name correctly.

Objective 4: Use spelling strategies to achieve accuracy (e.g., prediction, visualization, association).

a. Use knowledge about spelling to predict the spelling of new words.
b. Associate the spelling of new words with that of known words.

Standard 5 (Fluency): Students develop reading fluency to read aloud grade level text effortlessly without hesitation.

Objective 1: Read aloud grade level text with appropriate speed and accuracy.

a. Read alphabet letters in random order with automaticity.
b. Read numerals from zero to ten in random order with automaticity.

Objective 2: Read aloud grade level text effortlessly with clarity.

a. Use appropriate intonation and expression during unison oral reading with the teacher.
b. Read with automaticity approximately 25 high-frequency/sight words.

Standard 6 (Vocabulary): Students learn and use grade level vocabulary to increase understanding and read fluently.

Objective 1: Learn new words through listening and reading widely.

a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.
b. Learn the meaning of a variety of grade level words (e.g., words from literature, social studies, science, math).
c. Use resources to learn new words by relating them to known words (e.g., books, charts, word walls).

Objective 2: Use multiple resources to learn new words by relating them to known words and/or concepts. See second, third, fourth, fifth, and sixth grades.

Objective 3: Use structural analysis and context clues to determine meanings of words.

a. Identify meanings of words by looking at the root word and using known endings (e.g., car, cars; jump, jumped, jumping).
b. Monitor reading using context to explain the meanings of unknown key words from text read aloud.

Standard 7 (Comprehension): Students understand, interpret, and analyze narrative and informational grade level text.

Objective 1: Identify purposes of text.

a. Discuss purpose for reading.
b. Discuss author's purpose.

Objective 2: Apply strategies to comprehend text.

a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).
b. Ask questions about text.
c. Make predictions using picture clues, title, and prior knowledge.
d. Make inferences and draw conclusions from text.
e. Retell identifying key ideas.
f. Compile information from text.

Objective 3: Recognize and use features of narrative and informational text.

a. Identify beginning, middle, and ending of text.
b. View a variety of simple genres: nursery rhymes, fairy tales, poems, realistic fiction, fantasy.
c. Identify information from pictures.
d. Recognize information as real/make believe.
e. View a variety of informational texts (e.g., pictures books).

Standard 8 (Writing): Students write daily to communicate effectively for a variety of purposes and audiences.

Objective 1: Prepare to write by gathering and organizing information and ideas (pre-writing).

a. Generate ideas for writing by listening, talking, drawing, looking at literature and informational text, being read to, and reflecting on personal experiences.
b. Select topics from generated ideas.

Objective 2: Compose a written draft.

a. Draft ideas on paper, utilizing pictures with labels/words.
b. Select appropriate words to convey meaning.

Objective 3: Revise by elaborating and clarifying a written draft. See first, second, third, fourth, fifth, and sixth grades.

Objective 4: Edit written draft for conventions.

a. Edit writing of first name for appropriate capital and lower-case letters.
b. Edit writing for the spelling of a key word.

Objective 5: Use fluent and legible handwriting to communicate.

a. Print all upper- and lower-case letters of the alphabet and numerals 0-9 using proper form, proportions, and spacing.
b. Write with increasing fluency in forming manuscript letters and numerals.
c. Write name legibly using correct manuscript form.

Objective 6: Write in different forms and genres.

a. Produce personal writing (e.g., All About Me books, notes).
b. Produce traditional and imaginative stories, narrative and formula poetry as a shared writing activity.
c. Produce functional text (e.g., ABC books, labels, signs).
d. Share illustrations and writing with others.
e. Take part in producing group products.

Kindergarten Mathematics

Standard 1: Students will understand simple number concepts and relationships.

Objective 1: Identify and use whole numbers.

a. Relate a *numeral* to the number of objects in a set (e.g., ~ ~ ~ = 3).
b. Construct models of numbers to 10 with physical objects or manipulatives.
c. Make pictorial representations of numbers to 10 (e.g., draw four circles, draw six squares).
d. Recognize and write numerals from 0 to 10.
e. Manipulate objects to demonstrate and describe multiple ways of representing a number (e.g., 5 can be 3 and 2 more, 5 can also be 2 and 2 and 1).

Objective 2: Identify simple relationships among whole numbers.

a. Develop strategies for *one-to-one correspondence* and keeping track of quantities.
b. Compare two sets of objects to determine whether they have the same, fewer, or more elements.
c. Order sets of objects from 1 to 9.
d. Estimate quantities less than 10.

Objective 3: Model and illustrate meanings of the operations of addition and subtraction and describe how they relate.

a. Demonstrate the joining and separating of sets with objects to solve problems.
b. Describe the joining or separating of sets with informal language when using models.
c. Record pictorially the results from the joining or separating of sets.

Standard 2: Students will identify and use patterns to represent mathematical situations.

Objective 1: Identify and sort objects according to common attributes.

a. Sort objects into groups by color, shape, size, number, or other *attributes*.
b. Identify which attribute was used to sort objects into a group.
c. Find multiple ways to sort and classify a group of objects.

Objective 2: Identify and use patterns to describe numbers or objects.

a. Use patterns to count orally from 1 to 20 and backward from 10 to 0.
b. Identify simple patterns in the environment.
c. Predict what comes next in an established pattern and justify thinking.
d. Duplicate, extend, and create simple patterns using objects and pictorial representations.

Standard 3: Students will identify and create simple geometric shapes and describe spatial relationships.

Objective 1: Identify and create simple geometric shapes.

a. Identify circles, triangles, rectangles, and squares.
b. Combine shapes to create *two-dimensional* objects (e.g., using a triangle and square to create a picture of a house).
c. Draw circles, triangles, rectangles, and squares.
d. Recognize circles, triangles, rectangles, and squares in the students' environment.

Objective 2: Describe simple spatial relationships.

a. Visualize how to fit a shape into a design.
b. Use and demonstrate words to describe position with objects (i.e., on, over, under, above, below, top, bottom, up, down, in front of, behind, next to, beside).
c. Use and demonstrate words to describe distance with objects (i.e., far, near).

Standard 4: Students will understand and use simple measurement tools and techniques.

Objective 1: Identify measurable attributes of objects and units of measurement.

a. Identify clocks and calendars as tools that measure time.
b. Identify a day, week, and month on a calendar.
c. Identify pennies, nickels, dimes, and quarters as units of money.

Objective 2: Use appropriate techniques and tools to determine measurements.

a. Compare two objects (e.g., shorter/longer, heavier/lighter, larger/smaller, more/less).
b. Find the length of an object using nonstandard units (e.g., pencils, paper clips).
c. Name the days of the week in order.
d. Sort pennies, nickels, dimes, and quarters.

Standard 5: Students will collect and draw conclusions from data and understand basic concepts of probability.

Objective 1: Collect, organize, and display simple data.

a. Collect, organize, and record data using objects and pictures.
b. Represent data in a variety of ways (e.g., graphs made from people, *pictographs*, bar graphs) and interpret the data (e.g., more people like red than blue).

Objective 2: Determine the likelihood of events.

a. Describe events encountered in books read as possible or not possible.
b. Describe events as likely or unlikely (e.g., It is likely to snow today. It is unlikely an elephant will be in school).

Kindergarten
Fine Arts, Health, Physical Education, Science, and Social Studies

Standard 1: Students will develop a sense of self.

Objective 1: Describe and practice responsible behaviors for health and safety.

a. Describe proper care of the body (e.g., proper brushing of teeth, eating a variety of foods, proper hand washing, sneezing into sleeve).
b. Recognize that food is fuel for the body.
c. Recognize signs of physical activity (e.g., heart rate, breathing, sweat).
d. Identify helpful and harmful substances to the body.
e. Recall basic safety (e.g., follow rules, maintain personal space/boundaries, know phone number, address, emergency number).

Objective 2: Develop skills in gross and fine motor movement.

a. Participate in regular physical activity that requires exertion (e.g., walk, jog, jump rope).
b. Explore a variety of fundamental and manipulative gross motor skills (e.g., hop, skip, twirl, dance, throw, catch, kick, strike).
c. Perform a variety of fine motor skills (e.g., draw, cut, paste, mold, write).
d. Maintain personal space and boundaries while moving.
e. Create and perform simple dance movements that express who one is, knowledge of the body, feelings, senses, and ideas in time and space.

Objective 3: Develop and use skills to communicate ideas, information, and feelings.

a. Identify and express ideas, information, and feelings in a variety of ways (e.g., draw, paint, tell stories, play, make believe, dance, sing).
b. Recognize similar colors as being members of the family of reds, blues, and yellows and shapes as being similar to squares, circles, and triangles.
c. Describe sounds in terms of dynamics (loud/soft), pitch (high/low), duration (long/short; fast/slow), and timbre (tone of an animal, human, musical instrument, or machine).
d. Develop competency in beat accuracy and respond to an understanding of beat as a life force through moving, singing, chanting, or playing instruments.
e. Express emotions by selecting and playing a variety of simple rhythm instruments.

Standard 2: Students will develop a sense of self in relation to families and community.

Objective 1: Describe factors that influence relationships with family and friends.

a. Identify ways individuals are alike and different.
b. Identify contributions of family members.
c. Describe how children change over time.
d. Identify behaviors to initiate play and develop friendships.
e. Demonstrate positive interactions with peers and adults.

Objective 2: Identify important aspects of community and culture that strengthen relationships.

a. Recognize and follow family and classroom rules.
b. Describe the school community (e.g., students, teachers, secretary, custodian, principal).
c. Describe resources in the community (e.g., police officer, firefighter, library, museum).
d. Describe cultural traditions in family and community.
e. Recognize national symbols and recite the Pledge of Allegiance.

Objective 3: Express relationships in a variety of ways.

a. Recognize traditions, music, dances, artwork, poems, rhymes, and stories that distinguish cultures.
b. Develop skills in storytelling through moving the body and making sounds while pretending to be characters in a familiar story.
c. Create and perform/exhibit dances, visual art, music, and dramatic stories from various cultures.

Standard 3: Students will develop an understanding of their environment.

Objective 1: Investigate changes in the seasons.

a. Identify the seasons and represent each with pictures and songs.
b. Observe and describe typical weather for each of the seasons.
c. Describe the information each of the five senses provides with the changing of seasons.
d. Observe and describe changes in behavior of animals as the seasons change.
e. Describe how people change their behavior as the seasons change.

Objective 2: Observe and describe animals in the local environment.

a. Observe, describe, draw, and compare familiar animals.
b. Describe how young animals are different from adult animals.
c. Describe how animals care for their young.
d. Observe and imitate the sounds and movements of animals with songs, dances, and storytelling.
e. Distinguish between real and make-believe animal behaviors.

Objective 3: Recognize symbols and models used to represent features of the environment.

a. Recognize that maps and globes are symbols for actual places.
b. Identify items on a map of the classroom.
c. Explore basic map and globe directions and characteristics (e.g., top, bottom, right, left, land, water, Arctic Ocean, Antarctica).
d. Make representations of things observed in the environment (e.g., drawing, painting, building structures with blocks, making models with clay).

First Grade
Core Curriculum

The First Grade Core Curriculum

First grade core concepts should be integrated across all curriculum areas. Reading, writing, and mathematical skills should be emphasized as integral to the instruction in all other areas. Personal relevance of content is always an important part of helping students to value learning and should be emphasized.

In first grade, students are immersed in a literature-rich environment to develop an awareness of phonemes and print materials as sources of information and enjoyment. They listen and speak to participate in classroom discussions and use a variety of strategies to read new words and familiar selections aloud with fluency and expression. Understanding the main idea and sequence of events in a story are important comprehension skills that are applied in all other content areas.

First graders continue their development of number sense. They learn basic addition and subtraction facts through joining and separating sets with twelve or fewer objects. Students draw and describe specified two-dimensional figures and use nonstandard units to measure length and weight. They are introduced to the idea of fractions and continue the development of sorting and patterning skills. While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers.

In first grade, students learn about themselves and their relationship to the classroom, school, family, and community. Students develop the skills of questioning, gathering information, making measurements using nonstandard units, constructing explanations, and drawing conclusions. Students learn about their bodies and the behaviors necessary to protect them and keep them healthy. They learn basic body control while beginning to develop motor skills and moving in a variety of settings. Students become aware of strength, endurance, and flexibility in different parts of their bodies. They express their thoughts and ideas creatively, while challenging their imagination, fostering reflective thinking, and developing disciplined effort and problem-solving skills.

First Grade Intended Learning Outcomes

The main intent at the early grades is for students to value learning and develop the skills to gain knowledge and understand their world.

The Intended Learning Outcomes described below reflect the belief that kindergarten, first, and second grade education should address the intellectual, social, emotional, physical, and ethical development of children. While the Kindergarten, First, and Second Grade Core Curriculum focuses primarily on content and the intellectual development of children, it is important to create a classroom culture that fosters development of many aspects of a person. By nurturing development in these interrelated human domains, young people will be healthy and discover varied and exciting talents and dreams. They will be socially and civically competent and able to express themselves effectively.

The outcomes identified below are to provide a direction for general classroom instruction, management, culture, environment, and inclusion. These outcomes should be interwoven throughout the Kindergarten, First, and Second Grade Core Curriculum, which offers more specific and measurable standards for instruction.

Beginning in kindergarten and by the end of second grade students will be able to:

1. **Demonstrate a positive learning attitude.**
   a. Display a sense of curiosity.
   b. Practice personal responsibility for learning.
   c. Demonstrate persistence in completing tasks.
   d. Apply prior knowledge and processes to construct new knowledge.
   e. Voluntarily use a variety of resources to investigate topics of interest.

2. **Develop social skills and ethical responsibility.**
   a. Respect similarities and differences in others.
   b. Treat others with kindness and fairness.
   c. Follow classroom and school rules.
   e. Include others in learning and play activities.
   f. Participate with others when making decisions and solving problems.
   g. Function positively as a member of a family, class, school, and community.

3. **Demonstrate responsible emotional and cognitive behaviors.**
   a. Recognize own values, talents, and skills.
   b. Express self in positive ways.
   c. Demonstrate aesthetic awareness.
   d. Demonstrate appropriate behavior.
   e. Express feelings appropriately.
   f. Meet and respect needs of self and others.

4. **Develop physical skills and personal hygiene.**
    a. Respect physical similarities and differences in self and others.
    b. Learn proper care of the body for health and fitness.
    c. Develop knowledge that enhances participation in physical activities.
    d. Display persistence in learning motor skills and developing fitness.
    e. Use physical activity for self-expression.

5. **Understand and use basic concepts and skills.**
    a. Develop phonological and phonemic awareness.
    b. Decode, read, and comprehend written text and symbols.
    c. Develop vocabulary.
    d. Develop reasoning and sequencing skills.
    e. Demonstrate problem-solving skills.
    f. Observe, sort, and classify objects.
    g. Make and interpret representations, graphs, and models.
    h. Recognize how content ideas interconnect.
    i. Make connections from content areas to application in real life.

6. **Communicate clearly in oral, artistic, written, and nonverbal form.**
    a. Share ideas using communication skills.
    b. Predict an event or outcome based on evidence.
    c. Use appropriate language to describe events, objects, people, ideas, and emotions.
    d. Listen attentively and respond to communication.
    e. Use mathematical concepts to communicate ideas.
    f. Use visual art, dance, drama, and music to communicate.

First Grade Language Arts

Standard 1 (Oral Language): Students develop language for the purpose of effectively communicating through listening, speaking, viewing, and presenting.

Objective 1: Develop language through listening and speaking.

a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).
b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question).
c. Speak clearly and audibly with expression in communicating ideas.
d. Speak in complete sentences.

Objective 2: Develop language through viewing media and presenting.

a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/nonfiction).
b. Use a variety of formats (e.g., show and tell, drama, sharing of books and personal writings, choral readings, informational reports, retelling experiences and stories in sequence) in presenting with various forms of media.

Standard 2 (Concepts of Print): Students develop an understanding of how printed language works.

Objective 1: Demonstrate an understanding that print carries "<u>the</u>" message.

a. Recognize that print carries different messages.
b. Identify messages in common environmental print (e.g., signs, boxes, wrappers).

Objective 2: Demonstrate knowledge of elements of print within a text.

a. Discriminate between letters, words, and sentences in text.
b. Match oral words to printed words while reading.
c. Identify punctuation in text (i.e., periods, question marks, and exclamation points).

Standard 3 (Phonological and Phonemic Awareness): Students develop phonological and phonemic awareness.

Objective 1: Demonstrate phonological awareness.

a. Count the number of syllables in words.
b. Count the number of syllables in a first name.

Objective 2: Recognize like and unlike word parts (oddity tasks).

a. Identify words with same beginning consonant sounds (e.g., man, <u>s</u>at, <u>s</u>ick) and ending consonant sounds (e.g., ma<u>n,</u> sat, te<u>n</u>) in a series of words.
b. Identify words with same medial sounds in a series of words (e.g., long vowel sound: t<u>a</u>ke, l<u>a</u>te, feet; short vowel sound: top, c<u>a</u>t, p<u>a</u>n; middle consonant sound: kitten, mi<u>ss</u>ing, le<u>ss</u>on).

Objective 3: Orally blend word parts (blending).

a. Blend syllables to make words (e.g., /ta/…/ble/, table).
b. Blend onset and rime to make words (e.g., /p/…/an/, pan).
c. Blend individual phonemes to make words (e.g., /s/ /a/ /t/, sat).

Objective 4: Orally segment words into word parts (segmenting).

a. Segment words into syllables (e.g., table, /ta/…/ble/.
b. Segment words into onset and rime (e.g., pan, /p/…/an/).
c. Segment words into individual phonemes (e.g., sat, /s/…/a/…/t/).

Objective 5: Orally manipulate phonemes in words and syllables (manipulation).

a. Substitute initial and final sound (e.g., replace first sound in mat to /s/, say sat; replace last sound in mat with /p/, say map).
b. Substitute vowel in words (e.g., replace middle sound in map to /o/, say mop).
c. Delete syllable in words (e.g., say baker without the /ba/, say ker).
d. Deletes initial and final sounds in words (e.g., say sun without the /s/, say un; say hit without the /t/, say hi).
e. Delete initial phoneme and final phoneme in blends (e.g., say step without the /s/, say tep; say best without the /t/, say bes).

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective 1: Demonstrate an understanding of the relationship between letters and sounds.

a. Write letters to represent spoken sounds of all letters of the alphabet in random order.
b. Identify and pronounce sounds for consonants, consonant blends (e.g., br, st, fl) and consonant digraphs (e.g., ch, sh, wh, th) accurately in words.
c. Identify and pronounce sounds for short and long vowels, using patterns (e.g., vc, vcv, cvc, cvvc, cvcv, cvc-silent e), and vowel digraphs (e.g., ea, ee, ie, oa, ai, ay, oo, ow) accurately in words.
d. Identify and pronounce sounds for r–controlled vowels accurately in one-syllable words (e.g., ar, or, er).
e. Identify and blend initial letter sounds with common vowel patterns to pronounce one-syllable words (e.g., /g/…/oa/…/t/, goat).

Objective 2: Use knowledge of structural analysis to decode words.

a. Identify and read grade level contractions and compound words.
b. Identify sound patterns and apply knowledge to decode one-syllable words (e.g., blends, digraphs, vowel patterns, r-controlled vowels).
c. Demonstrate an understanding of representing same sound with different patterns by decoding these patterns accurately in one-syllable words (e.g., ee, ie, ea, e).
d. Use knowledge of root words and suffixes to decode words (i.e., -ful, -ly, -er).
e. Use letter patterns to decode words (e.g., phonograms/word families/onset and rime: -ack, -ail, -ake).

Objective 3: Spell words correctly.

a. Write sounds heard in words in the correct order.
b. Hear and write beginning, middle, and ending consonant sounds to spell one-syllable words.
c. Spell short vowel words with consonant blends and digraphs (e.g., bl, st, nt, sh, wh, th).
d. Spell an increasing number of grade level high-frequency and irregular words correctly (e.g., bear, gone, could).
e. Learn the spellings of irregular and difficult words (e.g., river, house, animal).

Objective 4: Use spelling strategies to achieve accuracy (e.g., prediction, visualization, association).

a. Use knowledge about spelling to predict the spelling of new words.
b. Associate the spelling of new words with that of known words and word patterns.
c. Use spelling generalities to assist spelling of new words (e.g., one vowel between two consonants, silent "e" on the end of a word, two vowels together).

Standard 5 (Fluency): Students develop reading fluency to read aloud grade level text effortlessly without hesitation.

Objective 1: Read aloud grade level text with appropriate speed and accuracy.

a. Read grade level text at a rate of approximately 60 wpm.
b. Read grade level text with an accuracy rate of 95-100%.

Objective 2: Read aloud grade level text effortlessly with clarity.

a. Read grade level text in three- to four-word phrases using intonation, expression, and punctuation cues.
b. Read with automaticity 100 first grade high-frequency/sight words.

Standard 6 (Vocabulary): Students learn and use grade level vocabulary to increase understanding and read fluently.

Objective 1: Learn new words through listening and reading widely.

a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.
b. Learn the meanings of a variety of grade level words (e.g., words from literature, social studies, science, math).
c. Use resources to learn new words by relating them to known words (e.g., books, charts, word walls, simple dictionaries).

Objective 2: Use multiple resources to learn new words by relating them to known words and/or concepts. See second, third, fourth, fifth, and sixth grades.

Objective 3: Use structural analysis and context clues to determine meanings of words.

a. Identify meanings of words using the root word and known endings (e.g., car, cars; jump, jumped, jumping).
b. Use context to determine meanings of unknown key words (e.g., The *gigantic* dog couldn't fit in his new doghouse.).

Standard 7 (Comprehension): Students understand, interpret, and analyze narrative and informational grade level text.

Objective 1: Identify purposes of text.

a. Discuss purpose for reading.
b. Discuss author's purpose.

Objective 2: Apply strategies to comprehend text.

a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).
b. Ask questions about text read aloud and independently.
c. Make predictions using picture clues, title, text, and/or prior knowledge.
d. Make inferences and draw conclusions from text.
e. Identify topic/main idea from text noting details.
f. Retell using important ideas/events and supporting details in sequence.
g. Compile information from text.

Objective 3: Recognize and use features of narrative and informational text.

a. Identify beginning, middle, and end; characters; setting; problem/resolution.
b. Identify different genres: nursery rhymes, fairy tales, poems, realistic fiction, fantasy, fables.
c. Identify information from pictures, captions, and diagrams.
d. Identify multiple facts in grade level informational text.
e. Locate facts from informational texts (e.g., picture books, grade level informational books).

Standard 8 (Writing): Students write daily to communicate effectively for a variety of purposes and audiences.

Objective 1: Prepare to write by gathering and organizing information and ideas (pre-writing).

a. Generate ideas for writing by reading, discussing literature and informational text, drawing, looking at books, being read to, and reflecting on personal experiences.
b. Select topics from generated ideas.
c. Identify audience for writing.

Objective 2: Compose a written draft.

a. Draft ideas on paper in an organized manner (e.g., beginning, middle, end) utilizing words and sentences.
b. Select appropriate words to convey meaning.

Objective 3: Revise by elaborating and clarifying a written draft.

a. Revise draft to add details.
b. Revise draft using descriptive words.
c. Write in complete sentences.

Objective 4: Edit written draft for conventions.

a. Edit writing for capitals in names, first word of a sentence, and the pronoun “I” and correct ending punctuation (i.e., periods, question marks).
b. Edit for spelling of grade level-appropriate words (e.g., would, down, made, write).
c. Edit for standard grammar (i.e., complete sentences).
d. Edit for appropriate formatting features (i.e., spacing, margins, titles).

Objective 5: Use fluent and legible handwriting to communicate.

a. Print all upper- and lower-case letters of the alphabet and numerals 0-9 using proper form, proportions, and spacing.
b. Write with increasing fluency in forming manuscript letters and numerals.
c. Produce legible documents with manuscript handwriting.

Objective 6: Write in different forms and genres.

a. Produce personal writing (e.g., journals, lists, friendly notes and letters, personal experiences, family stories, literature responses).
b. Produce traditional and imaginative stories, narrative and formula poetry as a shared writing activity.
c. Produce functional text (e.g., ABC books, lists, labels, signs, how-to books, observations).
d. Share writing with others using illustrations to add meaning to published works.
e. Publish group and individual products.

First Grade Mathematics

Standard 1: Students will acquire number sense and perform simple operations with whole numbers.

Objective 1: Represent whole numbers in a variety of ways.

a. Relate number words to the *numerals* that represent the quantities 0 to 10.
b. Sort objects into groups of tens and ones and write the numeral representing the set.
c. Represent *whole numbers* up to 100 in groups of tens and ones using objects.
d. Write a numeral when given the number of tens and ones.
e. Write a numeral to 99 in *expanded form* (e.g., 39 is 3 tens and 9 ones or 30+9).
f. Use zero to represent the number of elements in the empty set or as a placeholder in a two-digit numeral.

Objective 2: Identify simple relationships among whole numbers.

a. Identify the number that is one more or one less than any *whole number* from 1 to 99.
b. Use the vocabulary "greater than," "less than," and "equal to" when comparing sets of objects or numbers.
c. Order sets of objects and numbers from 0 to 20.
d. Use *ordinal numbers* 1st through 5th (i.e., 1st, 2nd, 3rd, 4th, 5th).

Objective 3: Model and illustrate meanings of the operations addition and subtraction and describe how they relate.

a. Demonstrate the joining and separating of sets with twelve or fewer objects and record the results with pictures or symbols.
b. Model two meanings of subtraction: separating of sets ("take away") and comparison of sets ("how many more/fewer") using objects, pictorial representations, and symbols.
c. Use correct vocabulary and symbols to describe addition (i.e., add, "and," plus, +, sum), subtraction (i.e., subtract, minus, -, take away, how many more/fewer), and equals (i.e., =, same as).
d. Use zero in addition and subtraction sentences.

Objective 4: Use fractions to identify parts of the whole.

a. Share sets of up to ten objects between two students and identify each part as half.
b. Divide geometric shapes into equal parts, identifying halves and fourths.

Objective 5: Solve whole number problems using addition and subtraction in horizontal and vertical notation.

a. Compute addition and subtraction facts to twelve.
b. Add three whole numbers with sums to twelve.

Standard 2: Students will identify and use patterns and relations to represent mathematical situations.

Objective 1: Recognize and represent patterns with one or two attributes.

a. Sort and classify objects by one or two *attributes*.
b. Identify, create, and label simple patterns using manipulatives, pictures, and symbolic notation (e.g., ABAB . . ., □○△□○△ . . .).
c. Identify patterns in the environment.
d. Identify horizontal and vertical patterns on hundreds charts.
e. Use patterns to establish skip counting by twos to 20 and by fives and tens to 100.
f. Count backward from 10 to 0 and identify the pattern.

Objective 2: Recognize and represent relations using mathematical symbols.

a. Recognize that "=" indicates a relationship in which the quantities on each side of an equation are equal.
b. Recognize that symbols such as ~, △, or ◇ in an addition or subtraction equation represent a missing value that will make the statement true (e.g., ~ + 3 = 6, 5 +7 = △, 4 = 5 – ◇).
c. Demonstrate that changing the order of *addends* does not change the *sum* (e.g., 3+2=5 and 2+3=5).

Standard 3: Students will describe, identify, and create simple geometric shapes and describe spatial relationships.

Objective 1: Describe, identify, and create simple geometric shapes.

a. Identify, name, draw, create, and sort circles, triangles, rectangles, and squares.
b. Identify circles, triangles, rectangles, and squares in the students' environment.
c. Recognize that combining simple geometric shapes can create more complex geometric shapes.

Objective 2: Describe simple spatial relationships.

a. Use and demonstrate words to describe position (i.e., between, before, after, middle, left, right).
b. Use and demonstrate words to describe distance (i.e., closer, farther).

Standard 4: Students will understand and use simple measurement tools and techniques.

Objective 1: Identify measurable attributes of objects and units of measurement.

a. Identify the appropriate tools for measuring length, weight, volume, temperature, and time.
b. Identify the values of a penny, nickel, dime, and quarter.
c. Estimate the length of an object by comparing to a nonstandard unit (e.g., How many new pencils wide is your desk?).

Objective 2: Use appropriate techniques and tools to determine measurements.

a. Compare objects, using nonstandard units, according to their length, weight, or *capacity* (e.g., pencils/length, books/weight, boxes/volume).
b. Read and tell time to the nearest hour.
c. Name the days of the week, months of the year, and seasons in order.
d. Determine the value of a set of the same coins that total 25¢ or less (e.g., a set of 14 pennies equals 14¢, a set of 5 nickels equals 25¢, a set of 2 dimes equals 20¢).

Standard 5: Students will collect and draw conclusions from data and understand basic concepts of probability.

Objective 1: Collect, organize, and display simple data.

a. Collect physical objects to use as data.
b. Collect, represent, and interpret data using tables, tally marks, *pictographs*, and bar graphs.

Objective 2: Determine the likelihood of an event.

a. Compare events to decide which are more likely, less likely, and equally likely.
b. Relate past events to future events (e.g., The sun set about 6:00 last night, so it will set about the same time tonight).

First Grade
Fine Arts, Health, Physical Education, Science, and Social Studies

Standard 1: Students will develop a sense of self.

Objective 1: Describe and practice responsible behaviors for health and safety.

a. Practice appropriate personal hygiene (e.g., bathe, wash hands, clean clothes).
b. Describe the benefits of eating a variety of nutritious foods.
c. Describe the benefits of physical activity.
d. Describe substances that are helpful and harmful to the body.
e. Practice basic safety and identify hazards.

Objective 2: Develop and demonstrate skills in gross and fine motor movement.

a. Participate daily in short periods of physical activity that require exertion (e.g., one to three* minutes of walking, jogging, jump roping).
b. Perform fundamental locomotor (e.g., skip, gallop, run) and nonlocomotor (twist, stretch, balance) skills with mature form.
c. Develop manipulative skills (e.g., cut, glue, throw, catch, kick, strike).
d. Create and perform unique dance movements and sequences that strengthen skills while demonstrating personal and spatial awareness.

Objective 3: Develop and use skills to communicate ideas, information, and feelings.

a. Recognize and express feelings in a variety of ways (e.g., draw, paint, tell stories, dance, sing).
b. Express how colors, values, and sizes have been controlled in artworks to create mood, tell stories, or celebrate events.
c. Sing a melody independently, with developing accuracy and a natural voice that is free from strain.
d. Create simple rhythm, movement, and melody patterns with body percussion and instruments.

Standard 2: Students will develop a sense of self in relation to families and community.

Objective 1: Describe behaviors that influence relationships with family and friends.

a. Explain how family members support each other.
b. Describe tasks at home and school.
c. Explain how families change over time.
d. Recognize that choices have consequences that affect self, peers, and family.
e. Describe behaviors that initiate and maintain friendships.

* Some students may not be able to sustain activity for one minute due to various medical concerns.

Objective 2: Describe important aspects of the community and culture that strengthen relationships.

a. Practice democratic processes (e.g., follow family and classroom rules, take turns, listen to others, share ideas).
b. Describe physical features surrounding the home, school, and community.
c. Identify changes in the school and neighborhood over time.
d. Identify and use technology in your home, school, and community (e.g., computer, TV, radio).
e. Show respect for state and national symbols and patriotic traditions; recite the Pledge of Allegiance.

Objective 3: Express relationships in a variety of ways.

a. Describe traditions, music, dances, artwork, poems, rhymes, and stories that distinguish cultures.
b. Develop dramatic storytelling skills through flexibility in movement and voice, accurate sequencing, and listening and responding to others.
c. Create and perform/exhibit dances, visual art, music, and dramatic stories from a variety of cultures expressing the relationship between people and their culture.

Standard 3: Students will develop an understanding of their environment.

Objective 1: Investigate plants and plant growth.

a. Observe and draw pictures of plants.
b. Compare seeds of plants and describe ways they may be carried through the environment (e.g., wind, water, animals).
c. Observe and describe plants as they grow from seeds.
d. Identify how people use plants (e.g., food, clothing, paper, shelter).
e. Investigate and report conditions that affect plant growth.

Objective 2: Investigate water and interactions with water.

a. Observe and measure characteristics of water as a solid and liquid.
b. Compare objects that float and sink in water.
c. Measure and predict the motion of objects in water.
d. Describe how plants and people need, use, and receive water.

Objective 3: Demonstrate how symbols and models are used to represent features of the environment.

a. Use map skills to identify features of the neighborhood and community.
b. Create representations that show size relationships among objects of the home, classroom, school, or playground.
c. Identify map and globe symbols (e.g., cardinal directions, compass rose, mountains, rivers, lakes).
d. Locate continents and oceans on a map or globe (i.e., North America, Antarctica, Australia, Pacific Ocean, Atlantic Ocean).

Second Grade
Core Curriculum

The Second Grade Core Curriculum

Second grade core concepts should be integrated across all curriculum areas. Reading, writing, and mathematical skills should be emphasized as integral to the instruction in all other areas. Personal relevance of content is always an important part of helping students to value learning and should be emphasized.

In second grade, students are immersed in a literature-rich environment, filled with classical and contemporary fiction and nonfiction selections, which relate to all areas of learning and interest. Students listen and speak effectively in classroom discussions. They continue to work on fluency and expression and use a combination of strategies for reading and comprehension.

Second graders extend their study of number and spatial sense to include three-digit numbers and three-dimensional figures. They make measurements and collect, organize, and display data. They use graphs to answer questions and make summary statements and predictions based on their experiences. While learning mathematics, students will be actively engaged in using concrete materials and appropriate technologies such as calculators and computers.

In second grade, students learn about their relationship to the classroom, school, family, and community. Students develop the skills of questioning, gathering information, constructing explanations, and drawing conclusions. They learn basic body control while developing motor skills and moving in a variety of settings. Students become aware of strength, endurance, and flexibility in different parts of their bodies. They express thoughts and ideas creatively, while challenging their imagination, fostering reflective thinking, and developing disciplined effort and problem-solving skills.

Second Grade Intended Learning Outcomes

The main intent at the early grades is for students to value learning and develop the skills to gain knowledge and understand their world.

The Intended Learning Outcomes described below reflect the belief that kindergarten, first, and second grade education should address the intellectual, social, emotional, physical, and ethical development of children. While the Kindergarten, First, and Second Grade Core Curriculum focuses primarily on content and the intellectual development of children, it is important to create a classroom culture that fosters development of many aspects of a person. By nurturing development in these interrelated human domains, young people will be healthy and discover varied and exciting talents and dreams. They will be socially and civically competent and able to express themselves effectively.

The outcomes identified below are to provide a direction for general classroom instruction, management, culture, environment, and inclusion. These outcomes should be interwoven throughout the Kindergarten, First, and Second Grade Core Curriculum, which offers more specific and measurable standards for instruction.

Beginning in kindergarten and by the end of second grade students will be able to:

1. **Demonstrate a positive learning attitude.**
   a. Display a sense of curiosity.
   b. Practice personal responsibility for learning.
   c. Demonstrate persistence in completing tasks.
   d. Apply prior knowledge and processes to construct new knowledge.
   e. Voluntarily use a variety of resources to investigate topics of interest.

2. **Develop social skills and ethical responsibility.**
   a. Respect similarities and differences in others.
   b. Treat others with kindness and fairness.
   c. Follow classroom and school rules.
   e. Include others in learning and play activities.
   f. Participate with others when making decisions and solving problems.
   g. Function positively as a member of a family, class, school, and community.

3. **Demonstrate responsible emotional and cognitive behaviors.**
   a. Recognize own values, talents, and skills.
   b. Express self in positive ways.
   c. Demonstrate aesthetic awareness.
   d. Demonstrate appropriate behavior.
   e. Express feelings appropriately.
   f. Meet and respect needs of self and others.

4. **Develop physical skills and personal hygiene.**
    a. Respect physical similarities and differences in self and others.
    b. Learn proper care of the body for health and fitness.
    c. Develop knowledge that enhances participation in physical activities.
    d. Display persistence in learning motor skills and developing fitness.
    e. Use physical activity for self-expression.

5. **Understand and use basic concepts and skills.**
    a. Develop phonological and phonemic awareness.
    b. Decode, read, and comprehend written text and symbols.
    c. Develop vocabulary.
    d. Develop reasoning and sequencing skills.
    e. Demonstrate problem-solving skills.
    f. Observe, sort, and classify objects.
    g. Make and interpret representations, graphs, and models.
    h. Recognize how content ideas interconnect.
    i. Make connections from content areas to application in real life.

6. **Communicate clearly in oral, artistic, written, and nonverbal form.**
    a. Share ideas using communication skills.
    b. Predict an event or outcome based on evidence.
    c. Use appropriate language to describe events, objects, people, ideas, and emotions.
    d. Listen attentively and respond to communication.
    e. Use mathematical concepts to communicate ideas.
    f. Use visual art, dance, drama, and music to communicate.

Second Grade Language Arts

Standard 1 (Oral Language): Students develop language for the purpose of effectively communicating through listening, speaking, viewing, and presenting.

Objective 1: Develop language through listening and speaking.

a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).
b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question, summarize).
c. Speak clearly and audibly with expression in communicating ideas.
d. Speak in complete sentences with appropriate subject-verb agreement.

Objective 2: Develop language through viewing media and presenting.

a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/nonfiction).
b. Use a variety of formats (e.g., drama, sharing of books and personal writings, choral readings, informational reports, retelling experiences, and stories in sequence) in presenting with various forms of media (e.g., pictures, posters, charts, ads, newspapers).

Standard 2 (Concepts of Print): Students develop an understanding of how printed language works. See kindergarten and first grade.

Standard 3 (Phonological and Phonemic Awareness): Students develop phonological and phonemic awareness. See kindergarten and first grade.

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective 1: Demonstrate an understanding of the relationship between letters and sounds.

a. Identify and pronounce all vowel diphthongs (e.g., oi, oy, aw, au) and consonant digraphs (e.g., ch, sh, th, wh) accurately in words.
b. Identify and pronounce sounds for short and long vowels, using patterns (e.g., cvc, cvvc, cvcv, cvc-silent e), and vowel digraphs (e.g., ea, ee, ie, oa, ai, ay, oo, ow) accurately in two-syllable words.
c. Identify and pronounce r-controlled vowel patterns in words (e.g., ar, or, er).
d. Identify and blend letter sounds to pronounce words.

Objective 2: Use knowledge of structural analysis to decode words.

a. Identify and read grade level contractions and compound words.
b. Identify sound patterns and apply knowledge to decode words (e.g., blends, digraphs, vowel patterns, r-controlled vowels).
c. Demonstrate an understanding of representing the same sound with different patterns by decoding these patterns accurately in isolation and in text (e.g., ee, ea, ei, e).
d. Use knowledge of root words and prefixes (e.g., re, un, mis) and suffixes (e.g., s, es, ed, ing, est, ly) to decode words.
e. Use letter and syllable patterns to pronounce multi-syllabic words.

Objective 3: Spell words correctly.

a. Use knowledge of word families, patterns, and common letter combinations to spell new words.
b. Spell words with short and long vowel sounds, r-controlled words, words with consonant blends, consonant and vowel digraphs.
c. Spell an increasing number of grade level high-frequency and irregular words correctly (e.g., believe, answer).
d. Learn the spellings of irregular and difficult words (e.g., because, animals, before, answer, weight).

Objective 4: Use spelling strategies to achieve accuracy (e.g., prediction, visualization, and association).

a. Use knowledge about spelling to predict the spelling of new words.
b. Visualize words while writing.
c. Associate the spelling of new words with that of known words and word patterns.
d. Use spelling generalities to assist spelling of new words (e.g., one vowel between two consonants, silent "e" on the end of a word, two vowels together).

Standard 5 (Fluency): Students develop reading fluency to read aloud grade level text effortlessly without hesitation.

Objective 1: Read aloud grade level text with appropriate speed and accuracy.

a. Read grade level text at a rate of approximately 80 wpm.
b. Read grade level text with an accuracy rate of 95-100%.

Objective 2: Read aloud grade level text effortlessly with clarity.

a. Read grade level text in three- to four-word phrases using intonation, expression, and punctuation cues.
b. Read with automaticity 200 second grade high-frequency/sight words.

Standard 6 (Vocabulary): Students learn and use grade level vocabulary to increase understanding and read fluently.

Objective 1: Learn new words through listening and reading widely.

a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.
b. Learn the meaning of a variety of grade level words (e.g., words from literature, social studies, science, math).

Objective 2: Use multiple resources to learn new words by relating them to known words and/or concepts.

a. Use multiple resources to determine the meanings of unknown words (e.g., simple dictionaries, glossaries).
b. Relate unfamiliar words and concepts to prior knowledge to increase vocabulary (e.g., liquid: milk, water, punch).

Objective 3: Use structural analysis and context clues to determine meanings of words.

a. Identify meanings of words using prefixes and suffixes (e.g., do/undo, write/rewrite, happy/happiness, help/helper/helpful).
b. Use context to determine meanings of unknown key words (e.g., The store clerk glared at the children as they looked at the toys.).
c. Use context to determine meanings of synonyms, antonyms, homonyms (e.g., sun/son) and multiple-meaning words (e.g., ring).

Standard 7 (Comprehension): Students understand, interpret, and analyze narrative and informational grade level text.

Objective 1: Identify purposes of text.

a. Identify purpose for reading.
b. Identify author's purpose.

Objective 2: Apply strategies to comprehend text.

a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).
b. Ask questions about text read aloud and independently.
c. Form mental pictures to aid understanding of text.
d. Make and confirm predictions while reading using title, picture clues, text, and/or prior knowledge.
e. Make inferences and draw conclusions from text.
f. Identify topic/main idea from text; note details.
g. Summarize important ideas/events; summarize supporting details in sequence.
h. Monitor and clarify understanding applying fix-up strategies while interacting with text.
i. Compile information from text.

Objective 3: Recognize and use features of narrative and informational text.

a. Identify characters, setting, sequence of events, problem/resolution.
b. Identify different genres: fairy tales, poems, realistic fiction, fantasy, fables, folk tales.
c. Identify information from pictures, captions, diagrams, charts, graphs, and table of contents.
d. Identify different structures in texts (e.g., compare/contrast, cause/effect).
e. Locate facts from a variety of informational texts (e.g. newspapers, magazines, books, other resources).

Standard 8 (Writing): Students write daily to communicate effectively for a variety of purposes and audiences.

Objective 1: Prepare to write by gathering and organizing information and ideas (pre-writing).

a. Generate ideas for writing by reading, discussing literature and informational text, and reflecting on personal experiences.
b. Select topics from generated ideas.
c. Identify audience, purpose, and form for writing.
d. Use simple graphic organizers to organize information.

Objective 2: Compose a written draft.

a. Draft ideas on paper in an organized manner utilizing words and sentences (e.g., beginning, middle, end; main idea; details).
b. Use voice in writing (e.g., express feelings, opinions).
c. Select appropriate words to convey meaning.

Objective 3: Revise by elaborating and clarifying a written draft.

a. Revise draft to add details, strengthen word choice, and reorder content.
b. Enhance fluency by using complete sentences.
c. Revise writing, considering the suggestions of others.

Objective 4: Edit written draft for conventions.

a. Edit writing for capitals in names, first word of a sentence, and the pronoun "I", correct punctuation of sentence endings, greetings and closings of letters, dates, and contractions.
b. Edit for spelling of grade level-appropriate words.
c. Edit for standard grammar (e.g., subject-verb agreement).
d. Edit for appropriate formatting features (e.g., margins, indentations, titles).

Objective 5: Use fluent and legible handwriting to communicate.

a. Write demonstrating mastery of all upper- and lower-case manuscript letters and numerals using proper form, proportions, and spacing.
b. Increase fluency in forming manuscript letters and numerals.
c. Produce legible documents with manuscript handwriting.

Objective 6: Write in different modes and genres.

a. Produce personal writing (e.g., journals, friendly notes and letters, personal experiences, family stories, literature responses).
b. Produce traditional and imaginative stories, narrative and formula poetry as an individual/shared writing activity.
c. Produce informational text (e.g., ABC books, how-to books, observations).
d. Produce writing to persuade (e.g., express opinions).
e. Produce functional texts (e.g., lists, labels, signs).
f. Share writing with others using illustrations, graphs, and/or charts to add meaning.
g. Publish 4-6 individual products.

Second Grade Mathematics

Standard 1: Students will acquire number sense and perform operations with whole numbers.

Objective 1: Represent whole numbers in a variety of ways.

a. Relate number words to the *numerals* that represent the quantities 0-100.
b. Represent *whole numbers* up to 1,000 in groups of hundreds, tens, and ones using base ten models, and write the numeral representing the set.
c. Read and write a three-digit numeral, relating it to a set of objects and a pictorial representation.
d. Write a numeral to 999 in *expanded form* (e.g., 539 is 5 hundreds, 3 tens, 9 ones or 500+30+9).
e. Identify the place and the value of a given digit in a three-digit numeral (e.g., the two in 281 means 2 hundreds or 200).
f. Demonstrate multiple ways to represent numbers using symbolic representations (e.g., thirty is the same as two groups of 15, the number of pennies in three dimes, or 58-28).

Objective 2: Identify simple relationships among whole numbers.

a. Identify the number that is one more, one less, ten more, or ten less than any *whole number* up to 100.
b. Write number sentences using the terms “greater than,” “less than,” or “equal to,” to compare numbers.
c. Order four whole numbers less than 100 from least to greatest and from greatest to least.
d. Use *ordinal numbers* 1st through 10th.

Objective 3: Model and illustrate meanings of the operations of addition and subtraction and describe how they relate.

a. Demonstrate the joining and separating of sets with eighteen or fewer objects and record the results with pictures or symbols.
b. Model three meanings of subtraction: separating of sets (“take away”), comparison of sets (“how many more/fewer”), and missing *addends* using objects, pictorial representations, and symbols.
c. Separate a given set of objects into two, three, five, or ten groups of equal size.
d. Model addition and subtraction of two-digit *whole numbers* in a variety of ways (e.g., *expanded form*, compensation, partial sums, regrouping).
e. Select an addition or subtraction sentence to solve a problem involving joining or separating of sets with eighteen or fewer objects.
f. Recognize that addition number sentences have related subtraction sentences (e.g., 8-5=3, 3+5=8).

Objective 4: Use fractions to identify parts of the whole.

a. Separate geometric shapes and sets of objects into halves, thirds, and fourths using a variety of models and illustrations.
b. Specify a region of a geometric shape (e.g., as “___ out of ___ equal parts” when given four or fewer equal parts.
c. Represent the unit fractions 1/2, 1/3, and 1/4 with objects, pictures, and symbols.

Objective 5: Solve whole number problems using addition and subtraction in vertical and horizontal notation.

a. Use a variety of methods and tools to facilitate computation (e.g., estimation, mental math strategies, paper and pencil, calculator).
b. Compute accurately with basic number combinations for addition and subtraction facts to eighteen.
c. Add three *whole numbers* with *sums* to eighteen.
d. Find the sum of two-digit whole numbers and describe the process used.

Standard 2: Students will identify and use patterns and relations to represent mathematical situations.

Objective 1: Recognize and represent patterns having multiple attributes.

a. Sort, classify, and label objects by three or more *attributes*.
b. Identify and label *repeating* and *growing patterns* using objects, pictures, and symbolic notation (e.g., ABAABBAAABBB . . .).
c. Identify repeating and growing patterns in the environment.
d. Construct models and skip count by twos, threes, fives, and tens and relate to repeated addition.

Objective 2: Recognize and represent relations using mathematical symbols.

a. Recognize that "≠" indicates a relationship in which the quantities on each side are not of equal value.
b. Recognize that symbols such as ~, △, or ◇ in an addition or subtraction equation represent a value that will make the statement true (e.g., ~ +3=6, 5+7=△, 7=9-◇).
c. Demonstrate that changing the order of *addends* does not change the *sum* (e.g., 3+2+7=12, 7+3+2=12) and that changing the grouping of three or more addends does not change the sum (e.g., (2+3)+7=12, 2+(3+7)=12).

Standard 3: Students will describe, identify, and create geometric shapes and describe spatial relationships.

Objective 1: Describe, identify, and create geometric shapes.

a. Identify, name, draw, sort, and compare circles, triangles, and *parallelograms*.
b. Identify and name spheres, *cones*, and *cylinders*.
c. Find and identify familiar geometric shapes in the students' environment.
d. Determine whether a circle, triangle, square, or rectangle has a *line of symmetry*.

Objective 2: Describe spatial relationships.

a. Create and use verbal or written instructions to move within the environment.
b. Find and name locations using coordinates (A, 1).
c. Identify shapes in various orientations (e.g., △ and ▽).

Standard 4: Students will understand and use measurement tools and techniques.

Objective 1: Identify measurable attributes of objects and units of measurement.

a. Sequence a series of events of a day in order by time (e.g., breakfast at 7:00, school begins at 9:00).
b. Identify the name and value of a penny, nickel, dime, quarter, and dollar.
c. Estimate length, *capacity*, and weight using customary units.

Objective 2: Use appropriate techniques and tools to determine measurements.

a. Compare and order objects, using nonstandard units, according to their length, weight, or *capacity*.
b. Measure length using inches and feet, weight using pounds, and capacity using cups.
c. Determine the value of a set of up to five coins that total $1.00 or less (e.g., two quarters and one dime equals 60¢; three dimes, one nickel, and one penny equals 36¢).
d. Read, tell, and write time to the hour and half-hour.
e. Use a calendar to determine the day of the week and date.
f. Determine the *perimeter* of a square, triangle, and rectangle by measuring with nonstandard units.

Standard 5: Students will collect and draw conclusions from data and understand basic concepts of probability.

Objective 1: Collect, organize, and display simple data.

a. Gather data by vote or survey.
b. Sort, classify, and organize data in a variety of ways.
c. Use a variety of methods to organize, display, and label information, including keys, using *pictographs*, tallies, bar graphs, and organized tables.
d. Report information from a data display.

Objective 2: Determine the likelihood of an event.

a. Predict events that will be the same in one day or one week.
b. Predict the outcome when there are only two possible outcomes (e.g., tossing a coin).

Second Grade
Fine Arts, Health, Physical Education, Science, and Social Studies

Standard 1: Students will develop a sense of self.

Objective 1: Describe and adopt behaviors for health and safety.

a. Explain the importance of balance in a diet.
b. Distinguish communicable from noncommunicable diseases (e.g., chicken pox, common cold, flu; asthma, cancer, diabetes).
c. Relate behaviors that can help prevent disease (e.g., hand washing, good nutrition, fitness, universal precautions).
d. Identify the harmful effects of tobacco on self and others (e.g., death, heart and lung disease, shortness of breath).
e. Adopt basic safety habits (e.g., wear a seatbelt, practice bicycle safety, find adult help in an emergency).

Objective 2: Develop and apply skills in fine and gross motor movement.

a. Participate daily in sustained periods of physical activity that requires exertion (e.g., one to five* minutes of walking, jogging, jump roping).
b. Perform fundamental locomotor and nonlocomotor skills in movement sequences and game applications (e.g., walk-hop-skip, run-stretch-skate, run-hop-lay up).
c. Perform manipulative skills exhibiting a majority of correct technique components (e.g., soccer kick: eyes on ball, step with foot opposite to kicking foot, contact ball with inside of foot, follow through).
d. Identify components of physical fitness (i.e., strength, endurance, flexibility) and corresponding activities.
e. Create and perform unique dance movements and sequences that expand physical skills while demonstrating personal and spatial awareness.

Objective 3: Develop and use skills to communicate ideas, information, and feelings.

a. Express personal experiences and imagination through dance, storytelling, music, and visual art.
b. Create, with improving accuracy, works of art depicting depth (e.g., close objects large, distant objects small) using secondary and tertiary colors.
c. Develop ability to sing in tune with relaxed strength and clarity.
d. Develop consistency in rhythmic accuracy of body percussion and instrument playing.

* Some students may not be able to sustain activity for one minute due to various medical concerns.

Standard 2: Students will develop a sense of self in relation to families and community.

Objective 1: Describe behaviors that influence relationships with family and friends.

a. Describe characteristics of healthy relationships (e.g., caring, responsibility, trust, respect).
b. Identify benefits of cooperating and sharing.
c. Explain how families and communities change over time.
d. Recognize how choices and consequences affect self, peers, and family.
e. Identify behaviors that might create conflict situations and ways to resolve them.

Objective 2: Examine important aspects of the community and culture that strengthen relationships.

a. Explain why families, schools, and communities have rules.
b. Compare rural, suburban, and urban communities.
c. Relate goods and services to resources within the community.
d. Participate in activities that promote public good (e.g., respect cultural and ethnic differences, identify community needs) and recite the Pledge of Allegiance.
e. Recognize the positive and negative impact of media.

Objective 3: Express relationships in a variety of ways.

a. Describe traditions, music, dances, artwork, poems, rhymes, and stories that distinguish cultures.
b. Develop an acting ability to relate to characters' thoughts and feelings (e.g., needs, hopes, frustrations, fears) in stories and plays.
c. Create and perform/exhibit dances, visual art, music, and dramatic stories from a variety of cultures expressing the relationship between people and their culture.

Standard 3: Students will develop an understanding of their environment.

Objective 1: Investigate relationships between plants and animals and how living things change during their lives.

a. Observe and describe relationships between plants and animals.
b. Describe the life cycle of local plants and animals using diagrams and pictures.
c. Create pictures and stories about real animals and compare them to make-believe stories about animals.

Objective 2: Observe and describe weather.

a. Observe and describe patterns of change in weather.
b. Measure, record, graph, and report changes in local weather.
c. Describe how weather affects people and animals.
d. Draw pictures and create dances and sounds that represent weather features (e.g., clouds, storms, snowfall).

Objective 3: Investigate the properties and uses of rocks.

a. Describe rocks in terms of the parts that make up the rocks.
b. Sort rocks based upon color, hardness, texture, layering, and particle size.
c. Identify how the properties of rocks determine how people use them.
d. Create artworks using rocks and rock products.

Objective 4: Demonstrate how symbols and models are used to represent features of the environment.

a. Identify and use information on a map or globe (i.e., map key or legend, compass rose, physical features, continents, oceans).
b. Use an atlas and globe to locate information.
c. Locate continents and oceans on a map or globe (i.e., North America, Antarctica, Australia, Africa, Pacific Ocean, Atlantic Ocean).

K-6 Language Arts
Core Curriculum in Table Format

Standard 1: Oral Language

Oral language encompasses the ability to listen, speak, and communicate effectively. Oral language provides a basis on which literacy is built. Research has repeatedly shown a strong connection between oral language and reading. Oral language development begins at birth and is continuous and unending; each of us continues to acquire new aspects of language through our interactions and experiences.

Research shows that oral language builds background knowledge as students listen, view, speak, and present. Background knowledge greatly influences comprehension and vocabulary acquisition. Continuous oral language development not only provides, but expands, the opportunity for students to effectively develop comprehension and vocabulary skills, as well as the ability to decode words. Weak or limited oral language may interfere with a student's ability to learn to read.

Oral language is also a social skill necessary to communicate information, share cultures, and build traditions. However, some children come from environments with limited models and opportunities to develop language. Thus, schools must provide appropriate oral language experiences that extend the oral language development of all children, facilitating social competencies, learning, and literacy.

The following are possible suggestions and not all-inclusive:

Teacher Delivery

1. Provide a model for listening, speaking, viewing, and presenting.
2. Listen attentively to students' discussions and responses.
3. Provide opportunities for students to listen, respond, and share information with others.
4. Encourage students to speak clearly and audibly, elaborating upon their ideas during class discussions and presentations.
5. Provide opportunities for students to listen and view for pleasure, acquire information, and solve problems.
6. Provide opportunities for students to recount experiences, present stories, recite selections, and give presentations.
7. Encourage parents and students to share cultural heritage and traditions with classrooms.

Assessment

Formal:

Approved state, district, and school assessments.

Standard 1: Oral Language (Continued)

Assessment (Continued)

Informal:

1. Student conferences and discussions.
2. Checklists of expected language behaviors.
3. Anecdotal records of the students' performances in class.
4. Retelling of information.
5. Presentation rubrics.

Differentiation

1. Provide opportunities for students to work independently and in groups to prepare and present information to others.
2. Engage students in projects (e.g., service learning).
3. Provide visual, auditory, and kinesthetic instruction.
4. Provide explicit instruction according to students' needs.
5. Provide additional opportunities for students to listen, speak, view, and present utilizing media aids.
6. Elicit physical responses to questions (e.g., point to a picture).
7. Provide opportunities for students to speak in their native language.

Home Connection

1. Encourage parents to provide opportunities for children to engage in listening, speaking, viewing, and presenting.
2. Encourage parents to share cultural heritage and traditions.

Standard 1 (Oral Language): Students develop language for the purpose of effectively communicating through listening, speaking, viewing, and presenting.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Develop language through listening and speaking.	a. Listen attentively.	a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).	a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).	a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).	a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).	a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).	a. Identify specific purpose(s) for listening (e.g., to gain information, to be entertained).
	b. Listen and demonstrate understanding by responding appropriately (e.g., follow two-step directions).	b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question).	b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question, summarize).	b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question, summarize).	b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question, summarize, elaborate formulating an opinion with supporting evidence).	b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question, summarize, elaborate formulating an opinion with supporting evidence, interpret verbal and nonverbal messages, note purpose and perspective).	b. Listen and demonstrate understanding by responding appropriately (e.g., follow multiple-step directions, restate, clarify, question, summarize, elaborate formulating an opinion with supporting evidence, interpret verbal and nonverbal messages, note purpose and perspective, identify tone, mood, emotion).
	c. Speak clearly and audibly with expression in communicating ideas.	c. Speak clearly and audibly with expression in communicating ideas.	c. Speak clearly and audibly with expression in communicating ideas.	c. Speak clearly and audibly with expression in communicating ideas (i.e., effective rate, volume, pitch, tone, phrasing, tempo).	c. Speak clearly and audibly with expression in communicating ideas (i.e., effective rate, volume, pitch, tone, phrasing, tempo).	c. Speak clearly and audibly with expression in communicating ideas (i.e., effective rate, volume, pitch, tone, phrasing, tempo).	c. Speak clearly and audibly with expression in communicating ideas (i.e., effective rate, volume, pitch, tone, phrasing, tempo).

Standard 1 (Oral Language): Students develop language for the purpose of effectively communicating through listening, speaking, viewing, and presenting.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Develop language through listening and speaking. (Continued)	d. Speak in complete sentences.	d. Speak in complete sentences.	d. Speak in complete sentences with appropriate subject-verb agreement.	d. Speak in complete sentences with appropriate subject-verb agreement.	d. Speak using simple and compound sentences with appropriate subject-verb agreement and verb tense.	d. Speak using complex sentences with appropriate subject-verb agreement, correct verb tense, and syntax.	d. Speak using complex sentences with appropriate subject-verb agreement, correct verb tense, and syntax.
2. Develop language through viewing media and presenting.	a. View a variety of media presentations attentively.	a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/nonfiction).	a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/nonfiction).	a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/non-fiction, distinguish between fact/opinion, form an opinion).	a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/non-fiction, distinguish between fact/opinion, form an opinion, determine presentation's accuracy).	a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/ non-fiction, distinguish between fact/opinion, form an opinion, determine presentation's accuracy/bias).	a. Identify specific purpose(s) for viewing media (i.e., to identify main idea and details, to gain information, distinguish between fiction/non-fiction, distinguish between fact/opinion, form an opinion, determine presentation's accuracy/bias, analyze and critique persuasive techniques).
	b. Use a variety of formats (e.g., show and tell, drama, sharing of books) in presenting with various forms of media.	b. Use a variety of formats (e.g., show and tell, drama, sharing of books and personal writings, choral readings, informational reports, retelling experiences and stories in sequence) in presenting with various forms of media.	b. Use a variety of formats (e.g., drama, sharing of books and personal writings, choral readings, informational reports, retelling experiences, and stories in sequence) in presenting with various forms of media (e.g., pictures, posters, charts, ads, newspapers).	b. Use a variety of formats (e.g., drama, sharing of books, personal writings, choral readings, informational reports) in presenting with various forms of media (e.g., pictures, posters, charts, ads, newspapers).	b. Use a variety of formats in presenting with various forms of media (e.g., pictures, posters, charts, ads, newspapers, graphs, videos, slide shows).	b. Use a variety of formats in presenting with various forms of media (e.g., pictures, posters, charts, ads, newspapers, graphs, videos, slide shows).	b. Use a variety of formats in presenting with various forms of media (e.g., pictures, posters, charts, ads, newspapers, graphs, videos, slide shows).

Standard 2: Concepts of Print

Knowledge about print is a critical skill for beginning readers and writers. Before young children can read or write, they must understand that print carries meaning, print is organized in a particular way, and print has a specific function within our society.

Many children come to school with this knowledge firmly in place. However, students with limited exposure to books need to be taught the elements of print such as directionality (i.e., front/back, top/bottom, left/right), an understanding that words are made up of letters, and that print contains the message.

Teachers should observe student behaviors to ensure that all children understand the various functions and conventions of printed text. Children's understanding of the concepts of print has been found to be a strong predictor of future reading achievement.

The following are possible suggestions and not all-inclusive:

Teacher Delivery

1. Provide explicit instruction on directionality.
2. Model directionality while reading aloud with students.
3. Provide opportunities for students to track words while being read to/reading.
4. Provide opportunities for students to locate author and title of a book.

Assessment

Formal:

Approved state, district, and school assessments.

Informal:

1. Observation.
2. Students demonstrate elements of directionality with a text.
3. Students identify letters and words.
4. Students track a printed page.
5. Students demonstrate book-handling skills.

Standard 2: Concepts of Print (Continued)

Differentiation

1. Provide explicit instruction and modeling of concepts of print while reading to individual or small groups of students according to need.
2. Show sensitivity to students whose primary written language differs in script and/or format from written English.
3. Provide visual, auditory, and kinesthetic instruction about print.
4. Provide multiple opportunities for students to practice and demonstrate skills with print.

Home Connections

1. Communicate the importance of print concepts to parents.
2. Provide parents with a list of the essential elements of print concepts.

Standard 2 (Concepts of Print): Students develop an understanding of how printed language works.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Demonstrate an understanding that print carries "the" message.	a. Recognize that print carries different messages.	a. Recognize that print carries different messages.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	b. Identify messages in common environmental print (e.g., signs, boxes, wrappers).	b. Identify messages in common environmental print (e.g., signs, boxes, wrappers).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
2. Demonstrate knowledge of elements of print within a text.	a. Identify front/back, top/bottom, left/right of text/book.	Mastered	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	b. Discriminate between upper- and lower-case letters, numbers, and words in text.	a. Discriminate between letters, words, and sentences in text.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	c. Show the sequence of print by pointing left to right with return sweep.	b. Match oral words to printed words while reading.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	d. Identify where text begins and ends on a page.	Mastered	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	e. Identify punctuation in text (i.e., periods, question marks, exclamation points).	c. Identify punctuation in text (i.e., periods, question marks, exclamation points).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained

Standard 3: Phonological and Phonemic Awareness

Phonemic awareness has been shown to be the single best predictor of success in beginning reading. Before children can understand the relationship between letters and sound, they must be able to identify individual sounds in words.

Phonemic awareness is the ability to hear, identify, and manipulate individual sounds in spoken words. Phonemic awareness is not the same thing as phonics. Phonemic awareness deals with sounds in spoken words, whereas phonics involves the relationship between sounds and written symbols. Therefore, phonics deals with learning sound-spelling relationships and is associated with print. Most phonemic awareness tasks are purely oral. Phonemic awareness training provides the foundation on which phonics instruction is built. Thus, children need solid phonemic awareness training for phonics instruction to be effective. Phonemic awareness should be explicit and taught in a logical sequence.

Phonological awareness is a much broader term than phonemic awareness. Phonological awareness includes identifying and manipulating larger parts of spoken language (e.g., words, syllables, onsets and rimes). Phonological awareness also includes other aspects of spoken language, such as rhyming and alliteration. Phonemic awareness is a subcategory of phonological awareness.

There are five basic types of phonological and phonemic awareness tasks:

1. The ability to hear rhymes and alliteration.
2. The ability to do oddity tasks. (Example: Three words are read to the student. The student selects the word that does not fit the pattern.)
3. The ability to orally blend words and syllables.
4. The ability to orally segment words and syllables (including counting sounds).
5. The ability to do phonemic manipulation tasks.

The first four task types should be covered by the end of kindergarten. The fifth task type is appropriate for introduction in middle to late first grade. Each task type does not have to be mastered before moving on to the next. Rather, mixes of appropriately sequenced activities throughout lessons keep children engaged and provide practice with all types of phonemic awareness tasks. However, instruction in oral blending should begin before instruction in oral segmentation.

Standard 3: Phonological and Phonemic Awareness (Continued)

Research indicates that approximately 20 percent of children lack phonemic awareness. For these students, the likelihood of reading failure is quite high. Scientifically based research tells us that phonemic awareness can be taught to preschoolers, kindergartners, and first graders who are just beginning to read, as well as older less able readers. Phonemic awareness and phonological awareness help children learn to read and spell. They are most effective when children are taught to manipulate phonemes in an organized manner. Phonological and phonemic awareness instruction is most effective when it focuses on only one or two types of tasks. Small group instruction in phonemic awareness training is more effective than individual or whole group instruction.

Teachers should not devote a great deal of class time to phonemic awareness instruction. Over the school year, the entire phonemic awareness program should take no more than 20 hours or approximately 10-15 minutes a day. Phonemic awareness training does not constitute a complete reading program. Rather, it provides children with essential foundational knowledge in the alphabetic system as part of beginning reading programs and remedial reading programs.

The following are possible suggestions and not all-inclusive:
Teacher Delivery
1. Provide instruction in phonological awareness through rhymes, songs, chants, alliteration, counting words in a sentence, and clapping syllables in words.
2. Provide activities in rhyming and rhyme recognition.
3. Demonstrate and encourage students to blend sounds to make words.
4. Provide opportunities for students to segment words, isolate, delete, substitute, and match phonemes in words.
5. Provide application opportunities for students to manipulate letters with sounds through word sorts, magnetic letters, Elkonin boxes, and white boards while matching letters to sounds.

Assessment
Formal:
Approved state, district, and school assessments.

Standard 3: Phonological and Phonemic Awareness (Continued)

Informal:

1. Checklists of sounds children hear in isolation or at the beginning, middle, or ending of a word; producing or hearing words that rhyme; and segmenting or blending words.
2. Observation of students' ability to produce, identify, and manipulate sounds.
3. Anecdotal records of behaviors students exhibit while producing or making sounds.

Differentiation

1. Provide explicit instruction in the area of the student's need.
2. The areas of phonological and phonemic awareness are especially difficult for children with speech and hearing problems.
3. Demonstrate correct mouth formation to produce sounds.

Home Connection

1. Communicate the importance of children identifying and producing all the sounds of our language.
2. Provide suggestions for parents to help their child with rhyming words, blending sounds, segmenting sounds, and identifying sounds in isolation.
3. Provide home activities for parents to develop their children's phonological and phonemic awareness.

Standard 3 (Phonological and Phonemic Awareness): Students develop phonological and phonemic awareness.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Demonstrate phonological awareness.	a. Count the number of words in a sentence.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		a. Count the number of syllables in words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		b. Count the number of syllables in a first name.					
	b. Identify and create a series of rhyming words orally (e.g., cat, bat, sat, ____).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	c. Recognize words beginning with the same initial sound in an alliterative phrase or sentence (e.g., Six snakes sold snacks and sodas.).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
2. Recognize like and unlike word parts (oddity tasks).	a. Identify the word that does not rhyme in a series of words (e.g., bat, cat, sat, pig).	a. Identify words with same beginning consonant sounds (e.g., man, sat, sick) and ending consonant sounds (e.g., man, sat, ten) in a series of words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained

Standard 3 (Phonological and Phonemic Awareness): Students develop phonological and phonemic awareness.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
2. Recognize like and unlike word parts (oddity tasks). (Continued)	b. Identify the words with the same beginning consonant sound in a series of words (e.g., man, sat, sick) and ending consonant sound (e.g., man, sat, then).	b. Identify words with the same medial sounds in a series of words (e.g., long vowel sound: take, late, feet; short vowel sound: top, cat, pan; middle consonant sound: kitten, missing, lesson).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
3. Orally blend word parts (blending).	a. Blend syllables to make words (e.g., /ta/…/ble/, table).	a. Blend syllables to make words (e.g., /ta/…/ble/, table).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	b. Blend onset and rime to make words (e.g., /p/…/an/, pan).	b. Blend onset and rime to make words (e.g., /p/…/an/, pan).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	c. Blend individual phonemes to make words (e.g., /s/…/a/…/t/, sat).	c. Blend individual phonemes to make words (e.g., /s/…/a/…/t/, sat).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
4. Orally segment words into word parts (segmenting).	a. Segment words into syllables (e.g., table, /ta/…/ble/).	a. Segment words into syllables (e.g., table, /ta/…/ble/).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	b. Segment words into onset and rime (e.g., pan, /p/…/an/).	b. Segment words into onset and rime (e.g., pan, /p/…/an/).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	c. Segment words into individual phonemes (e.g., sat, /s/…/a/…/t/).	c. Segment words into individual phonemes (e.g., sat, /s/…/a/…/t/).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained

Standard 3 (Phonological and Phonemic Awareness): Students develop phonological and phonemic awareness.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
5. Orally manipulate phonemes in words and syllables (manipulation).	a. Substitute initial sound (e.g., replace first sound in mat to /s/, say sat).	a. Substitute initial and final sounds (e.g., replace first sound in mat to /s/, say sat; replace last sound in mat with /p/, say map).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	b. Substitute initial sound to create new words (e.g., replace the first sound in mat with letters of the alphabet).	b. Substitute vowel in words (e.g., replace middle sound in map to /o/, say mop).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		c. Delete syllable in words (e.g., say baker without the /ba/, say ker).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		d. Delete initial and final sounds in words (e.g., say sun without the /s/, say un; say hit without the /t/, say hi).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		e. Delete initial phoneme and final phoneme in blends (e.g., say step without the /s/, say tep; say best without the /t/, say bes).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained

Standard 4: Phonics and Spelling

Beginning readers must know and understand the relationship between letters and sounds in order to learn to read and spell. In addition, beginning readers must know and be able to use a variety of phonics skills to unlock unknown words. Phonics skills are critical to the word identification process until almost all words are learned to the point of automaticity—that is, to the point where words are recognized automatically, without thinking. Phonics instruction has been shown to be most effective when taught systematically, sequentially, and explicitly.

Research reports that phonics instruction is most effective when taught early. Phonics instruction:

- Significantly improves kindergarten and first-grade children's word recognition and spelling.
- Significantly improves children's reading comprehension.
- Is effective for children from various social and economic levels.
- Is particularly beneficial for children who have difficulty learning to read and are at risk for developing future reading problems.
- Is more effective than non-systematic or no phonics instruction.
- Is not an entire reading program for beginning readers.

Approaches to phonics instruction include:

- Analogy—children use parts of word families to identify words they don't know.
- Analytic—children analyze letter-sound relationships in previously learned words to read new words.
- Embedded—children use letter-sound relationships while reading connected text.
- Onset-rime—children learn to identify the sound of the first letter with the remaining part of the word.
- Synthetic—children convert letters into sounds and blend the sounds to make words.

Research shows that students who are at-risk readers profit significantly from systematic synthetic phonics instruction.

Spelling is a developmental process. Research confirms that spelling, for most people, requires something above and beyond experience with reading. The ability to read a word does not always guarantee a child can spell the word. Without fluent spelling skills, many students continue to struggle with the mechanics of the writing process and cannot focus their attention and energy on what and why they are writing. Careful examination of words that are part of formal spelling instruction can affect the quality of students' writing, as well as their reading experiences.

Standard 4: Phonics and Spelling (Continued)

Correct spelling requires prediction and memory. It is a combination of interactive language processes, use of strategies, self-checking and monitoring. Spelling instruction, in past years, has often been a practice of having students memorizing lists of single words. However, research tells us it is more productive to teach word families, syllabication, word origins, and basic spelling rules as a major part of spelling instruction. Spelling should be a thinking activity, not merely a memory activity. According to research, efficient spellers view spelling as a problem-solving activity. They have a strong sense of control over their own learning, using a combination of strategies to spell unknown words during writing while committing the spelling of words to memory.

The following are possible suggestions and not all-inclusive:

Teacher Delivery

1. Provide explicit, systematic, synthetic instruction to students on letter sounds and blending for the purpose of decoding and spelling words.
2. Provide explicit instruction on vowels, vowel digraphs, and vowel variants.
3. Provide instruction on segmenting and blending letters to form words.
4. Provide opportunities for students to build words with onsets and rimes.
5. Provide experiences in making words, word sorts, and studying word walls.
6. Provide instruction and application in analyzing word parts (e.g., word chunks, prefixes, suffixes, roots, syllables).
7. Provide instruction on strategies to read and spell unknown words.
8. Use decodable text in earlier grades as an integral part of explicit phonics instruction.
9. Provide sound-by-sound dictation and whole word dictation as a means of practice.
10. Determine students' developmental spelling level.
11. Generate word lists according to students' developmental level, writing sample, and commonly misspelled words.
12. Provide explicit instruction to teach spelling as a developmental process beginning with sound-symbol relationships.
13. Provide explicit instruction with spelling patterns.
14. Provide and encourage students to use spelling cues as needed for accuracy when completing writing assignments.
15. Provide numerous opportunities for students to see words spelled correctly.
16. Teach spelling as part of the reading and writing process.
17. Teach commonly misspelled words (e.g., they, too, there).
18. Teach proofreading as an application of spelling knowledge.

Standard 4: Phonics and Spelling (Continued)

Teacher Delivery (Continued)

19. Provide instruction on resources to assist spelling (e.g., dictionaries).
20. Teach specific strategies to promote spelling and writing fluency.
21. Encourage and foster accountability for correct spelling.
22. Encourage interest and enthusiasm for words; avoid word searches, word puzzles, and writing words multiple times.
23. Provide frequent opportunities for purposeful writing.

Assessment:

Formal: Approved state, district, and school assessments.

Informal:

1. Checklists of skills used by students.
2. Anecdotal records of noted behaviors in class.
3. Conferences and discussions with students.
4. Performance assessment to see how well students apply phonetic principles.
5. Informal reading inventories.
6. Running records.
7. Assessments of decoding ability.
8. Pre- and post-spelling tests.
9. Writing samples.
10. Spelling inventories.

Differentiation

1. Provide explicit instruction in the area of the student's deficit.
2. Provide activities that focus on the manipulation of letters and sounds.
3. Provide opportunities for students to respond kinesthetically to instruction.
4. Provide modeling and demonstration.

Standard 4: Phonics and Spelling (Continued)

Differentiation (Continued)

5. Provide opportunities for students to use and manipulate letters.
6. Provide multiple practice opportunities with decodable books.
7. Provide visual, auditory, and kinesthetic instruction with spelling.
8. Generate lists of key words from student's reading and writing.
9. Provide varied and frequent practice with words.
10. Modify practice opportunities with feedback (e.g., word sorts, making words).
11. Provide opportunities for students to learn to spell functional words.
12. Analyze, with the student, the errors being made in writing assignments, using this information for reading and spelling instruction.
13. Assess often, observing skill level and strategy used.
14. Modify practice opportunities according to individual student needs.
15. Help students develop a study process that fits individual needs.
16. Teach students to apply strategies in determining unknown words and spellings.

Home Connections

1. Communicate expectations to parents.
2. Provide suggestions for parents to help their children with phonics applications.
3. Encourage parents to listen to children read decodable books nightly.
4. Train parents to be able to select appropriate books for their children to practice reading.
5. Help parents to set aside time nightly for children to read to adults.
6. Encourage parents to provide their children with opportunities to write, encouraging correct spelling (e.g., grocery lists, notes to family members, thank you notes).
7. Encourage parents to play word games.
8. Encourage parents to support teacher spelling instruction.
9. Help parents encourage interest in words.

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Demonstrate an understanding of the relationship between letters and sounds.	a. Name all upper- and lower-case letters of the alphabet in random order.	a. Write letters to represent spoken sounds of all letters of the alphabet in random order.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	b. Match consonant and short vowel sounds to the correct letter.	b. Identify and pronounce sounds for consonants, consonant blends (e.g., br, st, fl) and consonant digraphs (e.g., ch, sh, wh, th) accurately in words.	a. Identify and pronounce all vowel diphthongs (e.g., oi, oy, aw, au) and consonant digraphs (e.g., ch, sh, th, wh) accurately in words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		c. Identify and pronounce sounds for short and long vowels, using patterns (e.g., vc, vcv, cvc, cvvc, cvcv, cvc-silent e), and vowel digraphs (e.g., ea, ee, ie, oa, ai, ay, oo, ow) accurately in words.	b. Identify and pronounce sounds for short and long vowels, using patterns (e.g., cvc, cvvc, cvcv, cvc-silent e), and vowel digraphs (e.g., ea, ee, ie, oa, ai, ay, oo, ow) accurately in two-syllable words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		d. Identify and pronounce sounds for r-controlled vowels accurately in one-syllable words (e.g., ar, or, er).	c. Identify and pronounce r-controlled vowel patterns in words (e.g., ar, or, er).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
	c. Blend simple cvc sounds into one-syllable words.	e. Identify and blend initial letter sounds with common vowel patterns to pronounce one-syllable words (e.g., /g/…/oa/… /t/, goat).	d. Identify and blend letter sounds to pronounce words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
2. Use knowledge of structural analysis to decode words.		a. Identify and read grade level contractions and compound words.	a. Identify and read grade level contractions and compound words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
2. Use knowledge of structural analysis to decode words. (Continued)		b. Identify sound patterns and apply knowledge to decode one-syllable words (e.g., blends, digraphs, vowel patterns, r-controlled vowels).	b. Identify sound patterns and apply knowledge to decode words (e.g., blends, digraphs, vowel patterns, r-controlled vowels).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		c. Demonstrate an understanding of representing same sound with different patterns by decoding these patterns accurately in one-syllable words (e.g., ee, ie, ea, e).	c. Demonstrate an understanding of representing same sound with different patterns by decoding these patterns accurately in isolation and in text (e.g., ee, ea, ei, e).	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		d. Use knowledge of root words and suffixes to decode words (i.e., -ful, -ly, -er).	d. Use knowledge of root words and prefixes (e.g., re, un, mis) and suffixes (e.g., s, es, ed, ing, est, ly) to decode words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
		e. Use letter patterns to decode words (e.g., phonograms/word families/onset and rime: -ack, -ail, -ake).	e. Use letter and syllable patterns to pronounce multisyllabic words.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained
3. Spell words correctly.	a. Hear and write letters to represent single sounds in words.	a. Write sounds heard in words in the correct order.	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained	Mastered/Maintained

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
3. Spell words correctly. (Continued)		b. Hear and write beginning, middle, and ending consonant sounds to spell one-syllable words.	a. Use knowledge of word families, patterns, and common letter combinations to spell new words.	a. Use knowledge of word families, patterns, syllabication, and common letter combinations to spell new words.	a. Use knowledge of word families, patterns, syllabication, and common letter combinations to spell new words.	a. Use knowledge of word families, patterns, syllabication, and common letter combinations to spell new words.	a. Use knowledge of word families, patterns, syllabication, and common letter combinations to spell new words.
		c. Spell short vowel words with consonant blends and digraphs (e.g., bl, st, nt, sh, wh, th).	b. Spell words with short and long vowel sounds, r-controlled words, words with consonant blends, consonant and vowel digraphs.	b. Spell correctly grade level compound words, words with plural endings, and common phonograms.	b. Spell words with roots, inflectional endings, prefixes, and suffixes (e.g., faster, disapprove, celebration).	b. Spell multisyllable words with roots, prefixes, and suffixes.	b. Use knowledge of Greek and Latin roots and affixes to spell multisyllable words.
	b. Spell a small number of grade level words (e.g., you, the, to, is).	d. Spell an increasing number of grade level high-frequency and irregular words correctly (e.g., bear, gone, could).	c. Spell an increasing number of grade level high-frequency and irregular words correctly (e.g., believe, answer).	c. Spell an increasing number of grade level high-frequency and irregular words correctly (e.g., friend, square, special).	c. Spell an increasing number of high-frequency and irregular words correctly (e.g., explain, course, several).	c. Spell an increasing number of high-frequency and irregular words correctly (e.g., language, tongue).	c. Spell an increasing number of high-frequency and irregular words correctly (e.g., straight, soldier, property, particular).
	c. Spell first name correctly.	e. Learn the spellings of irregular and difficult words (e.g., river, house, animal).	d. Learn the spellings of irregular and difficult words (e.g., because, animals, before, answer, weight).	d. Learn the spellings of irregular and difficult words (e.g., electric, planet, trapper, rectangle).	d. Learn the spellings of irregular and difficult words (e.g., triangle, volcanoes, minerals, county).	d. Learn the spellings of irregular and difficult words (e.g., hundredths, legislative, digestive).	d. Learn the spellings of irregular and difficult words (e.g., feudalism, electricity, parallelogram, microorganism).
4. Use spelling strategies to achieve accuracy (e.g., prediction, visualization, association).	a. Use knowledge about spelling to predict the spelling of new words.	a. Use knowledge about spelling to predict the spelling of new words.	a. Use knowledge about spelling to predict the spelling of new words.	a. Use knowledge about spelling to predict the spelling of new words.	a. Use knowledge about spelling to predict the spelling of new words.	a. Use knowledge about spelling to predict the spelling of new words.	a. Use knowledge about spelling to predict the spelling of new words.
			b. Visualize words while writing.	b. Visualize words while writing.	b. Visualize words while writing.	b. Visualize words while writing.	b. Visualize words while writing.

Standard 4 (Phonics and Spelling): Students use phonics and other strategies to decode and spell unfamiliar words while reading and writing.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
4. Use spelling strategies to achieve accuracy (e.g., prediction, visualization, association). (Continued)	b. Associate the spelling of new words with that of known words.	b. Associate the spelling of new words with that of known words and word patterns.	c. Associate the spelling of new words with that of known words and word patterns.	c. Associate the spelling of new words with that of known words and word patterns.	c. Associate spelling of new words with that of known words and word patterns.	c. Associate spelling of new words with that of known words and word patterns.	c. Associate spelling of new words with that of known words and word patterns.
		c. Use spelling generalities to assist spelling of new words (e.g., one vowel between two consonants, silent "e" on the end of a word, two vowels together).	d. Use spelling generalities to assist spelling of new words (e.g., one vowel between two consonants, silent "e" on the end of a word, two vowels together).	d. Use spelling generalities to assist spelling of new words (e.g., doubling of consonants, "le" endings, adding suffixes).	d. Use spelling generalities to assist spelling of new words.	d. Use spelling generalities to assist spelling of new words.	d. Use spelling generalities to assist spelling of new words.

Standard 5: Fluency

Fluency is the ability to read a text accurately, quickly, and expressively with appropriate phrasing and intonation. Fluency is a critical component of reading development that can be developed through instruction. The goal of fluency instruction is not fast reading, but expressive and meaning-filled reading. Automaticity (fast, effortless word recognition) is necessary, but not sufficient, for fluency. Fluency has as much to do with accessing the deeper meaning of the text as it has to do with attending to words on a page. Fluency allows the reader to concentrate on comprehension, but fluent reading does not guarantee comprehension. Fluency instruction should begin in kindergarten as children participate in shared reading with the teacher. Fluent reading can be developed by modeling and having students engage in repeated oral reading of familiar text.

Fluency develops gradually over considerable time and through substantial practice. Students need multiple opportunities to orally and silently read text that is not too difficult. Multiple opportunities allow students to learn to read expressively and discover reading as a pleasurable, meaning-making activity. Reading rate and accuracy are important as diagnostic indicators for assessing students' overall reading performance.

Research shows that beginning readers who develop automaticity with word identification skills are better able to comprehend text. A study conducted with the National Assessment of Educational Progress (NAEP) indicates a strong relationship between oral fluency and silent reading comprehension. Students who scored lower on measures of fluency also scored lower on measures of comprehension.

Reading rate has been shown to be related to reading volume. Children with slower reading rates simply read fewer words than faster readers in the same amount of time. High levels of fluency are related to ample opportunities to practice. Students should never lose sight of the importance of understanding what they read; lessons should be comprehension-oriented, even when smooth and fluent oral reading is being emphasized.

The following are possible suggestions and not all-inclusive:

<u>Teacher Delivery</u>

1. Provide students with models of fluent reading during read alouds and guided reading lessons.
2. Provide opportunities for students to repeatedly read (3-4 times) a short passage of 50-200 words aloud with guidance and monitoring for fluency.
3. Provide teacher-directed (guided reading) lessons in which children spend the maximum amount of time engaged in reading connected text on an appropriate level (90% or higher accuracy).
4. Provide multiple opportunities with a variety of texts on students' independent reading level (95% or higher accuracy).
5. Provide opportunities to practice through echo reading, choral reading, readers' theater, shared book experience, and paired reading. (Round robin reading has been shown to be ineffective.)

Standard 5: Fluency (Continued)

Assessments

Formal: Approved state, district, and school assessments.

Informal:

1. Assess word recognition on groups of high-frequency words after learning and practice opportunities have been provided.
2. Listen to individual students read and evaluate whether the reading is word-by-word; more than word-by-word but not in phrases; or in phrases.
3. Listen to individual students read and evaluate accuracy, phrasing, expression, and comprehension.
4. Time a student's reading to determine rate in words per minute.

Differentiation

1. Select short, highly predictable selections that are meant to be read aloud with expression, such as rhyming poetry.
2. Model the initial pages of a text with the students following along in their own texts. Students can then read the remainder of the story with greater fluency and fewer misread words.
3. Instruct tutors to preview new stories with a student, pause to allow the student to self-correct or figure out a difficult word, prompt helpfully and strategically if needed, and offer specific praise for the student's efforts.
4. Provide frequent uninterrupted reading practice with connected text containing high-frequency words.
5. Provide additional opportunities for students to reread familiar text.
6. Provide students with ample opportunity to read more sophisticated or less sophisticated text.
7. Provide students with models of fluent reading.
8. Provide students with the opportunity to read material on their independent level, in pairs, and groups with fluency and expression.

Home Connection

1. Communicate the importance of students and parents reading together daily to improve fluency.
2. Provide appropriate reading material for students to read fluently to parents.
3. Instruct parents in instructional models that include rereading and paired reading.
4. Encourage parents to have their children read at home daily:
   - Kindergarten—read to, with, and by for twenty minutes.
   - First grade—twenty minutes.
   - Second—twenty to thirty minutes.
   - Third-sixth—thirty to sixty minutes.

Standard 5 (Fluency): Students develop reading fluency to read aloud grade level text effortlessly without hesitation.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Read aloud grade level text with appropriate speed and accuracy.	a. Read alphabet letters in random order with automaticity.	a. Read grade level text at a rate of approximately 60 wpm.	a. Read grade level text at a rate of approximately 80 wpm.	a. Read grade level text at a rate of approximately 100 wpm.	a. Read grade level text at a rate of approximately 120-150 wpm.	a. Read grade level text at a rate of approximately 120-150 wpm.	a. Read grade level text at a rate of approximately 120-150 wpm.
	b. Read numerals from zero to ten in random order with automaticity.	b. Read grade level text with an accuracy rate of 95-100%.	b. Read grade level text with an accuracy rate of 95-100%.	b. Read grade level text with an accuracy rate of 95-100%.	b. Read grade level text with an accuracy rate of 95-100%.	b. Read grade level text with an accuracy rate of 95-100 meaningful %.	b. Read grade level text with an accuracy rate of 95-100%.
2. Read aloud grade level text effortlessly with clarity.	a. Use appropriate intonation and expression during unison oral reading with the teacher.	a. Read grade level text in three- to four-word phrases using intonation, expression, and punctuation cues.	a. Read grade level text in three- to four-word phrases using intonation, expression, and punctuation cues.	a. Read grade level text in meaningful phrases using intonation, expression, and punctuation cues.	a. Read grade level text in meaningful phrases using intonation, expression, and punctuation cues.	a. Read grade level text in phrases using intonation, expression, and punctuation cues.	a. Read grade level text in meaningful phrases using intonation, expression, and punctuation cues.
	b. Read with automaticity approximately 25 high-frequency/sight words.	b. Read with automaticity 100 first grade high-frequency/sight words.	b. Read with automaticity 200 second grade high-frequency/sight words.	b. Read with automaticity 300 third grade high-frequency/sight words.	b. Read grade level words with automaticity.	b. Read grade level words with automaticity.	b. Read grade level words with automaticity.

Standard 6: Vocabulary

Vocabulary is critical to comprehension. Students must know what individual words mean within the context of listening, speaking, reading, and writing. Research suggests the proportion of difficult words in text is the single most powerful predictor of text difficulty; a reader's general vocabulary-knowledge is the single best predictor of how well a reader can understand text.

Research shows the average second grade student has a reading vocabulary of about 2,000 to 5,000 words, yet the materials he/she will read in third through ninth grade contain approximately 90,000 different words. According to the best estimates, students need to learn approximately 3,000 to 4,000 words per year just to stay on grade level. The California State Board of Education (1999) recommended that students in early grades read 500,000 to 1,000,000 words per year. Vocabulary acquisition is related to the amount of reading students do both in and out of school.

There are four types of vocabulary: listening, speaking, reading, and writing. Most students whose primary language is English enter kindergarten with speaking vocabularies ranging between 2,500-5,000 words. Generally, first graders can orally use and understand about 6,000 words but have very limited reading vocabularies. By second grade, students' reading vocabularies are growing steadily, with students learning an average of 3,000-4,000 words a year. It would be impossible to teach this number of words directly each year. Thus, it becomes critical that teachers provide explicit vocabulary instruction, motivation, and reading opportunities to develop word knowledge.

The following are possible suggestions and not all-inclusive:

<u>Teacher Delivery</u>

1. Read aloud challenging text from a variety of genres.
2. Provide explicit instruction on content-specific vocabulary.
3. Provide instruction on vocabulary within the content area being studied.
4. Provide sufficient practice opportunities with vocabulary.
5. Provide and promote opportunities for students to independently read from a variety of genres to expand vocabulary.
6. Provide explicit instruction on word structure (e.g., affixes, root words).
7. Provide instruction to deepen students' understanding of vocabulary (e.g., semantic feature analysis, word synonyms, antonyms, multiple meanings of words).
8. Provide explicit instruction on high-frequency words.
9. Provide access to resource material (e.g., dictionary, thesaurus).

Standard 6: Vocabulary (Continued)

Assessment

Formal:

Approved state, district, and school assessments.

Informal:

1. Observe for complexity of vocabulary usage as students read, speak, and write.
2. Informal assessments of vocabulary.

Differentiation

1. Provide a print-rich environment for students to read materials that reflect their interests and maturity levels.
2. Provide opportunities for students to read in content areas where they can apply knowledge of content vocabulary.
3. Present material that matches students' instructional reading levels.
4. Provide opportunities to extend students' speaking and listening level of vocabulary beyond their reading level.
5. Allow students to use multiple resources for vocabulary support.
6. Allow for additional experiences and practice with vocabulary.
7. Allow students to work with a peer.
8. Provide visual and kinesthetic experiences with vocabulary.
9. Provide direct instruction on grammatical features and idioms.
10. Provide simplified text as needed to reinforce vocabulary instruction and word recognition.
11. Support ELL students with vocabulary acquisition by providing:
    - Vocabulary in native language with connections to English.
    - Opportunities to work with English speaking peers.
    - Instruction on grade level concepts (animals, weather) and functions (walk, quiet).
    - Cultural references of vocabulary.

Home Connection

1. Encourage parents to provide time to read together as a family and engage in conversation.
2. Encourage parents to provide experiences and discussions on concepts, observations, and materials read or viewed.

Standard 6: Vocabulary (Continued)

Home Connection (Continued)

3. Encourage parents to provide opportunities that encourage vocabulary development through promoting reading, by visiting the library, bookstores, and discussing environmental print.
4. Encourage parents to monitor children's time spent watching TV, playing video games, and/or surfing the Internet.
5. Encourage parents to have nightly reading for pleasure in the home.

Standard 6 (Vocabulary): Students learn and use grade level vocabulary to increase understanding and read fluently.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Learn new words through listening and reading widely.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.	a. Use new vocabulary learned by listening, reading, and discussing a variety of genres.
	b. Learn the meaning of a variety of grade level words (e.g., words from literature, social studies, science, math).	b. Learn the meaning of a variety of grade level words (e.g., words from literature, social studies, science, math).	b. Learn the meaning of a variety of grade level words (e.g., words from literature, social studies, science, math).	b. Learn the meaning and properly use a variety of grade level words (e.g., words from literature, social studies, science, math).	b. Learn the meaning and properly use a variety of grade level words (e.g., words from literature, social studies, science, math).	b. Learn the meaning and properly use a variety of grade level words (e.g., words from literature, social studies, science, math).	b. Learn the meaning and properly use a variety of grade level words (e.g., words from literature, social studies, science, math).
	c. Use resources to learn new words by relating them to known words (e.g., books, charts, word walls).	c. Use resources to learn new words by relating them to known words (e.g., books, charts, word walls, simple dictionaries).					
2. Use multiple resources to learn new words by relating them to known words and/or concepts.	See cell above.	See cell above.	a. Use multiple resources to determine the meanings of unknown words (e.g., simple dictionaries, glossaries).	a. Use multiple resources to determine the meanings of unknown words (e.g., simple dictionaries, glossaries, beginning thesauruses).	a. Use multiple resources to determine the meanings of unknown words (e.g., dictionaries, glossaries, beginning thesauruses).	a. Use multiple resources to determine the meanings of unknown words (e.g., dictionaries, glossaries, beginning thesauruses).	a. Use multiple resources to determine the meanings of unknown words (e.g., dictionaries, glossaries, thesauruses).
			b. Relate unfamiliar words and concepts to prior knowledge to increase vocabulary (e.g., liquid: milk, water, punch).	b. Relate unfamiliar words and concepts to prior knowledge to increase vocabulary (e.g., rotation: planets, spinner, taking turns).	b. Relate unfamiliar words and concepts to prior knowledge to increase vocabulary (e.g., settlers: Indians, pioneers, farmers).	b. Determine gradients of meanings between related words and concepts (e.g., ambassador: official, representative).	b. Determine gradients of meanings between related words and concepts (e.g., colonization: exploration, migrate, settlement).

Standard 6 (Vocabulary): Students learn and use grade level vocabulary to increase understanding and read fluently.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
3. Use structural analysis and context clues to determine meanings of words.	a. Identify meanings of words by looking at the root word and using known endings (e.g., car, cars; jump, jumped, jumping).	a. Identify meanings of words using the root word and known endings (e.g., car, cars; jump, jumped, jumping).	a. Identify meanings of words using prefixes and suffixes (e.g., do/undo, write/rewrite, happy/happiness, help/helper/helpful).	a. Identify meanings of words using prefixes and suffixes.	a. Identify meanings of words using roots and affixes (e.g., disrespectfully).	a. Identify meanings of words using roots and affixes.	a. Identify meanings of words using roots and affixes (i.e., Greek/Latin affixes).
	b. Monitor reading using context to explain the meanings of unknown key words from text read aloud.	b. Use context to determine meanings of unknown key words (e.g., The gigantic dog couldn't fit in his new doghouse.).	b. Use context to determine meanings of unknown key words (e.g., The store clerk glared at the children as they looked at the toys.).	b. Use context to determine meanings of unknown key words (e.g., The ferocious dog growled at the children.).	b. Use words, sentences, and paragraphs as context clues to determine meanings of unknown key words, similes, and idioms.	b. Use words, sentences, and paragraphs as context clues to determine meanings of unknown key words, similes, metaphors, idioms, proverbs, and clichés.	b. Use words, sentences, and paragraphs as context clues to determine meanings of unknown key words, similes, metaphors, idioms, proverbs, clichés, and literary expressions.
			c. Use context to determine meanings of synonyms, antonyms, homonyms (e.g., sun/son), and multiple-meaning words (e.g., ring).	c. Use context to determine meanings of synonyms, antonyms, homonyms (e.g., blue, blew), and multiple-meaning words (e.g., light).	c. Use context to determine meanings of synonyms, antonyms, homonyms (e.g., there, their, they're), and multiple-meaning words (e.g., rock).	c. Use context to determine meanings of synonyms, antonyms, homonyms (e.g., your, you're), and multiple-meaning words (e.g., beat).	c. Use context to determine meanings of synonyms, antonyms, homonyms (e.g., through/threw, principal/principle), and multiple-meaning words (e.g., print).

Standard 7: Comprehension

The ultimate goal of reading is comprehension. Comprehension is the process of constructing meaning utilizing the reader's existing knowledge, the information in the text, and the purpose for reading. Comprehension requires the reader to apply strategies and monitor his/her understanding of both narrative and informational text. Comprehension is critically important to the development of reading, academic learning in all subject areas, and success in today's society.

Research shows there are three critical findings regarding comprehension: (1) Comprehension is a complex cognitive process in which vocabulary plays an important part. (2) Comprehension is an active process that requires intentional and thoughtful interaction between the reader and the text. (3) Teacher preparation is linked to student achievement in comprehension.

Certain key comprehension strategies employed before, during, and after reading need to be taught directly to students in the context of their reading. In explicit comprehension strategy instruction, students learn what the strategy is; why it is important; and how, when, and where to apply it.

Students' awareness and understanding of text organization plays a key role in reading comprehension. Text organization is the physical presentation of the text with headings, subheadings, graphics, and underlying text structure (e.g., compare/contrast, sequence of presentation within narrative or expository text).

The following are possible suggestions and not all-inclusive:

<u>Teacher Delivery</u>

1. Model the processes and strategies being taught (e.g., read and think aloud).
2. Provide explicit instruction in the use of comprehension strategies before, during, and after reading.
3. Provide explicit instruction in:
    - Identifying text structure
    - Activating prior knowledge (e.g., about topic, author, illustrator, genre)
    - Determining importance/main idea
    - Predicting/Inferring
    - Questioning
    - Monitoring
    - Clarifying
    - Retelling
    - Summarizing

Standard 7: Comprehension (Continued)

Teacher Delivery (Continued)

- Synthesizing
- Making connections (e.g., text to self, text to text, text to world)
- Visualizing

4. Provide explicit instruction on the various expository text structures (e.g., compare/contrast, cause/effect, chronological order, sequence, descriptive).
5. Provide models of delivery (e.g., reciprocal teaching, graphic organizers, Question-Answer-Relationship—QARs).
6. Utilize a variety of texts and genres to develop comprehension.
7. Provide extensive opportunities for reading on an independent level.
8. Utilize flexible grouping practices.
9. Model metacognitive strategies (e.g., fix-up strategies, adjusting reading speed to fit the difficulty of text, checking understanding of what was read).
10. Emphasize comprehension across all eight standards of the Utah Language Arts Core Curriculum.

Assessments

Formal:

Approved state, district, and school assessments.

Informal:

1. Story retellings noting beginning, middle, and ending.
2. Various reading response strategies (e.g., journals, coding text).
3. Discussion of text.

Differentiation

1. Provide students with choices from a wide variety of appropriate materials.
2. Provide clear models and examples of comprehension strategies.
3. Present information visually as well as orally.
4. Utilize flexible grouping practices.
5. Repeat instruction as appropriate.
6. Check frequently for understanding.

Standard 7: Comprehension (Continued)

Differentiation (Continued)

7. Pair struggling students with a reading partner when appropriate.
8. Give students opportunities to discuss books with their peers and others.
9. Provide instruction with higher-level thinking skills.

Home Connection

1. Communicate the importance of students and parents reading together daily.
2. Communicate the importance of children reading at home daily:
   - Kindergarten—read to, with, and by for twenty minutes.
   - First—twenty minutes.
   - Second—twenty to thirty minutes.
   - Third through sixth—thirty to sixty minutes.
3. Encourage parents to discuss and respond to reading material with their children.
4. Help parents to encourage children to read a variety of genres.
5. Encourage parents to visit libraries and bookstores with their children.

Standard 7 (Comprehension): Students understand, interpret, and analyze narrative and informational grade level text.

Objectives	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Identify purposes of text.	a. Discuss purpose for reading.	a. Discuss purpose for reading.	a. Identify purpose for reading.	a. Identify purpose for reading.	a. Identify purpose for reading.	a. Identify purpose for reading.	a. Identify purpose for reading.
	b. Discuss author's purpose.	b. Discuss author's purpose.	b. Identify author's purpose.	b. Identify author's purpose.	b. Identify author's purpose.	b. Identify author's purpose.	b. Identify author's purpose.
2. Apply strategies to comprehend text.	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).	a. Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world).
	b. Ask questions about text.	b. Ask questions about text read aloud and independently.	b. Ask questions about text read aloud and independently.	b. Generate questions about text (e.g., factual, inferential, evaluative).	b. Generate questions about text (e.g., factual, inferential, evaluative).	b. Generate questions about text (e.g., factual, inferential, evaluative).	b. Generate questions about text (e.g., factual, inferential, evaluative).
			c. Form mental pictures to aid understanding of text.	c. Form mental pictures to aid understanding of text.	c. Form mental pictures to aid understanding of text.	c. Form mental pictures to aid understanding of text.	c. Form mental pictures to aid understanding of text.
	c. Make predictions using picture clues, title, and prior knowledge.	c. Make predictions using picture clues, title, text, and/or prior knowledge.	d. Make and confirm predictions while reading using title, picture clues, text, and/or prior knowledge.	d. Make and confirm predictions while reading using title, picture clues, text, and/or prior knowledge.	d. Make and confirm or revise predictions while reading using title, picture clues, text, and/or prior knowledge.	d. Make and confirm or revise predictions while reading using title, picture clues, text, and/or prior knowledge.	d. Make and confirm or revise predictions while reading using title, picture clues, text, and/or prior knowledge.
	d. Make inferences and draw conclusions from text.	d. Make inferences and draw conclusions from text.	e. Make inferences and draw conclusions from text.	e. Make inferences and draw conclusions from text.	e. Make inferences and draw conclusions from text.	e. Make inferences and draw conclusions from text.	e. Make inferences and draw conclusions from text.
		e. Identify topic/main idea from text; note details.	f. Identify topic/main idea from text; note details.	f. Identify topic/main idea from text; note details.	f. Identify theme/topic/ main idea from text; note details.	f. Identify theme/topic/ main idea from text; note details.	f. Identify theme/topic/ main idea from text; note details.

Standard 7 (Comprehension): Students understand, interpret, and analyze narrative and informational grade level text.

Objectives	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
2. Apply strategies to comprehend text. (Continued)	e. Retell identifying key ideas.	f. Retell using important ideas/events; summarize supporting details in sequence.	g. Summarize important ideas/events; summarize supporting details in sequence.	g. Summarize important ideas/events; summarize supporting details in sequence.	g. Summarize important ideas/events; summarize supporting details in sequence.	g. Summarize important ideas/events; summarize supporting details in sequence.	g. Summarize important ideas/events; summarize supporting details in sequence.
			h. Monitor and clarify understanding applying fix-up strategies while interacting with text.	h. Monitor and clarify understanding applying fix-up strategies while interacting with text.	h. Monitor and clarify understanding applying fix-up strategies while interacting with text.	h. Monitor and clarify understanding applying fix-up strategies while interacting with text.	h. Monitor and clarify understanding applying fix-up strategies while interacting with text.
	f. Compile information from text.	g. Compile information from text.	i. Compile information from text.	i. Compile information from text.	i. Compile, organize, and interpret information from text.	i. Compile, organize, and interpret information from text.	i. Compile, organize, and interpret information from text.
3. Recognize and use features of narrative and informational text.	a. Identify beginning, middle, and ending of text.	a. Identify beginning, middle, and end; characters; setting; problem/resolution.	a. Identify characters, setting, sequence of events, problem/ resolution.	a. Identify characters, setting, sequence of events, problem/ resolution.	a. Identify characters, setting, sequence of events, problem/ resolution.	a. Identify characters, setting, sequence of events, problem/ resolution.	a. Identify characters, setting, sequence of events, problem/ resolution, theme.
	b. View a variety of simple genres: nursery rhymes, fairy tales, poems, realistic fiction, fantasy.	b. Identify different genres: nursery rhymes, fairy tales, poems, realistic fiction, fantasy, fables.	b. Identify different genres: fairy tales, poems, realistic fiction, fantasy, fables, folk tales.	b. Identify different genres: fairy tales, poems, realistic fiction, fantasy, fables, folk tales, tall tales, biographies, historical fiction.	b. Identify different genres: fairy tales, poems, realistic fiction, fantasy, fables, folk tales, tall tales, biographies, historical fiction.	b. Compare and contrast elements of different genres: fairy tales, poems, realistic fiction, fantasy, fables, folk tales, tall tales, biographies, historical fiction, science fiction.	b. Compare and contrast elements of different genres: fairy tales, poems, realistic fiction, fantasy, fables, folk tales, tall tales, biographies, historical fiction, science fiction, myths, legends.
	c. Identify information from pictures.	c. Identify information from pictures, captions, and diagrams.	c. Identify information from pictures, captions, diagrams, charts, graphs, and table of contents.	c. Identify information from pictures, captions, diagrams, charts, graphs, table of contents, index, and glossary.	c. Identify information from text, headings, subheadings, diagrams, charts, captions, graphs, table of contents, index, and glossary.	c. Identify information from text, headings, subheadings, diagrams, charts, captions, graphs, table of contents, index, and glossary.	c. Identify information from text, headings, subheadings, diagrams, charts, captions, graphs, table of contents, index, and glossary.

Standard 7 (Comprehension): Students understand, interpret, and analyze narrative and informational grade level text.

Objectives	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
3. Recognize and use features of narrative and informational text. (Continued)	d. Recognize information as real/make believe.	d. Identify multiple facts in grade level informational text.	d. Identify different structures in text (e.g., compare/contrast, cause/effect).	d. Identify different structures in text (e.g., problem/solution, compare/contrast).	d. Identify different structures in text (e.g., description, problem/solution, compare/contrast, cause/effect).	d. Identify different structures in text (e.g., description, problem/solution, compare/contrast, cause/effect, order of importance, time, geographic classification).	d. Identify different structures in text (e.g., description, problem/solution, compare/contrast, cause/effect, order of importance, time, geographic classification).
	e. View a variety of informational texts (e.g., picture books).	e. Locate facts from informational texts (e.g., picture books, grade level informational books).	e. Locate facts from a variety of informational texts (e.g., newspapers, magazines, books, other resources).	e. Locate facts from a variety of informational texts (e.g., newspapers, magazines, books, other resources).	e. Locate facts from a variety of informational texts (e.g., newspapers, magazines, textbooks, biographies, other resources).	e. Locate facts from a variety of informational texts (e.g., newspapers, magazines, textbooks, biographies, Internet, other resources).	e. Locate facts from a variety of informational texts (e.g., newspapers, magazines, textbooks, biographies, Internet, other resources).

Standard 8: Writing

Writing is a process of selecting, organizing, and developing ideas; expressing ideas in effective language; arranging them in logical sequences; and presenting them in standard forms of spelling, handwriting, or word processing. We write to discover what we know, think, and believe, and to communicate with others.

Research shows that learning to write well requires frequent practice. Students who learn to write as a process of planning, drafting, and revising develop fluency and control as writers. When students write on topics they care about, for varied audiences and a range of purposes, they find writing purposeful.

Just as students need to be exposed to a wide range of reading materials, students need to develop skills with different writing modes/forms. Research has shown that 50 percent of all the writing produced during high school occurs outside the English class. Developing writing across all subject areas, using different writing modes/forms while integrating content knowledge with personal knowledge, is essential. Writing should begin in the elementary school years, with continuous development throughout a student's school career. Writing is a lifelong powerful tool.

The usefulness of teaching penmanship/handwriting as part of the writing process is really debatable in today's high-tech society. While students are becoming proficient with technology tools at an early age, legible handwriting is a practical asset still needed today. Three-fourths of all elementary schoolwork is still done by hand, and tests often include essay questions. There is little doubt that a minimal amount of time should be devoted to handwriting instruction and practice. Teachers should allocate sufficient time to teach students the skill of penmanship in order to produce legible documents with fluency/automaticity.

The following are possible suggestions and not all-inclusive:

<u>Teacher Delivery</u>

1. Provide explicit instruction in writing through shared, interactive, and guided writing.
2. Teach writing as a recursive process of pre-writing, drafting, revising, editing, and sharing/publishing.
3. Provide students with frequent opportunities and ample time to write.
4. Confer with students, validating strengths and teaching skills at point of need.
5. Teach students to write in different genres for different purposes.
6. Provide instruction in both large and small groups, utilizing mini-lessons as needed.

Standard 8: Writing (Continued)

Teacher Delivery (Continued)

7. Provide brief, explicit instruction to help students produce letters automatically and retrieve forms rapidly from memory.
8. Devote minimal amounts of time to penmanship instruction and practice.
9. Provide small group instruction for students who are having trouble forming letters in manuscript or cursive.
10. Be consistent by following district instructional style of penmanship (e.g., vertical/traditional, slanted/italicized).
11. Consider teaching a penmanship style most like print in books to students with disabilities in reading.
12. Allow students the choice of manuscript or cursive when using penmanship as a tool for writing.
13. Remember that the goal of penmanship instruction and practice is to produce legible documents created with fluency/automaticity.
14. Provide instruction and practice in penmanship for students to read a variety of styles of print/fonts, including cursive.

Assessment

Formal:

Approved state, district, and school assessments.

Informal:

1. Six-Traits Writing, Six-Traits Plus 1, writing assessments.
2. Rubrics and scoring guides.
3. Holistic writing assessments.
4. Developmental checklists in writing.
5. Writing conferences.

Differentiation

1. Allow students to dictate stories.
2. Simplify students' writing assignments.
3. Allow students to use a word processor.
4. Allow students to write first drafts in their primary language.
5. Assist students in creating storyboards or other illustrations for stories before writing.
6. Provide students with extra time to complete assignments.
7. Allow and encourage students to work with peers.

Standard 8: Writing (Continued)

Differentiation (Continued)

8. Encourage students to write from self-selected topics.
9. Encourage interest and enthusiasm for writing.
10. Provide students with frequent opportunities for purposeful writing.
11. Encourage and foster accountability for Six-Traits Writing.
12. Develop students' writing in all modes/forms.
13. Facilitate students' utilization of technology and technology tools to produce writing products.
14. Encourage students to use graphic organizers to organize and plan their writing.
15. Encourage students to honor individual student writing efforts, noting positive elements.
16. Allow students choice with forms and styles of penmanship.
17. Allow students to use technology.
18. Emphasize legibility, not form, with penmanship.

Home Connections

1. Encourage parents to foster writing exploration by providing a variety of materials.
2. Encourage students to write daily at home (e.g., logs, journals).
3. Encourage children to share their writing at home.
4. Encourage writing at home by using a message board to communicate.
5. Encourage functional writing at home (e.g., thank you notes, messages, labels).
6. Facilitate the appropriate use of technology and writing tools in the home (e.g., computer, dictionary).
7. Encourage parents to act as role models for writing, as well as noting other models for writing found in the home (e.g., authors' writing,
   newspapers, letters, advertisements).
8. Encourage parents to communicate the importance of legibility, not form and style, with penmanship.
9. Communicate to parents the district preferred style for letter formation to eliminate early confusion for preschoolers and students beginning
   the letter formation process.
10. Communicate to parents the value of technology as a tool for writing in today's world.

Standard 8 (Writing): Students write daily to communicate effectively for a variety of purposes and audiences.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Prepare to write by gathering and organizing information and ideas (pre-writing).	a. Generate ideas for writing by listening, talking, drawing, looking at literature and informational text, being read to, and reflecting on personal experiences.	a. Generate ideas for writing by reading, discussing literature and informational text, drawing, looking at books, being read to, and reflecting on personal experiences.	a. Generate ideas for writing by reading, discussing literature and informational text, and reflecting on personal experiences.	a. Generate ideas for writing by reading, discussing literature and informational text, and reflecting on personal experiences.	a. Generate ideas for writing by reading, discussing, researching, and reflecting on personal experiences.	a. Generate ideas for writing by reading, discussing, researching, and reflecting on personal experiences.	a. Generate ideas for writing by reading, discussing, researching, and reflecting on personal experiences.
	b. Select topics from generated ideas.	b. Select topics from generated ideas.	b. Select topics from generated ideas.	b. Select and narrow a topic from generated ideas.	b. Select and narrow a topic from generated ideas.	b. Select and narrow a topic from generated ideas.	b. Select and narrow a topic from generated ideas.
		c. Identify audience for writing.	c. Identify audience, purpose, and form for writing.	c. Identify audience, purpose, and form for writing.	c. Identify audience, purpose, and form for writing.	c. Identify audience, purpose, and form for writing.	c. Identify audience, purpose, and form for writing
			d. Use simple graphic organizers to organize information.	d. Use a variety of graphic organizers to organize information.	d. Use a variety of graphic organizers to organize information.	d. Use a variety of graphic organizers to organize information from multiple sources.	d. Use a variety of graphic organizers to organize information from multiple sources.
2. Compose a written draft.	a. Draft ideas on paper, utilizing pictures with labels/words.	a. Draft ideas on paper in an organized manner (e.g., beginning, middle, end) utilizing words and sentences.	a. Draft ideas on paper in an organized manner utilizing words and sentences (e.g., beginning, middle, end; main idea; details).	a. Draft ideas on paper in an organized manner utilizing words and sentences (e.g., beginning, middle, end; main idea; details; characterization; setting; plot).	a. Draft ideas on paper in an organized manner utilizing words, sentences, and multiple paragraphs (e.g., beginning, middle, end; main idea, details; characterization; setting; plot).	a. Draft ideas on paper in an organized manner utilizing words, sentences, and multiple paragraphs (e.g., beginning, middle, end; main idea; details; characterization; setting; plot).	a. Draft ideas on paper in an organized manner utilizing words, sentences, and multiple paragraphs (e.g., beginning, middle, end; main idea; details; characterization; setting; plot).
			b. Use voice in writing (e.g., express feelings, opinions).	b. Use voice to fit the purpose and audience.	b. Use voice to fit the purpose and audience.	b. Use voice to fit the purpose and audience.	b. Use voice to fit the purpose and audience.
	b. Select appropriate words to convey meaning.	b. Select appropriate words to convey meaning.	c. Select appropriate words to convey meaning.	c. Use strong verbs and vivid language.	c. Use strong verbs and precise and vivid language to convey meaning.	c. Use strong verbs and precise and vivid language to convey meaning.	c. Use strong verbs and precise and vivid language to convey meaning.

Standard 8 (Writing): Students write daily to communicate effectively for a variety of purposes and audiences.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
2. Compose a written draft. (Continued)				d. Identify and use effective leads and strong endings.	d. Identify and use effective leads and strong endings.	d. Identify and use effective leads and strong endings.	d. Identify and use effective leads and strong endings.
3. Revise by elaborating and clarifying a written draft.		a. Revise draft to add details.	a. Revise draft to add details, strengthen word choice, and reorder content.	a. Revise draft to add details, strengthen word choice, clarify main idea, and reorder content.	a. Revise draft to add details, strengthen word choice, clarify main idea, and reorder content.	a. Revise draft to add details, strengthen word choice, clarify main idea, and reorder content.	a. Revise draft to add details, strengthen word choice, clarify main idea, and reorder content.
		b. Revise draft using descriptive words.	b. Enhance fluency by using complete sentences.	b. Enhance fluency by using a variety of complete sentences (i.e., varied sentence length, simple and complex sentences).	b. Enhance fluency by using transitional words, phrases to connect ideas, and a variety of complete sentences (i.e., sentence length, simple and complex sentences).	b. Enhance fluency by using transitional words, phrases to connect ideas, and a variety of complete sentences and paragraphs to build ideas (e.g., varied sentence length, simple and compound sentences).	b. Enhance fluency by using transitional words, phrases to connect ideas, and a variety of complete sentences and paragraphs to build ideas (e.g., varied sentence length, simple and compound sentences).
		c. Write in complete sentences.	c. Revise writing, considering the suggestions of others.	c. Revise writing, considering the suggestions of others.	c. Revise writing, considering the suggestions of others.	c. Revise writing, considering the suggestions of others.	c. Revise writing, considering the suggestions of others.
4. Edit written draft for conventions.	a. Edit writing of first name for appropriate capital and lower case letters.	a. Edit writing for capitals in names, first word of a sentence, the pronoun "I", and correct ending punctuation (i.e., periods, question marks).	a. Edit writing for capitals in names, first word of a sentence, the pronoun "I", correct punctuation of sentence endings, greetings and closings of letters, dates, and contractions.	a. Edit writing for correct capitalization and punctuation (i.e., capitals in holidays, titles, dates, greetings and closings of letters, personal titles, contractions, abbreviations).	a. Edit writing for correct capitalization and punctuation (i.e., words in a series, dialogue, complex sentences, singular possessives, abbreviations).	a. Edit writing for correct capitalization and punctuation (i.e., introductory and dependent clauses, dialogue, singular and plural possessives).	a. Edit writing for correct capitalization and punctuation (i.e., introductory and dependent clauses, dialogue, singular and plural possessives).

Standard 8: Writing – Students write daily to communicate effectively for a variety of purposes and audiences.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
4. Edit written draft for conventions. (Continued)	b. Edit writing for the spelling of a key word.	b. Edit for spelling of grade level-appropriate words (e.g., would, down, made, write).	b. Edit for spelling of grade level-appropriate words.	b. Edit for spelling of grade level-appropriate words.	b. Edit for spelling of grade level-appropriate words.	b. Edit for spelling of grade level-appropriate words.	b. Edit for spelling of grade level-appropriate words.
		c. Edit for standard grammar (i.e., complete sentences).	c. Edit for standard grammar (e.g., subject-verb agreement).	c. Edit for standard grammar (e.g., subject-verb agreement, verb tense, comparatives, superlatives, pronouns).	c. Edit for standard grammar (e.g., subject-verb agreement, verb tense, comparatives, superlatives, pronouns).	c. Edit for standard grammar (e.g., subject-verb agreement, verb tense, irregular verbs).	c. Edit for standard grammar (e.g., subject-verb agreement, verb tense, irregular verbs).
		d. Edit for appropriate formatting features (i.e., spacing, margins, titles).	d. Edit for appropriate formatting features (e.g., margins, indentations, titles).	d. Edit for appropriate formatting features (e.g., margins, indentations, titles).	d. Edit for appropriate formatting features (e.g., margins, indentations, titles).	d. Edit for appropriate formatting features (e.g., margins, indentations, titles, headings).	d. Edit for appropriate formatting features (e.g., margins, indentations, titles, headings).
5. Use fluent and legible handwriting to communicate.	a. Print all upper- and lower-case letters of the alphabet and numerals 0-9 using proper form, proportions, and spacing.	a. Print all upper- and lower-case letters of the alphabet and numerals 0-9 using proper form, proportions, and spacing.	a. Write demonstrating mastery of all upper- and lower-case manuscript letters and numerals using proper form, proportions, and spacing.	a. Write using upper- and lower-case cursive letters using proper form, proportions, and spacing.	a. Write using upper- and lower-case cursive letters with proper form, proportions, and spacing.	a. Write using upper- and lower-case cursive letters using proper form, proportions, and spacing.	a. Write using upper- and lower-case cursive letters using proper form, proportions, and spacing.
	b. Write with increasing fluency in forming manuscript letters and numerals.	b. Write with increasing fluency in forming manuscript letters and numerals.	b. Increase fluency in forming manuscript letters and numerals.	b. Develop fluency with cursive handwriting.	b. Increase fluency with cursive handwriting.	b. Increase fluency with cursive handwriting.	b. Increase fluency with cursive handwriting.
	c. Write name legibly using correct manuscript form.	c. Produce legible documents with manuscript handwriting.	c. Produce legible documents with manuscript handwriting.	c. Produce legible documents with cursive handwriting.	c. Produce legible documents with cursive handwriting.	c. Produce legible documents with manuscript or cursive handwriting.	c. Produce legible documents with manuscript or cursive handwriting.

Standard 8: Writing – Students write daily to communicate effectively for a variety of purposes and audiences.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
6. Write in different forms and genres.	a. Produce personal writing (e.g., All About Me books, notes).	a. Produce personal writing (e.g., journals, lists, friendly notes and letters, personal experiences, family stories, literature responses).	a. Produce personal writing (e.g., journals, friendly notes and letters, personal experiences, family stories, literature responses).	a. Produce personal writing (e.g., journals, friendly notes and letters, personal experiences, family stories, literature responses).	a. Produce personal writing (e.g., journals, personal experiences, eyewitness accounts, memoirs, literature responses).	a. Produce personal writing (e.g., journals, personal experiences, eyewitness accounts, memoirs, literature responses).	a. Produce personal writing (e.g., journals, personal experiences, eyewitness accounts, memoirs, literature responses).
	b. Produce traditional and imaginative stories, narrative and formula poetry as a shared writing activity.	b. Produce traditional and imaginative stories, narrative and formula poetry as a shared writing activity.	b. Produce traditional and imaginative stories, narrative and formula poetry as an individual/ shared writing activity.	b. Produce traditional and imaginative stories, narrative and formula poetry.	b. Produce traditional and imaginative stories, narrative and formula poetry.	b. Produce traditional and imaginative stories, narrative and formula poetry.	b. Produce traditional and imaginative stories, narrative and formula poetry.
	c. Produce functional text (e.g., ABC books, labels, signs).	c. Produce functional text (e.g., ABC books, lists, labels, signs, how-to books, observations).	c. Produce informational text (e.g., ABC books, how-to books, observations).	c. Produce informational text (e.g., explanation of a complex process—math/journals, observations, content area reports, summaries).	c. Produce informational text (e.g., book reports, compare/contrast essays, observational reports, research reports, content area reports, biographies, summaries).	c. Produce informational text (e.g., book reports, cause/effect reports, compare/contrast essays, observational/ research reports, content area reports, biographies, historical fiction, summaries).	c. Produce informational text (e.g., book reports, cause/effect reports, compare/contrast essays, observational/ research reports, content area reports, biographies, historical fiction, summaries).
			d. Produce writing to persuade (e.g., express opinions).	d. Produce writing to persuade (e.g., expressing opinions with supporting data).	d. Produce writing to persuade (e.g., response to newspaper and magazine articles).	d. Produce writing to persuade (e.g., essays, editorials, speeches, TV scripts, responses to various media).	d. Produce writing to persuade (e.g., essays, editorials, speeches, TV scripts, responses to various media).
			e. Produce functional texts (e.g., lists, labels, signs).	e. Produce functional texts (e.g., newspaper and newsletter articles).	e. Produce functional texts (e.g., newspaper and newsletter articles, e-mails, simple PowerPoint presentations).	e. Produce functional texts (e.g., newspaper and newsletter articles, e-mails, simple PowerPoint presentations, memos, agendas, bulletins).	e. Produce functional texts (e.g., newspaper and newsletter articles, e-mails, simple PowerPoint presentations, memos, agendas, bulletins, web pages).

Standard 8: Writing – Students write daily to communicate effectively for a variety of purposes and audiences.

Objective	Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
6. Write in different forms and genres. (Continued)	d. Share illustrations and writing with others.	d. Share writing with others using illustrations to add meaning to published works.	f. Share writing with others using illustrations, graphs, and/or charts to add meaning.	f. Share writing with others using illustrations, graphs, and/or charts to add meaning.	f. Share writing with others incorporating relevant illustrations, photos, charts, diagrams, and/or graphs to add meaning.	f. Share writing with others incorporating relevant illustrations, photos, charts, diagrams, and/or graphs to add meaning.	f. Share writing with others incorporating relevant illustrations, photos, charts, diagrams, and/or graphs to add meaning.
	e. Take part in producing group products.	e. Publish group and individual products.	g. Publish 4-6 individual products.	g. Publish 4-6 individual products.	g. Publish 6-8 individual products.	g. Publish 6-8 individual products.	g. Publish 6-8 individual products.

Language Arts Glossary

Glossary of Terms

affix:	A non-word or morpheme that changes the meaning or function of a root word to which it is attached (e.g., a prefix [-ad] or suffix [-ly]).
alliteration:	The repetition of the same consonant at the beginning of two or more words immediately succeeding each other or at short intervals (e.g., fields ever fresh, groves ever green).
alphabetic principle:	The assumption that all speech sounds have a graphic representation.
analogies (making):	The ability to relate something known to something new.
anecdotal records:	The recording of observed behavioral incidents.
assessment:	The process of gathering data in order to better understand student strengths and weaknesses. Formal Assessment: Standardized assessment. Informal Assessment: Teacher-made, published assessments, or observational data gathered but not interpreted through norms.
assonance:	The similarity or repetition of vowel sounds in words or syllables.
attentive:	Paying attention and demonstrating an understanding for what is being presented.
automaticity:	The fluent reading of words in a text. The spontaneous formation of letters to make words.
ballad:	A story written in four-line stanzas, often having the second and fourth lines rhyme.
base word/root:	A word to which affixes may be added to create related words (e.g., <u>happy</u> and un<u>happy</u>).
blend:	Two or more letters blended together so the sound elements of each letter are heard (e.g., bl, black; str, string).
blending:	The ability to sequentially combine two or more sounds to make a word.
book talk:	The discussion of one or more books by a teacher, librarian, or student to encourage others to read these books, a discussion after a book is read, or a group discussion to enhance comprehension.
choral reading:	The reading aloud in unison of the same selection by a group to develop fluency or make a presentation.

Glossary of Terms (Continued)

chunking (or chunks): The grouping of smaller units/letters into large, more meaningful word parts; knowledge of patterns in words or word parts.

cinquain: A poem five lines long with a certain number of syllables or words in each line. There are many ways to write a cinquain poem.

cliché: An expression used in writing (e.g., sadder but wiser). Some clichés are considered old and worn out, adding nothing to the writing (e.g., hard as a rock).

concepts about print: The way print works, including directionality, recognition of words and letters, the connection between spoken and written language, and the function of punctuation.

consonant blend: A combination of two consonant letters represented by a single sound where the sounds of both letters are voiced (e.g., br, bl, sp).

consonant digraph: A combination of two consonant letters representing a single speech sound (e.g., gn for /n/).

context: Words or phrases placed in meaningful units of text.

couplet: A two-line verse that usually rhymes and expresses one thought.

cueing systems: Any one of several sources of information that may help identify words initially not known.
Semantic cue: Identifies an unknown word using meaning of content to determine whether the word makes sense. (Does it make sense?)
Syntactic cue: Uses knowledge of rules and patterns of language to identify a word in context. (Does the word fit into the sentence structure?)
Graphophonic cues: Using the elements of phonics to decode a word. (Does what I read match what I see in print?)

cvc: Indicates a spelling pattern of consonant, vowel, consonant.

decodable text: Text composed of words containing certain decodable elements for practice in decoding while reading (e.g., short <u>a</u> vowel words).

decoding: Strategies readers use to pronounce and understand the meaning of words (see cueing systems).

dialogue journal: Written conversations in which students and teachers exchange ideas in response to literature.

differentiation: The enhancing of learning for all students by engaging students in small group or individual learning activities, or modifications that better respond to particular learning needs, strengths, and preferences.

Glossary of Terms (Continued)

digraph:	Two letters representing a sound different from the sounds of individual letters (e.g., ch, sh, th).
directionality:	Directional orientation (e.g., reading from left to right).
echo reading:	The reading of text where a student reads portions of text after the teacher (or another person or student) reads the same passage. Echo reading is often used to build fluency or expression.
e.g.:	This term means "for example" (Be sure to bring your dog a treat, e.g., a bone or rubber toy).
encoding:	Transferring oral language into written language.
environmental print:	Print found in the environment (e.g., street signs, billboards, food labels, advertisements).
explicit:	Teaching according to precise directions; not leaving the student to infer or guess meaning or concept.
figurative language:	Language characterized by figures of speech, especially metaphors; not literal.
fix-up strategies:	Strategies readers use to monitor their understanding of text (e.g., reread, read ahead, clarify, change predictions, make new predictions, raise questions, identify unknown words).
flexible grouping:	Students work in mixed groups depending on the goal of learning, not ability. (Also known as skill-based grouping.)
fluency:	The reading of text smoothly, not hindered with word-by-word reading and other word recognition problems that might hinder comprehension (see automaticity). Writing without thinking about how to form a letter before writing.
form/mode:	A term used in writing to identify categories of writing (personal writing, descriptive writing, imaginative writing, informational writing, and writing to persuade are forms or modes of writing).
formula poetry:	Poetry written to a formula (e.g., ballad, cinquain, couplet, haiku, limerick, lyric, quatrain).
free verse:	Poetry that does not include patterned rhyme or rhythm.
genre:	A term used to categorize literary works (e.g., fairy tales, mysteries, historical fiction).
grade level text:	A text at a designated level of difficulty as determined by a readability formula or text leveling system.

Glossary of Terms (Continued)

gradients of meaning:	Variable meaning of a term based on the context.
graphic organizer:	Visual representation of facts and concepts from a text showing their relationship (e.g., Venn diagram, KWL chart).
Greek and Latin roots:	Root words derived from Greek and Latin words. Knowing Greek and Latin roots helps with comprehension of many English words (e.g., the Latin root *script*, meaning to write, can be found in the English words inscription, scripture, manuscript, transcript).
guided reading:	Small group instruction for students who are reading the same text. The group is homogeneous (reads at about the same level, demonstrates similar reading behaviors, and shares similar instructional needs). Groups change as the teacher assesses student growth and needs. The teacher selects the text and provides instruction.
haiku:	A three-line poem about nature. The first line is five syllables, the second line is seven syllables, and the third line is five syllables.
high-frequency words/ sight words:	A list of words most frequently encountered as students read; words students should recognize instantly as they read and that must be read with fluency.
homonyms/homophones:	Words with different meanings, but the same oral or written form (e.g., bear—an animal, bear—to support, bare—to expose).
idioms:	Expressions without literal meaning (e.g., It was raining cats and dogs.).
i.e.:	This term means "that is to say." (After working on her invention for two years, she treated herself to a hiatus, i.e., a break.).
independent reading:	Voluntary or leisure reading for pleasure, not to develop skills; reading with no assistance.
informal reading inventory (IRI):	Graded reading passages of increasing difficulty used to determine student's strengths, weaknesses, and strategies in word identification and comprehension.
informational text:	Text that is factual as opposed to story-based narrative text; nonfictional text meant to set forth an idea or explain using such techniques as listing of facts, chronological order, showing cause/effect, or comparison/contrast (e.g., science, social studies).
journal:	A typed or written message, often recorded daily.
lead:	An opening paragraph in writing. Good leads provide interesting background information, a telling quotation, an illustrative story, or a series of questions.

Glossary of Terms (Continued)

leveled text:	Text arranged in sequence of difficulty, not necessarily related to grade levels.
levels of questioning:	Types of questions asked to develop levels of understanding: *Factual* questions can be answered by pointing to information contained in text or by noting information expressed in presentations. *Inferential* questions are questions requiring the reader or listener to synthesize materials read or presented, drawing conclusions not explicitly stated. *Evaluative* questions ask the reader or listener to make judgments on what was read or presented based the reader's or listener's experience.
limerick:	A funny verse in five lines. Lines one, two, and five rhyme. Lines three and four rhyme. Lines one, two, and five have three stressed syllables. Lines three and four have two stressed syllables.
literature circle/ response group:	Students read a piece of literature and meet together to discuss reactions, raise questions, or reread favorite parts.
lyric:	A song-like poem that uses sensory details. A tune can be added to a lyric poem and it becomes a song.
mastered/maintained:	This term indicates knowledge mastered/learned at the grade level preceding the term. Learning should be maintained.
media:	Material/information that may be viewed, read, or listened to (e.g., newspapers, TV, videos, audiotapes, posters, announcements, books, signs).
Metacognition:	Reflection on one's own thinking and learning process; monitoring reading behavior and adjusting successfully to changing reading conditions.
miscue:	A deviation in text during oral reading by the reader in an attempt to make sense of the passage; often provides a rich source of information for analyzing language and reading development.
mode/form:	A term used in writing to identify categories of writing (personal writing, descriptive writing, imaginative writing, informational writing, writing to persuade are forms or modes of writing).
modeling:	The act of a teacher or a student serving as an example of a desired behavior.
morpheme:	A meaningful linguistic unit that cannot be divided into smaller meaningful elements. Man, for example, is an individual word and one morpheme. We can add other morphemes such as –ly to form manly, a new word that contains two morphemes.
narrative:	A story of actual or fictional events expressed orally or in writing.

Glossary of Terms (Continued)

one-to-one correspondence:	The relationship between the spoken word and the written symbol or the representation of each phoneme by one grapheme.
onset and rime:	Units smaller than words, but making a word when combined. The onset is the part that precedes the vowel (e.g., bl in the word black). The rime is the part including the vowel and any consonants that follow (e.g., ack in the word black).
paired reading:	Reading with a more fluent partner, or partner of similar ability, who provides a model of fluent reading.
phoneme:	The smallest unit of speech.
phonemic awareness:	The ability to hear, identify, and manipulate individual sounds and phonemes in spoken words; individual knowledge that every spoken word is made up of a series of phonemes that can be represented by letters of the alphabet. Phonemic awareness is a prime predictor of a student's ability to read and comprehend text.
phonics:	Instructional practices emphasizing that spellings are related to speech sounds in systematic ways. Analogy phonics: Children use parts of word families to identify words they don't know. Analytic phonics: Children analyze letter-sound relationships in previously learned words to read new words in text. Embedded phonics: Children use letter-sound relationships in previously learned words to read new words. Onset-rime phonics: Children learn to identify the sound of the first letter and connect it with the remaining part of the word. Synthetic phonics: Children convert letters into sounds and blend the sounds into words. This approach to phonics instruction shows the most positive and significant effect on at-risk readers.
phonograms/ word families:	A group of words sharing the same rhyme (rime); a group of words sharing a common phonic element (e.g., ite in bite, kite, despite).
phonological awareness:	A broad term including phonemic awareness, as well as the ability to identify the number of words in a sentence, break a word into syllables, and recognize and produce rhymes (rimes).
phrase reading:	Reading in meaningful units larger than a word, but smaller than a sentence.
publish:	The act or process of preparing written material for presentation to an audience, usually informally to classmates, as part of the writing process. A published piece could be as simple as a three-page picture book with one word per page written by a kindergarten student or a single paragraph written by second grade student.

Glossary of Terms (Continued)

quatrain:	A poem with a four-line stanza. At times, the first two lines rhyme and the last two lines rhyme. At other times, the first and third lines rhyme and the second and fourth lines rhyme.
r-controlled vowel:	The modified sound of a vowel immediately preceding the letter "r" (e.g., car, her, girl, for).
reader's theater:	A performance of literature as a story, play, poem, etc., which is read aloud expressively by one or more persons rather than acted.
reading levels:	Levels based on students' abilities to read and comprehend text. Independent: Text that is easy for a student to read with few word-identification problems and high comprehension (95-100% word identification and 90-100% comprehension). Instructional: Text that is challenging, but not frustrating for a student to read successfully with normal classroom instruction and support (90-95% word identification and 75-90% comprehension). Frustrational: Text that is too challenging for students to read and comprehend (less that 90% word identification and less than 75% comprehension).
reciprocal teaching:	A strategy where both teacher and student are involved in question-generating, clarifying, and discussion of a shared text.
return sweep:	The horizontal-diagonal eye movement from the end of one line of print to the start of the next.
rime:	A term used in reading instruction to refer to a vowel and any following consonants of a syllable (e.g., ook is the rime in book or brook); see definition of onset and rime.
root:	The base part of a word that usually carries the meaning and cannot be further analyzed without loss of identity (e.g., unreadable—the root is <u>read</u> and the affixes are <u>un</u> and <u>able</u>).
schema building:	A process of comprehension by integrating new information with a network of prior knowledge.
segmentation:	Recognizing a word when the sounds are pronounced one at a time.
self-monitoring:	Recognizing dissonance while reading text and applying appropriate strategies to effectively decode and comprehend.
shared reading:	The teacher and the students share the reading process to provide modeling and practice.
sight words/	A list of words most frequently encountered as students read; words students should recognize instantly as they read and

Glossary of Terms (Continued)

high-frequency words:	that must be read with fluency.
Six-Traits Writing:	The six characteristics in writing that make for effective writing (e.g., ideas, organization, voice, word choice, sentence fluency, and conventions). Ideas: The heart of the message, the content of the piece, the main theme. Organization: The structure of the writing piece, the logical and sometimes intriguing pattern of ideas. Voice: The feelings and convictions of the individual writer reflected through the written word. Word choice: The rich, colorful, precise language that moves and enlightens the readers.
Six-Traits Writing (Continued)	Sentence fluency: The rhythm and flow of language, the sound of word patterns; the way writing sounds to the ear, not just the way it looks to the eye. Conventions: The mechanical correctness of the piece (e.g., spelling , grammar and usage, paragraphing, capitals, punctuation).
syntax:	The word order of language. The word order/syntax assists in determining the meaning of a word.
synthesis:	The combining of separate ideas to form a coherent encompassing idea.
text:	Reading material, including both fiction and nonfiction.
vowel digraph:	Two or more adjoining letters representing one sound (e.g., ew in new and ay in day).
word analysis:	General term applied to the decoding of words.
word family/ phonograms:	A group of words sharing the same rhyme (rime); a group of words sharing a common phonetic element (e.g., ite in bite, kite, despite).
word sort:	An activity where words or pictures representing words are sorted according to a common spelling pattern or shared meaning.
word wall:	A wall or other surface in the classroom where words are placed to help students identify patterns (e.g., high-frequency/sight words, phonograms/word families). Word walls generally contain words students often need in their reading and writing. Word walls are often confused with other word displays that help with spelling, retention, or learning new content vocabulary.
writing process:	A writing instructional model that views writing as an ongoing process in which students follow a given set of procedures for pre-writing, drafting, revising, editing, and publishing.

K-6 Mathematics
Core Curriculum in Table Format

K-6 Elementary Mathematics Core Curriculum in Table Format

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
Standard 1: Students will understand simple number concepts and relationships.	**Standard 1: Students will acquire number sense and perform simple operations with whole numbers.**	**Standard 1: Students will acquire number sense and perform operations with whole numbers.**	**Standard 1: Students will acquire number sense and perform operations with whole numbers and simple fractions.**	**Standard 1: Students will acquire number sense and perform operations with whole numbers, simple fractions, and decimals.**	**Standard 1: Students will acquire number sense and perform operations with whole numbers, simple fractions, and decimals.**	**Standard 1: Students will acquire number sense and perform operations with rational numbers.**
Objective 1: Identify and use whole numbers. a. Relate a *numeral* to the number of objects in a set (e.g., ~ ~ ~ = 3). b. Construct models of numbers to 10 with physical objects or manipulatives. c. Make pictorial representations of numbers to 10 (e.g., draw four circles, draw six squares). d. Recognize and write numerals from 0 to 10. e. Manipulate objects to demonstrate and describe multiple ways of representing a number (e.g., 5 can be 3 and 2 more, 5 can also be 2 and 2 and 1).	**Objective 1: Represent whole numbers in a variety of ways.** a. Relate number words to the *numerals* that represent the quantities 0 to 10. b. Sort objects into groups of tens and ones and write the numeral representing the set. c. Represent *whole numbers* up to 100 in groups of tens and ones using objects. d. Write a numeral when given the number of tens and ones. e. Write a numeral to 99 in *expanded form* (e.g., 39 is 3 tens and 9 ones or 30+9). f. Use zero to represent the number of elements in the empty set or as a placeholder in a two-digit numeral.	**Objective 1: Represent whole numbers in a variety of ways.** a. Relate number words to the *numerals* that represent the quantities 0-100. b. Represent *whole numbers* up to 1,000 in groups of hundreds, tens, and ones using base ten models, and write the numeral representing the set. c. Read and write a three-digit numeral, relating it to a set of objects and a pictorial representation. d. Write a numeral to 999 in *expanded form* (e.g., 539 is 5 hundreds, 3 tens, 9 ones or 500+30+9). e. Identify the place and the value of a given digit in a three-digit numeral (e.g., the two in 281 means 2 hundreds or 200). f. Demonstrate multiple ways to represent numbers using symbolic representations (e.g., thirty is the same as two groups of 15, the number of pennies in three dimes, or 58-28).	**Objective 1: Represent whole numbers in a variety of ways.** a. Model, read, and write *whole numbers* up to 10,000 using base ten models, pictures, and symbols. b. Write a *numeral* when given the number of thousands, hundreds, tens, and ones. c. Write a number up to 9,999 in expanded form (e.g., 6,539 is 6 thousands, 5 hundreds, 3 tens, 9 ones or 6000+500+30+9). d. Identify the place and the value of a given digit in a four-digit numeral. e. Demonstrate multiple ways to represent numbers using models and symbolic representations (e.g., fifty is the same as two groups of 25, the number of pennies in five dimes, or 75-25).	**Objective 1: Represent whole numbers and decimals in a variety of ways.** a. Model, read, and write numerals from tenths to 100,000. b. Write a *whole number* up to 99,999 in *expanded form* (e.g., 76,539 is 7 ten-thousands, 6 one-thousands, 5 hundreds, 3 tens, 9 ones or 70,000+ 6,000+500+30+9). c. Identify the place and the value of a given digit in a five-digit numeral, including decimals to tenths. d. Demonstrate multiple ways to represent numbers by using models and symbolic representations (e.g., 36 is the same as the square of six, three dozen, or 9x4). e. Identify *square numbers* using models.	**Objective 1: Represent whole numbers and decimals in a variety of ways.** a. Model, read, and write numerals from hundredths to one millions. b. Write a *whole number* up to 999,999 in *expanded form* (e.g., 876,539 = 8 hundred-thousands, 7 ten-thousands, 6 thousands, 5 hundreds, 3 tens, 9 ones or 8x100,000 + 7x10,000 + 6x1,000 + 5x100 + 3x10 + 9). c. Demonstrate multiple ways to represent whole numbers by using models and symbolic representations (e.g., 108=2x50+8; $108=10^2 + 8$). d. Classify whole numbers from 2 to 20 as *prime* or *composite* and 0 and 1 as neither prime nor composite, using models. e. Represent repeated factors using *exponents* up to three (e.g., $8=2x2x2=2^3$).	**Objective 1: Represent whole numbers and decimals in a variety of ways.** a. Change *whole numbers* with *exponents* to *standard form* (e.g., 2^4 = 2^4=16) and recognize that $10^0 = 1$. b. Read and write *numerals* from thousandths to one billion. c. Write a whole number to 999,999 in *expanded form* using *exponents* (e.g., $876,539 = 8 \times 10^5 + 7 \times 10^4 + 6 \times 10^3 + 5 \times 10^2 + 3 \times 10^1 + 9 \times 10^0$). d. Express numbers in *scientific notation* using positive powers of ten. e. Classify whole numbers to 100 as *prime*, *composite*, or neither. f. Determine the *prime factorization* for a whole number up to 50.

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
Objective 2: Identify simple relationships among whole numbers. a. Develop strategies for *one-to-one correspondence* and keeping track of quantities. b. Compare two sets of objects to determine whether they have the same, fewer, or more elements. c. Order sets of objects from 1 to 9. d. Estimate quantities less than 10.	**Objective 2: Identify simple relationships among whole numbers.** a. Identify the number that is one more or one less than any *whole number* from 1 to 99. b. Use the vocabulary "greater than," "less than," and "equal to" when comparing sets of objects or numbers. c. Order sets of objects and numbers from 0 to 20. d. Use *ordinal numbers* 1st through 5th (i.e., 1st, 2nd, 3rd, 4th, 5th).	**Objective 2: Identify simple relationships among whole numbers.** a. Identify the number that is one more, one less, ten more, or ten less than any *whole number* up to 100. b. Write number sentences using the terms "greater than," "less than," or "equal to," to compare numbers. c. Order four whole numbers less than 100 from least to greatest and from greatest to least. d. Use *ordinal numbers* 1st through 10th.	**Objective 2: Identify relationships among whole numbers.** a. Use a variety of strategies to determine whether a number is even or odd. b. Identify the number that is ten more, ten less, 100 more, or 100 less than any *whole number* up to 1,000. c. Compare the relative size of numbers (e.g., 31 is large compared to 4, about half as big as 60, close to 27). d. Compare whole numbers up to four digits using the symbols <, >, and =. e. Order and compare whole numbers on a number line.	**Objective 2: Identify relationships among whole numbers and decimals.** a. Identify the number that is 100 more, 100 less, 1,000 more, or 1,000 less than any *whole number* up to 10,000. b. Compare the relative size of numbers (e.g., 100 is small compared to a million, but large compared to 5). c. Compare whole numbers up to five digits using the symbols <, >, and =. d. Identify a whole number that is between two given whole numbers. e. Order and compare whole numbers and decimals to tenths on a number line.	**Objective 2: Identify relationships among whole numbers, fractions, decimals, and percents.** a. Order and compare *whole numbers*, fractions (including mixed numbers), and decimals using a variety of methods and symbols. b. Rewrite mixed numbers and improper fractions from one form to the other. c. Find the least common denominator for two fractions. d. Represent commonly used fractions as decimals and percents in various ways (e.g., objects, pictures, calculators).	**Objective 2: Identify relationships among whole numbers, fractions (rational numbers), decimals, and percents.** a. Find the *greatest common factor* and *least common multiple* for two numbers using a variety of methods (e.g., list of multiples, prime factorization). b. Order and compare *rational numbers*, including mixed numbers, using a variety of methods and symbols. c. Locate positive rational numbers on a number line. d. Convert common fractions, decimals, and percents from one form to another (e.g., 3/4= 0.75 = 75%).
Objective 3: Model and illustrate meanings of the operations of addition and subtraction and describe how they relate. a. Demonstrate the joining and separating of sets of objects to solve problems. b. Describe the joining or separating of sets with informal language when using models. c. Record pictorially the results from the joining or separating of sets.	**Objective 3: Model and illustrate meanings of the operations of addition and subtraction and describe how they relate.** a. Demonstrate the joining and separating of sets with twelve or fewer objects and record the results with pictures or symbols. b. Model two meanings of subtraction: separating of sets ("take away") and comparison of sets ("how many more/fewer") using objects, pictorial representations, and symbols. c. Use correct vocabulary and symbols to describe addition (i.e., add, "and," plus, +,	**Objective 3: Model and illustrate meanings of the operations of addition and subtraction and describe how they relate.** a. Demonstrate the joining and separating of sets with eighteen or fewer objects and record the results with pictures or symbols. b. Model three meanings of subtraction: separating of sets ("take away"), comparison of sets ("how many more/fewer"), and missing addends using objects, pictorial representations, and symbols. c. Separate a given set of objects into two, three, five, or ten groups of equal size.	**Objective 3: Model and illustrate meanings of the operations of addition, subtraction, multiplication, and division and describe how they relate.** a. Model addition and subtraction of two- and three-digit *whole numbers* in a variety of ways. b. Model multiplication of a one-digit *factor* by a one-digit factor using various methods (e.g., repeated addition, rectangular *arrays*, manipulatives, pictures) and connect the representation to an *algorithm*. c. Model division as sharing equally and as repeated subtraction using various methods	**Objective 3: Model and illustrate meanings of the four operations and describe how they relate.** a. Use models to represent multiplication of a one- or two-digit *factor* by a two-digit factor (up to 30) using a variety of methods (e.g., rectangular *arrays*, manipulatives, pictures) and connect the representation to an *algorithm*. b. Recognize that division by zero is not possible (e.g., 6÷0 is undefined). c. Select and write a multiplication or division sentence to solve a problem related to the students'	**Objective 3: Model and illustrate meanings of operations and describe how they relate.** a. Identify the *dividend*, *divisor*, and *quotient* regardless of the division symbol used. b. Determine whether a whole number is divisible by 2, 3, 5, 9, and/or 10, using the *rules of divisibility*. c. Represent remainders as *whole numbers*, decimals, or fractions and describe the meaning of remainders as they apply to problems from the students' environment (e.g., If there are 53 people, how many vans are needed if each van	**Objective 3: Model and illustrate meanings of operations and describe how they relate.** a. Represent division of a multi-digit *dividend* by two-digit *divisors*, including decimals, using models, pictures, and symbols. b. Model addition, subtraction, multiplication, and division of fractions and decimals in a variety of ways (e.g., objects, a number line). c. Apply *rules of divisibility*. d. Select or write a number sentence that can be used to solve a multi-step problem and write a word

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
	sum), subtraction (i.e., subtract, minus, -, take away, how many more/fewer), and equals (i.e., =, same as). d. Use zero in addition and subtraction sentences.	d. Model addition and subtraction of two-digit whole numbers in a variety of ways. e. Select an addition or subtraction sentence to solve a problem involving joining or separating of sets with eighteen or fewer objects. f. Recognize that addition number sentences have related subtraction sentences (e.g., 8-5=3, 3+5=8).	(e.g., rectangular arrays, manipulatives, number lines, pictorial representations). d. Demonstrate, using objects, that multiplication and division are inverse operations (e.g., 3x4=12; thus, 12÷4=3 and 12÷3=4). e. Select and write an addition, subtraction, or multiplication sentence to solve a problem related to the students' environment, and write a story problem that relates to a given equation. f. Demonstrate the effects of place value when multiplying whole numbers by 10.	environment and write a story problem that relates to a given equation. d. Represent division of a two-digit *dividend* by a one-digit *divisor*, including whole number remainders, using various methods (e.g., rectangular arrays, manipulatives, pictures) and connect the representation to an algorithm. e. Demonstrate that multiplication and division are inverse operations (e.g., 3x4=12; thus, 12÷4=3 and 12÷3=4). f. Describe the effect of place value when multiplying whole numbers by 10 and 100.	holds 8 people?). d. Model addition, subtraction, and multiplication of fractions and decimals in a variety of ways (e.g., using objects and a number line). e. Select or write the number sentences that can be used to solve a two-step problem. f. Model different strategies for whole number multiplication (e.g., partial product, lattice) and division (e.g., partial quotient). g. Describe the effect on place value when multiplying and dividing whole numbers and decimals by 10, 100, and 1,000.	problem when given a two-step expression or equation.
	Objective 4: Use fractions to identify parts of the whole. a. Share sets of up to ten objects between two students and identify each part as half. b. Divide geometric shapes into equal parts, identifying halves and fourths.	**Objective 4: Use fractions to identify parts of the whole.** a. Separate geometric shapes and sets of objects into halves, thirds, and fourths using a variety of models and illustrations. b. Specify a region of a geometric shape (e.g., as "___ out of ___ equal parts" when given four or fewer equal parts. c. Represent the unit fractions 1/2, 1/3, and 1/4 with objects, pictures, and symbols.	**Objective 4: Use fractions to communicate parts of the whole.** a. Identify the denominator of a fraction as the number of equal parts in the whole region or set. b. Identify the numerator of a fraction as the number of equal parts being considered. c. Divide *regions* and sets of objects into equal parts using a variety of models and illustrations. d. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, sixths, and eighths. e. Determine which of two fractions is greater using models or illustrations.	**Objective 4: Use fractions to communicate parts of the whole.** a. Divide regions and sets of objects into equal parts using a variety of models and illustrations. b. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, fifths, sixths, eighths, and tenths. c. Relate fractions to decimals that represent tenths. d. Determine which of two fractions is greater using models or illustrations. e. Find equivalent fractions for one-half, one-third, and one-fourth using manipulatives and	**Objective 4: Use fractions to communicate parts of the whole.** a. Divide regions, sets of objects, and line segments into equal parts using a variety of models and illustrations. b. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths. c. Represent the simplest form of a fraction in various ways (e.g., objects, pictorial representations, symbols). d. Represent mixed numbers and improper fractions in	**Objective 4: Use fractions and percents to communicate parts of the whole.** a. Divide regions, sets of objects, and *line segments* into equal parts using a variety of models and illustrations. b. Name and write a fraction to represent a portion of a unit whole for halves, thirds, fourths, fifths, sixths, eighths, tenths, twelfths, and sixteenths. c. Write a fraction or ratio in simplest form. d. Name equivalent forms for fractions (halves, thirds, fourths, fifths, tenths), ratios, percents, and decimals, including

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
				pictorial representations.	various ways (e.g., rulers, objects, number lines, symbols). e. Rename *whole numbers* as fractions with different denominators (e.g., 5=5/1, 3=6/2, 1=7/7). f. Model and calculate equivalent forms of a fraction and describe the process used.	repeating or terminating decimals. e. Relate percents less than 1% or greater than 100% to equivalent fractions, decimals, *whole numbers*, and mixed numbers.
	Objective 5: Solve whole number problems using addition and subtraction in horizontal and vertical notation. a. Compute addition and subtraction facts to twelve. b. Add three whole numbers with sums to twelve.	**Objective 5: Solve whole number problems using addition and subtraction in vertical and horizontal notation.** a. Use a variety of methods and tools to facilitate computation (e.g., estimation, mental math strategies, paper and pencil, calculator). b. Compute accurately with basic number combinations for addition and subtraction facts to eighteen. c. Add three *whole numbers* with *sums* to eighteen. d. Find the sum of two-digit whole numbers and describe the process used.	**Objective 5: Solve whole number problems using addition, subtraction, multiplication, and division in vertical and horizontal notation.** a. Use a variety of methods and tools to facilitate computation (e.g., estimation, mental math strategies, paper and pencil, calculator). b. Find the sum of any two *addends* with three or fewer digits, including monetary amounts, and describe the process used. c. Find the *difference* of two-digit w*hole numbers* and describe the process used. d. Find the *product* for multiplication facts through ten times ten and describe the process used.	**Objective 5: Solve whole number problems using addition, subtraction, multiplication, and division in vertical and horizontal notation.** a. Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, or a calculator. b. Find the sum and difference of four-digit numbers, including monetary amounts, and describe the process used. c. Multiply two- and three-digit *factors* by a one-digit factor and describe the process used. d. Divide a two-digit *whole number dividend* by a one-digit *divisor*, with a *remainder* of zero and describe the process used.	**Objective 5: Solve problems using the four operations with whole numbers, decimals, and fractions.** a. Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, or a calculator. b. Use estimation strategies to determine whether results obtained using a calculator are reasonable. c. Multiply up to a three-digit *whole number* by a one- or two-digit whole number. d. Divide up to a three-digit whole number *dividend* by a one-digit *divisor*. e. Add and subtract decimals with digits to the hundredths place (e.g., 35.42+7.2; 75.2–13.45). f. Add, subtract, and multiply fractions. g. Simplify *expressions*, without *exponents*, using the *order of operations.*	**Objective 5: Solve problems using the four operations with whole numbers, decimals, and fractions.** a. Determine when it is appropriate to use estimation, mental math strategies, paper and pencil, or a calculator. b. Use estimation strategies to determine whether results obtained using a calculator are reasonable. c. Multiply up to a three-digit *factor* by a one- or two-digit factor including decimals. d. Divide up to a three-digit *dividend* by a one- or two-digit *divisor* including decimals. e. Add and subtract decimals to the thousandths place (e.g., 34.567+3.45; 65.3-5.987). f. Add, subtract, multiply, and divide fractions and mixed numbers. g. Solve problems using ratios and proportions. h. Simplify *expressions*, with *exponents*, using

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
						the *order of operations*.
					Objective 6: Model and illustrate integers. a. Identify, read, and locate *integers* on a number line. b. Describe situations where integers are used in the students' environment.	**Objective 6: Model, illustrate, and perform the operations of addition and subtraction of integers.** a. Recognize that the sum of an *integer* and its opposite is zero. b. Model addition and subtraction of integers using manipulatives and a number line. c. Add and subtract integers.
Standard 2: Students will identify and use patterns to represent mathematical situations.	**Standard 2: Students will identify and use patterns and relations to represent mathematical situations.**	**Standard 2: Students will identify and use patterns and relations to represent mathematical situations.**	**Standard 2: Students will use patterns and relations to represent mathematical situations.**	**Standard 2: Students will use patterns and relations to represent mathematical situations.**	**Standard 2: Students will use patterns and relations to represent and analyze mathematical situations using algebraic symbols.**	**Standard 2: Students will use patterns, relations, and functions to represent and analyze mathematical situations using algebraic symbols.**
Objective 1: Identify and sort objects according to common attributes. a. Sort objects into groups by color, shape, size, number, or other *attributes*. b. Identify which attribute was used to sort objects into a group. c. Find multiple ways to sort and classify a group of objects.	**Objective 1: Recognize and represent patterns with one or two *attributes*.** a. Sort and classify objects by one or two *attributes*. b. Identify, create, and label simple patterns using manipulatives, pictures, and symbolic notation (e.g., ABAB . . ., □○△□○△ . . .). c. Identify patterns in the environment. d. Identify horizontal and vertical patterns on hundreds charts. e. Use patterns to establish skip counting by twos to 20 and by fives and tens to 100. f. Count backward from 10 to 0 and identify the pattern.	**Objective 1: Recognize and represent patterns having multiple attributes.** a. Sort, classify, and label objects by three or more *attributes*. b. Identify and label repeating and *growing patterns* using objects, pictures, and symbolic notation (e.g., ABAABBAAABBB . . .). c. Identify repeating and growing patterns in the environment. d. Construct models and skip count by twos, threes, fives, and tens and relate to repeated addition.	**Objective 1: Recognize and create patterns with given attributes.** a. Create and extend *repeating* and *growing* patterns using objects, numbers, and tables. b. Record results of patterns created using manipulatives, pictures, and numeric representations and describe how they are extended.	**Objective 1: Recognize, describe, and use patterns and identify the attributes.** a. Represent and analyze repeating and growing patterns using objects, pictures, numbers, and tables. b. Recognize and extend multiples and other number patterns using a variety of methods.	**Objective 1: Recognize, analyze, and use patterns and describe their attributes.** a. Analyze and make predictions about patterns involving *whole numbers*, decimals, and fractions using a variety of tools including organized lists, tables, objects, and variables. b. Extend patterns and describe a rule for predicting the next element.	**Objective 1: Recognize, analyze, and use multiple representations of patterns and functions and describe their attributes.** a. Analyze patterns on graphs and tables and write a generalization to predict how the patterns will continue. b. Create tables and graphs to represent given patterns and algebraic *expressions*. c. Draw a graph from a table of values or to represent an equation. d. Write an algebraic expression from a graph or a table of values.
Objective 2: Identify and use patterns to describe numbers or objects. a. Use patterns to count orally from 1 to 20 and backward from 10 to 0.	**Objective 2: Recognize and represent relations using mathematical symbols.** a. Recognize that "=" indicates a relationship	**Objective 2: Recognize and represent relations using mathematical symbols.** a. Recognize that "≠" indicates a relationship in which the quantities	**Objective 2: Recognize and represent mathematical situations using patterns and symbols.** a. Recognize that symbols such as ~, △, or ◇ in an	**Objective 2: Recognize, represent, and solve mathematical situations using patterns and symbols.** a. Solve equations	**Objective 2: Represent, solve, and analyze mathematical situations using algebraic symbols.** a. Recognize a variety of symbols for	**Objective 2: Represent, solve, and analyze mathematical situations using algebraic symbols.** a. Recognize that a number in front of a

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
b. Identify simple patterns in the environment. c. Predict what comes next in an established pattern and justify thinking. d. Duplicate, extend, and create simple patterns using objects and pictorial representations.	in which the quantities on each side of an equation are equal. b. Recognize that symbols such as ~, △, or ◇ in an addition or subtraction equation represent a missing value that will make the statement true (e.g., ~ + 3 = 6, 5 +7 = △, 4 = 5 – ◇). c. Demonstrate that changing the order of *addends* does not change the *sum* (e.g., 3+2=5 and 2+3=5).	on each side are not of equal value. b. Recognize that symbols such as ~, △, or ◇ in an addition or subtraction equation represent a value that will make the statement true (e.g., ~ +3=6, 5+7=△, 7=9-◇). c. Demonstrate that changing the order of *addends* does not change the *sum* (e.g., 3+2+7=12, 7+3+2=12) and that changing the grouping of three or more addends does not change the sum (e.g., (2+3)+7=12, 2+(3+7)=12).	addition, subtraction, or multiplication equation, represent a value that will make the statement true (e.g., 5+7=△, ~-3=6, ◇=2x4). b. Solve equations involving equivalent expressions (e.g., 6+4 = ~+7). c. Use the >, <, and = symbols to compare two *expressions* involving addition and subtraction (e.g., 4+6 ~ 3+2; 3+5 ◇ 16-9). d. Demonstrate that grouping three or more *addends* does not change the *sum* (e.g., 3+(2+7)=12, (7+3)+2=12) and changing the order of *factors* does not change the *product* (e.g., 3x7=21, 7x3=21). e. Use a variety of manipulatives to model the *identity property of addition* (e.g., 3+0=3), the *identity property of multiplication* (e.g., 7x1=7), and the *zero property of multiplication* (e.g., 6x0=0).	involving equivalent *expressions* (e.g., 6x2= ~x3 or 6x~=9+9). b. Use the <, >, = symbols to compare two expressions involving addition, subtraction, multiplication, and division (e.g., 5x4◇9÷3). c. Recognize that a given variable maintains the same value throughout an equation or expression (e.g., ~+~=8; ~=4). d. Demonstrate that changing the order of *factors* does not change the *product* (e.g., 2x3=6, 3x2=6) and that the grouping of three or more factors does not change the product (e.g., (2x3)x1=6; 2x(3x1)=6). e. Demonstrate the distribution of multiplication over addition using a rectangular *array* (e.g., 8x14=8 rows of 10 plus 8 rows of 4).	multiplication and division including x, • , and * as symbols for multiplication and ÷, ⌈, and a fraction bar (/ or -) as division symbols. b. Recognize that a variable (◇, n, x) represents an unknown quantity. c. Solve one-step equations involving *whole numbers* and a single variable (e.g., n÷7=3). d. Recognize that the answer to a multiplication problem involving a factor of zero is equal to zero (e.g., 0x45=0). e. Use expressions or one-step equations to represent real-world situations. f. Use the *associative, commutative,* and *distributive properties* to compute with whole numbers.	variable indicates multiplication (e.g., 3y means 3 times the quantity y). b. Solve two-step equations involving *whole numbers* and a single variable (e.g., 3x+4=19). c. Recognize that "≈" indicates a relationship in which the quantities on each side are approximately of equal value (e.g., Π ≈3.14). d. Recognize that an *exponent* can be represented in the following ways: 4^3 or 4^3. e. Evaluate *expressions* and formulas, substituting given values for the variables (e.g., 2x+4; x=2; therefore, 2(2)+4=8). f. Recognize that if the *product* is zero, then one or more *factors* equal zero (i.e., if a*b=0 then either a=0 or b=0 or a and b=0).
Standard 3: Students will identify and create simple geometric shapes and describe spatial relationships.	**Standard 3: Students will describe, identify, and create and simple geometric shapes and describe spatial relationships.**	**Standard 3: Students will describe, identify, and create geometric shapes and describe spatial relationships.**	**Standard 3: Students will use spatial reasoning to describe, identify, and create geometric shapes.**	**Standard 3: Students will use spatial reasoning to recognize, describe, and identify geometric shapes.**	**Standard 3: Students will use spatial reasoning to recognize, describe, and identify geometric shapes and principles.**	**Standard 3: Students will use spatial and logical reasoning to recognize, describe, and identify geometric shapes and principles.**
Objective 1: Identify and create simple geometric shapes. a. Identify circles, triangles, rectangles, and squares. b. Combine shapes to create *two-dimensional* objects. c. Draw circles, triangles, rectangles, and squares.	**Objective 1: Describe, identify, and create simple geometric shapes.** a. Identify, name, draw, create, and sort circles, triangles, rectangles, and squares. b. Identify circles, triangles, rectangles, and squares in the students' environment. c. Recognize that	**Objective 1: Describe, identify, and create geometric shapes.** a. Identify, name, draw, sort, and compare circles, triangles, and *parallelograms*. b. Identify and name spheres, cones, and cylinders. c. Find and identify familiar geometric	**Objective 1: Describe, identify, and create geometric shapes.** a. Identify and draw *points, lines, line segments,* and *endpoints.* b. Identify and draw *lines of symmetry* on triangles, squares, circles, and rectangles. c. Determine whether an angle is *right, obtuse*, or	**Objective 1: Describe, identify, and analyze characteristics and properties of geometric shapes.** a. Identify and draw *parallel lines* and *intersecting lines*. b. Identify and draw lines of symmetry on a variety of *polygons*. c. Identify and describe	**Objective 1: Describe, identify, and analyze characteristics and properties of geometric shapes.** a. Identify and draw *perpendicular lines*. b. Draw, label, and describe *rays* and describe an angle as two rays sharing a common endpoint.	**Objective 1: Identify and analyze characteristics and properties of geometric shapes.** a. Identify the *midpoint* of a *line segment*. b. Identify *concave* and *convex polygons*. c. Identify the center, *radius, diameter,* and *circumference* of a circle.

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
d. Recognize circles, triangles, rectangles, and squares in the students' environment.	combining simple geometric shapes can create more complex geometric shapes.	shapes in the students' environment. d. Determine whether a circle, triangle, square, or rectangle has a *line of symmetry*.	*acute* by comparing the angle to the corner of a rectangle. d. Classify *polygons* (e.g., *quadrilaterals*, pentagons, hexagons, octagons) by the number of sides and corners. e. Identify, make, and describe cubes (e.g., a cube has 6 square *faces*, 8 *vertices*, and 12 *edges*).	*quadrilaterals* (i.e., rectangles, squares, *rhombuses*, *trapezoids*, kites). d. Identify *right*, *obtuse*, and *acute* angles. e. Compare two polygons to determine whether they are *congruent* or *similar*. f. Identify and describe *cylinders* and *rectangular prisms*.	c. Label an angle as *acute*, *obtuse*, *right*, or *straight*. d. Identify and describe *equilateral*, *isosceles*, *scalene*, *right*, *acute*, and *obtuse* triangles. e. Identify the *vertex* of an angle or the *vertices* of a polygon. f. Compare *corresponding angles* of two triangles and determine whether the triangles are *similar*. g. Identify and describe *pyramids* and *prisms*.	d. Identify the number of *faces*, *edges*, and *vertices* of *pyramids* and *prisms*.
Objective 2: Describe simple spatial relationships. a. Visualize how to fit a shape into a design. b. Use and demonstrate words to describe position with objects (i.e., on, over, under, above, below, top, bottom, up, down, in front of, behind, next to, beside). c. Use and demonstrate words to describe distance with objects (i.e., far, near).	**Objective 2: Describe simple spatial relationships.** a. Use and demonstrate words to describe position (i.e., between, before, after, middle, left, right). b. Use and demonstrate words to describe distance (i.e., closer, farther).	**Objective 2: Describe spatial relationships.** a. Create and use verbal or written instructions to move within the environment. b. Find and name locations using coordinates (A, 1). c. Identify shapes in various orientations (e.g., △ and ▽).	**Objective 2: Describe spatial relationships.** a. Give directions to reach a location. b. Use coordinates (A, 1) or regions to locate positions on a map. c. Demonstrate and use horizontal and vertical lines.	**Objective 2: Specify locations and describe spatial relationships using grids and maps.** a. Locate positions on a map of Utah using *coordinates* or *regions*. b. Give the coordinates or regions of a position on a map of Utah.	**Objective 2: Specify locations and describe spatial relationships using coordinate geometry.** a. Locate points defined by ordered pairs in the first *quadrant*. b. Write an ordered pair for a point in the first quadrant. c. Specify possible paths between locations on a *coordinate grid* and compare distances of the various paths.	**Objective 2: Specify locations and describe spatial relationships using coordinate geometry.** a. Graph points defined by ordered pairs in all four quadrants. b. Write the ordered pair for a point in any quadrant.
			Objective 3: Visualize and identify geometric shapes after applying transformations. a. Demonstrate the effect of a slide (translation) or flip (reflection) on a figure, using manipulatives. b. Determine whether two polygons are *congruent* by sliding, flipping, or turning to physically fit one object on top of the other. c. Identify *two-dimensional* shapes (*nets*) that will	**Objective 3: Visualize and identify geometric shapes after applying transformations.** a. Identify a *slide* (*translation*) or *flip* (*reflection*) on a figure using manipulatives. b. Relate *cubes*, *cylinders*, *cones*, and *rectangular prisms* to the *two-dimensional* shapes (*nets*) from which they were created.	**Objective 3: Visualize and identify geometric shapes after applying transformations.** a. Identify a *slide (translation)* or *flip (reflection)* on a figure across a line. b. Demonstrate the effect of a *turn (rotation)* on a figure using manipulatives. c. Relate *pyramids* and *prisms* to the *two-dimensional* shapes (*nets*) from which they were created.	**Objective 3: Visualize and identify geometric shapes after applying transformations.** a. *Turn (rotate)* a shape around a point and identify the location of the new vertices. b. *Slide (translate)* a polygon either horizontally or vertically on a coordinate grid and identify the location of the new vertices. c. *Flip (reflect)* a shape across either the x- or

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
			fold to make a cube. d. Create a *polygon* that results from combining other polygons.			y-axis and identify the location of the new vertices.
Standard 4: Students will understand and use simple measurement tools and techniques.	**Standard 4: Students will understand and use simple measurement tools and techniques.**	**Standard 4: Students will understand and use measurement tools and techniques.**	**Standard 4: Students will understand and use measurement tools and techniques.**	**Standard 4: Students will understand and use measurement tools and techniques.**	**Standard 4: Students will understand and apply measurement tools and techniques.**	**Standard 4: Students will understand and apply measurement tools and techniques.**
Objective 1: Identify measurable attributes of objects and units of measurement. a. Identify clocks and calendars as tools that measure time. b. Identify a day, week, and month on a calendar. c. Identify pennies, nickels, dimes, and quarters as units of money.	**Objective 1: Identify measurable attributes of objects and units of measurement.** a. Identify the appropriate tools for measuring length, weight, capacity, temperature, and time. b. Identify the values of a penny, nickel, dime, and quarter. c. Estimate the length of an object by comparing to a nonstandard unit (e.g., How many new pencils wide is your desk?).	**Objective 1: Identify measurable attributes of objects and units of measurement.** a. Sequence a series of events of a day in order by time (e.g., breakfast at 7:00, school begins at 9:00). b. Identify the name and value of a penny, nickel, dime, quarter, and dollar. c. Estimate length, *capacity*, and weight using customary units.	**Objective 1: Identify and describe measurable attributes of objects and units of measurement.** a. Recognize the two systems of measurement: *metric* and *customary*. b. Describe the relationship between metric units of length (i.e., centimeter, meter). c. Describe the relationship among customary units of length (i.e., inch, foot, yard) and the relationship between customary units of *capacity* (i.e., cup, quart). d. Estimate length, capacity, and weight using metric and customary units.	**Objective 1: Identify and describe measurable attributes of objects and units of measurement.** a. Describe the relationship among *metric* units of length (i.e., millimeter, centimeter, meter), between metric units of capacity (i.e., milliliter, liter), and between metric units of weight (i.e., gram, kilogram). b. Identify a mile as a measure of distance and its relationship to other *customary* units of length. c. Describe the relationship among customary units of *capacity* (i.e., cup, pint, quart, gallon). d. Estimate length, capacity, and weight using metric and customary units.	**Objective 1: Identify and describe measurable attributes of objects and units of measurement.** a. Describe the relationship among *metric* units of length (i.e., millimeter, centimeter, meter, kilometer). b. Describe the relationship among *customary* units of weight (i.e., ounce, pound). c. Identify the correct units of measurement for *volume*, *area*, and *perimeter* in both metric and customary systems. d. Estimate length, volume, weight, and area using metric and customary units. e. Convert units of measurement within the metric system and convert units of measurement within the customary system.	**Objective 1: Identify and describe measurable attributes of objects and units of measurement.** a. Compare a meter to a yard, a liter to a quart, and a kilometer to a mile. b. Identify *pi* as the ratio of the *circumference* to *diameter* of a circle. c. Explain how the size of the unit used in measuring affects the precision. d. Estimate length, volume, weight, and area using *metric* and *customary* units.
Objective 2: Use appropriate techniques and tools to determine measurements. a. Compare two objects (e.g., shorter/longer, heavier/lighter, larger/smaller, more/less). b. Find the length of an object using nonstandard units (e.g., pencils, paper clips). c. Name the days of the	**Objective 2: Use appropriate techniques and tools to determine measurements.** a. Compare objects, using nonstandard units, according to their length, weight, or volume (e.g., pencils/length, books/weight, boxes/volume). b. Read and tell time to the nearest hour.	**Objective 2: Use appropriate techniques and tools to determine measurements.** a. Compare and order objects, using nonstandard units, according to their length, weight, or *capacity*. b. Measure length using inches and feet, weight using pounds, and capacity using cups.	**Objective 2: Use appropriate techniques and tools to determine measurements.** a. Measure the length of objects to the nearest centimeter, meter, half-inch, foot, and yard. b. Measure *capacity* using cups and quarts, and measure weight using pounds. c. Determine the value of a combination of coins and	**Objective 2: Determine measurements using appropriate tools and formulas.** a. Measure the length of objects to the nearest centimeter, meter, quarter-inch, foot, and yard. b. Measure *capacity* using milliliters, liters, cups, pints, quarts, and gallons and measure weight using grams,	**Objective 2: Determine measurements using appropriate tools and formulas.** a. Measure length to the nearest 1/8 of an inch and to the nearest centimeter. b. Measure *volume* and weight using *metric* and *customary* units. c. Measure angles using a protractor. d. Calculate *elapsed*	**Objective 2: Determine measurements using appropriate tools and formulas.** a. Measure length to the nearest one-sixteenth of an inch and to the nearest millimeter. b. Estimate and measure an angle to the nearest degree. c. Calculate the *circumference* of a circle using a given

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
week in order. d. Sort pennies, nickels, dimes, and quarters.	c. Name the days of the week, months of the year, and seasons in order. d. Determine the value of a set of the same coins that total 25¢ or less (e.g., a set of 14 pennies equals 14¢, a set of 5 nickels equals 25¢, a set of 2 dimes equals 20¢).	c. Determine the value of a set of up to five coins that total $1.00 or less (e.g., two quarters and one dime equals 60¢; three dimes, one nickel, and one penny equals 36¢). d. Read, tell, and write time to the hour and half-hour. e. Use a calendar to determine the day of the week and date. f. Determine the *perimeter* of a square, triangle, and rectangle by measuring with nonstandard units.	bills that total $5.00 or less and write the monetary amounts using the dollar sign and decimal notation. d. Identify the number of hours in a day, the number of days in a year, and the number of weeks in a year. e. Read, tell, and write time to the quarter-hour. f. Identify any given day of the month (e.g., the third Wednesday of the month is the 18th). g. Read and record the temperature to the nearest ten degrees using a Fahrenheit thermometer. h. Estimate and measure the *perimeter* and *area* of rectangles by measuring with nonstandard units.	kilograms, and pounds. c. Read, tell, and write time to the nearest minute, identifying a.m. and p.m. d. Read and record the temperature to the nearest degree, in Fahrenheit, using a thermometer. e. Determine the value of a combination of coins and bills that total $20.00 or less. f. Count back change for a single-item purchase and determine the amount of change to be received from a multiple-item purchase. g. Determine possible *perimeters*, in whole units, for a rectangle with a fixed *area* and determine possible areas when given a rectangle with a fixed perimeter.	*time* within a.m. or p.m. time periods. e. Read and record the temperature to the nearest degree (above and below zero) when using a thermometer with a Celsius or Fahrenheit scale. f. Calculate the *perimeter* of rectangles and triangles. g. Calculate the *area* of squares and rectangles using a formula.	formula. d. Calculate *elapsed time* across a.m. and p.m. time periods. e. Calculate the *areas* of triangles, rectangles, and *parallelograms* using given formulas. f. Calculate the *surface area* and *volume* of right, rectangular prisms using given formulas.
Standard 5: Students will collect and draw conclusions from data and understand basic concepts of probability.	**Standard 5: Students will collect and draw conclusions from data and understand basic concepts of probability.**	**Standard 5: Students will collect and draw conclusions from data and understand basic concepts of probability.**	**Standard 5: Students will collect and organize data to make predictions and identify basic concepts of probability.**	**Standard 5: Students will collect and organize data to make predictions and use basic concepts of probability.**	**Standard 5: Students will collect, analyze, and draw conclusions from data and apply basic concepts of probability.**	**Standard 5: Students will collect, analyze, and draw conclusions from data and apply basic concepts of probability.**
Objective 1: Collect, organize, and display simple data. a. Collect, organize, and record data using objects and pictures. b. Represent data in a variety of ways (e.g., graphs made from people, *pictographs*, bar graphs) and interpret the data (e.g., more people like red than blue).	**Objective 1: Collect, organize, and display simple data.** a. Collect physical objects to use as data. b. Collect, represent, and interpret data using tables, tally marks, *pictographs*, and bar graphs.	**Objective 1: Collect, organize, and display simple data.** a. Gather data by vote or survey. b. Sort, classify, and organize data in a variety of ways. c. Use a variety of methods to organize, display, and label information, including keys, using *pictographs*, tallies, bar graphs, and organized tables. d. Report information from a data display.	**Objective 1: Collect, organize, and display data to make predictions.** a. Collect, read, represent, and interpret data using tables, graphs, and charts, including keys (e.g., pictographs, bar graphs). b. Make predictions based on a data display.	**Objective 1: Collect, organize, and display data to make predictions and answer questions.** a. Identify a question that can be answered by collecting data. b. Collect, read, and interpret data from tables, graphs, charts, surveys, and observations. c. Represent data using tables, line plots, line graphs, and bar graphs. d. Identify and distinguish between *clusters* and *outliers* of a data set.	**Objective 1: Formulate and answer questions using statistical methods to compare data.** a. Formulate a question that can be answered by collecting data. b. Collect, compare, and display data using an appropriate format (i.e., *line plots*, bar graphs, pictographs, circle graphs, line graphs). c. Identify *minimum* and *maximum* values for a set of data. d. Identify or calculate the *mean*, *mode*, and *range*.	**Objective 1: Design investigations to reach conclusions using statistical methods to make inferences based on data.** a. Design investigations to answer questions by collecting and organizing data in a variety of ways (e.g., bar graphs, line graphs, frequency tables, stem and leaf plots). b. Collect, compare, and display data using an appropriate format (i.e., bar graphs, line graphs, *line plots*,

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
					e. Propose and justify inferences based on data.	circle graphs, scatter plots). c. Compare two similar sets of data on the same graph and compare two graphs representing the same set of data. d. Recognize that changing the scale influences the appearance of a display of data. e. Develop and evaluate inferences and predictions based on data.
Objective 2: Determine the likelihood of events. a. Describe events encountered in books read as possible or not possible. b. Describe events as likely or unlikely (e.g., It is likely to snow today. It is unlikely an elephant will be in school).	**Objective 2: Determine the likelihood of an event.** a. Compare events to decide which are more likely, less likely, and equally likely. b. Relate past events to future events (e.g., The sun set about 6:00 last night, so it will set about the same time tonight).	**Objective 2: Determine the likelihood of an event.** a. Predict events that will be the same in one day or one week. b. Predict the outcome when there are only two possible outcomes (e.g., tossing a coin).	**Objective 2: Identify basic concepts of probability.** a. Describe the results of events using the terms "certain," "equally likely," and "impossible." b. Predict outcomes of simple activities (e.g., a bag contains three red marbles and five blue marbles. If one marble is selected, is it more likely to be red or blue?).	**Objective 2: Use basic concepts of probability.** a. Describe the results of investigations involving random outcomes as simple ratios (e.g., 4 out of 9, 4/9). b. Predict outcomes of simple experiments, including with and without replacement, and test the predictions.	**Objective 2: Apply basic concepts of probability.** a. Describe the results of investigations involving random outcomes using a variety of notations (e.g., 4 out of 9, 4/9, 4:9). b. Recognize that outcomes of experiments and samples are fractions between 0 and 1. c. Predict the probability of an outcome in a simple experiment.	**Objective 2: Apply basic concepts of probability.** a. Write the results of a probability experiment as a fraction, ratio, or percent between zero and one. b. Compare experimental results with anticipated results (e.g., experimental: 7 out of 10 tails; whereas, anticipated 5 out of 10 tails). c. Compare individual, small group, and large group results for a probability experiment.

K-2 Mathematics Glossary

Mathematics Glossary

acute angle	An angle with a measure less than 90º.
addend	Any number being added. In 32+4=36, 32 and 4 are *addends.*
algorithm	A step-by-step method for computing.
area	The measure, in square units, of the inside of a plane figure.
array	An arrangement of objects in equal rows.
Associative Property	Changing the grouping of three or more *addends* does not change the *sum*. Changing the grouping of three or more *factors* does not change the *product.*
attribute	A characteristic of an object, such as color, shape, size, etc.
capacity	The maximum amount that can be contained by an object. Often refers to measurement of a liquid.
chord	Any *line segment* that joins two *points* on a circle.
circumference	The *perimeter* of a circle.
cluster	Data that are grouped together.
Commutative Property	Changing the order of the *addends* does not change the *sum.* Changing the order of the *factors* does not change the *product.*
composite number	A number greater than 0 that has more than two different factors. The number 9 is a *composite number* because it has three *factors*: 1, 3, and 9.
concave polygon	A *polygon* with one or more diagonals that have points outside the polygon.
cone	A solid bounded by a circular base and a curved surface with one *vertex.*
congruent	Having exactly the same size and shape.
convex polygon	A *polygon* with all interior angles measuring less than 180º. All diagonals of a *convex polygon* are inside the figure.
coordinate grid	A *two-dimensional* system in which the *coordinates* of a point are its distances from two intersecting, usually *perpendicular*, straight lines called axes.
coordinates	An ordered pair of numbers that identify a point on a coordinate plane or grid.
corresponding angles	Angles in the same position from one line to another.
cube (solid figure)	A regular solid with six congruent square faces.
customary system	A system of measurement used in the U.S. The system includes units for measuring length, capacity, and weight.

Mathematics Glossary

cylinder	A three-dimensional figure with two circular bases that are *parallel* and *congruent* .
diameter	A *chord* that goes through the center of a circle.
difference	The amount that remains after one quantity is subtracted from another.
Distributive Property	When one of the *factors* of a *product* is a *sum* , multiplying each *addend* before adding does not change the *product.* For example: 6x (2+3)=(6x2)+(6x3)
dividend	A number that is divided by another number.
divisor	The number by which another number is divided.
e.g.	This abbreviation means "for example." When used in the Core, *e.g.* is not limited to the examples given.
edge	The *line segment* where two *faces* of a solid figure meet.
elapsed time	The amount of time that passes between two times.
endpoint	A point at either end of a *line segment,* arc, or a point at one end of a *ray.*
equilateral triangle	A triangle with all sides the same length.
expanded form	A way to write numbers that shows the place value of each digit. 263 = 200 + 60 + 3 or 263 is 2 hundreds, 60 tens, and 3 ones.
exponent	The number that tells how many equal *factors* there are.
expression	A variable or combination of variables, numbers, and operation symbols that represents a mathematical relationship. 6, 2 + 3, x, x + 4, and x + 2y are all *expressions* .
face	A plane figure that serves as one side of a solid figure. The *faces* of a *cube* are squares.
factors	The *whole numbers* that are multiplied to get a *product.* In 6x3=18, 6 and 3 are factors of 18.
flip	A transformation creating a mirror image of a figure on the opposite side of a line. A *flip* is also called a *reflection* .
greatest common factor	The greatest number that is a *factor* of every number in a set of numbers. 3 is the *greatest common factor* of 9 and 15.
growing pattern	A pattern that grows or increases.
horizontal line	A line that is *parallel* to the horizon. A *horizontal line* is straight across.
i.e.	This abbreviation means "that is to say." When used in the Core, *i.e.* is limited to the specific examples given.
Identity Property of Addition	If you add zero to a number, the *sum* is the same as that number. For example, 8+0=8.

Mathematics Glossary

Identity Property of Multiplication	If you multiply a number by one, the *product* is the same as that number. For example, 18x1=18.
integers	*Whole numbers* and their opposites.
intersect	To meet or cross.
isosceles triangle	A triangle that has exactly two *congruent* sides.
least common multiple	The least common multiple of a set of two or more numbers. For example, the *least common multiple* of 3 and 5 is 15.
line	A set of connected points continuing without end in both directions.
line of symmetry	A line that divides a figure into two *congruent* halves that are mirror images of each other.
line plot	A graph showing frequency of data on a number line.
line segment	A part of a line with two *endpoints.*
mean	A number found by dividing the *sum* of two or more numbers by the number of *addends.* The *mean* is often referred to as the average.
metric system	A system of measurement based on tens. The basic unit of length is the meter. The basic unit of mass is the gram. The basic unit of *capacity* is the liter.
midpoint	The point on a *line segment* that divides it into two *congruent* segments.
mode	The number that appears most frequently in a set of numbers. There may be one, more than one, or no mode.
net	A *two-dimensional* shape that can be folded into a three-dimensional figure is a *net* of that figure.
numeral	A symbol used to represent a number.
obtuse angle	An angle with a measure greater than 90º and less than 180º.
obtuse triangle	A triangle with one *obtuse angle.*
one-to-one correspondence	The relationship between the spoken word and the written symbol.
Order of Operations	A set of rules that tells the order in which to compute.
ordinal number	A *whole number* that names the position of an object in sequence. First, second, and third are *ordinal numbers.*
outlier	A number in a set of data that is much larger or smaller than most of the other numbers in the set.

Mathematics Glossary

parallel lines Lines in the same plane that are always the same distance apart.

parallelogram A *quadrilateral* with two pairs of *parallel* and *congruent* sides.

perimeter The distance around a figure.

perpendicular Forming *right angles.*

pi The ratio of the *circumference* of any circle to its *diameter*, approximately equal to 3.14.

pictograph A graph that uses pictures to show data.

plane A flat surface that extends infinitely in all directions.

point An exact location in space represented by a dot.

polygon A closed plane figure made by *line segments.*

prime factorization A way to show a number as the *product* of *prime factors.* The *prime factorization* of 12 is 2x2x3.

prime number A *whole number* greater than 0 that has exactly two different *factors,* 1 and itself. 5 is a *prime number* because its only *factors* are 1 and 5.

prism A three-dimensional figure that has two *congruent* and *parallel* faces that are *polygons.* The rest of the faces are *parallelograms.*

product The answer to a multiplication problem. For example, 6x3=18, 18 is the *product* of 6x3.

pyramid A polyhedron whose base is a *polygon* and whose other *faces* are triangles that share a common *vertex*.

quadrants The four sections of a *coordinate grid* that are separated by the axes.

quadrilateral A four-sided *polygon.*

quotient The answer to a division problem.

radius The segment, or the length of the segment, from the center of a circle to any point on the circle.

range The difference between the greatest number and the least number in a set of numbers.

rational number A number that can be expressed as a ratio of two non-zero *integers.*

ray A part of a line that has one *endpoint* and goes on forever in one direction.

rectangular prism A *prism* with six rectangular faces.

reflection A transformation creating a mirror image of a figure on the opposite side of a line. A *reflection* is also called a *flip.*

region A part of a plane.

Mathematics Glossary

remainder In *whole number* division, when you have divided as far as you can without using decimals, what has not been divided yet is the remainder.

repeating pattern A pattern of a group of items that repeats over and over.

rhombus A *parallelogram* with all four sides equal in length.

right angle An angle that measures exactly 90º.

right triangle A triangle that has one 90º angle.

rotation The transformation that occurs when a figure is turned a certain angle and direction around a

Rules of Divisibility Patterns that make it easier to tell whether one number is *divisible* by another.

scalene triangle A triangle that has no *congruent* sides.

scientific notation A form of writing numbers as the *product* of a power of 10 and a decimal number greater than or equal to 1 and less than 10.

similar figures Figures that have the same shape, but not necessarily the same size.

slide A transformation that slides a figure a given distance in a given direction. A *slide* is also called a *translation.*

square number A number that is the result of multiplying an *integer* by itself. Any *square number* of dots can be arranged in a square array.

standard form A number written with one digit for each place value. The *standard form* for the number three thousand three is 3,003.

straight angle An angle with a measure of 180º.

sum The answer to an addition problem. In 32+4=36, 36 is the *sum.*

surface area The total *area* of the *faces* (including bases) and curved surfaces of a solid figure.

translation A transformation that slides a figure a given distance in a given direction. A *translation* is also called a *slide.*

trapezoid A *quadrilateral* with one pair of *parallel* sides and one pair of sides that are not parallel.

turn The transformation that occurs when a figure is turned a certain angle and direction around a point. A *turn* is also called a *rotation.*

two-dimensional A figure that has length and width, but not height. Having *area,* but not *volume.* The image

vertex The point at which two *line segments, lines,* or *rays* meet to form an angle.

vertical line A line that has right angles to the horizon. A *vertical line* is straight up and down.

Mathematics Glossary

vertices	Plural of *vertex*.
volume	The number of cubic units it takes to fill a figure.
whole number	Any of the numbers 0, 1, 2, 3, 4, 5, and so on.
Zero Property of Multiplication	The *product* of any number and zero is zero. For example, 8x0=0.