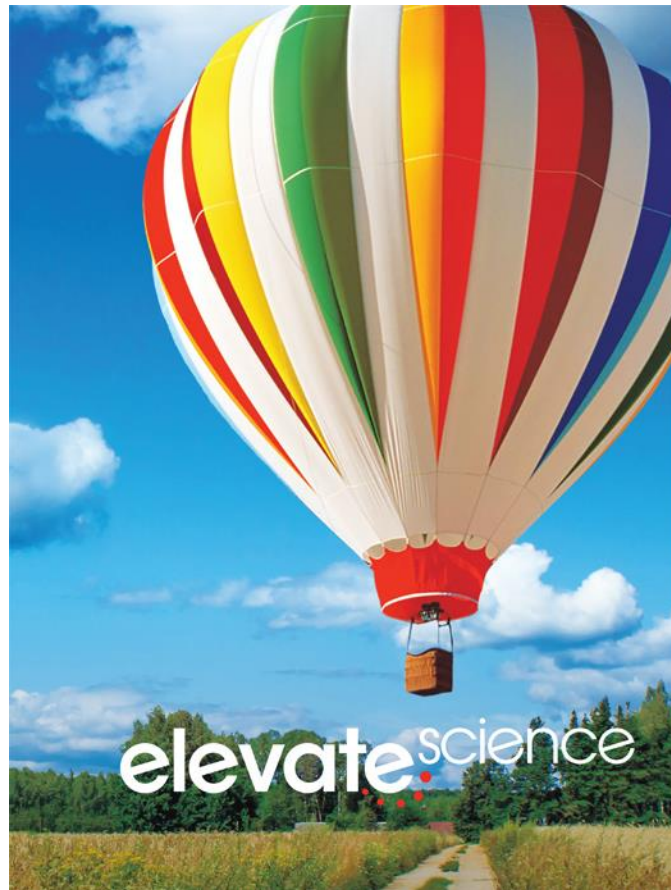


A Correlation of
Elevate Science
Grade 5, ©2019



To the

**Tennessee Academic Standards
for Science, Grade 5**

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Introduction

The following document demonstrates how the ***Elevate Science, ©2019*** program supports the Tennessee Academic Standards for Science, Grade 5. 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 21st 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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5.PS1	5.PS1: Matter and Its Interactions	
5.PS1.1	1) Analyze and interpret data from observations and measurements of the physical properties of matter to explain phase changes between a solid, liquid, or gas.	SE/TE: States of Matter, 28 uInvestigate Lab: Is goop solid or liquid?, 49 Visual Literacy Connection: What states of matter do you see?, 50-51 Solids, 52 Liquids, 53 Gas, 54 Evidence-Based Assessment, 92-93
5.PS1.2	2) Analyze and interpret data to show that the amount of matter is conserved even when it changes form, including transitions where matter seems to vanish.	SE/TE: uConnect Lab: What happens to mass when objects are mixed?, 46 uInvestigate Lab: Which properties are affected by temperature?, 57 uInvestigate Lab: How can you identify chemical changes?, 65 Conservation of Matter, 68-69 Quest Connection, 69 Visual Literacy Connection: Is matter conserved?, 70-71
5.PS1.3	3) Design a process to measure how different variables (temperature, particle size, stirring) affect the rate of dissolving solids into liquids.	SE/TE: Solutions, 81
5.PS1.4	4) Evaluate the results of an experiment to determine whether the mixing of two or more substances results in a physical or chemical change.	SE/TE: Quest Connection, 19 Quest Check-in Lab: How can you make modelilng dough? , 74-75 uInvestigate Lab: How can you separate a mixture?, 79 Mixtures, 80 uDemonstrate Lab: How does mass change when you make glop?, 94-95

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5.PS2	5.PS2: Motion and Stability: Forces and Interactions	
5.PS2.1	1) Test the effects of balanced and unbalanced forces on the speed and direction of motion of objects.	SE/TE: See Grade 3, Topic 1, Motion and Forces, Lesson 4, Balanced and Unbalanced Forces
5.PS2.2	2) Make observations and measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	SE/TE: Quest Check-In: Sun Up, Sun down, 292 uInvestigate Lab: what star patterns can you see?, 295 uBe a Scientist, 296 Quest Check-In: Moon Sightings, 303 uDemonstrate Lab: What can we tell from shadows? , 312-313
5.PS2.3	3) Use evidence to support that the gravitational force exerted by Earth on objects is directed toward the Earth's center.	SE/TE: uInvestigate Lab: How long do objects take to fall?, 279 Gravity on Earth, 281 uBe a Scientist: Explore Gravity, 281 Science Practice Toolbox: Engage in Argument from Evidence, 282 Quest Check-In Lab: How does gravity affect matter?, 283
5.PS2.4	4) Explain the cause and effect relationship of two factors (mass and distance) that affect gravity.	SE/TE: uInvestigate Lab: How long do objects take to fall?, 279
5.PS2.5	5) Explain how forces can create patterns within a system (moving in one direction, shifting back and forth, or moving in cycles), and describe conditions that affect how fast or slowly these patterns occur.	SE/TE: Visual Literacy Connection: What is the motion of the ocean? See also Grade 4, Topic 5, Earth's Natural Hazards, Lesson 1, 166-167

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5.LS1	5.LS1: From Molecules to Organisms: Structures and Processes	
5.LS1.1	1) Compare and contrast animal responses that are instinctual versus those that that are gathered through the senses, processed, and stored as memories to guide their actions.	SE/TE: See Grade 3, Topic 5, Life Cycles and Traits.
5.LS3	5.LS3: Heredity: Inheritance and Variation of Traits	
5.LS3.1	1) Distinguish between inherited characteristics and those characteristics that result from a direct interaction with the environment. Apply this concept by giving examples of characteristics of living organisms that are influenced by both inheritance and the environment.	SE/TE: See Grade 3, Topic 5, Life Cycles and Traits.
5.LS3.2	2) Provide evidence and analyze data that plants and animals have traits inherited from parents and that variations of these traits exist in a group of similar organisms.	SE/TE: See Grade 3, Topic 5, Life Cycles and Traits.
5.LS4	5.LS4: Biological Change: Unity and Diversity	
5.LS4.1	1) Analyze and interpret data from fossils to describe types of organisms and their environments that existed long ago. Compare similarities and differences of those to living organisms and their environments. Recognize that most kinds of animals (and plants) that once lived on Earth are now extinct.	SE/TE: See Grade 4, Topic 6, the History of Planet Earth
5.LS4.2	2) Use evidence to construct an explanation for how variations in characteristics among individuals within the same species may provide advantages to these individuals in their survival and reproduction.	SE/TE: See Grade 3, Topic 5, Life Cycles and Traits.

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5.ESS1	5.ESS1: Earth's Place in the Universe	
5.ESS1.1	1) Explain that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.	SE/TE: Local-to-Global Connection, 236 Brightness of Stars, 240 Plan It!, 241 Evidence-Based Assessment, 268-269
5.ESS1.2	2) Research and explain the position of the Earth and the solar system within the Milky Way galaxy, and compare the size and shape of the Milky Way to other galaxies in the universe.	SE/TE: Supporting content: Local-to-Global Connection, 236 Earth's Sun, 238 Size of Stars, 241
5.ESS1.3	3) Use data to categorize different bodies in our solar system including moons, asteroids, comets, and meteoroids according to their physical properties and motion.	SE/TE: Earth's Sun, 238 Visual Literacy Connection: What is in our solar system?, 248-249 Planetary Orbit, 250 Moons, 251 Investigate Lab: How hard do space objects hit earth?, 255 Gas Giants, 256 Visual Literacy Connection: How are the outer planets aligned?, 258-259 Comets and Asteroids, 261 STEM Quest Check-In Lab: What planets are way out there?, 262 STEM Math Connection: How long does it take to orbit?, 293

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5.ESS1.4	4) Explain the cause and effect relationship between the positions of the sun, earth, and moon and resulting eclipses, position of constellations, and appearance of the moon.	SE/TE: Quest Kickoff: Plan a Trip Around the World of Patterns, 274-275 Visual Literacy Connection: What is the movement of Earth’s moon in space?, 288-289 Visual Literacy Connection: How do we identify star patterns in the sky?, 298-299 Moon Phases, 300-301 Quest Check-In: Moon Sightings, 303 uEngineer It!: Coding Moon Phases, 304-305
5.ESS1.5	5) Relate the tilt of the Earth’s axis, as it revolves around the sun, to the varying intensities of sunlight at different latitudes. Evaluate how this causes changes in day-lengths and seasons.	SE/TE: Local-to-Global Connection, 284 uInvestigate Lab: How are we spinning?, 285 Earth’s Rotation, 286 Earth’s Revolution, 287 Quest Connection, 287 Seasons, 290-291 Curriculum Connection, 294
5.ESS1.6	6) Use tools to describe how stars and constellations appear to move from the Earth’s perspective throughout the seasons.	SE/TE: Visual Literacy Connection: How do we identify star patterns in the sky?, 298-299 Keeping Track of Time, 302 Science Tools, EM2-EM3
5.ESS1.7	7) Use evidence from the presence and location of fossils to determine the order in which rock strata were formed.	SE/TE: See Grade 4, Topic 6, The History of Planet Earth
5.ETS1	5.ETS1: Engineering Design	
5.ETS1.1	1) Research, test, re-test, and communicate a design to solve a problem.	SE/TE: Quest Check-In Lab: How can you make a new and improved formula?, 86-87 uDemonstrate Lab: How can you use the energy of water?, 228-229 Optimizing Solutions, EM13

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5.ETS1.2	2) Plan and carry out tests on one or more elements of a prototype in which variables are controlled and failure points are considered to identify which elements need to be improved. Apply the results of tests to redesign the prototype.	SE/TE: Quest Check-In Lab: How can you make a new and improved formula?, 86-87 Quest Check-In Lab: How do building materials affect energy efficiency?, 210-211 uDemonstrate Lab: How can you model matter cycles in the Earth system?, 402-403
5.ETS1.3	3) Describe how failure provides valuable information toward finding a solution.	SE/TE: uDemonstrate Lab: How can you model matter cycles in the Earth system?, 402-403
5.ETS2	5.ETS2: Links Among Engineering, Technology, Science, and Society	
5.ETS2.1	1) Use appropriate measuring tools, simple hand tools, and fasteners to construct a prototype of a new or improved technology.	SE/TE: See related uEngineer It! activities, 76-77, 194-195, 394-395
5.ETS2.2	2) Describe how human beings have made tools and machines (X-ray cameras, microscopes, satellites, computers) to observe and do things that they could not otherwise sense or do at all, or as quickly or efficiently.	SE/TE: uEngineer It! 24-25 uEngineer It, 194 Visual Literacy Connection, 200-201 uEngineer It, 244-245 Career Connection: Astronomical Technician, 265 Stem Connection, 278 Career Connection, Planetarium Curator, 307 Use Evidence from Text, 319 uEngineer It! 336-337 Engineering Connection 386
5.ETS2.3	3) Identify how scientific discoveries lead to new and improved technologies.	SE/TE: Quest Check-In Lab: How do building materials affect energy efficiency?, 210-211