§110.22. ENGLISH LANGUAGE ARTS AND READING, GRADE 6 (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 a message, ask clarifying questions, and respond appropriately;
 - (B) follow and give oral instructions that include multiple action steps;
 - (C) give an organized presentation with a specific stance and position, employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively; and
 - (D) participate in student-led discussions by eliciting and considering suggestions from other group members, taking notes, and identifying points of agreement and disagreement.
- (2) 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 the meaning, syllabication, pronunciation, word origin, and part of speech;
 - (B) use context such as definition, analogy, and examples to clarify the meaning of words; and
 - (C) determine the meaning and usage of grade-level academic English words derived from Greek and Latin roots such as mis/mit, bene, man, vac, scrib/script, and jur/jus.
- (3) 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 adjust fluency when reading grade-level text based on the reading purpose.
- (4) 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.
- (5) 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:
 - (B) generate questions about text before, during, and after reading to deepen understanding and gain information;
 - (C) make, 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;
 - (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.

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§110.22. ENGLISH LANGUAGE ARTS AND READING, GRADE 6 (b) KNOWLEDGE AND SKILLS

- (6) 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 sources within and across genres;
 - (C) use text evidence to support an appropriate response;
 - (D) paraphrase and 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;
 - (G) discuss and write about the explicit or implicit meanings of text;
 - (H) respond orally or in writing with appropriate register, vocabulary, tone, and voice; and
 - (I) reflect on and adjust responses as new evidence is presented.
- (9) 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 figurative language such as metaphor and personification achieves specific purposes;
 - (E) identify the use of literary devices, including omniscient and limited point of view, to achieve a specific purpose; and
 - (F) analyze how the author's use of language contributes to mood and voice.
- (10) 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 appropriate for a particular topic, purpose, and audience using a range of strategies such as discussion, background reading, and personal interests;
 - (B) develop drafts into a focused, structured, and coherent piece of writing by:
 - (ii) developing an engaging idea reflecting depth of thought with specific facts and details; and
 - (E) publish written work for appropriate audiences.

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§110.22. ENGLISH LANGUAGE ARTS AND READING, GRADE 6 (b) KNOWLEDGE AND SKILLS

- (11) 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 multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;
 - (C) compose multi-paragraph argumentative texts using genre characteristics and craft; and
 - (D) compose correspondence that reflects an opinion, registers a complaint, or requests information in a business or friendly structure.
- (12) 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 student-selected and teacher-guided questions for formal and informal inquiry;
 - (B) develop and revise a plan;
 - (C) refine the major research question, if necessary, guided by the answers to a secondary set of questions;
 - (D) identify and gather relevant information from a variety of sources;
 - (F) synthesize information from a variety of sources; and
 - (J) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

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§111.26. MATHEMATICS, GRADE 6 (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.
- (5) **Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to:
 - (B) solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models.
- **(8) Expressions, equations, and relationships.** The student applies mathematical process standards to use geometry to represent relationships and solve problems. The student is expected to:
 - (D) determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.
- (9) Expressions, equations, and relationships. The student applies mathematical process standards to use equations and inequalities to represent situations. The student is expected to:
 - (C) write corresponding real-world problems given one-variable, one-step equations or inequalities.

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§112.18. SCIENCE, GRADE 6 (b) KNOWLEDGE AND SKILLS

- (1) Scientific investigation and reasoning. The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices.
- (2) Scientific investigation and reasoning. The student uses scientific practices during laboratory and field investigations.
- (3) Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists.
- **(4) Scientific investigation and reasoning.** The student knows how to use a variety of tools and safety equipment to conduct science inquiry. The student is expected to:
 - (A) use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information.
- (5) Matter and energy. The student knows the differences between elements and compounds. The student is expected to:
 - (C) identify the formation of a new substance by using the evidence of a possible chemical change such as production of gas, change in temperature, production of a precipitate, or color change.
- (7) Matter and energy. The student knows that some of Earth's energy resources are available on a nearly perpetual basis, while others can be renewed over a relatively short period of time. Some energy resources, once depleted, are essentially nonrenewable. The student is expected to research and discuss the advantages and disadvantages of using coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources.

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