

Texas Essential Knowledge and Skills for Grade 2

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§110.13. English Language Arts and Reading, Grade 2, Beginning with School Year 2009-2010.

(a) Introduction.

- (1) The English Language Arts and Reading Texas Essential Knowledge and Skills (TEKS) are organized into the following strands: Reading, where students read and understand a wide variety of literary and informational texts; Writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail; Research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information; Listening and Speaking, where students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and Oral and Written Conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing. The Reading strand is structured to reflect the major topic areas of the National Reading Panel Report. In second grade, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should write and read (or be read to) on a daily basis.
- (2) For students whose first language is not English, the students' native language serves as a foundation for English language acquisition.
 - (A) English language learners (ELLs) are acquiring English, learning content in English, and learning to read simultaneously. For this reason, it is imperative that reading instruction should be comprehensive and that students receive instruction in phonemic awareness, phonics, decoding, and word attack skills while simultaneously being taught academic vocabulary and comprehension skills and strategies. Reading instruction that enhances ELL's ability to decode unfamiliar words and to make sense of those words in context will expedite their ability to make sense of what they read and learn from reading. Additionally, developing fluency, spelling, and grammatical conventions of academic language must be done in meaningful contexts and not in isolation.
 - (B) For ELLs, comprehension of texts requires additional scaffolds to support comprehensible input. ELL students should use the knowledge of their first language (e.g., cognates) to further vocabulary development. Vocabulary needs to be taught in the context of connected discourse so that language is meaningful. ELLs must learn how rhetorical devices in English differ from those in their native language. At the same time

English learners are learning in English, the focus is on academic English, concepts, and the language structures specific to the content.

- (C) During initial stages of English development, ELLs are expected to meet standards in a second language that many monolingual English speakers find difficult to meet in their native language. However, English language learners' abilities to meet these standards will be influenced by their proficiency in English. While English language learners can analyze, synthesize, and evaluate, their level of English proficiency may impede their ability to demonstrate this knowledge during the initial stages of English language acquisition. It is also critical to understand that ELLs with no previous or with interrupted schooling will require explicit and strategic support as they acquire English and learn to learn in English simultaneously.
 - (3) To meet Public Education Goal 1 of the Texas Education Code, §4.002, which states, "The students in the public education system will demonstrate exemplary performance in the reading and writing of the English language," students will accomplish the essential knowledge, skills, and student expectations at Grade 2 as described in subsection (b) of this section.
 - (4) To meet Texas Education Code, §28.002(h), which states, "... each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of textbooks," students will be provided oral and written narratives as well as other informational texts that can help them to become thoughtful, active citizens who appreciate the basic democratic values of our state and nation.
- (b) Knowledge and skills.
- (1) Reading/Beginning Reading Skills/Print Awareness. Students understand how English is written and printed. Students are expected to distinguish features of a sentence (e.g., capitalization of first word, ending punctuation, commas, quotation marks).
 - (2) Reading/Beginning Reading Skills/Phonics. Students use the relationships between letters and sounds, spelling patterns, and morphological analysis to decode written English. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:
 - (A) decode multisyllabic words in context and independent of context by applying common letter-sound correspondences including:
 - (i) single letters (consonants and vowels);
 - (ii) consonant blends (e.g., thr, spl);
 - (iii) consonant digraphs (e.g., ng, ck, ph); and
 - (iv) vowel digraphs (e.g., ie, ue, ew) and diphthongs (e.g., oi, ou);
 - (B) use common syllabication patterns to decode words including:

- (i) closed syllable (CVC) (e.g., pic-nic, mon-ster);
 - (ii) open syllable (CV) (e.g., ti-ger);
 - (iii) final stable syllable (e.g., sta-tion, tum-ble);
 - (iv) vowel-consonant-silent "e" words (VCe) (e.g., in-vite, cape);
 - (v) r-controlled vowels (e.g., per-fect, cor-ner); and
 - (vi) vowel digraphs and diphthongs (e.g., boy-hood, oat-meal);
- (C) decode words by applying knowledge of common spelling patterns (e.g., -ight, -ant);
- (D) read words with common prefixes (e.g., un-, dis-) and suffixes (e.g., -ly, -less, -ful);
- (E) identify and read abbreviations (e.g., Mr., Ave.);
- (F) identify and read contractions (e.g., haven't, it's);
- (G) identify and read at least 300 high-frequency words from a commonly used list; and
- (H) monitor accuracy of decoding.
- (3) Reading/Beginning Reading/Strategies. Students comprehend a variety of texts drawing on useful strategies as needed. Students are expected to:
- (A) use ideas (e.g., illustrations, titles, topic sentences, key words, and foreshadowing) to make and confirm predictions;
 - (B) ask relevant questions, seek clarification, and locate facts and details about stories and other texts and support answers with evidence from text; and
 - (C) establish purpose for reading selected texts and monitor comprehension, making corrections and adjustments when that understanding breaks down (e.g., identifying clues, using background knowledge, generating questions, re-reading a portion aloud).
- (4) Reading/Fluency. Students read grade-level text with fluency and comprehension. Students are expected to read aloud grade-level appropriate text with fluency (rate, accuracy, expression, appropriate phrasing) and comprehension.
- (5) Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to:
- (A) use prefixes and suffixes to determine the meaning of words (e.g., allow/disallow);
 - (B) use context to determine the relevant meaning of unfamiliar words or multiple-meaning words;

- (C) identify and use common words that are opposite (antonyms) or similar (synonyms) in meaning; and
 - (D) alphabetize a series of words and use a dictionary or a glossary to find words.
- (6) Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:
- (A) identify moral lessons as themes in well-known fables, legends, myths, or stories; and
 - (B) compare different versions of the same story in traditional and contemporary folktales with respect to their characters, settings, and plot.
- (7) Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to describe how rhyme, rhythm, and repetition interact to create images in poetry.
- (8) Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. Students are expected to identify the elements of dialogue and use them in informal plays.
- (9) Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:
- (A) describe similarities and differences in the plots and settings of several works by the same author; and
 - (B) describe main characters in works of fiction, including their traits, motivations, and feelings.
- (10) Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and respond by providing evidence from text to support their understanding. Students are expected to distinguish between fiction and nonfiction.
- (11) Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to recognize that some words and phrases have literal and non-literal meanings (e.g., take steps).
- (12) Reading/Comprehension of Text/Independent Reading. Students read independently for sustained periods of time and produce evidence of their reading. Students are expected to read independently for a sustained period of time and paraphrase what the reading was about, maintaining meaning.

- (13) Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to identify the topic and explain the author's purpose in writing the text.
- (14) Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about and understand expository text and provide evidence from text to support their understanding. Students are expected to:
- (A) identify the main idea in a text and distinguish it from the topic;
 - (B) locate the facts that are clearly stated in a text;
 - (C) describe the order of events or ideas in a text; and
 - (D) use text features (e.g., table of contents, index, headings) to locate specific information in text.
- (15) Reading/Comprehension of Informational Text/Procedural Text. Students understand how to glean and use information in procedural texts and documents. Students are expected to:
- (A) follow written multi-step directions; and
 - (B) use common graphic features to assist in the interpretation of text (e.g., captions, illustrations).
- (16) Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:
- (A) recognize different purposes of media (e.g., informational, entertainment);
 - (B) describe techniques used to create media messages (e.g., sound, graphics); and
 - (C) identify various written conventions for using digital media (e.g., e-mail, website, video game).
- (17) Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:
- (A) plan a first draft by generating ideas for writing (e.g., drawing, sharing ideas, listing key ideas);
 - (B) develop drafts by sequencing ideas through writing sentences;
 - (C) revise drafts by adding or deleting words, phrases, or sentences;
 - (D) edit drafts for grammar, punctuation, and spelling using a teacher-developed rubric; and

- (E) publish and share writing with others.
- (18) Writing/Literary Texts. Students write literary texts to express their ideas and feelings about real or imagined people, events, and ideas. Students are expected to:
- (A) write brief stories that include a beginning, middle, and end; and
 - (B) write short poems that convey sensory details.
- (19) Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:
- (A) write brief compositions about topics of interest to the student;
 - (B) write short letters that put ideas in a chronological or logical sequence and use appropriate conventions (e.g., date, salutation, closing); and
 - (C) write brief comments on literary or informational texts.
- (20) Writing/Persuasive Texts. Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write persuasive statements about issues that are important to the student for the appropriate audience in the school, home, or local community.
- (21) Oral and Written Conventions/Conventions. Students understand the function of and use the conventions of academic language when speaking and writing. Students continue to apply earlier standards with greater complexity. Students are expected to:
- (A) understand and use the following parts of speech in the context of reading, writing, and speaking:
 - (i) verbs (past, present, and future);
 - (ii) nouns (singular/plural, common/proper);
 - (iii) adjectives (e.g., descriptive: old, wonderful; articles: a, an, the);
 - (iv) adverbs (e.g., time: before, next; manner: carefully, beautifully);
 - (v) prepositions and prepositional phrases;
 - (vi) pronouns (e.g., he, him); and
 - (vii) time-order transition words;
 - (B) use complete sentences with correct subject-verb agreement; and
 - (C) distinguish among declarative and interrogative sentences.

- (22) Oral and Written Conventions/Handwriting, Capitalization, and Punctuation. Students write legibly and use appropriate capitalization and punctuation conventions in their compositions. Students are expected to:
- (A) write legibly leaving appropriate margins for readability;
 - (B) use capitalization for:
 - (i) proper nouns;
 - (ii) months and days of the week; and
 - (iii) the salutation and closing of a letter; and
 - (C) recognize and use punctuation marks, including:
 - (i) ending punctuation in sentences;
 - (ii) apostrophes and contractions; and
 - (iii) apostrophes and possessives.
- (23) Oral and Written Conventions/Spelling. Students spell correctly. Students are expected to:
- (A) use phonological knowledge to match sounds to letters to construct unknown words;
 - (B) spell words with common orthographic patterns and rules:
 - (i) complex consonants (e.g., hard and soft c and g, ck);
 - (ii) r-controlled vowels;
 - (iii) long vowels (e.g., VCe-hope); and
 - (iv) vowel digraphs (e.g., oo-book, fool, ee-feet), diphthongs (e.g., ou-out, ow-cow, oi-coil, oy-toy);
 - (C) spell high-frequency words from a commonly used list;
 - (D) spell base words with inflectional endings (e.g., -ing and -ed);
 - (E) spell simple contractions (e.g., isn't, aren't, can't); and
 - (F) use resources to find correct spellings.
- (24) Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to:

- (A) generate a list of topics of class-wide interest and formulate open-ended questions about one or two of the topics; and
 - (B) decide what sources of information might be relevant to answer these questions.
- (25) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:
- (A) gather evidence from available sources (natural and personal) as well as from interviews with local experts;
 - (B) use text features (e.g., table of contents, alphabetized index, headings) in age-appropriate reference works (e.g., picture dictionaries) to locate information; and
 - (C) record basic information in simple visual formats (e.g., notes, charts, picture graphs, diagrams).
- (26) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to revise the topic as a result of answers to initial research questions.
- (27) Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students (with adult assistance) are expected to create a visual display or dramatization to convey the results of the research.
- (28) Listening and Speaking/Listening. Students use comprehension skills to listen attentively to others in formal and informal settings. Students continue to apply earlier standards with greater complexity. Students are expected to:
- (A) listen attentively to speakers and ask relevant questions to clarify information; and
 - (B) follow, restate, and give oral instructions that involve a short related sequence of actions.
- (29) Listening and Speaking/Speaking. Students speak clearly and to the point, using the conventions of language. Students continue to apply earlier standards with greater complexity. Students are expected to share information and ideas that focus on the topic under discussion, speaking clearly at an appropriate pace, using the conventions of language.
- (30) Listening and Speaking/Teamwork. Students work productively with others in teams. Students continue to apply earlier standards with greater complexity. Students are expected to follow agreed-upon rules for discussion, including listening to others, speaking when recognized, and making appropriate contributions.

Reading and Comprehension Skills—Second Grade

Figure: 19 TAC §110.10(b)

Reading/Comprehension Skills. Students use a flexible range of metacognitive reading skills in both assigned and independent reading to understand an author’s message. Students will continue to apply earlier standards with greater depth in increasingly more complex texts as they become self-directed, critical readers. The student is expected to:

- (A) establish purposes for reading selected texts based upon content to enhance comprehension;
- (B) ask literal questions of text;
- (C) monitor and adjust comprehension (e.g., using background knowledge, creating sensory images, re-reading a portion aloud, generating questions);
- (D) make inferences about text using textual evidence to support understanding;
- (E) retell important events in stories in logical order; and
- (F) make connections to own experiences, to ideas in other texts, and to the larger community and discuss textual evidence.

§111.4. Mathematics, Grade 2, Adopted 2012.

- (a) Introduction.
 - (1) The desire to achieve educational excellence is the driving force behind the Texas essential knowledge and skills for mathematics, guided by the college and career readiness standards. By embedding statistics, probability, and finance, while focusing on computational thinking, mathematical fluency, and solid understanding, Texas will lead the way in mathematics education and prepare all Texas students for the challenges they will face in the 21st century.
 - (2) The process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, algorithms, paper and pencil, and technology and techniques such as mental math, estimation, number sense, and generalization and

abstraction to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, computer programs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

- (3) For students to become fluent in mathematics, students must develop a robust sense of number. The National Research Council's report, "Adding It Up," defines procedural fluency as "skill in carrying out procedures flexibly, accurately, efficiently, and appropriately." As students develop procedural fluency, they must also realize that true problem solving may take time, effort, and perseverance. Students in Grade 2 are expected to perform their work without the use of calculators.
 - (4) The primary focal areas in Grade 2 are making comparisons within the base-10 place value system, solving problems with addition and subtraction within 1,000, and building foundations for multiplication.
 - (A) Students develop an understanding of the base-10 place value system and place value concepts. The students' understanding of base-10 place value includes ideas of counting in units and multiples of thousands, hundreds, tens, and ones and a grasp of number relationships, which students demonstrate in a variety of ways.
 - (B) Students identify situations in which addition and subtraction are useful to solve problems. Students develop a variety of strategies to use efficient, accurate, and generalizable methods to add and subtract multi-digit whole numbers.
 - (C) Students use the relationship between skip counting and equal groups of objects to represent the addition or subtraction of equivalent sets, which builds a strong foundation for multiplication and division.
- (b) Knowledge and skills.
- (1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
 - (A) apply mathematics to problems arising in everyday life, society, and the workplace;
 - (B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;
 - (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;
 - (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;

- (E) create and use representations to organize, record, and communicate mathematical ideas;
 - (F) analyze mathematical relationships to connect and communicate mathematical ideas; and
 - (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.
- (2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:
- (A) use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones;
 - (B) use standard, word, and expanded forms to represent numbers up to 1,200;
 - (C) generate a number that is greater than or less than a given whole number up to 1,200;
 - (D) use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols ($>$, $<$, or $=$);
 - (E) locate the position of a given whole number on an open number line; and
 - (F) name the whole number that corresponds to a specific point on a number line.
- (3) Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:
- (A) partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words;
 - (B) explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part;
 - (C) use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole; and
 - (D) identify examples and non-examples of halves, fourths, and eighths.
- (4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:
- (A) recall basic facts to add and subtract within 20 with automaticity;
 - (B) add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations;

- (C) solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms; and
 - (D) generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000.
- (5) Number and operations. The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:
- (A) determine the value of a collection of coins up to one dollar; and
 - (B) use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins.
- (6) Number and operations. The student applies mathematical process standards to connect repeated addition and subtraction to multiplication and division situations that involve equal groupings and shares. The student is expected to:
- (A) model, create, and describe contextual multiplication situations in which equivalent sets of concrete objects are joined; and
 - (B) model, create, and describe contextual division situations in which a set of concrete objects is separated into equivalent sets.
- (7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:
- (A) determine whether a number up to 40 is even or odd using pairings of objects to represent the number;
 - (B) use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200; and
 - (C) represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.
- (8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:
- (A) create two-dimensional shapes based on given attributes, including number of sides and vertices;
 - (B) classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language;

- (C) classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices;
 - (D) compose two-dimensional shapes and three-dimensional solids with given properties or attributes; and
 - (E) decompose two-dimensional shapes such as cutting out a square from a rectangle, dividing a shape in half, or partitioning a rectangle into identical triangles and identify the resulting geometric parts.
- (9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:
- (A) find the length of objects using concrete models for standard units of length;
 - (B) describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object;
 - (C) represent whole numbers as distances from any given location on a number line;
 - (D) determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes;
 - (E) determine a solution to a problem involving length, including estimating lengths;
 - (F) use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit; and
 - (G) read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.
- (10) Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:
- (A) explain that the length of a bar in a bar graph or the number of pictures in a pictograph represents the number of data points for a given category;
 - (B) organize a collection of data with up to four categories using pictographs and bar graphs with intervals of one or more;
 - (C) write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one; and
 - (D) draw conclusions and make predictions from information in a graph.
- (11) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:

- (A) calculate how money saved can accumulate into a larger amount over time;
 - (B) explain that saving is an alternative to spending;
 - (C) distinguish between a deposit and a withdrawal;
 - (D) identify examples of borrowing and distinguish between responsible and irresponsible borrowing;
 - (E) identify examples of lending and use concepts of benefits and costs to evaluate lending decisions; and
 - (F) differentiate between producers and consumers and calculate the cost to produce a simple item.
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§112.13. Science, Grade 2, Beginning with School Year 2010-2011.

(a) Introduction.

- (1) Science, as defined by the National Academy of Sciences, is the "use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process."
- (2) Recurring themes are pervasive in sciences, mathematics, and technology. These ideas transcend disciplinary boundaries and include patterns, cycles, systems, models, and change and constancy.
- (3) The study of elementary science includes planning and safely implementing classroom and outdoor investigations using scientific processes, including inquiry methods, analyzing information, making informed decisions, and using tools to collect and record information, while addressing the major concepts and vocabulary, in the context of physical, earth, and life sciences. Districts are encouraged to facilitate classroom and outdoor investigations for at least 60% of instructional time.
- (4) In Grade 2, careful observation and investigation are used to learn about the natural world and reveal patterns, changes, and cycles. Students should understand that certain types of questions can be answered by using observation and investigations and that the information gathered in these may change as new observations are made. As students participate in investigation, they develop the skills necessary to do science as well as develop new science concepts.
 - (A) Within the physical environment, students expand their understanding of the properties of objects such as shape, mass, temperature, and flexibility then use those properties to compare, classify, and then combine the objects to do something that they could not do before. Students manipulate objects to demonstrate a change in motion and position.

- (B) Within the natural environment, students will observe the properties of earth materials as well as predictable patterns that occur on Earth and in the sky. The students understand that those patterns are used to make choices in clothing, activities, and transportation.
 - (C) Within the living environment, students explore patterns, systems, and cycles by investigating characteristics of organisms, life cycles, and interactions among all the components within their habitat. Students examine how living organisms depend on each other and on their environment.
- (b) Knowledge and skills.
- (1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures. The student is expected to:
 - (A) identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately;
 - (B) describe the importance of safe practices; and
 - (C) identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal.
 - (2) Scientific investigation and reasoning. The student develops abilities necessary to do scientific inquiry in classroom and outdoor investigations. The student is expected to:
 - (A) ask questions about organisms, objects, and events during observations and investigations;
 - (B) plan and conduct descriptive investigations such as how organisms grow;
 - (C) collect data from observations using simple equipment such as hand lenses, primary balances, thermometers, and non-standard measurement tools;
 - (D) record and organize data using pictures, numbers, and words;
 - (E) communicate observations and justify explanations using student-generated data from simple descriptive investigations; and
 - (F) compare results of investigations with what students and scientists know about the world.
 - (3) Scientific investigation and reasoning. The student knows that information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions. The student is expected to:

- (A) identify and explain a problem in his/her own words and propose a task and solution for the problem such as lack of water in a habitat;
 - (B) make predictions based on observable patterns; and
 - (C) identify what a scientist is and explore what different scientists do.
- (4) Scientific investigation and reasoning. The student uses age-appropriate tools and models to investigate the natural world. The student is expected to:
- (A) collect, record, and compare information using tools, including computers, hand lenses, rulers, primary balances, plastic beakers, magnets, collecting nets, notebooks, and safety goggles; timing devices, including clocks and stopwatches; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums; and
 - (B) measure and compare organisms and objects using non-standard units that approximate metric units.
- (5) Matter and energy. The student knows that matter has physical properties and those properties determine how it is described, classified, changed, and used. The student is expected to:
- (A) classify matter by physical properties, including shape, relative mass, relative temperature, texture, flexibility, and whether material is a solid or liquid;
 - (B) compare changes in materials caused by heating and cooling;
 - (C) demonstrate that things can be done to materials to change their physical properties such as cutting, folding, sanding, and melting; and
 - (D) combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties.
- (6) Force, motion, and energy. The student knows that forces cause change and energy exists in many forms. The student is expected to:
- (A) investigate the effects on an object by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter;
 - (B) observe and identify how magnets are used in everyday life;

- (C) trace the changes in the position of an object over time such as a cup rolling on the floor and a car rolling down a ramp; and
 - (D) compare patterns of movement of objects such as sliding, rolling, and spinning.
- (7) Earth and space. The student knows that the natural world includes earth materials. The student is expected to:
- (A) observe and describe rocks by size, texture, and color;
 - (B) identify and compare the properties of natural sources of freshwater and saltwater; and
 - (C) distinguish between natural and manmade resources.
- (8) Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:
- (A) measure, record, and graph weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data;
 - (B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation;
 - (C) explore the processes in the water cycle, including evaporation, condensation, and precipitation, as connected to weather conditions; and
 - (D) observe, describe, and record patterns of objects in the sky, including the appearance of the Moon.
- (9) Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:
- (A) identify the basic needs of plants and animals;
 - (B) identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things; and
 - (C) compare and give examples of the ways living organisms depend on each other and on their environments such as food chains within a garden, park, beach, lake, and wooded area.
- (10) Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:

- (A) observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs such as fins help fish move and balance in the water;
- (B) observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant; and
- (C) investigate and record some of the unique stages that insects undergo during their life cycle.

§113.13. Social Studies, Grade 2, Beginning with School Year 2011-2012.

- (a) Introduction.
 - (1) In Grade 2, students focus on a study of their local community by examining the impact of significant individuals and events on the history of the community as well as on the state and nation. Students begin to develop the concepts of time and chronology. The relationship between the physical environment and human activities is introduced as are the concepts of consumers and producers. Students identify functions of government as well as services provided by the local government. Students continue to acquire knowledge of customs, symbols, and celebrations that represent American beliefs and principles. Students identify the significance of works of art in the local community and explain how technological innovations have changed transportation and communication. Students communicate what they have learned in written, oral, and visual forms.
 - (2) To support the teaching of the essential knowledge and skills, the use of a variety of rich material such as nonfiction texts, primary sources, biographies, folklore, poetry, songs, and artworks is encouraged. Motivating resources are available from museums, historical sites, presidential libraries, online tours, and local and state preservation societies.
 - (3) The eight strands of the essential knowledge and skills for social studies are intended to be integrated for instructional purposes. Skills listed in the social studies skills strand in subsection (b) of this section should be incorporated into the teaching of all essential knowledge and skills for social studies. A greater depth of understanding of complex content material can be attained when integrated social studies content from the various disciplines and critical-thinking skills are taught together. Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
 - (4) Students identify the role of the U.S. free enterprise system within the parameters of this course and understand that this system may also be referenced as capitalism or the free market system.
 - (5) Throughout social studies in Kindergarten-Grade 12, students build a foundation in history; geography; economics; government; citizenship; culture; science, technology, and society; and social studies skills. The content, as appropriate for the grade level or course, enables students to understand the importance of patriotism, function in a free enterprise society, and appreciate the basic democratic values of our state and nation as referenced in the Texas Education Code (TEC), §28.002(h).

- (6) Students understand that a constitutional republic is a representative form of government whose representatives derive their authority from the consent of the governed, serve for an established tenure, and are sworn to uphold the constitution.
 - (7) Students must demonstrate learning performance related to any federal and state mandates regarding classroom instruction. Although Grade 2 is not required to participate in Celebrate Freedom Week, according to the TEC, §29.907, primary grades lay the foundation for subsequent learning. As a result, Grade 2 Texas essential knowledge and skills include standards related to this patriotic observance.
 - (8) Students identify and discuss how the actions of U.S. citizens and the local, state, and federal governments have either met or failed to meet the ideals espoused in the founding documents.
- (b) Knowledge and skills.
- (1) History. The student understands the historical significance of landmarks and celebrations in the community, state, and nation. The student is expected to:
 - (A) explain the significance of various community, state, and national celebrations such as Veterans Day, Memorial Day, Independence Day, and Thanksgiving; and
 - (B) identify and explain the significance of various community, state, and national landmarks such as monuments and government buildings.
 - (2) History. The student understands the concepts of time and chronology. The student is expected to:
 - (A) describe the order of events by using designations of time periods such as historical and present times;
 - (B) apply vocabulary related to chronology, including past, present, and future; and
 - (C) create and interpret timelines for events in the past and present.
 - (3) History. The student understands how various sources provide information about the past and present. The student is expected to:
 - (A) identify several sources of information about a given period or event such as reference materials, biographies, newspapers, and electronic sources; and
 - (B) describe various evidence of the same time period using primary sources such as photographs, journals, and interviews.
 - (4) History. The student understands how historical figures, patriots, and good citizens helped shape the community, state, and nation. The student is expected to:
 - (A) identify contributions of historical figures, including Thurgood Marshall, Irma Rangel, John Hancock, and Theodore Roosevelt, who have influenced the community, state, and nation;

- (B) identify historical figures such as Amelia Earhart, W. E. B. DuBois, Robert Fulton, and George Washington Carver who have exhibited individualism and inventiveness; and
 - (C) explain how people and events have influenced local community history.
- (5) Geography. The student uses simple geographic tools such as maps and globes. The student is expected to:
- (A) interpret information on maps and globes using basic map elements such as title, orientation (north, south, east, west), and legend/map keys; and
 - (B) create maps to show places and routes within the home, school, and community.
- (6) Geography. The student understands the locations and characteristics of places and regions in the community, state, and nation. The student is expected to:
- (A) identify major landforms and bodies of water, including each of the continents and each of the oceans, on maps and globes;
 - (B) locate places of significance, including the local community, Texas, the state capital, the U.S. capital, major cities in Texas, the coast of Texas, Canada, Mexico, and the United States on maps and globes; and
 - (C) examine information from various sources about places and regions.
- (7) Geography. The student understands how physical characteristics of places and regions affect people's activities and settlement patterns. The student is expected to:
- (A) describe how weather patterns and seasonal patterns affect activities and settlement patterns;
 - (B) describe how natural resources and natural hazards affect activities and settlement patterns;
 - (C) explain how people depend on the physical environment and natural resources to meet basic needs; and
 - (D) identify the characteristics of different communities, including urban, suburban, and rural, and how they affect activities and settlement patterns.
- (8) Geography. The student understands how humans use and modify the physical environment. The student is expected to:
- (A) identify ways in which people have modified the physical environment such as building roads, clearing land for urban development and agricultural use, and drilling for oil;
 - (B) identify positive and negative consequences of human modification of the physical environment such as the use of irrigation to improve crop yields; and

- (C) identify ways people can conserve and replenish natural resources.
- (9) Economics. The student understands the value of work. The student is expected to:
- (A) explain how work provides income to purchase goods and services; and
 - (B) explain the choices people in the U.S. free enterprise system can make about earning, spending, and saving money and where to live and work.
- (10) Economics. The student understands the roles of producers and consumers in the production of goods and services. The student is expected to:
- (A) distinguish between producing and consuming;
 - (B) identify ways in which people are both producers and consumers; and
 - (C) examine the development of a product from a natural resource to a finished product.
- (11) Government. The student understands the purpose of governments. The student is expected to:
- (A) identify functions of governments such as establishing order, providing security, and managing conflict;
 - (B) identify governmental services in the community such as police and fire protection, libraries, schools, and parks and explain their value to the community; and
 - (C) describe how governments tax citizens to pay for services.
- (12) Government. The student understands the role of public officials. The student is expected to:
- (A) name current public officials, including mayor, governor, and president;
 - (B) compare the roles of public officials, including mayor, governor, and president;
 - (C) identify ways that public officials are selected, including election and appointment to office; and
 - (D) identify how citizens participate in their own governance through staying informed of what public officials are doing, providing input to them, and volunteering to participate in government functions.
- (13) Citizenship. The student understands characteristics of good citizenship as exemplified by historical figures and other individuals. The student is expected to:
- (A) identify characteristics of good citizenship, including truthfulness, justice, equality, respect for oneself and others, responsibility in daily life, and participation in government by educating oneself about the issues, respectfully holding public officials to their word, and voting;

- (B) identify historical figures such as Paul Revere, Abigail Adams, World War II Women Airforce Service Pilots (WASPs) and Navajo Code Talkers, and Sojourner Truth who have exemplified good citizenship;
 - (C) identify other individuals who exemplify good citizenship; and
 - (D) identify ways to actively practice good citizenship, including involvement in community service.
- (14) Citizenship. The student identifies customs, symbols, and celebrations that represent American beliefs and principles that contribute to our national identity. The student is expected to:
- (A) recite the Pledge of Allegiance to the United States Flag and the Pledge to the Texas Flag;
 - (B) identify selected patriotic songs, including "The Star Spangled Banner" and "America the Beautiful";
 - (C) identify selected symbols such as state and national birds and flowers and patriotic symbols such as the U.S. and Texas flags and Uncle Sam; and
 - (D) identify how selected customs, symbols, and celebrations reflect an American love of individualism, inventiveness, and freedom.
- (15) Culture. The student understands the significance of works of art in the local community. The student is expected to:
- (A) identify selected stories, poems, statues, paintings, and other examples of the local cultural heritage; and
 - (B) explain the significance of selected stories, poems, statues, paintings, and other examples of the local cultural heritage.
- (16) Culture. The student understands ethnic and/or cultural celebrations. The student is expected to:
- (A) identify the significance of various ethnic and/or cultural celebrations; and
 - (B) compare ethnic and/or cultural celebrations.
- (17) Science, technology, and society. The student understands how science and technology have affected life, past and present. The student is expected to:
- (A) describe how science and technology change communication, transportation, and recreation; and
 - (B) explain how science and technology change the ways in which people meet basic needs.

- (18) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including electronic technology. The student is expected to:
- (A) obtain information about a topic using a variety of valid oral sources such as conversations, interviews, and music;
 - (B) obtain information about a topic using a variety of valid visual sources such as pictures, maps, electronic sources, literature, reference sources, and artifacts;
 - (C) use various parts of a source, including the table of contents, glossary, and index, as well as keyword Internet searches to locate information;
 - (D) sequence and categorize information; and
 - (E) interpret oral, visual, and print material by identifying the main idea, predicting, and comparing and contrasting.
- (19) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
- (A) express ideas orally based on knowledge and experiences; and
 - (B) create written and visual material such as stories, poems, maps, and graphic organizers to express ideas.
- (20) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings. The student is expected to:
- (A) use a problem-solving process to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution; and
 - (B) use a decision-making process to identify a situation that requires a decision, gather information, generate options, predict outcomes, take action to implement a decision, and reflect on the effectiveness of that decision.

§114.4. Languages Other Than English, Elementary, Adopted 2014.

(a) According to the National Standards for Foreign Language Learning, advanced level language proficiency is necessary for college and career readiness. To that end, students should have uninterrupted, consistent access to early standards-based learning experiences in languages other than English. School districts are strongly encouraged to offer languages other than English in the elementary grades in immersion or Foreign Language in Elementary Schools (FLES) settings with consistent and frequent exposure. For districts that offer languages in elementary school, the expected student outcomes are the same as those designated at levels I-IV in Subchapter C of this chapter (relating to Texas Essential Knowledge and Skills for Languages Other Than English).

(b) Districts may offer a level of a language in a variety of scheduling arrangements that may extend or reduce the traditional schedule when careful consideration is given to the instructional time available on a campus and the language ability, access to programs, and motivation of students.

§115.4. Health Education, Grade 2.

(a) Introduction

- (1) In health education, students acquire the health information and skills necessary to become healthy adults and learn about behaviors in which they should and should not participate. To achieve that goal, students will understand the following: students should first seek guidance in the area of health from their parents; personal behaviors can increase or reduce health risks throughout the lifespan; health is influenced by a variety of factors; students can recognize and utilize health information and products; and personal/interpersonal skills are needed to promote individual, family, and community health.
- (2) In Grade 2, students learn age-appropriate skills to help them stay healthy and safe. Students are taught, in a basic way, that there are external factors that influence our health, and that the students can take responsibility for protecting their health. Students are taught ways to communicate in a healthy way with friends, families, and classmates.

(b) Knowledge and skills.

- (1) Health behaviors. The student understands that personal health decisions and behaviors affect health throughout the life span. The student is expected to:
 - (A) explain actions an individual can take when not feeling well;
 - (B) describe and demonstrate personal health habits such as brushing and flossing teeth and exercise;
 - (C) identify food groups and describe the effects of eating too much sugar and fat such as knowing that sugar causes dental cavities;
 - (D) identify healthy and unhealthy food choices such as a healthy breakfast and snacks and fast food choices;
 - (E) define stress and describe healthy behaviors that reduce stress such as exercise;
 - (F) describe the importance of individual health maintenance activities such as regular medical and dental checkups; and
 - (G) describe how a healthy diet can help protect the body against some diseases.
- (2) Health behaviors. The student understands that safe, unsafe, and/or harmful behaviors result in positive and negative consequences throughout the life span. The student is expected to:
 - (A) identify and describe the harmful effects of alcohol, tobacco, and other drugs on the body;

- (B) identify ways to avoid deliberate and accidental injuries;
 - (C) explain the need to use protective equipment when engaging in certain recreational activities such as skateboarding, rollerblading, cycling, and swimming;
 - (D) explain the importance of avoiding dangerous substances;
 - (E) explain ways to avoid weapons and report the presence of weapons to an adult; and
 - (F) identify a trusted adult such as a parent, teacher, or law enforcement officer and identify ways to react when approached and made to feel uncomfortable or unsafe by another person/adult.
- (3) Health information. The student understands the basic structures and functions of the human body and how they relate to personal health throughout the life span. The student is expected to:
- (A) describe behaviors that protect the body structure and organs such as wearing a seat belt and wearing a bicycle helmet;
 - (B) identify the major organs of the body such as the heart, lungs, and brain and describe their primary function; and
 - (C) identify the major systems of the body.
- (4) Health information. The student understands the difference between sickness and health in persons of all ages. The student is expected to:
- (A) explain ways in which germs are transmitted, methods of preventing the spread of germs, and the importance of immunization;
 - (B) identify causes of disease other than germs such as allergies and heart disease;
 - (C) explain how the body provides protection from disease; and
 - (D) apply practices to control spread of germs in daily life such as hand washing and skin care.
- (5) Health information. The student recognizes factors that influence the health of an individual. The student is expected to:
- (A) identify hazards in the environment that affect health and safety such as having loaded guns in the home and drinking untreated water;
 - (B) describe strategies for protecting the environment and the relationship between the environment and individual health such as air pollution and ultra-violet rays; and
 - (C) identify personal responsibilities as a family member in promoting and practicing health behaviors.
- (6) Health information. The student understands how to recognize health information. The student is expected to:
- (A) identify people who can provide health information; and
 - (B) identify various media that provide health information.

- (7) Influencing factors. The student recognizes the influence of media and technology on personal health. The student is expected to:
- (A) describe how the media can influence an individual's health choices such as television ads for fast foods and breakfast cereals; and
 - (B) discuss how personal health care products have been improved by technology such as sunblock and safety equipment.
- (8) Influencing factors. The student understands how relationships influence personal health. The student is expected to:
- (A) describe how friends can influence a person's health; and
 - (B) recognize unsafe requests made by friends such as playing in the street.
- (9) Personal/interpersonal skills. The student comprehends the skills necessary for building and maintaining healthy relationships. The student is expected to:
- (A) identify characteristics needed to be a responsible family member or friend;
 - (B) list and demonstrate good listening skills; and
 - (C) demonstrate refusal skills.
- (10) Personal/interpersonal skills. The student understands healthy and appropriate ways to communicate consideration and respect for self, family, friends, and others. The student is expected to:
- (A) describe how to effectively communicate;
 - (B) express needs, wants, and emotions in healthy ways;
 - (C) explain the benefits of practicing self-control;
 - (D) describe how to effectively respond to bullying of oneself or others; and
 - (E) explain the benefits of treating friends, teachers, family members, and peers with respect.
- (11) Personal/interpersonal skills. The student demonstrates critical-thinking, decision-making, goal-setting and problem-solving skills for making health-promoting decisions. The student is expected to:
- (A) explain steps in the decision-making process and the importance of following the steps;
 - (B) describe how personal-health decisions affect self and others;
 - (C) list the steps and describe the importance of task completion and goal setting; and
 - (D) explain why obtaining help, especially from parents/trusted adults, can be helpful when making decisions about personal health.
- (12) Personal/interpersonal skills. The student understands that bullying behaviors result in negative consequences throughout the life span. The student is expected to:
- (A) identify negative consequences that result from bullying behaviors; and
 - (B) identify ways to respond when made to feel uncomfortable or unsafe.

§116.4. Physical Education, Grade 2.

- (a) Introduction.
- (1) In Physical Education, students acquire the knowledge and skills for movement that provide the foundation for enjoyment, continued social development through physical activity, and access to a physically-active lifestyle. The student exhibits a physically-active lifestyle and understands the relationship between physical activity and health throughout the lifespan.
 - (2) Second grade students learn to demonstrate key elements of fundamental movement skills and mature form in locomotive skills. Students learn to describe the function of the heart, lungs, and bones as they relate to movement. Students are introduced to basic concepts of health promotion such as the relationship between a physically-active lifestyle and the health of the heart. Students learn to work in a group and demonstrate the basic elements of socially responsible conflict resolution.
- (b) Knowledge and skills.
- (1) Movement. The student demonstrates competency in fundamental movement patterns and proficiency in a few specialized movement forms. The student is expected to:
 - (A) travel independently in a large group while safely and quickly changing speed and direction;
 - (B) demonstrate skills of chasing, fleeing, and dodging to avoid or catch others;
 - (C) combine shapes, levels, and pathways into simple sequences;
 - (D) demonstrate mature form in walking, hopping, and skipping;
 - (E) demonstrate balance in symmetrical and non-symmetrical shapes from different basis of support;
 - (F) demonstrate a variety of relationships in dynamic movement situations such as under, over, behind, next to, through, right, left, up, or down;
 - (G) demonstrate simple stunts that exhibit personal agility such as jumping-one and two foot takeoffs and landing with good control;
 - (H) demonstrate smooth transition from one body part to the next in rolling activities such as side roll, log roll, balance/curl, and roll/balance in a new position;
 - (I) demonstrate control weight transfers such as feet to hands with controlled landing and feet to back;
 - (J) demonstrate the ability to mirror a partner;

- (K) walk in time to a 4/4 underlying beat;
 - (L) perform rhythmical sequences such as simple folk, creative, and ribbon routines;
 - (M) jump a self-turned rope repeatedly; and
 - (N) demonstrate on cue key elements of hand dribble, foot dribble, kick and strike such as striking balloon or ball with hand.
- (2) Movement. The student applies movement concepts and principles to the learning and development of motor skills. The student is expected to:
- (A) recognize that attention to the feeling of movement is important in motor skill development; and
 - (B) identify similar movement concepts and terms in a variety of skills such as straddle position, ready position, and bending knees to absorb force.
- (3) Physical activity and health. The student exhibits a health enhancing, physically-active lifestyle that improves health and provides opportunities for enjoyment and challenge. The student is expected to:
- (A) describe and select physical activities that provide opportunities for enjoyment and challenge;
 - (B) participate in moderate to vigorous physical activities on a daily basis that cause increased heart rate, breathing rate, and perspiration;
 - (C) participate in appropriate exercises for flexibility in shoulders, legs, and trunk; and
 - (D) lift and support his/her weight in selected activities that develop muscular strength and endurance of the arms, shoulders, abdomen, back, and legs such as hanging, hopping, and jumping.
- (4) Physical activity and health. The student knows the benefits from involvement in daily physical activity and factors that affect physical performance. The student is expected to:
- (A) identify how regular physical activity strengthens the heart, lungs, and muscular system;
 - (B) describe how the blood carries oxygen and nutrients through the body;
 - (C) identify foods that enhance a healthy heart;
 - (D) explain the need for foods as a source of nutrients that provide energy for physical activity;
 - (E) describe the negative effects of smoking on the lungs and the ability to exercise; and
 - (F) describe the need for rest and sleep in caring for the body.

- (5) Physical activity and health. The student knows and applies safety practices associated with physical activities. The student is expected to:
- (A) use equipment and space safely and properly;
 - (B) select and use appropriate protective equipment in preventing injuries such as helmets, elbow/knee pads, wrist guards, proper shoes, and clothing;
 - (C) list the effects the sun has on the body and describe protective measures such as sunscreen, hat, and long sleeves;
 - (D) list water safety rules and describe their importance;
 - (E) identify safe cycling and road practices; and
 - (F) describe appropriate reactions to emergency situations common to physical activity settings such as universal safety precautions and dialing 911.
- (6) Social development. The student understands basic components such as strategies and rules of structured physical activities including, but not limited to, games, sports, dance, and gymnastics. The student is expected to:
- (A) identify goals to be accomplished during simple games such as not getting tagged; and
 - (B) identify strategies in simple games and activities such as dodging to avoid being tagged.
- (7) Social development. The student develops positive self-management and social skills needed to work independently and with others in physical activity settings. The student is expected to:
- (A) display good sportsmanship; and
 - (B) treat others with respect during play.

§117.108. Art, Grade 2, Adopted 2013.

- (a) Introduction.
- (1) The fine arts incorporate the study of dance, music, theatre, and the visual arts to offer unique experiences and empower students to explore realities, relationships, and ideas. These disciplines engage and motivate all students through active learning, critical thinking, and innovative problem solving. The fine arts develop cognitive functioning and increase student academic achievement, higher-order thinking, communication, and collaboration skills, making the fine arts applicable to college readiness, career opportunities, workplace environments, social skills, and everyday life. Students develop aesthetic and cultural awareness through exploration, leading to creative expression. Creativity, encouraged through the study of the fine arts, is essential to nurture and develop the whole child.

- (2) Four basic strands--foundations: observation and perception; creative expression; historical and cultural relevance; and critical evaluation and response--provide broad, unifying structures for organizing the knowledge and skills students are expected to acquire. Each strand is of equal value and may be presented in any order throughout the year. Students rely on personal observations and perceptions, which are developed through increasing visual literacy and sensitivity to surroundings, communities, memories, imaginings, and life experiences, as sources for thinking about, planning, and creating original artworks. Students communicate their thoughts and ideas with innovation and creativity. Through art, students challenge their imaginations, foster critical thinking, collaborate with others, and build reflective skills. While exercising meaningful problem-solving skills, students develop the lifelong ability to make informed judgments.
- (3) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(b) Knowledge and skills.

- (1) Foundations: observation and perception. The student develops and expands visual literacy skills using critical thinking, imagination, and the senses to observe and explore the world by learning about, understanding, and applying the elements of art, principles of design, and expressive qualities. The student uses what the student sees, knows, and has experienced as sources for examining, understanding, and creating artworks. The student is expected to:
- (A) compare and contrast variations in objects and subjects from the environment using the senses; and
 - (B) identify the elements of art, including line, shape, color, texture, form, and space, and the principles of design, including emphasis, repetition/pattern, movement/rhythm, and balance.
- (2) Creative expression. The student communicates ideas through original artworks using a variety of media with appropriate skills. The student expresses thoughts and ideas creatively while challenging the imagination, fostering reflective thinking, and developing disciplined effort and progressive problem-solving skills. The student is expected to:
- (A) express ideas and feelings in personal artworks using a variety of lines, shapes, colors, textures, forms, and space;
 - (B) create compositions using the elements of art and principles of design; and
 - (C) identify and practice skills necessary for producing drawings, paintings, prints, constructions, and sculpture, including modeled forms, using a variety of materials.
- (3) Historical and cultural relevance. The student demonstrates an understanding of art history and culture by analyzing artistic styles, historical periods, and a variety of cultures. The student develops global awareness and respect for the traditions and contributions of diverse cultures. The student is expected to:
- (A) interpret stories, content, and meanings in a variety of artworks;

- (B) examine historical and contemporary artworks created by men and women, making connections to various cultures;
 - (C) analyze how art affects everyday life and is connected to jobs in art and design; and
 - (D) relate visual art concepts to other disciplines.
- (4) Critical evaluation and response. The student responds to and analyzes artworks of self and others, contributing to the development of lifelong skills of making informed judgments and reasoned evaluations. The student is expected to:
- (A) support reasons for preferences in personal artworks;
 - (B) compare and contrast ideas found in collections such as real or virtual art museums, galleries, portfolios, or exhibitions using original artworks created by artists or peers; and
 - (C) compile collections of artwork such as physical artwork, electronic images, sketchbooks, or portfolios for the purposes of self evaluations or exhibitions.

§117.109. Music, Grade 2, Adopted 2013.

- (a) Introduction.
- (1) The fine arts incorporate the study of dance, music, theatre, and the visual arts to offer unique experiences and empower students to explore realities, relationships, and ideas. These disciplines engage and motivate all students through active learning, critical thinking, and innovative problem solving. The fine arts develop cognitive functioning and increase student academic achievement, higher-order thinking, communication, and collaboration skills, making the fine arts applicable to college readiness, career opportunities, workplace environments, social skills, and everyday life. Students develop aesthetic and cultural awareness through exploration, leading to creative expression. Creativity, encouraged through the study of the fine arts, is essential to nurture and develop the whole child.
 - (2) Four basic strands--foundations: music literacy; creative expression; historical and cultural relevance; and critical evaluation and response--provide broad, unifying structures for organizing the knowledge and skills students are expected to acquire. The foundation of music literacy is fostered through reading, writing, reproducing, and creating music, thus developing a student's intellect. Through creative expression, students apply their music literacy and the critical-thinking skills of music to sing, play, read, write, and/or move. By experiencing musical periods and styles, students will understand the relevance of music to history, culture, and the world, including the relationship of music to other academic disciplines and the vocational possibilities offered. Through critical listening, students analyze, evaluate, and respond to music, developing criteria for making critical judgments and informed choices.

- (3) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (b) Knowledge and skills.
- (1) Foundations: music literacy. The student describes and analyzes musical sound. The student is expected to:
 - (A) identify choral voices, including unison versus ensemble;
 - (B) identify instruments visually and aurally;
 - (C) use known music terminology to explain musical examples of tempo, including presto, moderato, and andante, and dynamics, including fortissimo and pianissimo; and
 - (D) identify and label simple small forms such as aaba and abac.
 - (2) Foundations: music literacy. The student reads, writes, and reproduces music notation. Technology and other tools may be used to read, write, and reproduce musical examples. The student is expected to:
 - (A) read, write, and reproduce rhythmic patterns using standard notation in 2/4 meter, including half note/half rest;
 - (B) read, write, and reproduce pentatonic melodic patterns using standard staff notation; and
 - (C) read, write, and reproduce basic music terminology, including allegro/largo and forte/piano.
 - (3) Creative expression. The student performs a varied repertoire of developmentally appropriate music in informal or formal settings. The student is expected to:
 - (A) sing tunefully or play classroom instruments, including rhythmic and melodic patterns, independently or in groups;
 - (B) sing songs or play classroom instruments from diverse cultures and styles, independently or in groups;
 - (C) move alone or with others to a varied repertoire of music using gross and fine locomotor and non-locomotor movement;
 - (D) perform simple part work, including rhythmic ostinato, and vocal exploration such as singing, speaking, and chanting; and
 - (E) perform music using tempo, including presto, moderato, and andante, and dynamics, including fortissimo and pianissimo.

- (4) Creative expression. The student creates and explores new musical ideas. The student is expected to:
- (A) create rhythmic phrases using known rhythms;
 - (B) create melodic phrases using known pitches; and
 - (C) explore new musical ideas in phrases using singing voice and classroom instruments.
- (5) Historical and cultural relevance. The student examines music in relation to history and cultures. The student is expected to:
- (A) sing songs and play musical games, including patriotic, folk, and seasonal music;
 - (B) examine short musical excerpts from various periods or times in history and diverse and local cultures; and
 - (C) identify simple interdisciplinary concepts relating to music.
- (6) Critical evaluation and response. The student listens to, responds to, and evaluates music and musical performances. The student is expected to:
- (A) begin to practice appropriate audience behavior during live or recorded performances;
 - (B) recognize known rhythmic and melodic elements in simple aural examples using known terminology;
 - (C) distinguish between rhythms, higher/lower pitches, louder/softer dynamics, faster/slower tempos, and simple patterns in musical performances; and
 - (D) respond verbally or through movement to short musical examples.

§117.110. Theatre, Grade 2, Adopted 2013.

- (a) Introduction.
- (1) The fine arts incorporate the study of dance, music, theatre, and the visual arts to offer unique experiences and empower students to explore realities, relationships, and ideas. These disciplines engage and motivate all students through active learning, critical thinking, and innovative problem solving. The fine arts develop cognitive functioning and increase student academic achievement, higher-order thinking, communication, and collaboration skills, making the fine arts applicable to college readiness, career opportunities, workplace environments, social skills, and everyday life. Students develop aesthetic and cultural awareness through exploration, leading to creative expression. Creativity, encouraged through the study of the fine arts, is essential to nurture and develop the whole child.

- (2) Four basic strands--foundations: inquiry and understanding; creative expression; historical and cultural relevance; and critical evaluation and response--provide broad, unifying structures for organizing knowledge and skills students are expected to acquire. Through the foundations: inquiry and understanding strand, students develop a perception of self, human relationships, and the world using elements of drama and conventions of theatre. Through the creative expression strand, students communicate in a dramatic form, engage in artistic thinking, build positive self-concepts, relate interpersonally, and integrate knowledge with other content areas in a relevant manner. Through the historical and cultural relevance strand, students increase their understanding of heritage and traditions in theatre and the diversity of world cultures as expressed in theatre. Through the critical evaluation and response strand, students engage in inquiry and dialogue, accept constructive criticism, revise personal views to promote creative and critical thinking, and develop the ability to appreciate and evaluate live theatre.
- (3) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (b) Knowledge and skills.
- (1) Foundations: inquiry and understanding. The student develops concepts about self, human relationships, and the environment using elements of drama and conventions of theatre. The student is expected to:
- (A) react to sensory experiences such as sight or sound through dramatic play;
 - (B) expand spatial awareness in dramatic play using expressive and rhythmic movement;
 - (C) participate in dramatic play using actions, sounds, and dialogue; and
 - (D) role play, imitate, and recreate dialogue.
- (2) Creative expression: performance. The student interprets characters using the voice and body expressively and creates dramatizations. The student is expected to:
- (A) demonstrate safe use of movement and voice;
 - (B) role play in real life and imaginative situations through narrative pantomime, dramatic play, and story dramatization;
 - (C) create dramatizations of limited-action stories using simple pantomime or puppetry; and
 - (D) dramatize poems and songs using simple pantomime or puppetry.
- (3) Creative expression: production. The student applies design, directing, and theatre production concepts and skills. The student is expected to:

- (A) select aspects of the environment such as location, climate, or time for use in dramatic play;
 - (B) adapt the environment for dramatic play using common objects such as tables or chairs;
 - (C) plan dramatic play; and
 - (D) cooperate and interact with others in dramatic play.
- (4) Historical and cultural relevance. The student relates theatre to history, society, and culture. The student is expected to:
- (A) imitate life experiences from school and community cultures in dramatic play; and
 - (B) explore diverse cultural and historical experiences through fables, myths, or fairytales in dramatic play.
- (5) Critical evaluation and response. The student responds to and evaluates theatre and theatrical performances. The student is expected to:
- (A) discuss, practice, and display appropriate audience behavior;
 - (B) react to and discuss dramatic activities; and
 - (C) integrate music, creative movement, and visual components in dramatic play.

§126.6. Technology Applications, Kindergarten-Grade 2, Beginning with School Year 2012-2013.

- (a) Introduction.
- (1) The technology applications curriculum has six strands based on the National Educational Technology Standards for Students (NETS•S) and performance indicators developed by the International Society for Technology in Education (ISTE): creativity and innovation; communication and collaboration; research and information fluency; critical thinking, problem solving, and decision making; digital citizenship; and technology operations and concepts.
 - (2) Through the study of the six strands in technology applications, students use creative thinking and innovative processes to construct knowledge and develop products. Students communicate and collaborate both locally and globally to reinforce and promote learning. Research and information fluency includes the acquisition and evaluation of digital content. Students develop critical-thinking, problem-solving, and decision-making skills by collecting, analyzing, and reporting digital information. Students practice digital citizenship by behaving responsibly while using technology tools and resources. Through the study of technology operations and concepts, students learn technology related terms, concepts, and data input strategies.

- (3) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (b) Knowledge and skills.
- (1) Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to:
- (A) apply prior knowledge to develop new ideas, products, and processes;
 - (B) create original products using a variety of resources;
 - (C) explore virtual environments, simulations, models, and programming languages to enhance learning;
 - (D) create and execute steps to accomplish a task; and
 - (E) evaluate and modify steps to accomplish a task.
- (2) Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to:
- (A) use communication tools that allow for anytime, anywhere access to interact, collaborate, or publish with peers locally and globally;
 - (B) participate in digital environments to develop cultural understanding by interacting with learners of multiple cultures;
 - (C) format digital information, including font attributes, color, white space, graphics, and animation, for a defined audience and communication medium; and
 - (D) select, store, and deliver products using a variety of media, formats, devices, and virtual environments.
- (3) Research and information fluency. The student acquires and evaluates digital content. The student is expected to:
- (A) use search strategies to access information to guide inquiry;
 - (B) use research skills to build a knowledge base regarding a topic, task, or assignment; and
 - (C) evaluate the usefulness of acquired digital content.
- (4) Critical thinking, problem solving, and decision making. The student applies critical-thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to:

- (A) identify what is known and unknown and what needs to be known regarding a problem and explain the steps to solve the problem;
 - (B) evaluate the appropriateness of a digital tool to achieve the desired product;
 - (C) evaluate products prior to final submission; and
 - (D) collect, analyze, and represent data using tools such as word processing, spreadsheets, graphic organizers, charts, multimedia, simulations, models, and programming languages.
- (5) Digital citizenship. The student practices safe, responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to:
- (A) adhere to acceptable use policies reflecting appropriate behavior in a digital environment;
 - (B) comply with acceptable digital safety rules, fair use guidelines, and copyright laws; and
 - (C) practice the responsible use of digital information regarding intellectual property, including software, text, images, audio, and video.
- (6) Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to:
- (A) use appropriate terminology regarding basic hardware, software applications, programs, networking, virtual environments, and emerging technologies;
 - (B) use appropriate digital tools and resources for storage, access, file management, collaboration, and designing solutions to problems;
 - (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files;
 - (D) use a variety of input, output, and storage devices;
 - (E) use proper keyboarding techniques such as ergonomically correct hand and body positions appropriate for Kindergarten-Grade 2 learning;
 - (F) demonstrate keyboarding techniques for operating the alphabetic, numeric, punctuation, and symbol keys appropriate for Kindergarten-Grade 2 learning; and
 - (G) use the help feature online and in applications.