

STEM in Action: Master TEKS Alignment Grade 2

Color Code: **Grade 1** – **Grade 2** – **Grade K-2** – **Grade 1-2** – **Grade 3** – **Grade 4** – **Grade 5** – **Grade 6**

§112.13. Science, Grade 2, Adopted 2017

(1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures. The student is expected to:

(A) identify, describe, and demonstrate safe practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately

Correlated Lessons (1A):

- STEM in Action Grade 2: Muddy Mats Exploration

(2) Scientific investigation and reasoning. The student develops abilities necessary to do scientific inquiry in classroom and outdoor investigations. The student is expected to:

(A) Ask questions about organisms, objects, and events during observations and investigations.

Correlated Lessons (2A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action Grade 2: Muddy Mats Exploration

(B) Plan and conduct descriptive investigations.

Correlated Lessons (2B):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(C) Collect data from observations using scientific tools.

Correlated Lessons (2C):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
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- STEM in Action, Grade 2: Seed Rescue Exploration
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(D) Record and organize data using pictures, numbers, and words.

Correlated Lessons (2D):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(E) Communicate observations and justify explanations using student-generated data from simple descriptive investigations

Correlated Lessons (2E):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

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(F) Compare results of investigations with what students and scientists know about the world.

Correlated Lessons (2F):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(3) Scientific investigation and reasoning. The student knows that information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions. The student is expected to:

(A) Identify and explain a problem and propose a task and solution for the problem.

Correlated Lessons (3A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(B) Make predictions based on observable patterns.

Correlated Lessons (3B):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(C) Identify what a scientist is and explore what different scientists do.

Correlated Lessons (3C):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(4) Scientific investigation and reasoning. The student uses age-appropriate tools and models to investigate the natural world. The student is expected to:

(A) Collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums.

Correlated Lessons (4A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grades 1-2: Project Park Design
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(B) measure and compare organisms and objects.

Correlated Lessons (4B):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grades 1-2: Project Park Design
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- STEM in Action, Grade 2: Shrinking Shore Exploration

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(5) Matter and energy. The student knows that matter has physical properties and those properties determine how it is described, classified, changed, and used. The student is expected to:

(A) Classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or liquid.

Correlated Lessons (5A):

- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration

(B) Compare changes in materials caused by heating and cooling.

Correlated Lessons (5B):

- STEM in Action Grade 2: Muddy Mats Exploration

(D) Combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties.

Correlated Lessons (5D):

- STEM in Action Grade 2: Muddy Mats Exploration

(6) Force, motion, and energy. The student knows that forces cause change and energy exists in many forms. The student is expected to:

(A) Investigate the effects on objects by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter.

Correlated Lessons (6A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action Grade 2: Muddy Mats Exploration

(7) Earth and space. The student knows that the natural world includes earth materials. The student is expected to:

(B) Identify and compare the properties of natural sources of freshwater and saltwater.

Correlated Lessons (7B):

- STEM in Action Grade 2: Muddy Mats Exploration

(8) Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:

(C) Observe, describe, and record patterns of objects in the sky, including the appearance of the Moon.

Correlated Lessons (8C):

- STEM in Action, Grades 1-2: Project Park Design

(9) Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:

(A) Identify the basic needs of plants and animals.

Correlated Lessons (9A):

- STEM in Action, Grade 2: Seed Rescue Exploration

(C) Compare the ways living organisms depend on each other and on their environments such as through food chains.

Correlated Lessons (9C):

- STEM in Action, Grade 2: Seed Rescue Exploration

(10) Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:

(A) Observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs.

Correlated Lessons (10A):

- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration

(B) Observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant.

Correlated Lessons (10B):

- STEM in Action, Grade 2: Seed Rescue Exploration

§110.4. English Language Arts and Reading, Grade 2, Adopted 2017.

(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, ask relevant questions to clarify information, and answer questions using multi-word responses.

Correlated Lessons (1A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration

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Correlated Lessons (1A Continued):

- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(B) Follow, restate, and give oral instructions that involve a short, related sequence of actions.

Correlated Lessons (1B):

- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(C) Share information and ideas that focus on the topic under discussion, speaking clearly at an appropriate pace and using the conventions of language.

Correlated Lessons (1C):

- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(D) Work collaboratively with others by following agreed-upon rules for discussion, including listening to others, speaking when recognized, making appropriate contributions, and building on the ideas of others.

Correlated Lessons (1D):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(E) Develop social communication such as distinguishing between asking and telling.

Correlated Lessons (1E):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(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 phonological awareness by:

(A.iv) Manipulating phonemes within base words.

Correlated Lessons (2A.iv):

- STEM in Action, Grade 5: Food Deserts Challenge

(D) Alphabetize a series of words and use a dictionary or glossary to find words.

Correlated Lessons (2D):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

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- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(E) Develop handwriting by accurately forming all cursive letters using appropriate strokes when connecting letters.

Correlated Lessons (2E):

- STEM in Action, Grade 5: Food Deserts Challenge

(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:

(B) Use context within and beyond a sentence to determine the meaning of unfamiliar words.

Correlated Lessons (3B):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(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.

Correlated Lessons (5):

- STEM in Action, Grade 5: Food Deserts Challenge

(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.

Correlated Lessons (6A):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

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

Correlated Lessons (6B):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

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

Correlated Lessons (6C):

- STEM in Action, Grade 2: Muddy Mats Exploration

Correlated Lessons (6C Continued):

- STEM in Action, Grade 2: Shrinking Shore Exploration

(E) Make connections to personal experiences, ideas in other texts, and society.

Correlated Lessons (6E):

- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(F) Make inferences and use evidence to support understanding.

Correlated Lessons (6F):

- STEM in Action, Grade 1: Shadow Box Theater Exploration

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Correlated Lessons (6F Continued)

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
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(G) Evaluate details read to determine key ideas.

Correlated Lessons (6G):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(H) Synthesize information to create new understanding.

Correlated Lessons (6H):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(I) Monitor comprehension and make adjustments such as re-reading, using background knowledge, checking for visual cues, and asking questions when understanding breaks down.

Correlated Lessons (6I):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
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(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.

Correlated Lessons (7A):

- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(C) Use text evidence to support an appropriate response.

Correlated Lessons (7C):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
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Correlated Lessons (7C Continued):

- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(D) Retell and paraphrase texts in ways that maintain meaning and logical order.

Correlated Lessons (7D):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
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(E) Interact with sources in meaningful ways such as illustrating or writing.

Correlated Lessons (7E):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration

(F) Respond using newly acquired vocabulary as appropriate.

Correlated Lessons (7F):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
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(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) Discuss topics and determine theme using text evidence with adult assistance.

Correlated Lessons (8A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
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(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:

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

(D.i) The central idea and supporting evidence with adult assistance.

Correlated Lessons (9D.i):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
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(D.ii) Features and graphics to locate and gain information.

Correlated Lessons (9D.ii):

- STEM in Action, Grade 1: Wild Feet Exploration

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Correlated Lessons (9D.ii Continued):

- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(E) Recognize characteristics of persuasive text, including:

(E.ii) Distinguishing facts from opinion.

Correlated Lessons (9E.ii):

- STEM in Action, Grade 5: Food Deserts Challenge

(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) Discuss the author's purpose for writing text.

Correlated Lessons (10A):

- STEM in Action Grade 2: Muddy Mats Exploration

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

Correlated Lessons (10C):

- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
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(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 generating ideas for writing such as drawing and brainstorming.

Correlated Lessons (11A):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(B) Develop drafts into a focused piece of writing by:

(B.ii) Developing an idea with specific and relevant details.

Correlated Lessons (11B.ii):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
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(D) Edit drafts using standard English conventions, including:

(D.i) Complete sentences with subject-verb agreement.

Correlated Lessons (11D.i):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration

(D.iii) Singular, plural, common, and proper nouns.

Correlated Lessons (11D.iii):

- STEM in Action Grade 2: Muddy Mats Exploration

(D.iv) Adjectives, including articles.

Correlated Lessons (11D.iv):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
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Correlated Lessons (11D.iv Continued):

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(D.v) Adverbs that convey time and adverbs that convey place.

Correlated Lessons (11D.v):

- STEM in Action Grade 2: Muddy Mats Exploration

(D.vi) Prepositions and prepositional phrases.

Correlated Lessons (11D.vi):

- STEM in Action Grade 2: Muddy Mats Exploration

(D.vii) Pronouns, including subjective, objective, and possessive cases.

Correlated Lessons (11D.viii):

- STEM in Action Grade 2: Muddy Mats Exploration

(E) Publish and share writing.

Correlated Lessons (11E):

- STEM in Action, Grade 1: Shadow Box Theater Exploration

(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, including personal narratives and poetry.

Correlated Lessons (12A):

- STEM in Action Grade 2: Muddy Mats Exploration

(B) Compose informational texts, including procedural texts and reports.

Correlated Lessons (12B):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
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(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 questions for formal and informal inquiry with adult assistance.

Correlated Lessons (13A):

- STEM in Action, Grade 1: Sound Bite Exploration

(B) Develop and follow a research plan with adult assistance.

Correlated Lessons (13B):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
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(C) Identify and gather relevant sources and information to answer the questions.

Correlated Lessons (13C):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(E) Demonstrate understanding of information gathered.

Correlated Lessons (13E):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

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

Correlated Lessons (13G):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

§111.4. Mathematics, Grade 2, Adopted 2012.

(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.

Correlated Lessons (1A):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(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.

Correlated Lessons(1B):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(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.

Correlated Lessons (1C):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(D) Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

Correlated Lessons (1D):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

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(E) Create and use representations to organize, record, and communicate mathematical ideas.

Correlated Lessons (1E):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(F) Analyze mathematical relationships to connect and communicate mathematical ideas.

Correlated Lessons (1F):

- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(G) Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Correlated Lessons (1G):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action, Grade 1: Wild Feet Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:

(C) Generate a number that is greater than or less than a given whole number up to 1,200.

Correlated Lessons (2C):

- STEM in Action, Grade 1: Sound Bite Exploration

(D) Use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =).

Correlated Lessons (2D):

- STEM in Action, Grade 1: Sound Bite Exploration

(3) Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:

(A) Partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words.

Correlated Lessons (3A):

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(B) Explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part.

Correlated Lessons (3B):

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(D) Identify examples and non-examples of halves, fourths, and eighths.

Correlated Lessons (3D):

- STEM in Action, Grade 3: Wildlife Corridors Challenge

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

(A) Recall basic facts to add and subtract within 20 with automaticity.

Correlated Lessons (4A):

- STEM in Action Grade 2: Muddy Mats Exploration

(B) Add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations.

Correlated Lessons (4B):

- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

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(C) Solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms.

Correlated Lessons (4C):

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(5) Number and operations. The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:

(A) Determine the value of a collection of coins up to one dollar.

Correlated Lessons (5A):

- STEM in Action, Grade 2: Seed Rescue Exploration

(B) Use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins.

Correlated Lessons (5B):

- STEM in Action, Grade 2: Seed Rescue Exploration

(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:

(C) Represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.

Correlated Lessons (7C):

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:

(A) Create two-dimensional shapes based on given attributes, including number of sides and vertices.

Correlated Lessons (8A):

- STEM in Action, Grade 1: Shadow Box Theater Exploration

(B) Classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language.

Correlated Lessons (8B):

- STEM in Action, Grade 1: Shadow Box Theater Exploration

(C) Classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices.

Correlated Lessons (8C):

- STEM in Action, Grade 1: Shadow Box Theater Exploration

(D) Compose two-dimensional shapes and three-dimensional solids with given properties or attributes.

Correlated Lessons (8D):

- STEM in Action, Grade 1: Shadow Box Theater Exploration

(E) Decompose two-dimensional shapes such as cutting out a square from a rectangle, dividing a shape in half, or partitioning a rectangle into identical triangles and identify the resulting geometric parts.

Correlated Lessons (8E):

- STEM in Action, Grade 1: Shadow Box Theater Exploration
- STEM in Action, Grade 1: Wild Feet Exploration

(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:

(A) Find the length of objects using concrete models for standard units of length.

Correlated Lessons (9A):

- STEM in Action, Grade 2: Shrinking Shore Exploration

(D) Determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes.

Correlated Lessons (9D):

- STEM in Action, Grade 2: Seed Rescue Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Food Deserts Challenge

(E) Determine a solution to a problem involving length, including estimating lengths.

Correlated Lessons (9E):

- STEM in Action, Grade 2: Shrinking Shore Exploration

(F) Use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit.

Correlated Lessons (9F):

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge

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(10) Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:

(A) Explain that the length of a bar in a bar graph or the number of pictures in a pictograph represents the number of data points for a given category.

Correlated Lessons (10A):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(B) Organize a collection of data with up to four categories using pictographs and bar graphs with intervals of one or more.

Correlated Lessons (10B):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge

(C) Write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one.

Correlated Lessons(10C):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
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(D) Draw conclusions and make predictions from information in a graph.

Correlated Lessons (10D):

- STEM in Action, Grade 1: Sound Bite Exploration
- STEM in Action Grade 2: Muddy Mats Exploration
- STEM in Action, Grade 2: Shrinking Shore Exploration
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge