

A Correlation of  
**Elevate Science**  
**Grade 5, ©2019**



To the  
**Arizona Science Standards (2018)**  
**Grade 5**

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**Introduction**

The following document demonstrates how the ***Elevate Science, ©2019*** program supports Arizona Standards for Science (adopted in 2018). For each standard, correlation references are to the Student Edition and Teacher Edition where applicable.

***Elevate Science*** is a comprehensive K-5 science program that focuses on active, student-centered learning. It builds students' critical thinking, questioning, and collaboration skills, and fuels interest in STEM and creative problem solving while supporting literacy development for elementary-age learners. Developed to support Next Generation Science Standards (NGSS), ***Elevate Science*** integrates three-dimensional learning of the Scientific and Engineering Practices, Crosscutting Concepts (CCC), and Disciplinary Core Ideas (DCIs).

The ***Elevate Science*** blended print and digital curriculum engages students in phenomena-based inquiry and hands-on investigations.

- Problem-based learning Quests put students on a journey of discovery
- Engineering-focused features infuse STEM learning
- Coding and innovation engage students and build 21<sup>st</sup> century skills

The Teacher's Edition of ***Elevate Science*** helps elementary educators teach science with confidence: Scaffolding, ELD, differentiated instruction, and an instructional organization based upon the 5E learning model, (Engage, Explore, Explain, Extend/Elaborate, Evaluate), provide all the support needed for successful teaching practices. Professional development offers point-of-use support. A full-view approach to inquiry and testing provides new options for a variety of hands-on labs and assessments for three-dimensional learning.

***Elevate Science*** prepares students for the challenges of tomorrow, building strong reasoning skills and critical thinking strategies as they engage in explorations, formulate claims, and gather and analyze data that promote evidence-based argument. Designed for today's classroom, preparing students for tomorrow's world. ***Elevate Science*** promises to:

- Elevate thinking.
- Elevate learning.
- Elevate teaching.

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<b>Arizona Science Standards Grade 5</b>	<b>Elevate Science ©2019 Grade 5</b>
<b>Fifth Grade: Patterns; Scale, Proportion, and Quantity</b>	
By the end of fifth grade, students apply their understanding of scale at macro (time and space) and micro (particles of matter) levels to understand patterns and scale across life, earth and space, and physical sciences. Students will develop an understanding of forces, conservation of matter, and that genetic information can be passed down from parent to offspring. Student investigations focus on collecting and making sense of observational data and measurements using the science and engineering practices: ask questions and define problems, develop and use models, plan and carry out investigations, analyze and interpret data, use mathematics and computational thinking, construct explanations and design solutions, engage in argument from evidence, and obtain, evaluate, and communicate information. While individual lessons may include connections to any of the crosscutting concepts, the standards in fifth grade focus on helping students understand phenomena through patterns and scale, proportion and quantity.	
<b>Physical Sciences: Students develop an understanding that changes can occur to matter/objects on Earth or in space, but both energy and matter follow the pattern of being conserved during those changes.</b>	
<b>Physical Science Standards</b>	
5.P1U1.1 Analyze and interpret data to explain that matter of any type can be subdivided into particles too small to see and, in a closed system, if properties change or chemical reactions occur, the amount of matter stays the same.	<b>SE/TE:</b> Topic 1 uInvestigate Lab: How can you detect matter without seeing it?, 17 Topic 1 uBe a Scientist: Disappearance of Particles, 18 Topic 1 STEM Quest Check-In Lab: How do you know that matter is still there?, 23 Topic 1 uInvestigate Lab: How can you use properties to identify solids?, 27 Topic 1 Model It!, 28 Topic 2 Math Toolbox: Use Models, 67 Topic 2 Conservation of Matter, 68-69 Topic 2 Model It!, 68 Topic 2 Literacy Toolbox: Use Evidence from Text, 68 Topic 2 Interactivity, 69 Topic 2 Quest Connection, 69 Topic 2 Visual Literacy Connection: Is matter conserved?, 70-71 Topic 2 Lesson 3 Check: Question 2, 73 Science and Engineering Practices Handbook: Science Practices, Developing and Using Models, EM6

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<p>5.P1U1.2 Plan and carry out investigations to demonstrate that some substances combine to form new substances with different properties and others can be mixed without taking on new properties.'</p>	<p><b>SE/TE:</b>  Topic 2 Quest Kickoff! STEM: Find the Right Mix- and Step on It!, 44-45  Topic 2 Chemical Changes: STEM Connection, 64  Topic 2 New Substances, 64, 66  Investigate Lab: How can you identify chemical changes?, 65  Topic 2 Particles and Chemical Changes, 67  Topic 2 Model It!, 67  Topic 2 Math Toolbox: Use Models, 67  Topic 2 Examples of Chemical Changes, 72  Topic 2 Lesson 3 Check: Question 1, 73  Topic 2 STEM Quest Check-In Lab: How can you make modeling dough?, 74-75  Topic 2 Mixtures, 80  Topic 2 Model It!, 80  Topic 2 Quest Connection, 81  Topic 2 Engineering Practice Toolbox: Construct Explanations, 81  Topic 2 Quest Findings STEM: Find the Right Mix – and Step on It!, 89  Topic 2 Assessment: Questions 2, 3, 6, 7, 90-91  Science and Engineering Practices Handbook: Science Practices, Carry Out Investigations, EM1  <b>TE Only:</b>  Topic 2 Focus on Mastery!: Planning and Carrying Out Investigations, 74</p>
<p>5.P2U1.3 Construct an explanation using evidence to demonstrate that objects can affect other objects even when they are not touching.</p>	<p><b>SE/TE:</b>  Topic 1 Magnetic Materials, 12  Science and Engineering Practices Handbook: Science Practices, Constructing Explanations, EM6</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 4, Topic 3, Lesson 3: Energy Transfers; and Grade 3, Topic 2, Lesson 2: Magnetic Forces.</p>

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5.P3U1.4 Obtain, analyze, and communicate evidence of the effects that balanced and unbalanced forces have on the motion of objects.	<p><b>SE/TE:</b> Science and Engineering Practices Handbook: Science Practices, Communicating Information, EM9</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 3, Topic 1, Lesson 4: Balanced and Unbalanced Forces.</p>
5.P3U2.5 Define problems and design solutions pertaining to force and motion.	<p><b>SE/TE:</b> Science and Engineering Practices Handbook: Engineering Practices, Defining Problems, EM10 Science and Engineering Practices Handbook: Engineering Practices, Designing Solutions, EM11</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 4, Topic 1, Lesson 1: Energy, Speed, and Moving Objects; and Grade 3, Topic 1, Lesson 3 Forces and Motion.</p>
5.P4U1.6 Analyze and interpret data to determine how and where energy is transferred when objects move.	<p><b>SE/TE:</b> Science and Engineering Practices Handbook: Science Practices, Analyzing and Interpreting Data, EM4</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 4, Topic 3, Lesson 1: Energy, Speed, and Moving Objects; Lesson 3: Energy Transfers; and Grade 3, Topic 1, Lesson 3 Forces and Motion.</p>

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<b>Earth and Space Sciences: Students develop an understanding of the how forces (gravity) in space cause observable patterns due to the position of the Earth, Sun, Moon, and stars.</b>	
<b>Earth and Space Standards</b>	
5.E2U1.7 Develop, revise, and use models based on evidence to construct explanations about the movement of the Earth and Moon within our solar system.	<b>SE/TE:</b> Topic 7 Lesson 2 Earth’s Movements in Space: Local-To-Global Connection, 284 Topic 7 uInvestigate Lab: How are we spinning?, 285 Topic 7 Earth’s Rotation, 286 Topic 7 Earth’s Revolution, 287 Topic 7 Visual Literacy Connection: What is the movement of Earth’s moon in space?, 288-289 Topic 7 Lesson 2 Check: Question 2, 291 Topic 7 Quest Check-In: Sun Up, Sun Down, 292 Topic 7 uInvestigate Lab: What star patterns can you see?, 295 Topic 7 Shadow Patterns, 296 Topic 7 uBe a Scientist: Shadow Play, 296 Topic 7 Model It!, 296 Topic 7 Quest Findings: Plan a Trip Around the World of Patterns, 306 Topic 7 Evidenced-Based Assessment: Questions 1-4, 310-311 Topic 7 uDemonstrate Lab: What can we tell from shadows?, 312-313 Topic 7 Lesson 3 Check: Question 2, 302 Science and Engineering Practices Handbook: Science Practices, Constructing Explanations, EM6 Science and Engineering Practices Handbook: Science Practices, Developing and Using Models, EM6 Science and Engineering Practices Handbook: Engineering Practices, Using Models and Prototype, EM12

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<p>5.E2U1.8 Obtain, analyze, and communicate evidence to support an explanation that the gravitational force of Earth on objects is directed toward the planet’s center.</p>	<p><b>SE/TE:</b>  Topic 7 uInvestigate Lab: How long do objects take to fall?, 279  Topic 7 Gravitational Force, 280  Topic 7 Interactivity, 280  Topic 7 Gravity on Earth, 281</p> <p>Topic 7 uBe a Scientist: Explore Gravity, 281  Topic 7 Quest Check-In Lab: How does gravity affect matter?, 283  Science and Engineering Practices Handbook: Science Practices, Constructing Explanations, EM6  Science and Engineering Practices Handbook: Science Practices, Communicating Information, EM9</p> <p><b>TE Only:</b>  Topic 7 Focus on Mastery!: Constructing Explanations, 279</p>

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<b>Life Sciences: Students develop an understanding of patterns and how genetic information is passed from generation to generation. They also develop the understanding of how genetic information and environmental features impact the survival of an organism.</b>	
<b>Life Science Standards</b>	
5.L3U1.9 Obtain, evaluate, and communicate information about patterns between the offspring of plants, and the offspring of animals (including humans); construct an explanation of how genetic information is passed from one generation to the next.	<p><b>SE/TE:</b> Science and Engineering Practices Handbook: Science Practices, Communicating Information, EM9</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 3, Topic 5, Lesson 2: Inherited Traits; and <i>Elevate Science: Life</i>, Topic 4, Lesson 1: Patterns of Reproduction.</p>
5.L3U1.10 Construct an explanation based on evidence that the changes in an environment can affect the development of the traits in a population of organisms.	<p><b>SE/TE:</b> Topic 9 Investigate Lab: How does change affect organisms in an ecosystem?, 379 Topic 9 Quest Check-In Lab: How does change affect organisms in an ecosystem?, 384-385 Science and Engineering Practices Handbook: Science Practices, Constructing Explanations, EM6</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 3, Topic 5, Lesson 2: Traits Influenced by the Environment.</p>



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5.L4U3.11 Obtain, evaluate, and communicate evidence about how natural and human-caused changes to habitats or climate can impact populations.	<p><b>SE/TE:</b>  Topic 3 Literacy Connection: Cause and Effect, Population and Water Availability, 101  Topic 4 Threats to the Shoreline, 169  Topic 9 Investigate Lab: How does change affect organisms in an ecosystem?, 379  Topic 9 Visual Literacy Connection: What happens to a forest ecosystem after a fire?, 380-381  Topic 9 Threats to Ecosystems, 383  Topic 9 Quest Check-In Lab: How does change affect organisms in an ecosystem?, 384-385  Science and Engineering Practices Handbook: Science Practices, Communicating Information, EM9</p> <p><b>TE Only:</b>  Topic 9 21<sup>st</sup> Century Skills: Understanding Current Science and Technology, 383</p>
5.L4U3.12 Construct an argument based on evidence that inherited characteristics can be affected by behavior and/or environmental conditions.	<p><b>SE/TE:</b>  Science and Engineering Practices Handbook: Science Practices, Engaging in Arguments from Evidence, EM7</p> <p>This standard is also addressed in <i>Elevate Science</i> Grade 3, Topic 5, Lesson 2: Inherited Traits; Lesson 3: Traits Influenced by the Environment</p>