Texas Essential Knowledge and Skills for Grade 5

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§110.7. English Language Arts and Reading, Grade 5, Adopted 2017.

(a) Introduction.

(1) The English language arts and reading Texas Essential Knowledge and Skills (TEKS) embody the interconnected nature of listening, speaking, reading, writing, and thinking through the seven integrated strands of developing and sustaining foundational language skills; comprehension; response; multiple genres; author's purpose and craft; composition; and inquiry and research. The strands focus on academic oracy (proficiency in oral expression and comprehension), authentic reading, and reflective writing to ensure a literate Texas. The strands are integrated and progressive with students continuing to develop knowledge and skills with increased complexity and nuance in order to think critically and adapt to the ever-evolving nature of language and literacy.

(2) The seven strands of the essential knowledge and skills for English language arts and reading are intended to be integrated for instructional purposes and are recursive in nature. Strands include the four domains of language (listening, speaking, reading, writing) and their application in order to accelerate the acquisition of language skills so that students develop high levels of social and academic language proficiency. Although some strands may require more instructional time, each strand is of equal value, may be presented in any order, and should be integrated throughout the year. It is important to note that encoding (spelling) and decoding (reading) are reciprocal skills. Decoding is internalized when tactile and kinesthetic opportunities (encoding) are provided. Additionally, students should engage in academic conversations, write, read, and be read to on a daily basis with opportunities for cross-curricular content and student choice.

(3) Text complexity increases with challenging vocabulary, sophisticated sentence structures, nuanced text features, cognitively demanding content, and subtle relationships among ideas (Texas Education Agency, *STAAR Performance Level Descriptors*, 2013). As skills and knowledge are obtained in each of the seven strands, students will continue to apply earlier standards with greater depth to increasingly complex texts in multiple genres as they become self-directed, critical learners who work collaboratively while continuously using metacognitive skills.

(4) English language learners (ELLs) are expected to meet standards in a second language; however, their proficiency in English influences the ability to meet these standards. To demonstrate this knowledge throughout the stages of English language acquisition, comprehension of text requires additional scaffolds such as adapted text, translations, native language support, cognates, summaries, pictures, realia, glossaries, bilingual dictionaries, thesauri, and other modes of comprehensible input. ELLs can and should be encouraged to use knowledge of their first

language to enhance vocabulary development; vocabulary needs to be in the context of connected discourse so that it is meaningful. Strategic use of the student's first language is important to ensure linguistic, affective, cognitive, and academic development in English.

(5) Current research stresses the importance of effectively integrating second language acquisition with quality content area education in order to ensure that ELLs acquire social and academic language proficiency in English, learn the knowledge and skills, and reach their full academic potential. Instruction must be linguistically accommodated in accordance with the English Language Proficiency Standards (ELPS) and the student's English language proficiency levels to ensure the mastery of knowledge and skills in the required curriculum is accessible. For a further understanding of second language acquisition needs, refer to the ELPS and proficiency-level descriptors adopted in Chapter 74, Subchapter A, of this title (relating to Required Curriculum).

(6) Oral language proficiency holds a pivotal role in school success; verbal engagement must be maximized across grade levels (Kinsella, 2010). In order for students to become thinkers and proficient speakers in science, social studies, mathematics, fine arts, language arts and reading, and career and technical education, they must have multiple opportunities to practice and apply the academic language of each discipline (Fisher, Frey, & Rothenberg, 2008).

(7) 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) Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking--oral language. The student develops oral language through listening, speaking, and discussion. The student is expected to:

(A) listen actively to interpret verbal and non-verbal messages, ask relevant questions, and make pertinent comments;

(B) follow, restate, and give oral instructions that include multiple action steps;

(C) give an organized presentation employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and

(D) work collaboratively with others to develop a plan of shared responsibilities.

(2) Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--beginning reading and writing. The student develops word structure knowledge through phonological awareness, print concepts, phonics, and morphology to communicate, decode, and spell. The student is expected to:

(A) demonstrate and apply phonetic knowledge by:

(i) decoding words with consonant changes, including/t/ to/sh/ such as in select and selection and/k/ to/sh/ such as music and musician;

(ii) decoding multisyllabic words with closed syllables; open syllables; VCe syllable; vowel teams, including digraphs and diphthongs; r-controlled syllables; and final stable syllables;

(iii) decoding words using advanced knowledge of syllable division patterns;

(iv) decoding words using advanced knowledge of the influence of prefixes and suffixes on base words; and

(v) identifying and reading high-frequency words from a research-based list;

(B) demonstrate and apply spelling knowledge by:

(i) spelling multisyllabic words with closed syllables; open syllables; VCe syllables; vowel teams, including digraphs and diphthongs; r-controlled syllables; and final stable syllables;

(ii) spelling words with consonant changes, including/t/ to/sh/ such as in select and selection and/k/ to/sh/ such as music and musician;

(iii) spelling multisyllabic words with multiple sound-spelling patterns;

(iv) spelling words using advanced knowledge of syllable division patterns;

(v) spelling words using knowledge of prefixes; and

(vi) spelling words using knowledge of suffixes, including how they can change base words such as dropping e, changing y to i, and doubling final consonants; and

(C) write legibly in cursive.

(3) Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:

(A) use print or digital resources to determine meaning, syllabication, pronunciation, and word origin;

(B) use context within and beyond a sentence to determine the relevant meaning of unfamiliar words or multiple-meaning words;

(C) identify the meaning of and use words with affixes such as trans-, super-, -ive, and -logy and roots such as geo and photo; and

(D) identify, use, and explain the meaning of adages and puns.

(4) Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--fluency. The student reads grade-level text with fluency and comprehension. The student is expected to use appropriate fluency (rate, accuracy, and prosody) when reading grade-level text.

(5) Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking--self-sustained reading. The student reads grade-appropriate texts independently. The student is expected to self-select text and read independently for a sustained period of time.

(6) Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts. The student is expected to:

(A) establish purpose for reading assigned and self-selected texts;

(B) generate questions about text before, during, and after reading to deepen understanding and gain information;

(C) make and correct or confirm predictions using text features, characteristics of genre, and structures;

(D) create mental images to deepen understanding;

(E) make connections to personal experiences, ideas in other texts, and society;

(F) make inferences and use evidence to support understanding;

(G) evaluate details read to determine key ideas;

(H) synthesize information to create new understanding; and

(I) monitor comprehension and make adjustments such as re-reading, using background knowledge, asking questions, and annotating when understanding breaks down.

(7) Response skills: listening, speaking, reading, writing, and thinking using multiple texts. The student responds to an increasingly challenging variety of sources that are read, heard, or viewed. The student is expected to:

(A) describe personal connections to a variety of sources, including self-selected texts;

(B) write responses that demonstrate understanding of texts, including comparing and contrasting ideas across a variety of sources;

(C) use text evidence to support an appropriate response;

(D) retell, paraphrase, or summarize texts in ways that maintain meaning and logical order;

(E) interact with sources in meaningful ways such as notetaking, annotating, freewriting, or illustrating;

(F) respond using newly acquired vocabulary as appropriate; and

(G) discuss specific ideas in the text that are important to the meaning.

(8) Multiple genres: listening, speaking, reading, writing, and thinking using multiple texts--literary elements. The student recognizes and analyzes literary elements within and across increasingly complex traditional, contemporary, classical, and diverse literary texts. The student is expected to:

(A) infer multiple themes within a text using text evidence;

(B) analyze the relationships of and conflicts among the characters;

(C) analyze plot elements, including rising action, climax, falling action, and resolution; and

(D) analyze the influence of the setting, including historical and cultural settings, on the plot.

(9) Multiple genres: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student recognizes and analyzes genre-specific characteristics, structures, and purposes within and across increasingly complex traditional, contemporary, classical, and diverse texts. The student is expected to:

(A) demonstrate knowledge of distinguishing characteristics of well-known children's literature such as folktales, fables, legends, myths, and tall tales;

(B) explain the use of sound devices and figurative language and distinguish between the poet and the speaker in poems across a variety of poetic forms;

(C) explain structure in drama such as character tags, acts, scenes, and stage directions;

(D) recognize characteristics and structures of informational text, including:

(i) the central idea with supporting evidence;

(ii) features such as insets, timelines, and sidebars to support understanding; and

(iii) organizational patterns such as logical order and order of importance;

(E) recognize characteristics and structures of argumentative text by:

(i) identifying the claim;

(ii) explaining how the author has used facts for or against an argument; and

(iii) identifying the intended audience or reader; and

(F) recognize characteristics of multimodal and digital texts.; and

(10) Author's purpose and craft: listening, speaking, reading, writing, and thinking using multiple texts. The student uses critical inquiry to analyze the authors' choices and how they influence and communicate meaning within a variety of texts. The student analyzes and applies author's craft purposefully in order to develop his or her own products and performances. The student is expected to:

(A) explain the author's purpose and message within a text;

(B) analyze how the use of text structure contributes to the author's purpose;

(C) analyze the author's use of print and graphic features to achieve specific purposes;

(D) describe how the author's use of imagery, literal and figurative language such as simile and metaphor, and sound devices achieves specific purposes;

(E) identify and understand the use of literary devices, including first- or third-person point of view;

(F) examine how the author's use of language contributes to voice; and

(G) explain the purpose of hyperbole, stereotyping, and anecdote.

(11) Composition: listening, speaking, reading, writing, and thinking using multiple texts--writing process. The student uses the writing process recursively to compose multiple texts that are legible and uses appropriate conventions. The student is expected to:

(A) plan a first draft by selecting a genre for a particular topic, purpose, and audience using a range of strategies such as brainstorming, freewriting, and mapping;

(B) develop drafts into a focused, structured, and coherent piece of writing by:

(i) organizing with purposeful structure, including an introduction, transitions, and a conclusion; and

(ii) developing an engaging idea reflecting depth of thought with specific facts and details;

(C) revise drafts to improve sentence structure and word choice by adding, deleting, combining, and rearranging ideas for coherence and clarity;

(D) edit drafts using standard English conventions, including:

(i) complete simple and compound sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments;

(ii) past tense of irregular verbs;

(iii) collective nouns;

(iv) adjectives, including their comparative and superlative forms;

(v) conjunctive adverbs;

(vi) prepositions and prepositional phrases and their influence on subject-verb agreement;

(vii) pronouns, including indefinite;

(viii) subordinating conjunctions to form complex sentences;

(ix) capitalization of abbreviations, initials, acronyms, and organizations;

(x) italics and underlining for titles and emphasis and punctuation marks, including quotation marks in dialogue and commas in compound and complex sentences; and

(xi) correct spelling of words with grade-appropriate orthographic patterns and rules and high-frequency words; and

(E) publish written work for appropriate audiences.

(12) Composition: listening, speaking, reading, writing, and thinking using multiple texts--genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:

(A) compose literary texts such as personal narratives, fiction, and poetry using genre characteristics and craft;

(B) compose informational texts, including brief compositions that convey information about a topic, using a clear central idea and genre characteristics and craft;

(C) compose argumentative texts, including opinion essays, using genre characteristics and craft; and

(D) compose correspondence that requests information.

(13) Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to:

(A) generate and clarify questions on a topic for formal and informal inquiry;

(B) develop and follow a research plan with adult assistance;

(C) identify and gather relevant information from a variety of sources;

(D) understand credibility of primary and secondary sources;

(E) demonstrate understanding of information gathered;

(F) differentiate between paraphrasing and plagiarism when using source materials;

(G) develop a bibliography; and

(H) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

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§111.7. Mathematics, Grade 5, 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 5 are expected to perform their work without the use of calculators.

(4) The primary focal areas in Grade 5 are solving problems involving all four operations with positive rational numbers, determining and generating formulas and solutions to expressions, and extending measurement to area and volume. These focal areas are supported throughout the mathematical strands of number and operations, algebraic reasoning, geometry and measurement, and data analysis. In Grades 3-5, the number set is limited to positive rational numbers. In number and operations, students will apply place value and identify part-to-whole relationships and equivalence. In algebraic reasoning, students will represent and solve problems with expressions and equations, build foundations of functions through patterning, identify prime and composite numbers, and use the order of operations. In geometry and measurement, students will classify two-dimensional figures, connect geometric attributes to the measures of three-dimensional figures, use units of measure, and represent location using a coordinate plane. In data analysis, students will represent and interpret data.

(5) 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) 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 represent, compare, and order positive rational numbers and understand relationships as related to place value. The student is expected to:

(A) represent the value of the digit in decimals through the thousandths using expanded notation and numerals;

(B) compare and order two decimals to thousandths and represent comparisons using the symbols >, <, or =; and

(C) round decimals to tenths or hundredths.

(3) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:

(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division;

(B) multiply with fluency a three-digit number by a two-digit number using the standard algorithm;

(C) solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm;

(D) represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models;

(E) solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers;

(F) represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models;

(G) solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm;

(H) represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations;

(I) represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models;

(J) represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as 1/3 ÷ 7 and 7 ÷ 1/3 using objects and pictorial models, including area models;

(K) add and subtract positive rational numbers fluently; and

(L) divide whole numbers by unit fractions and unit fractions by whole numbers.

(4) Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:

(A) identify prime and composite numbers;

(B) represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity;

(C) generate a numerical pattern when given a rule in the form y = ax or y = x + a and graph;

(D) recognize the difference between additive and multiplicative numerical patterns given in a table or graph;

(E) describe the meaning of parentheses and brackets in a numeric expression;

(F) simplify numerical expressions that do not involve exponents, including up to two levels of grouping;

(G) use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube (V = l x w x h, V = s x s x s, and V = Bh); and

(H) represent and solve problems related to perimeter and/or area and related to volume.

(5) Geometry and measurement. The student applies mathematical process standards to classify two-dimensional figures by attributes and properties. The student is expected to classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties.

(6) Geometry and measurement. The student applies mathematical process standards to understand, recognize, and quantify volume. The student is expected to:

(A) recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible; and

(B) determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base.

(7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to solve problems by calculating conversions within a measurement system, customary or metric.

(8) Geometry and measurement. The student applies mathematical process standards to identify locations on a coordinate plane. The student is expected to:

(A) describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin;

(B) describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane; and

(C) graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table.

(9) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:

(A) represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots;

(B) represent discrete paired data on a scatterplot; and

(C) solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot.

(10) 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) define income tax, payroll tax, sales tax, and property tax;

(B) explain the difference between gross income and net income;

(C) identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments;

(D) develop a system for keeping and using financial records;

(E) describe actions that might be taken to balance a budget when expenses exceed income; and

(F) balance a simple budget.

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§112.16. Science, Grade 5, Adopted 2021.

(a) Introduction.

(1) In Kindergarten through Grade 5 Science, content is organized into recurring strands. The concepts within each grade level build on prior knowledge, prepare students for the next grade level, and establish a foundation for high school courses. In Grade 5, the following concepts will be addressed in each strand.

(A) Scientific and engineering practices. Scientific inquiry is the planned and deliberate investigation of the natural world using scientific and engineering practices. Scientific methods of investigation are descriptive, correlative, comparative, or experimental. The method chosen should be appropriate to the grade level and question being asked. Student learning for different types of investigations includes descriptive investigations, which have no hypothesis that tentatively answers the research question and involve collecting data and recording observations without making comparisons; correlative and comparative investigations, which have a hypothesis that predicts a relationship and involve collecting data, measuring variables relevant to the hypothesis that are manipulated, and comparing results; and experimental investigations, which involve processes similar to comparative investigations but in which a hypothesis can be tested by comparing a treatment with a control.

(i) Scientific practices. Students ask questions, plan and conduct investigations to answer questions, and explain phenomena using appropriate tools and models.

(ii) Engineering practices. Students identify problems and design solutions using appropriate tools and models.

(iii) To support instruction in the science content standards, it is recommended that districts integrate scientific and engineering practices through classroom and outdoor investigations for at least 50% of instructional time.

(B) Matter and energy. Students investigate matter expanding their understanding of properties learned in Grade 4 (mass, volume, states, temperature, magnetism, and relative density) to include solubility and the ability to conduct or insulate both thermal and electrical energy. Students observe the combination of substances to make mixtures and develop an understanding of conservation of matter. These concepts lead to the understanding of elements and compounds. Students will build on this understanding in middle school when they learn to determine density and to identify evidence of chemical changes.

(C) Force, motion, and energy. Students investigate equal and unequal forces and the effects these forces have on objects (motion and direction). Additionally, students investigate energy, including mechanical, light, thermal, electrical, and sound. They uncover cycles (e.g., movement of thermal energy), patterns (e.g., behavior of light, including reflection and refraction), and systems through their exploration. Students will build on this understanding in middle school when they begin to use calculations and measurements to study force, motion, and energy through the study of Newton's Laws of Motion.

(D) Earth and space. This strand is focused on identifying recognizable patterns and processes as students learn about Earth's rotation and demonstrate the effects this movement has on Earth's surface, including day and night, shadows, and the rotation of Earth on its axis. Students continue their learning of patterns and processes on Earth while exploring weather, climate, the water cycle, the formation of sedimentary rock and fossil fuels, and the formation of landforms. Finally, students learn ways to manage natural resources to support a healthy environment.

(E) Organisms and environments. This strand focuses on identifying relationships, systems, and cycles within organisms and environments. Students describe the interactions of biotic and abiotic factors in an ecosystem. Students build on their understanding of food webs from Grade 4 by predicting how ecosystem changes affect the flow of energy. Additionally, they describe how humans impact the ecosystem. Students also learn how organisms' structures help them to survive, and they distinguish between instinctual and learned behaviors in animals. This will set the foundation for Grade 6 where students compare and contrast variations within organisms and how they impact survival.

(2) Nature of science. 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." This vast body of changing and increasing knowledge is described by physical, mathematical, and conceptual models. Students should know that some questions are outside the realm of science because they deal with phenomena that are not currently scientifically testable.

(3) Scientific observations, inferences, hypotheses, and theories. Students are expected to know that:

(A) observations are active acquisition of either qualitative or quantitative information from a primary source through the senses;

(B) inferences are conclusions reached on the basis of observations or reasoning supported by relevant evidence;

(C) hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power that have been tested over a wide variety of conditions are incorporated into theories; and

(D) scientific theories are based on natural and physical phenomena and are capable of being tested by multiple independent researchers. Unlike hypotheses, scientific theories are well established and highly reliable explanations, but they may be subject to change as new areas of science and new technologies are developed.

(4) Science and social ethics. Scientific decision making is a way of answering questions about the natural world involving its own set of ethical standards about how the process of science should be carried out. Students distinguish between scientific decision-making practices and ethical and social decisions that involve science.

(5) Recurring themes and concepts. Science consists of recurring themes and making connections between overarching concepts. Recurring themes include structure and function, systems, models, and patterns. All systems have basic properties that can be described in space, time, energy, and matter. Change and constancy occur in systems as patterns and can be observed, measured, and modeled. Models have limitations but provide a tool for understanding the ideas presented. Students analyze a system in terms of its components and how these components relate to each other, to the whole, and to the external environment.

(6) Statements containing 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) Scientific and engineering practices. The student asks questions, identifies problems, and plans and safely conducts classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models. The student is expected to:

(A) ask questions and define problems based on observations or information from text, phenomena, models, or investigations;

(B) use scientific practices to plan and conduct descriptive and simple experimental investigations and use engineering practices to design solutions to problems;

(C) demonstrate safe practices and the use of safety equipment during classroom and field investigations as outlined in Texas Education Agency-approved safety standards;

(D) use tools, including calculators, microscopes, hand lenses, metric rulers, Celsius thermometers, prisms, concave and convex lenses, laser pointers, mirrors, digital scales, balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, notebooks, timing devices, materials for building circuits, materials to support observations of habitats or organisms such as terrariums and aquariums, and materials to support digital data collection such as computers, tablets, and cameras to observe, measure, test, and analyze information;

(E) collect observations and measurements as evidence;

(F) construct appropriate graphic organizers used to collect data, including tables, bar graphs, line graphs, tree maps, concept maps, Venn diagrams, flow charts or sequence maps, and input-output tables that show cause and effect; and

(G) develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.

(2) Scientific and engineering practices. The student analyzes and interprets data to derive meaning, identify features and patterns, and discover relationships or correlations to develop evidence-based arguments or evaluate designs. The student is expected to:

(A) identify advantages and limitations of models such as their size, scale, properties, and materials;

(B) analyze data by identifying any significant features, patterns, or sources of error;

(C) use mathematical calculations to compare patterns and relationships; and

(D) evaluate experimental and engineering designs.

(3) Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to:

(A) develop explanations and propose solutions supported by data and models;

(B) communicate explanations and solutions individually and collaboratively in a variety of settings and formats; and

(C) listen actively to others' explanations to identify relevant evidence and engage respectfully in scientific discussion.

(4) Scientific and engineering practices. The student knows the contributions of scientists and recognizes the importance of scientific research and innovation for society. The student is expected to:

(A) explain how scientific discoveries and innovative solutions to problems impact science and society; and

(B) research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

(5) Recurring themes and concepts. The student understands that recurring themes and concepts provide a framework for making connections across disciplines. The student is expected to:

(A) identify and use patterns to explain scientific phenomena or to design solutions;

(B) identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems;

(C) use scale, proportion, and quantity to describe, compare, or model different systems;

(D) examine and model the parts of a system and their interdependence in the function of the system;

(E) investigate how energy flows and matter cycles through systems and how matter is conserved;

(F) explain the relationship between the structure and function of objects, organisms, and systems; and

(G) explain how factors or conditions impact stability and change in objects, organisms, and systems.

(6) Matter and energy. The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to:

(A) compare and contrast matter based on measurable, testable, or observable physical properties, including mass, magnetism, relative density (sinking and floating using water as a reference point), physical state (solid, liquid, gas), volume, solubility in water, and the ability to conduct or insulate thermal energy and electric energy;

(B) demonstrate and explain that some mixtures maintain physical properties of their substances such as iron filings and sand or sand and water;

(C) compare the properties of substances before and after they are combined into a solution and demonstrate that matter is conserved in solutions; and

(D) illustrate how matter is made up of particles that are too small to be seen such as air in a balloon.

(7) Force, motion, and energy. The student knows the nature of forces and the patterns of their interactions. The student is expected to:

(A) investigate and explain how equal and unequal forces acting on an object cause patterns of motion and transfer of energy; and

(B) design a simple experimental investigation that tests the effect of force on an object in a system such as a car on a ramp or a balloon rocket on a string.

(8) Force, motion, and energy. The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to:

(A) investigate and describe the transformation of energy in systems such as energy in a flashlight battery that changes from chemical energy to electrical energy to light energy;

(B) demonstrate that electrical energy in complete circuits can be transformed into motion, light, sound, or thermal energy and identify the requirements for a functioning electrical circuit; and

(C) demonstrate and explain how light travels in a straight line and can be reflected, refracted, or absorbed.

(9) Earth and space. The student recognizes patterns among the Sun, Earth, and Moon system and their effects. The student is expected to demonstrate that Earth rotates on its axis once approximately every 24 hours and explain how that causes the day/night cycle and the appearance of the Sun moving across the sky, resulting in changes in shadow positions and shapes.

(10) Earth and space. The student knows that there are recognizable patterns and processes on Earth. The student is expected to:

(A) explain how the Sun and the ocean interact in the water cycle and affect weather;

(B) model and describe the processes that led to the formation of sedimentary rocks and fossil fuels; and

(C) model and identify how changes to Earth's surface by wind, water, or ice result in the formation of landforms, including deltas, canyons, and sand dunes.

(11) Earth and space. The student understands how natural resources are important and can be managed. The student is expected to design and explain solutions such as conservation, recycling, or proper disposal to minimize environmental impact of the use of natural resources.

(12) Organisms and environments. The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(A) observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem;

(B) predict how changes in the ecosystem affect the cycling of matter and flow of energy in a food web; and

(C) describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem.

(13) Organisms and environments. The student knows that organisms undergo similar life processes and have structures and behaviors that help them survive within their environments. The student is expected to:

(A) analyze the structures and functions of different species to identify how organisms survive in the same environment; and

(B) explain how instinctual behavioral traits such as turtle hatchlings returning to the sea and learned behavioral traits such as orcas hunting in packs increase chances of survival.

Source: The provisions of this §112.7 adopted to be effective April 26, 2022, 47 TexReg 2136.

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§113.16. Social Studies, Grade 5, Adopted 2022.

(a) Implementation. The provisions of this section shall be implemented by school districts beginning with the 2024-2025 school year.

(b) Introduction.

(1) In Grade 5, students survey the history of the United States from 1565 to the present. Historical content includes the colonial period, the American Revolution, the establishment of the U.S. Constitution and American identity, westward expansion, the Civil War and Reconstruction, immigration and industrialization, and the 20th and 21st centuries. Students study a variety of regions in the United States that result from physical features and human activity and identify how people adapt to and modify the environment. Students explain the characteristics and benefits of the free enterprise system and describe economic activities in the United States. Students identify the roots of representative government in this nation as well as the important

ideas in the Declaration of Independence and the U.S. Constitution. Students study the fundamental rights guaranteed in the Bill of Rights. Students examine the importance of effective leadership in a constitutional republic and identify important leaders in the national government. Students recite and explain the meaning of the Pledge of Allegiance to the United States Flag. Students describe the cultural impact of various racial, ethnic, and religious groups in the nation and identify the accomplishments of notable individuals in the fields of science and technology. Students explain symbols, traditions, and landmarks that represent American beliefs and principles. Students use critical-thinking skills to sequence, categorize, and summarize information and to draw inferences and conclusions.

(2) To support the teaching of the essential knowledge and skills, the use of a variety of rich primary and secondary source material such as documents, biographies, novels, speeches, letters, poetry, songs, and artworks is encouraged. Motivating resources are available from museums, historical sites, presidential libraries, 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 (c) 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) State and federal laws mandate a variety of celebrations and observances, including Celebrate Freedom Week.

(A) Each social studies class shall include, during Celebrate Freedom Week as provided under the TEC, §29.907, or during another full school week as determined by the board of trustees of a school district, appropriate instruction concerning the intent, meaning, and importance of the Declaration of Independence and the U.S. Constitution, including the Bill of Rights, in their historical contexts. The study of the Declaration of Independence must include the study of the relationship of the ideas expressed in that document to subsequent American history, including the relationship of its ideas to the rich diversity of our people as a nation of immigrants, the American Revolution, the formulation of the U.S. Constitution, and the abolitionist movement, which led to the Emancipation Proclamation and the women's suffrage movement.

(B) Each school district shall require that, during Celebrate Freedom Week or other week of instruction prescribed under subparagraph (A) of this paragraph, students in Grades 3-12 study and recite the following text from the Declaration of Independence: "We hold these

Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness--That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed."

(8) Students discuss how and whether the actions of U.S. citizens and the local, state, and federal governments have achieved the ideals espoused in the founding documents.

(c) Knowledge and skills.

(1) History. The student understands the reasons for and the role of key people in the European colonization of North America beginning in 1565, the founding of St. Augustine. The student is expected to:

(A) explain when, where, and why groups of people explored, colonized, and settled in the United States, including the search for religious freedom and economic gain; and

(B) describe the accomplishments of significant individuals who settled for religious freedom and economic gain during the colonial period, including William Bradford, Anne Hutchinson, William Penn, John Smith, and Roger Williams.

(2) History. The student understands how conflict between the American colonies and Great Britain led to American independence and the formation of the United States. The student is expected to:

(A) analyze the causes and effects of events prior to and during the American Revolution, including the taxation resulting from the French and Indian War and the colonist response to taxation such as the Boston Tea Party;

(B) identify the Founding Fathers and Patriot heroes, including John Adams, Benjamin Franklin, Thomas Jefferson, the Sons of Liberty, and George Washington, and their motivations and contributions during the revolutionary period; and

(C) summarize the results of the American Revolution, including the establishment of the United States.

(3) History. The student understands the significant individuals who contributed to the creation of the U.S. Constitution and the government it established. The student is expected to identify the contributions of Founding Fathers James Madison and George Mason who helped create the U.S. Constitution.

(4) History. The student understands political, economic, and social changes that occurred in the United States during the 19th century. The student is expected to:

(A) describe the causes and effects of the War of 1812 such as impressment of sailors, territorial conflicts with Great Britain, and the increase in U.S. manufacturing;

(B) identify and explain how changes resulting from the Industrial Revolution led to conflict among sections of the United States;

(C) identify significant events and concepts associated with U.S. territorial expansion, including the Louisiana Purchase, the expedition of Lewis and Clark, and Manifest Destiny;

(D) explain the central role of the expansion of slavery in causing sectionalism, disagreement over states' rights, and the Civil War;

(E) explain the effects of the Civil War, including Reconstruction and the 13th, 14th, and 15th amendments to the U.S. Constitution; and

(F) identify the challenges, opportunities, and contributions of people from various American Indian and immigrant groups such as the settlement of the frontier and building of the Transcontinental Railroad.

(5) History. The student understands important issues, events, and individuals in the United States during the 20th and 21st centuries. The student is expected to:

(A) explain the significance of issues and events of the 20th century such as industrialization, urbanization, the Great Depression, the world wars, the civil rights movement, and military actions;

(B) analyze various issues and events of the 21st century such as the War on Terror and the 2008 presidential election; and

(C) identify the accomplishments and contributions of individuals and groups such as Susan B. Anthony, Martin Luther King Jr., Rosa Parks, Cesar Chavez, Franklin D. Roosevelt, Ronald Reagan, the Tuskegee Airmen, and the 442nd Regimental Combat Team in the areas of civil rights, women's rights, military actions, and politics.

(6) Geography. The student understands places and regions in the United States. The student is expected to:

(A) describe political and economic regions in the United States that result from patterns of human activity;

(B) describe regions in the United States based on physical characteristics such as landform, climate, and vegetation;

(C) locate on a map important political features such as the five largest cities by population in the United States and the 50 states; and

(D) create a map of important physical features such as the Appalachian Mountains, Great Lakes, Mississippi River, Great Plains, and Rocky Mountains.

(7) Geography. The student understands the location and patterns of settlement and the geographic factors that influence where people live. The student is expected to:

(A) identify and describe the patterns of settlement such as rural, urban, and suburban;

(B) explain the geographic factors that influence patterns of settlement and the distribution of population in the United States; and

(C) analyze the geographic factors that influence the location of the five largest urban areas in the United States and explain their distribution.

(8) Geography. The student understands how people adapt to and modify their environment. The student is expected to:

(A) describe how and why people have adapted to and modified their environment in the United States such as the use of human resources to meet basic needs; and

(B) analyze the positive and negative consequences of human modification of the environment in the United States.

(9) Economics. The student understands the basic economic patterns of early societies in the United States. The student is expected to:

(A) explain the economic patterns of early European colonies; and

(B) identify major industries of colonial America such as shipbuilding and growing of cash crops.

(10) Economics. The student understands the development, characteristics, and benefits of the free enterprise system in the United States. The student is expected to:

(A) identify the development of the free enterprise system in colonial America and the United States;

(B) describe how the free enterprise system works in the United States; and

(C) give examples of the benefits of the free enterprise system in the United States.

(11) Economics. The student understands the impact of supply and demand on consumers and producers in a free enterprise system. The student is expected to:

(A) explain how supply and demand affects consumers in the United States; and

(B) evaluate the effects of supply and demand on industry and agriculture, including the plantation system, in the United States.

(12) Economics. The student understands patterns of work and economic activities in the United States. The student is expected to:

(A) compare how people in different regions of the United States earn a living, past and present;

(B) identify and explain how geographic factors have influenced the location of economic activities in the United States;

(C) analyze the effects of immigration and migration on the economic development and growth of the United States; and

(D) describe the impact of mass production, specialization, and division of labor on the economic growth of the United States.

(13) Government. The student understands the organization of governments in colonial America. The student is expected to:

(A) compare the systems of government of early European colonists, including representative government and monarchy; and

(B) identify examples of representative government in the American colonies, including the Mayflower Compact and the Virginia House of Burgesses.

(14) Government. The student understands important ideas in the Declaration of Independence, the U.S. Constitution, and the Bill of Rights. The student is expected to:

(A) explain the purposes, key elements, and the importance of the Declaration of Independence;

(B) explain the purposes of the U.S. Constitution as identified in the Preamble; and

(C) explain the reasons for the creation of the Bill of Rights and its importance.

(15) Government. The student understands the framework of government created by the U.S. Constitution of 1787. The student is expected to:

(A) identify and explain the basic functions of the three branches of government;

(B) identify the reasons for and describe the system of checks and balances outlined in the U.S. Constitution; and

(C) distinguish between national and state governments and compare their responsibilities in the U.S. federal system.

(16) Citizenship. The student understands important symbols, customs, celebrations, and landmarks that represent American beliefs and principles that contribute to our national identity. The student is expected to:

(A) explain various patriotic symbols, including Uncle Sam; national celebrations such as Labor Day; and political symbols such as the donkey and elephant;

(B) sing or recite "The Star-Spangled Banner" and explain its history;

(C) recite and explain the meaning of the Pledge of Allegiance to the United States Flag; and

(D) explain the significance of important landmarks, including the White House, the Statue of Liberty, and Mount Rushmore.

(17) Citizenship. The student understands the importance of individual participation in the democratic process at the local, state, and national levels. The student is expected to:

(A) explain why individuals have a duty to participate in civic affairs at the local, state, and national levels;

(B) explain how to contact elected and appointed leaders in local, state, and national governments; and

(C) use voting as a method for group decision making.

(18) Citizenship. The student understands the importance of effective leadership in a constitutional republic. The student is expected to:

(A) identify past and present leaders in the national government, including the president and various members of Congress, and their political parties; and

(B) identify leadership qualities of national leaders, past and present.

(19) Citizenship. The student understands the fundamental rights of American citizens guaranteed in the Bill of Rights. The student is expected to describe the fundamental rights guaranteed in the Bill of Rights, including freedom of religion, speech, and press; the right to assemble and petition the government; the right to keep and bear arms; the right to trial by jury; and the right to an attorney.

(20) Culture. The student understands the relationship between the arts and the times during which they were created. The student is expected to:

(A) identify significant examples of art, music, and literature from various periods in U.S. history such as the painting *American Progress*, "Yankee Doodle," and "Paul Revere's Ride"; and

(B) explain how examples of art, music, and literature reflect the times during which they were created.

(21) Culture. The student understands the contributions of people of various racial, ethnic, and religious groups to the United States culture. The student is expected to:

(A) describe customs and traditions of various racial, ethnic, and religious groups in the United States; and

(B) summarize the contributions of people of various racial, ethnic, and religious groups to our national identity.

(22) Science, technology, and society. The student understands the impact of science and technology on society in the United States. The student is expected to:

(A) identify the accomplishments of notable individuals in the fields of science and technology such as Benjamin Franklin, Eli Whitney, John Deere, Thomas Edison, Alexander Graham Bell, George Washington Carver, the Wright Brothers, and Neil Armstrong;

(B) identify how scientific discoveries, technological innovations, and the rapid growth of technology industries have advanced the economic development of the United States, including the transcontinental railroad and the space program; and

(C) explain how scientific discoveries and technological innovations in the fields of medicine, communication, and transportation have benefited individuals and society in the United States.

(23) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:

(A) differentiate between, locate, and use valid primary and secondary sources such as technology; interviews; biographies; oral, print, and visual material; documents; and artifacts to acquire information about the United States;

(B) identify and ask questions about the credibility of different kinds of primary and secondary sources;

(C) analyze information by applying absolute and relative chronology through sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;

(D) organize and interpret information in outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;

(E) identify different points of view about an issue, topic, historical event, or current event;

(F) identify the historical context of an event;

(G) identify the central claim in a primary or secondary source; and

(H) develop and communicate a claim and supporting evidence visually, orally, or in writing related to a social studies topic.

(24) Social studies skills. The student uses geographic tools to collect, analyze, and interpret data. The student is expected to:

(A) apply mapping elements, including grid systems, legends, symbols, scales, and compass roses, to create and interpret maps; and

(B) interpret geographic data, population distribution, and natural resources into a variety of formats such as graphs and maps.

(25) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:

(A) use social studies terminology correctly;

(B) incorporate main and supporting ideas in verbal and written communication;

(C) express ideas orally based on research and experiences;

(D) create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies; and

(E) apply foundational language skills to engage in civil discourse about social studies topics, including those with multiple perspectives.

(26) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to:

(A) use democratic procedures to simulate making decisions on school, local, or state issues; and

(B) use problem-solving and decision-making processes 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.

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§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.

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§115.17. Health Education, Grade 5, Adopted 2020.

(a) Introduction.

(1) The goal of health education is to provide instruction that allows youth to develop and sustain health-promoting behaviors throughout their lives. The understanding and application of these standards will allow students the ability to gather, interpret, and understand health information; achieve health literacy; and adapt to the ever-evolving science of health. The health education knowledge and skills should be presented to students in a positive manner to support the development of a healthy self-concept and responsible decision making. The standards will help students reinforce, foster, and apply positive character traits.

(2) There are essential skills that repeat throughout the six strands and embody the interconnection of health literacy. These skills include decision making, problem solving, goal setting, maintaining healthy relationships with self and others, seeking help and support, and recognizing various influences on health such as social, environmental, media, and genetic. These skills, developed early on and reinforced throughout a student's education, will foster mastery of health concepts. Health class educators are encouraged to partner with school counselors where available to schedule time for them to deliver classroom guidance lessons to help teach these essential competencies.

(3) In Grade 4 and higher, students gain an understanding of health information and skills through six strands: physical health and hygiene; mental health and wellness; healthy eating and physical activity; injury and violence prevention and safety; alcohol, tobacco, and other drugs; and reproductive and sexual health.

(A) Physical health and hygiene education helps to prepare students for improved lifelong health outcomes. Learning about body systems will lay the foundation for personal health and hygiene. Health literacy and preventative behaviors empower students to make informed choices to support self, family, and community.

(B) The mental health and wellness strand recognizes that the knowledge and skills necessary to manage emotions, reactions, and relationships are essential to reaching one's full potential. Students gain knowledge about social and emotional health, developing a healthy self-concept, understanding risk and protective factors, and identifying and managing mental health and wellness concerns. In the early grades, students develop fluency around emotions and self-regulation and understand the relationship between feelings, thoughts, and behavior. In subsequent grades, students learn and practice appropriate ways to solve interpersonal conflicts, work to develop a positive self-image, and develop healthy self-management skills.

(C) The healthy eating and physical activity strand addresses the importance of nutrition and physical activity to support a healthy lifestyle. Students apply critical-thinking and decision-making skills to make positive health choices. Students learn about essential nutrients, food groups, portion control, government nutritional recommendations, and the health benefits of being physically active. Students evaluate the connection between physical activity and nutrition and the prevention of chronic diseases.

(D) By focusing on injury and violence prevention and safety, the standards promote student well-being and awareness of dangerous situations. Supporting student well-being and providing instruction in digital citizenship, bullying prevention, first aid, and the identification of safe and unsafe situations creates empowered and educated students able to make decisions that keep themselves and others safe. Beginning in Kindergarten and continuing through high school, students gain knowledge and skills to support safety and wellness at school, at home, online, and in the community.

(E) The standards under the alcohol, tobacco, and other drugs strand focus on a number of protective factors that develop empowered students who are able to make better-informed decisions, including understanding the impact of substance use on physical, mental, and social health. Through this strand, students learn key concepts about alcohol, tobacco, and other drugs, including the use, misuse, and physiological effects; short- and long-term impacts on health; treatment; risk and protective factors; and prevention. These concepts introduce healthy alternatives and ways for students to ask for and seek out help from parents and other trusted adults.

(F) Beginning in Grade 4, students learn about changes associated with adolescent development in the reproductive and sexual health strand. In subsequent grade levels, students identify the purpose of these changes and their role in fertilization and reproduction. Students learn the characteristics of healthy and unhealthy relationships and how to use communication and refusal skills to set personal boundaries in dating/romantic relationships. Students also identify how to respond to sexual harassment and abuse.

(4) An integral part of health education involves educators being aware of state laws relevant to human sexuality instruction. These laws include affirming:

(A) a local school district's control over the provision of human sexuality instruction to ensure that local community values are reflected in that instruction (Texas Education Code (TEC), §28.004(e)-(h));

(B) the right of a parent or legal guardian to be informed of the provision of human sexuality instruction to their child and review the content of that instruction (TEC, §28.004(i)-(j));

(C) the right of a parent or legal guardian to remove their child from any portion of human sexuality instruction without penalty to the child (TEC, §28.004(i));

(D) the centrality of abstinence education in any human sexuality curriculum (TEC, §28.004(e)); and

(E) the right of a parent or legal guardian to be informed of and consent to an abortion performed on their pregnant child (with judicially authorized or medical emergency exceptions) (Texas Family Code, Chapter 33).

(5) Educators also should be aware of and abide by the statutory prohibition on taxpayer resource transactions between state governmental entities, including public schools, and abortion providers or an affiliate of an abortion provider (Texas Government Code, Chapter 2272).

(6) Statements containing the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(7) Students should first seek guidance in the area of health from a parent or legal guardian.

(b) Knowledge and skills.

(1) Physical health and hygiene--body systems. The student examines the structure, function, and relationships of body systems and their relevance to personal health. The student is expected to describe the structure, functions, and interdependence of the major body systems, including the reproductive, endocrine, and urinary systems.

(2) Physical health and hygiene--personal health and hygiene. The student understands health literacy, preventative health behaviors, and how to access and evaluate health care information to make informed decisions. The student is expected to:

(A) explain how to manage common minor illnesses such as colds and skin infections;

(B) identify how to distinguish between myth and fact when accessing information about health;

(C) identify decision-making skills that promote individual, family, and community health;

(D) describe the benefits of promoting health maintenance for individuals and households;

(E) analyze how personal hygiene helps prevent the spread of germs and communicable illnesses; and

(F) distinguish between treatments if infected by various vectors, including ticks and mosquitos.

(3) Mental health and wellness--social and emotional health. The student identifies and applies strategies to develop socio-emotional health, self-regulation, and healthy relationships. The student is expected to:

(A) analyze how thoughts and emotions influence behaviors;

(B) practice and apply strategies for calming and self-management;

(C) explain ways of maintaining healthy relationships and resisting negative peer influence in social groups;

(D) analyze how to identify perspectives and respectful ways to communicate disagreement with friends, family, teachers, and others;

(E) define and differentiate between sympathy and empathy toward others; and

(F) describe ways to engage in and promote positive interactions when conflict arises.

(4) Mental health and wellness--developing a healthy self-concept. The student develops the capacity for self-assessment and evaluation, goal setting, and decision making in order to develop a healthy self-concept. The student is expected to:

(A) identify and demonstrate strategies to help build self-esteem for self, friends, and others;

(B) describe benefits of setting and implementing short- and long-term goals and perseverance to achieve those goals;

(C) discuss choices and decision making as part of goal setting; and

(D) identify goals that one wishes to achieve, including identifying areas for one's personal growth and ways to gather constructive feedback.

(5) Mental health and wellness--risk and protective factors. The student recognizes the influence of various factors on mental health and wellness. The student is expected to:

(A) identify factors such as school climate and safety measures that affect an individual's physical, emotional, and social health; and

(B) discuss how brain development during childhood affects emotions and decision making.

(6) Mental health and wellness--identifying and managing mental health and wellness concerns. The student develops and uses appropriate skills to identify and manage conditions related to mental health and wellness. The student is expected to:

(A) compare and contrast healthy and unhealthy methods for managing concerns related to long-term health conditions for self and others;

(B) identify situations in which stress can help to achieve goals and build resiliency;

(C) examine ways to reduce the impact of stress, trauma, loss, and grief;

(D) define eating disorders and disordered eating patterns as mental health concerns and the importance of seeking help from a parent or another trusted adult for self or others if these patterns are observed;

(E) describe situations that call for professional mental health services; and

(F) discuss healthy alternatives to harming oneself, others, or property and the importance of telling a parent or another trusted adult when someone is struggling to manage overwhelming emotions or lacks support.

(7) Healthy eating and physical activity--food and beverage daily recommendations. The student analyzes and applies healthy eating strategies for enhancing and maintaining personal health throughout the lifespan. The student is expected to:

(A) identify foods that are sources of one or more of the six major nutrients;

(B) examine food labels and menus for nutritional content, calories, and serving sizes;

(C) identify the amount of sugar in common beverages and snacks and the daily recommended allowance for added sugar; and

(D) identify caffeine content of common beverages and health concerns associated with excess caffeine consumption.

(8) Healthy eating and physical activity--physical activity. The student identifies, analyzes, and applies strategies for enhancing and maintaining optimal personal physical fitness throughout the lifespan. The student is expected to explain the physical, mental, and social benefits of fitness.

(9) Healthy eating and physical activity--nutrition and physical activity literacy. The student obtains, processes, and understands basic physical activity and nutrition information needed to make health-promoting decisions. The student is expected to:

(A) describe the importance of goal setting and set a goal for achieving appropriate levels of physical activity; and

(B) research and evaluate health products and information about physical activity and nutritional choices.

(10) Healthy eating and physical activity--risk and protective factors. The student analyzes and applies risk and protective factors related to healthy eating and physical activity. The student is expected to:

(A) describe the connection between dietary choices and the prevention of obesity, heart disease, and diabetes; and

(B) identify attitudes and behaviors that can reduce the likelihood of developing chronic conditions such as obesity, heart disease, or diabetes.

(11) Injury and violence prevention and safety--safety skills and unintentional injury. The student identifies and demonstrates safety and first aid knowledge to prevent and treat injuries. The student is expected to analyze strategies for preventing and responding to injuries.

(12) Injury and violence prevention and safety--healthy home, school, and community climate. The student understands that individual actions and awareness can impact safety, community, and environment. The student is expected to:

(A) explain strategies for avoiding violence, gangs, and weapons and define human trafficking;

(B) examine characteristics of gang behavior;

(C) identify safety procedures that can be used in various situations, including violence in the home, school, and community; and

(D) create a personal safety plan.

(13) Injury and violence prevention and safety--digital citizenship and media. The student understands how to be a safe and responsible citizen in digital and online environments. The student is expected to:

(A) distinguish between appropriate and inappropriate boundaries for digital and online communication and research;

(B) explain the benefits of identity protection in digital and online environments; and

(C) analyze the consequences of cyberbullying and inappropriate digital and online communication in relation to home, school, and community environments.

(14) Injury and violence prevention and safety--interpersonal violence. The student understands the impact of interpersonal violence and the importance of seeking guidance and help to maintain personal safety. The student is expected to:

(A) identify methods available to report bullying;

(B) identify ways to advocate for self and others to prevent bullying and cyberbullying behavior; and

(C) explain the impact of abuse and neglect and the importance of reporting abuse and neglect.

(15) Alcohol, tobacco, and other drugs--use, misuse, and physiological effects. The student understands the difference between the use and misuse of different substances and how the use and misuse of substances impacts health. The student is expected to:

(A) explain the reasons to avoid the misuse of over-the-counter and prescription drugs;

(B) identify and explain the importance of each component of prescription and over-the-counter drug labels; and

(C) describe the physiological effects of alcohol, vaping products, tobacco, other drugs, and dangerous substances.

(16) Alcohol, tobacco, and other drugs--short- and long-term impacts. The student identifies and analyzes the short- and long-term impacts of use and misuse of alcohol; tobacco; drugs, including prescription drugs; and other substances. The student is expected to:

(A) analyze the short- and long-term harmful effects of alcohol, tobacco, other drugs, and dangerous substances such as inhalants and household products on the functions of the body systems and mental and social health; and

(B) describe the legal consequences of the illegal use of alcohol, tobacco, other drugs, and dangerous substances.

(17) Alcohol, tobacco, and other drugs--treatment. The student understands how to seek emergency help for self and others in poisoning and overdose situations. The student is expected to describe the signs of poisoning or overdose and identify how to respond, including who to contact for help.

(18) Alcohol, tobacco, and other drugs--risk and protective factors. The student understands how various factors can influence decisions regarding substance use and the resources available for help. The student is expected to:

(A) analyze how positive peer influence can be used to help a person decide not to use alcohol or drugs; and

(B) describe the importance of seeking help and reporting unsafe situations related to alcohol, tobacco, and other drugs.

(19) Alcohol, tobacco, and other drugs--prevention. The student demonstrates refusal skills to avoid substance use and misuse. The student is expected to:

(A) assess how being assertive, using refusal skills, and evaluating peer influence can affect decision making and problem solving;

(B) identify a variety of scenarios and the different types of refusal skills that can be used to avoid the use of alcohol, tobacco, and other drugs; and

(C) identify and describe healthy alternative activities to the use of drugs and other substances.

(20) Reproductive and sexual health--healthy relationships. The student understands the characteristics of healthy romantic relationships. The student is expected to

identify characteristics of healthy dating/romantic relationships and marriage, including sharing, kindness, honesty, respect, trust, patience, communication, and compatibility.

(21) Reproductive and sexual health--personal safety, limits, and boundaries. The student understands how to set and respect personal boundaries to reduce the risk of sexual abuse and harassment. The student is expected to:

(A) define sexual harassment, sexual abuse, sexual assault, and sex trafficking;

(B) identify ways of reporting suspected sexual abuse involving self or others such as telling a parent or another trusted adult;

(C) identify refusal skills such as saying "no" to any unwanted touch that violates personal boundaries in relationships; and

(D) discuss and explain the importance of making decisions regarding setting personal boundaries and respecting the boundaries of others.

(22) Reproductive and sexual health--anatomy, puberty, reproduction, and pregnancy. The student identifies the processes of adolescent development, fertilization, and healthy fetal development. The student is expected to:

(A) explain the physical, social, and emotional changes that occur in males and females during puberty and adolescent development;

(B) describe the process of the menstrual cycle;

(C) identify and describe the role of hormones in the growth and development of secondary sex characteristics such as body hair growth and voice change in males;

(D) define the processes of fertilization and reproduction; and

(E) identify significant milestones of fetal development.

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§116.17. Physical Education, Grade 5, Adopted 2020.

(a) Introduction.

(1) Physical education is the foundation of a well-balanced curriculum. "It is an academic subject with a planned and sequential K-12 curriculum based on the national standards for physical education. Physical education provides cognitive content and instruction designed to develop motor skills, knowledge, and behaviors for physical activity and physical fitness. Supporting schools to establish daily physical education can provide students with the ability and confidence to be physically active for a lifetime" (Centers for Disease Control and Prevention (CDC), CDC Healthy Schools, May 2019).

(A) Physical education is designed to develop motor skills, knowledge, and behaviors for active living, physical fitness, sportsmanship, self-efficacy, and emotional intelligence. Physical education addresses the three domains of learning: cognitive skills related to the knowledge of movement, affective skills related to feelings and attitudes about movement, and psychomotor skills related to the manual or physical skills in movement literacy (SHAPE America, 2014, p. 4).

(B) Physically literate students have the ability to develop a lifetime of wellness. Physical literacy can be described as the ability to move with competence and confidence, to acquire knowledge and understanding, and to value and take responsibility for engagement in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person (Mandigo, Francis, Lodewyk & Lopez, 2012, and Whitehead, 2016).

(C) Research shows physical education is important to the development of the whole child and increases a lifetime of wellness. The Association for Supervision and Curriculum Development and the National Academy of Medicine support the belief that physical education, taught at a developmentally appropriate level, improves physical fitness and skill development, supports and improves academic achievement, reinforces self-discipline and teacher goal setting, reduces stress and increases blood flow to the brain, strengthens peer relationships, and improves self-confidence and self-esteem.

(2) The physical education standards are categorized into five strands that are of equal importance and value. The movement patterns and movement skills strand guides the physically literate student in the development of fundamental movement patterns, spatial and body awareness, and rhythmic activities. The performance strategies strand guides the physically literate student in utilizing strategies in fundamental components of games, activities, and outdoor and recreational pursuits. The health, physical activity, and fitness strand encompasses health-related fitness, environmental awareness, and safety practices that guide students to a health-enhancing, physically active lifestyle. The physically literate student demonstrates skills and mechanics used during physical activity and analyzes data used during fitness performance. The physically literate student recognizes the correlation between nutrition, hydration, and physical activity. The social and emotional health strand incorporates working with others, responding to class expectations, and applying self-management skills. The lifetime wellness strand engages students in physical activity for the purposes of self-expression, enjoyment, and challenge.

(3) Quality physical education programs include a comprehensive curriculum, physical activity, safety policies, safe environments, qualified physical education specialists instructing the class, and student assessment and do not use physical activity as a form of punishment. Texas state law outlines state requirements that support these essential components. In accordance with state law, physical education curriculum and instruction must be sequential, developmentally appropriate, and designed to meet the needs of all students, including students with disabilities and of all physical ability levels. At least 50% of the physical education class must be used for actual student physical activity at a moderate or vigorous intensity level, which aligns with additional state requirements for a minimum number of minutes for moderate or vigorous physical activity in Kindergarten-Grade 8. Required student-to-teacher ratios of 45-to-1 ensure the proper supervision and safety of students in physical education classes, and school districts must identify how student safety will be maintained if that ratio is exceeded. State law also requires that school districts and charter schools annually assess the physical fitness of students in Grade 3 or higher who are enrolled in a physical education course.

(4) Access to age-appropriate physical education equipment is essential to quality instruction. Basic, age-appropriate equipment for all students is imperative for the development of motor skills, manipulative skills, and eventually becoming a physically literate lifelong learner. Without basic, age-appropriate equipment, students will not have the necessary experiences to become physically literate, lifelong learners. All equipment should be age appropriate for the grade levels to be taught. The term "age appropriate" means that the equipment must include a variety of sizes, weights, and textures to provide differentiated experiences for various ages and ability levels of students. Basic equipment for quality instruction includes, but is not limited to, the following list: sports balls, including fleece balls, foam balls, tennis balls, beach balls, volleyballs, basketballs, soccer balls, footballs, baseballs, softballs, and unity balls; striking implements, including golf clubs, hockey sticks, baseball bats, pool noodles, tennis rackets, racquetball rackets, pickleball paddles, lollipop paddles, and ping pong paddles; goals for various sports, including soccer goals and basketball goals; nets and standards for a variety of sports, including volleyball, pickleball, badminton, and tennis; fitness-related equipment; other basic equipment, including scarves, bean bags, hula hoops, jump ropes, and scooters; classroom management equipment, including cones,

mats, pinnies, poly spots, and ball inflators; and technology, including microphones, projectors, speakers, heart rate monitors, timers, and other technology appropriate for instruction.

(5) In Kindergarten-Grade 5, students learn fundamental movement skills and cues; begin to understand that the body functions in relation to physical activity; develop body control; become aware of the health-related fitness components; begin applying strategies, rules, etiquette, and conflict resolution techniques in dynamic situations; and identify safety practices and protocols while being physically active. Students engage in activities that develop basic levels of strength, endurance, and flexibility. Activities are presented to complement a student's natural inclination to view physical activity as challenging and enjoyable.

(6) 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) Movement patterns and movement skills--locomotor skills. The physically literate student demonstrates competency in fundamental movement patterns and developmentally appropriate locomotor skills. The student is expected to:

(A) demonstrate and apply correct technique in a variety of locomotor skills and combinations during lead-up activities;

(B) demonstrate correct jumping and landing technique while performing a long jump and a full turn jump in both directions; and

(C) demonstrate advanced balancing to include equipment, cross lateralization during increasingly complex movements, and sequencing of four or more skills with repetition.

(2) Movement patterns and movement skills--non-locomotor skills. The physically literate student demonstrates competency in fundamental movement patterns and developmentally appropriate non-locomotor skills. The student is expected to:

(A) maintain balance and transfer body weight with control during dynamic activities and lead-up games; and

(B) perform a combination of bending, stretching, twisting, curling, pushing, pulling, and swaying in a variety of activities.

(3) Movement patterns and movement skills--manipulative skills. The physically literate student demonstrates competency in developmentally appropriate manipulative skills. The student is expected to:

(A) demonstrate the key elements of manipulative skills, including eye on target, follow-through, body weight transfer, and body position, during games and activities;

(B) demonstrate the key elements of catching while moving during games and activities;

(C) demonstrate key elements of hand dribbling with either hand when stationary while protecting the ball from a defender during dynamic activities and lead-up games;

(D) combine foot dribbling with other skills during dynamic activities and lead-up games;

(E) demonstrate appropriate form when kicking and punting during dynamic activities and lead-up games;

(F) demonstrate correct technique in volleying in dynamic activities and lead-up games;

(G) demonstrate correct technique when striking an object with a hand or short- or long-handled implement in dynamic activities and lead-up games;

(H) jump a self-turned rope in a routine using a variety of advanced skills; and

(I) demonstrate entering and exiting a turned long rope using advanced jumping skills.

(4) Movement patterns and movement skills--spatial and body awareness. The physically literate student demonstrates competency in spatial and body awareness, including pathways, shapes, levels, speed, direction, and force. The student is expected to:

(A) demonstrate the appropriate use of open space and closing space in small groups during dynamic activities and lead-up games;

(B) apply appropriate use of pathways and levels in small groups during dynamic activities and lead-up games; and

(C) apply speed, direction, and force with a short-handled implement during dynamic activities and lead-up games.

(5) Movement patterns and movement skills--rhythmic activities. The physically literate student demonstrates competency in rhythmic activities and rhythmic combinations. The student is expected to create rhythmic routines in counts of eight using basic steps and coordinated movement patterns individually or in a group.

(6) Performance strategies--games and activities. The physically literate student demonstrates competency in performance strategies in invasion, target, net or wall, fielding, striking, and cooperative games. The student is expected to:

(A) identify and demonstrate the relationships among a variety of game skills, including preparation, movement, follow-through, and recovery, used in net or wall, invasion, target, fielding, or striking games;

(B) demonstrate specific movement skills in designated dynamic activities and lead-up games with a partner or group; and

(C) engage appropriately in physical activity, sporting behavior, and game etiquette without teacher cue.

(7) Performance strategies--outdoor and recreational pursuits. The physically literate student demonstrates competency in outdoor and recreational pursuits. The student is expected to participate in outdoor recreational skills and activities such as rock climbing, orienteering, hiking, paddle sports, archery, cycling, or challenge courses.

(8) Health, physical activity, and fitness--fitness principles. The physically literate student demonstrates and recognizes a health-enhancing, physically active lifestyle. The student is expected to:

(A) describe the benefits of moderate to vigorous physical activity on overall health and wellness;

(B) describe the frequency, intensity, time, and type (FITT) principle and how it improves fitness; and

(C) differentiate between health-related and skill-related fitness components.

(9) Health, physical activity, and fitness--analyze data. The physically literate student demonstrates competency in the ability to analyze data used during fitness performance. The student is expected to:

(A) analyze personal fitness goals for self-improvement; and

(B) track progress and analyze data, with teacher guidance, to target areas needing improvement.

(10) Health, physical activity, and fitness--nutrition and hydration. The physically literate student recognizes the correlation between nutrition, hydration, and physical activity. The student is expected to:

(A) identify healthy foods that enhance physical activity; and

(B) explain the importance of proper hydration before, during, and after physical activity.

(11) Health, physical activity, and fitness--environmental awareness and safety practices. The physically literate student demonstrates competency in environmental awareness and understands safety practices. The student is expected to:

(A) describe and select proper attire and safety equipment that promote safe participation and prevent injury in dynamic activities and games; and

(B) demonstrate correct safety precautions, including water, sun, cycling, skating, and scooter safety.

(12) Social and emotional health--personal responsibility and self-management. The physically literate student demonstrates competency in personal responsibility. The student is expected to:

(A) accept and take responsibility for personal actions that affect self and others during dynamic activities and lead-up games;

(B) accept responsibility and demonstrate respect for differences and similarities in abilities of self and others during dynamic activities and lead-up games; and

(C) apply self-management skills to demonstrate self-control of impulses and emotions during dynamic activities and lead-up games.

(13) Social and emotional health--resolving conflict and social interaction. The physically literate student demonstrates competency in resolving conflict and social interaction. The student is expected to:

(A) explain the importance of and demonstrate how to resolve conflict in socially acceptable ways and respond to winning and losing with dignity and understanding;

(B) identify and describe effective communication to enhance healthy interactions while settling disagreements; and

(C) identify and describe the concepts of empathy and mutual respect for the feelings of others.

(14) Social and emotional health--perseverance. The physically literate student perseveres while addressing challenges. The student is expected to discuss the importance of accepting individual challenges and use self-management skills to persevere in a positive manner during dynamic activities and lead-up games.

(15) Social and emotional health--accepting and providing constructive feedback. The physically literate student accepts and provides constructive feedback. The student is expected to apply appropriate changes to performance based on feedback from peers.

(16) Lifetime wellness--application of lifetime wellness. The physically literate student identifies the value of lifetime wellness. The student is expected to:

(A) differentiate among types of and participate in moderate to vigorous physical activity for a sustained period of time on a regular basis using technology when available; and

(B) analyze the level of personal enjoyment in a variety of activities in the school and community.

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§117.117. Art, Grade 5, 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) develop and communicate ideas drawn from life experiences about self, peers, family, school, or community and from the imagination as sources for original works of art;

(B) use appropriate vocabulary when discussing the elements of art, including line, shape, color, texture, form, space, and value, and the principles of design, including emphasis, repetition/pattern, movement/rhythm, contrast/variety, balance, proportion, and unity; and

(C) discuss the elements of art as building blocks and the principles of design as organizers of works of art.

(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) integrate ideas drawn from life experiences to create original works of art;

(B) create compositions using the elements of art and principles of design; and

(C) produce drawings; paintings; prints; sculpture, including modeled forms; and other art forms such as ceramics, fiber art, constructions, digital art and media, and photographic imagery 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) compare the purpose and effectiveness of artworks from various times and places, evaluating the artist's use of media and techniques, expression of emotions, or use of symbols;

(B) compare the purpose and effectiveness of artworks created by historic and contemporary men and women, making connections to various cultures;

(C) connect art to career opportunities for positions such as architects, animators, cartoonists, engineers, fashion designers, film makers, graphic artists, illustrators, interior designers, photographers, and web designers; and

(D) investigate connections of 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) evaluate the elements of art, principles of design, general intent, media and techniques, or expressive qualities in artworks of self, peers, or historical and contemporary artists;

(B) use methods such as written or oral response or artist statements to identify themes found in collections of artworks created by self, peers, and major historical or contemporary artists in real or virtual portfolios, galleries, or art museums; and

(C) compile collections of personal artworks for purposes of self-assessment or exhibition such as physical artworks, electronic images, sketchbooks, or portfolios.

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§117.118. Music, Grade 5, 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) distinguish among a variety of musical timbres, including those of children's voices and soprano, alto, tenor, and bass adult voices;

(B) distinguish among a variety of musical timbres, including those of woodwind, brass, string, percussion, keyboard, electronic instruments, and instruments of various cultures;

(C) use known music symbols and terminology referring to rhythm; melody; timbre; form; tempo, including accelerando and ritardando; dynamics; articulation; and meter, including simple and compound, to explain musical sounds presented aurally; and

(D) identify and label small and large musical forms such as abac, AB, and ABA; rondo; and theme and variations presented aurally in simple songs and larger works.

(2) Foundations: music literacy. The student reads, writes, and reproduces music notation using a system. 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, including syncopated patterns, and previously learned note values in 2/4, 3/4, or 4/4 meters as appropriate;

(B) read, write, and reproduce extended pentatonic and diatonic melodic patterns using standard staff notation; and

(C) identify and interpret new and previously learned music symbols and terms referring to tempo, including accelerando and ritardando; dynamics; articulation; and meter, including simple and compound.

(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 and play classroom instruments independently or in groups with accurate intonation and rhythm;

(B) sing or play a varied repertoire of music such as American folk songs, patriotic music, and folk songs representative of local and world cultures independently or in groups;

(C) move alone and with others to a varied repertoire of music using gross motor, fine motor, locomotor, and non-locomotor skills and integrated movement such as hands and feet moving together;

(D) perform various folk dances and play parties;

(E) perform simple two-part music, including rhythmic and melodic ostinati, rounds, partner songs, and counter melodies; and

(F) interpret through performance new and previously learned music symbols and terms referring to tempo, including accelarando and ritardando; dynamics; articulation; and meter, including simple and compound.

(4) Creative expression. The student creates and explores new musical ideas within specified guidelines. The student is expected to:

(A) create rhythmic phrases through improvisation and composition;

(B) create melodic phrases through improvisation and composition; and

(C) create simple accompaniments through improvisation and composition.

(5) Historical and cultural relevance. The student examines music in relation to history and cultures. The student is expected to:

(A) perform a varied repertoire of songs, movement, and musical games representative of diverse cultures such as historical folk songs of Texas and America and European and African cultures in America;

(B) perform music representative of Texas and America, including "The Star Spangled Banner";

(C) identify and describe music from diverse genres, styles, periods, and cultures; and

(D) examine the relationships between music and interdisciplinary concepts.

(6) Critical evaluation and response. The student listens to, responds to, and evaluates music and musical performances. The student is expected to:

(A) exhibit audience etiquette during live and recorded performances;

(B) identify known rhythmic and melodic elements in aural examples using appropriate vocabulary;

(C) describe specific musical events such as changes in timbre, form, tempo, dynamics, or articulation in aural examples using appropriate vocabulary;

(D) respond verbally and through movement to short musical examples;

(E) evaluate a variety of compositions and formal or informal musical performances using specific criteria; and

(F) justify personal preferences for specific music works and styles using music vocabulary.

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§117.119. Theatre, Grade 5, 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) develop characterization using sensory and emotional recall;

(B) develop body awareness and spatial perceptions using pantomime;

(C) respond to sounds, music, images, language, and literature using movement;

(D) express emotions and relate ideas using interpretive and planned movement and dialogue;

(E) integrate life experiences in dramatic play;

(F) portray environment, character, and actions; and

(G) demonstrate correct use of basic theatrical terminology.

(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 the voice and body;

(B) describe characters, their relationships, and their surroundings in detail;

(C) create movements and portray a character using dialogue appropriately;

(D) dramatize literary selections in unison, pairs, or groups, demonstrating a logical connection of events and describing the characters, their relationships, and their surroundings; and

(E) create simple stories collaboratively through imaginative play, improvisations, and story dramatizations, demonstrating a logical connection of events describing the characters, their relationships, and their surroundings.

(3) Creative expression: production. The student applies design, directing, and theatre production concepts and skills. The student is expected to:

(A) demonstrate character, environment, action, and theme using props, costumes, and visual elements;

(B) alter space appropriately to create suitable performance environments for playmaking;

(C) plan dramatizations collaboratively; and

(D) interact cooperatively with others in dramatizations.

(4) Historical and cultural relevance. The student relates theatre to history, society, and culture. The student is expected to:

(A) explain theatre as a reflection of life in particular times, places, cultures, and oral traditions specific to American history;

(B) examine the role of live theatre, film, television, or electronic media throughout American history; and

(C) analyze and compare theatre artists and their contributions to theatre and society.

(5) Critical evaluation and response. The student responds to and evaluates theatre and theatrical performances. The student is expected to:

(A) analyze and apply appropriate audience behavior at a variety of performances;

(B) compare visual, aural, oral, and kinetic aspects of informal and formal theatre with the elements of art, dance, or music; and

(C) identify and discuss how movement, music, or visual elements enhance ideas and emotions depicted in theatre.

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§126.10. Technology Applications, Grade 5, Adopted 2022.

(a) Implementation. The provisions of this section shall be implemented by school districts beginning with the 2024-2025 school year.

(1) No later than August 1, 2024, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.

(2) If the commissioner makes the determination that instructional materials funding has been made available this section shall be implemented beginning with the 2024-2025 school year and apply to the 2024-2025 and subsequent school years.

(3) If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 1 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.

(b) Introduction.

(1) Technology includes data communication, data processing, and the devices used for these tasks locally and across networks. Learning to apply these technologies motivates students to develop critical-thinking skills, higher-order thinking, and innovative problem solving. Technology applications incorporates the study of digital tools, devices, communication, and programming to empower students to apply current and emerging technologies in their careers, their education, and beyond.

(2) The technology applications Texas Essential Knowledge and Skills (TEKS) consist of five strands that prepare students to be literate in technology applications by Grade 8: computational thinking; creativity and innovation; data literacy, management, and representation; digital citizenship; and practical technology concepts. Communication and collaboration skills are embedded across the strands.

(A) Computational thinking. Students break down the problem-solving process into four steps: decomposition, pattern recognition, abstraction, and algorithms.

(B) Creativity and innovation. Students use innovative design processes to develop solutions to problems. Students plan a solution, create the solution, test the solution, iterate, and debug the solution as needed, and implement a completely new and innovative product.

(C) Data literacy, management, and representation. Students collect, organize, manage, analyze, and publish various types of data for an audience.

(D) Digital citizenship. Students practice the ethical and effective application of technology and develop an understanding of cybersecurity and the impact of a digital footprint to become safe, productive, and respectful digital citizens.

(E) Practical technology concepts. Students build their knowledge of software applications and hardware focusing on keyboarding and use of applications and tools. Students also build their knowledge and use of technology systems, including integrating the use of multiple applications.

(3) The technology applications TEKS can be integrated into all content areas and can support stand-alone courses. Districts have the flexibility of offering technology applications in a variety of settings, including through a stand-alone course or by integrating the technology applications standards in the essential knowledge and skills for one or more courses or subject areas.

(4) Statements containing the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

(1) Computational thinking--foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms. The student is expected to:

(A) decompose a real-world problem into smaller, manageable subproblems using graphic organizers such as learning maps, concept maps, or other representations of data;

(B) identify patterns in real-world problems and make predictions based on the pattern;

(C) design and create an outline collaboratively that documents a problem, possible solutions, and an expected timeline for the development of a coded solution; and

(D) compare multiple algorithms for the same task and determine which algorithm is the most appropriate for that task.

(2) Computational thinking--applications. The student applies the fundamentals of computer science. The student is expected to:

(A) use variables within a program to store and modify data;

(B) use a design process to create block-based programs that include sequences, loops, conditionals, and events to solve an everyday problem; and

(C) analyze a code and how the code may be reused to develop new or improved programs.

(3) Creativity and innovation--innovative design process. The student takes an active role in learning by using a design process to solve authentic problems for a local or global audience, using a variety of technologies. The student is expected to:

(A) explain the importance of and demonstrate personal skills and behaviors, including persistence, effective communication, following directions, mental agility, metacognition, problem solving and questioning, that are needed to implement a design process successfully; and

(B) apply an appropriate design process that includes components to generate multiple solutions for an authentic problem and develop original products.

(4) Creativity and innovation--emerging technologies. The student demonstrates an understanding that technology is dynamic and impacts different communities. The student is expected to predict how emerging technologies may impact different communities.

(5) Data literacy, management, and representation--collect data. The student uses digital strategies to collect and identify data. The student is expected to:

(A) identify and collect quantitative and qualitative data with digital tools; and

(B) identify keyword(s), Boolean operators, and limiters within provided search strategies.

(6) Data literacy, management, and representation--organize, manage, and analyze data. The student uses data to answer questions. The student is expected to use digital tools to analyze and transform data and make inferences to answer questions.

(7) Data literacy, management, and representation--communicate and publish results. The student communicates data through the use of digital tools to inform an audience. The student is expected to use digital tools to communicate and display data using appropriate visualization to inform an intended audience.

(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:

(A) identify the components of a digital footprint such as online activity, game use, or social media platforms;

(B) describe appropriate digital etiquette for addressing different audiences such as peers, teachers, and other adults; and

(C) apply appropriate digital etiquette for collaborating with different audiences such as peers, teachers, and other adults.

(9) Digital citizenship--ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to:

(A) demonstrate adherence to local acceptable use policy (AUP) and explain the importance of responsible and ethical technology use;

(B) describe the purpose of copyright law and the possible consequences for inappropriate use of digital content; and

(C) create citations for digital forms of media with assistance.

(10) Digital citizenship--privacy, safety, and security. The student practices safe, legal, and ethical digital behaviors to become a socially responsible digital citizen. The student is expected to:

(A) discuss cybersecurity strategies such as using a secured internet connection to protect digital information;

(B) discuss how data collection technology is used to track online navigation and identify strategies to maintain digital privacy and security; and

(C) discuss and identify how interactions can escalate online and explain ways to stand up to cyberbullying, including advocating for self and others.

(11) Practical technology concepts--processes. The student engages with technology systems, concepts, and operations. The student is expected to:

(A) identify file types for text, graphics, and multimedia files; and

(B) perform software application functions, including inserting or deleting text and images and formatting tools or options.

(12) Practical technology concepts--skills and tools. The student selects appropriate methods or techniques for an assigned task and identifies and solves simple hardware and software problems using common troubleshooting strategies. The student is expected to:

(A) describe and evaluate operating systems, learning management systems, virtual systems, and network systems such as internet, intranet, wireless network, and short-range wireless technology;

(B) organize files using appropriate naming conventions and folder structures;

(C) demonstrate proper touch keyboarding techniques with increasing speed and accuracy and ergonomic strategies such as correct hand and body positions;

(D) demonstrate keyboard or other input device shortcuts with fluency; and

(E) use help sources to research application features and solve software issues.

Source: The provisions of this §126.10 adopted to be effective August 7, 2022, 47 TexReg 4518.