

## STEM in Action: Master TEKS Alignment

### Grade 5

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

#### §112.16. Science, Grade 5, Adopted 2017

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

(A) Demonstrate safe practices and the use of safety equipment as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations using safety equipment, including safety goggles or chemical splash goggles, as appropriate, and gloves, as appropriate.

Correlated Lessons:

- STEM in Action, Grade 4: Digital Relay Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge

(B) Make informed choices in the conservation, disposal, and recycling of materials.

Correlated Lessons:

- STEM in Action, Grade 5: Food Deserts Challenge

(2) Scientific investigation and reasoning. The student uses scientific practices during laboratory and outdoor investigations. The student is expected to:

(A) Describe, plan, and implement simple experimental investigations testing one variable.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 4: Digital Relay Challenge
- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge
- STEM in Action, Grade 5: Food Deserts Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge
- STEM in Action, Grades 3-5: Silly Straw Challenge

(B) Ask well defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology.

Correlated Lessons:

- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
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- STEM in Action, Grades 3-5: Silly Straw Challenge

(C) Collect and record information using detailed observations and accurate measuring.

Correlated Lessons:

- 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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- STEM in Action, Grades 3-5: Silly Straw Challenge

(D) Analyze and interpret information to construct reasonable explanations from direct (observable). and indirect (inferred). evidence

Correlated Lessons:

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

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- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 4: Digital Relay Challenge
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(E) Demonstrate that repeated investigations may increase the reliability of results.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 4: Digital Relay Challenge
- STEM in Action Grade 4: Solar House Design Challenge
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(F) Communicate valid conclusions in both written and verbal forms.

Correlated Lessons:

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(G) Construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information.

Correlated Lessons:

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- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(3) Scientific investigation and reasoning. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

(A) Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing

Correlated Lessons:

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- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(B) Draw or develop a model that represents how something that cannot be seen such as the Sun, Earth, and Moon system and formation of sedimentary rock works or looks

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(C) Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 4: Digital Relay Challenge
- STEM in Action, Grades 3-5: Silly Straw Challenge

(4) Scientific investigation and reasoning. The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

(A) Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices; and materials to support observations of habitats or organisms such as terrariums and aquariums.

Correlated Lessons:

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

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

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge
- STEM in Action, Grades 3-5: Silly Straw Challenge

(B) Demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(C) Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.

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Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(6) Force, motion, and energy. The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to:

(A) Explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action, Grade 4: Digital Relay Challenge

(B) Demonstrate that the flow of electricity in closed circuits can produce light, heat, or sound.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action, Grade 4: Digital Relay Challenge

(C) Demonstrate that light travels in a straight line until it strikes an object and is reflected or travels through one medium to another and is refracted.

Correlated Lessons:

- STEM in Action Grade 4: Solar House Design Challenge

(D) Design a simple experimental investigation that tests the effect of force on an object.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge
- STEM in Action, Grades 3-5: Silly Straw Challenge

(7) Earth and space. The student knows Earth's surface is constantly changing and consists of useful resources. The student is expected to:

(B) Recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, or ice.

Correlated Lessons:

- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

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

(A) Differentiate between weather and climate.

Correlated Lessons:

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

(B) Explain how the Sun and the ocean interact in the water cycle.

Correlated Lessons:

- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(D) Identify and compare the physical characteristics of the Sun, Earth, and Moon.

Correlated Lessons:

- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(9) Organisms and environments. The student knows that there are relationships, systems, and cycles within environments. The student is expected to:

(A) Observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving components.

Correlated Lessons:

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(B) Describe the flow of energy within a food web, including the roles of the Sun, producers, consumers, and decomposers.

Correlated Lessons:

- STEM in Action, Grade 5: Food Deserts Challenge

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(C) Predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways.

Correlated Lessons:

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

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

(A) Compare the structures and functions of different species that help them live and survive in a specific environment such as hooves on prairie animals or webbed feet in aquatic animals.

Correlated Lessons:

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

(B) Differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle.

Correlated Lessons:

- STEM in Action, Grade 3: Wildlife Corridors Challenge

### §110.7. English Language Arts and Reading, Grade 5, 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 to interpret verbal and non-verbal messages, ask relevant questions, and make pertinent comments.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(B) Follow, restate, and give oral instructions that include multiple action steps.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(C) Give an organized presentation employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively.

Correlated Lessons:

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

Correlated Lessons:

- STEM in Action, Grade 3: Farmer Grady's Challenge
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- STEM in Action, Grade 5: Rainwater Runoff Design Challenge
- STEM in Action, Grades 3-5: Silly Straw 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:

(C) Write legibly in cursive.

Correlated Lessons:

- 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 relevant meaning of unfamiliar words or multiple-meaning words.

Correlated Lessons:

- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
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(C) Identify the meaning of and use words with affixes such as trans-, super-, -ive, and -logy and roots such as geo and photo.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design 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:

- 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:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge
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(B) Generate questions about text before, during, and after reading to deepen understanding and gain information.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
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(D) Create mental images to deepen understanding.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

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

Correlated Lessons:

- 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:

- 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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(G) Evaluate details read to determine key ideas.

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(H) Synthesize information to create new understanding.

Correlated Lessons:

- 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, asking questions, and annotating when understanding breaks down.

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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, including self-selected texts.

Correlated Lessons:

- 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:

- STEM in Action, Grade 3: Farmer Grady's Challenge
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(D) Retell, paraphrase, or summarize texts in ways that maintain meaning and logical order.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge
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(F) Respond using newly acquired vocabulary as appropriate.

Correlated Lessons:

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• STEM in Action, Grade 5: Rainwater Runoff Design Challenge

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

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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 with supporting evidence.

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(D.ii.) Features such as insets, timelines, and sidebars to support understanding.

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

(E.ii.) Explaining how the author has used facts for or against an argument.

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(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:

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

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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 selecting a genre for a particular topic, purpose, and audience using a range of strategies such as brainstorming, freewriting, and mapping.



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

(B.i.) Organizing with purposeful structure, including an introduction, transitions, and a conclusion.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge
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(B.ii.) Developing an engaging idea reflecting depth of thought with specific facts and details.

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

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

(D.i.) Complete simple and compound sentences with subject-verb agreement and avoidance of splices, run-ons, and fragments.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(D.ii.) Past tense of irregular verbs.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(D.iii.) Collective nouns.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(D.iv.) Adjectives, including their comparative and superlative forms.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action Grade 5: The Great Toy Design Challenge

(D.vi.) Prepositions and prepositional phrases and their influence on subject-verb agreement.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(D.vii.) Pronouns, including indefinite.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(D.viii.) Subordinating conjunctions to form complex sentences.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

(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.

Correlated Lessons:

- STEM in Action Grade 5: The Great Toy Design Challenge

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

Correlated Lessons:

- STEM in Action, Grade 3: Farmer Grady's Challenge
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(C) Compose argumentative texts, including opinion essays, using genre characteristics and craft.

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- STEM in Action, Grade 3: Wildlife Corridors Challenge

- STEM in Action, Grade 4: Digital Relay Challenge

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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 and clarify questions on a topic for formal and informal inquiry.

Correlated Lessons:

- 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) Develop and follow a research plan with adult assistance.

Correlated Lessons:

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

- STEM in Action, Grade 3: Wildlife Corridors Challenge

- STEM in Action Grade 5: The Great Toy Design Challenge

- STEM in Action, Grade 5: Food Deserts Challenge

(C) Identify and gather relevant information from a variety of sources.

Correlated Lessons:

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

- STEM in Action, Grade 3: Wildlife Corridors Challenge

(D) Understand credibility of primary and secondary sources.

Correlated Lessons:

- 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:

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

- STEM in Action, Grade 3: Wildlife Corridors Challenge

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

Correlated Lessons:

- 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 4: Digital Relay Challenge

- STEM in Action Grade 4: Solar House Design Challenge

- STEM in Action Grade 5: The Great Toy Design Challenge

### §111.7. Mathematics, Grade 5, 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:

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

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

- STEM in Action Grade 4: Solar House Design Challenge

- STEM in Action Grade 5: The Great Toy Design Challenge

- STEM in Action, Grade 5: Food Deserts Challenge

## STEM in Action: Master TEKS Alignment

### Grade 5

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

(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:

- 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 4: Digital Relay Challenge
- STEM in Action, Grade 4: Solar House Design Challenge
- STEM in Action, Grade 5: The Great Toy Design Challenge
- STEM in Action, Grade 5: Food Deserts Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge
- STEM in Action, Grades 3-5: Silly Straw 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:

- 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 4: Digital Relay Challenge
- STEM in Action, Grade 4: Solar House Design Challenge
- STEM in Action, Grade 5: The Great Toy Design Challenge
- STEM in Action, Grade 5: Food Deserts Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge
- STEM in Action, Grades 3-5: Silly Straw Challenge

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

Correlated Lessons:

- 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

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

Correlated Lessons:

- 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:

- 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:

- 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
- STEM in Action, Grades 3-5: Silly Straw Challenge

(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.

Correlated Lessons:

- STEM in Action, Grade 5: Food Deserts Challenge

(C) Round decimals to tenths or hundredths.

Correlated Lessons:

- STEM in Action, Grade 5: Food Deserts Challenge

(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.

## STEM in Action: Master TEKS Alignment

### Grade 5

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Correlated Lessons:

- STEM in Action, Grade 5: Food Deserts Challenge

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

Correlated Lessons:

- STEM in Action, Grade 3: Farmer Grady's Challenge
- STEM in Action, Grade 4: Digital Relay Challenge
- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(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.

Correlated Lessons:

- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(K) Add and subtract positive rational numbers fluently.

Correlated Lessons:

- STEM in Action, Grade 5: Food Deserts Challenge

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

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

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(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)

Correlated Lessons:

- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(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.

Correlated Lessons:

- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(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.

Correlated Lessons:

- STEM in Action Grade 4: Solar House Design Challenge
- STEM in Action, Grade 5: Food Deserts Challenge
- STEM in Action, Grades 3-5: Silly Straw Challenge

(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.

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

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

Correlated Lessons:

- STEM in Action, Grade 3: Squeaky Clean Magnets Challenge
- STEM in Action, Grade 3: Wildlife Corridors Challenge
- STEM in Action, Grade 5: Rainwater Runoff Design Challenge

(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:

(D) Develop a system for keeping and using financial records.

Correlated Lessons:

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

## STEM in Action: Master TEKS Alignment

### Grade 5

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

(E) Describe actions that might be taken to balance a budget when expenses exceed income.

Correlated Lessons:

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

(F) Balance a simple budget.

Correlated Lessons:

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