

A Correlation of
Elevate Science
Earth ©2019



To the
Georgia
Standards of Excellence for Science
Grade 6



**A Correlation of Elevate Science, Earth ©2019
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Introduction

This document demonstrates how *Elevate Science, Earth ©2019* supports the Georgia Standards of Excellence for Science. Correlation page references are to the Student and Teacher’s Editions and cited at the page level.

Pearson is proud to introduce *Elevate Science* Middle Grades – where exploration is the heart of science! Designed to address the rigors of new science standards, students will experience science up close and personal, using real-world, relevant phenomena to solve project-based problems. Our newest program 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 arguments. The blended print and digital curriculum covers all Next Generation Science Standards at every grade level.

Elevate Science helps teachers transform learning, promote innovation, and manage their classroom.

Transform science classrooms by immersing students in active, three-dimensional learning.

Elevate Science engages students with real-world tasks, open-ended Quests, uDemonstrate performance-based labs, and in the engineering/design process with uEngineer It! investigations.

- A new 3-D learning model enhances best practices.
- Engineering-focused features infuse STEM learning.
- Phenomena-based activities put students at the heart of a Quest for knowledge.

Innovate learning by focusing on 21st century skills.

Students are encouraged to think, collaborate, and innovate! With *Elevate Science*, students explore STEM careers, experience engineering activities, and discover our scientific and technological world. The content, strategies, and resources of *Elevate Science* equip the science classroom for scientific inquiry and science and engineering practices.

- Problem-based learning Quests put students on a journey of discovery.
- STEM connections help integrate curriculum.
- Coding and innovation engage students and build 21st century skills.

Manage the classroom with confidence.

Teachers will lead their class in asking questions and engaging in argumentation. Evidence-based assessments provide new options for monitoring student understanding.

- Professional development offers practical point-of-use support.
- Embedded standards in the program allow for easy integration.
- ELL and differentiated instruction strategies help instructors reach every learner.
- Interdisciplinary connections relate science to other subjects.

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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(S6E) Earth and Space Science	
(S6E1) Obtain, evaluate, and communicate information about current scientific views of the universe and how those views evolved.	
(S6E1.a) Ask questions to determine changes in models of Earth’s position in the solar system, and origins of the universe as evidence that scientific theories change with the addition of new information.	SE/TE: Models of the Solar System, 498–500 The Solar System (Figure 7), 544 Case Study: The Ptolemaic Model: Explaining the Unexplained, 502–503 The Future of the Universe, 576 How the Universe Formed, 577
(S6E1.b) Develop a model to represent the position of the solar system in the Milky Way galaxy and in the known universe.	SE/TE: Supporting Content: Understanding the Solar System, 537 Models of the Solar System, 498-500 The Solar System (Figure 7), 544 From Stars to Galaxies, 571-573 The Universe, 574-575 Understanding the Universe, 576
(S6E1.c) Analyze and interpret data to compare and contrast the planets in our solar system in terms of: size relative to Earth, surface and atmospheric features, relative distance from the sun, and ability to support life.	SE/TE: Understanding the Solar System, 537 The Solar System, 544–545
(S6E1.d) Develop and use a model to explain the interaction of gravity and inertia that governs the motion of objects in the solar system.	SE/TE: Hands-on Lab, 537 Hands-on Lab, 539 Evidence-Based Assessment, 582–583
(S6E1.e) Ask questions to compare and contrast the characteristics, composition, and location of comets, asteroids, and meteoroids.	SE/TE: Connect It!, 492 Meteors and Comets, 494 Math Toolbox, 494 Case Study: Comparing Solar System Objects, 548–549

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(S6E2) Obtain, evaluate, and communicate information about the effects of the relative positions of the sun, Earth, and moon.	
(S6E2.a) Develop and use a model to demonstrate the phases of the moon by showing the relative positions of the sun, Earth, and moon.	SE/TE: Orbital Motion, 511 The Two Sides of the Moon, 515–516 Motions of the Moon, 516 Modeling Lunar Phases, 528–531
(S6E2.b) Construct an explanation of the cause of solar and lunar eclipses.	SE/TE: Eclipses, 518–519 Evidence-Based Assessment, 526–527
(S6E2.c) Analyze and interpret data to relate the tilt of the Earth to the distribution of sunlight throughout the year and its effect on seasons.	SE/TE: How Earth Moves, 505–506 The Seasons, 507–508 Evidence-Based Assessment, 526–527
(S6E3) Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes.	
(S6E3.a) Ask questions to determine where water is located on Earth’s surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.	SE/TE: Distribution of Earth’s Water, 27 Surface Water, 28–29 Groundwater, 30 Exploring the Ocean, 31–32 Lesson 3 Check, 33 Case Study: The Case of the Shrinking Sea, 34–35 Water on Earth, 293–295 Water as a Resource, 345
(S6E3.b) Plan and carry out an investigation to illustrate the role of the sun’s energy in atmospheric conditions that lead to the cycling of water.	SE/TE: The Water Cycle, 25-26 Figure 2, 26 Investigate Lab: Water on Earth, 27

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(S6E3.c) Ask questions to identify and communicate, using graphs and maps, the composition, location, and subsurface topography of the world's oceans.	SE/TE: Ocean Features, 32 Mid-Ocean Ridges, 160 Sea-Floor Spreading, 161 Ocean Trenches, 162–163 Volcanoes and Plate Boundaries, 192–193
(S6E3.d) Analyze and interpret data to create graphic representations of the causes and effects of waves, currents, and tides in Earth's systems.	SE/TE: Lesson 3 Check, 433 Power From the Tides, 523 For supporting content, please see: Surface Currents, 427–430 Deep Ocean Currents, 431–432 Tides, 520–521
(S6E4) Obtain, evaluate, and communicate information about how the sun, land, and water affect climate and weather.	
(S6E4.a) Analyze and interpret data to compare and contrast the composition of Earth's atmospheric layers (including the ozone layer) and greenhouse gases.	SE/TE: Composition of the Atmosphere, 50 Air Pressure, 51 Layers of the Atmosphere, 52–53 The Greenhouse Effect, 410
(S6E4.b) Plan and carry out an investigation to demonstrate how energy from the sun transfers heat to air, land and water at different rates.	SE/TE: Evidence-Based Assessment, 438–439 UEngineer It!, 425 uDemonstrate Lab, Not All Heating Is Equal, 440–443 For supporting content, please see: Sunlight and the Atmosphere, 408 Earth's Energy Budget, 409 The Greenhouse Effect, 410 Methods of Heat Transfer, 412 Heat transfer at Earth's Surface, 413

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(S6E4.c) Develop a model demonstrating the interaction between unequal heating and the rotation of the Earth that causes local and global wind systems.	SE/TE: Causes of Winds, 417 Measuring Wind, 418 Local Winds, 419 Global Winds, 420 The Coriolis Effect, 421 Global Wind Patterns, 422 Effects of Global Wind Belts, 423 Jet Streams, 423 Lesson 2 Check, 424 Not All Heating is Equal, 440–443
(S6E4.d) Construct an explanation of the relationship between air pressure, weather fronts, and air masses and meteorological events such as tornados and thunderstorms.	SE/TE: Lesson 3 Check, 73 Thunderstorms, 85 Case Study: The Case of the Runaway Hurricane, 92–93 Case Study: Hurricanes in the Making, 434–435 For supporting content, please see: Air Pressure, 51 Heating of Earth, 53 Winds, 54 Major Air Masses, 67–68 Types of Fronts, 69–71 Cyclones and Anticyclones, 72 Winter Storms, 84 Hurricanes, 86–87 Tornadoes, 88 Types of Severe Storms, 83
(S6E4.e) Analyze and interpret weather data to explain the effects of moisture evaporating from the ocean on weather patterns and weather events such as hurricanes.	SE/TE: Case Study: The Case of the Runaway Hurricane, 92–93 Evidence-Based Assessment, 96–97 Case Study: Hurricanes in the Making, 434–435

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(S6E5) Obtain, evaluate, and communicate information to show how Earth’s surface is formed.	
(S6E5.a) Ask questions to compare and contrast the Earth’s crust, mantle, inner and outer core, including temperature, density, thickness, and composition.	SE/TE: Learning About Earth’s Interior, 107–108 Earth’s Layers.109–113 Movement in Earth’s Mantle, 114–115 Evidence-Based Assessment, 146–147
(S6E5.b) Plan and carry out an investigation of the characteristics of minerals and how minerals contribute to rock composition.	SE/TE: Interactivity, 120 Defining Minerals, 119–121 Mineral Formation, 122–125 Hands-on Lab, 122 Interactivity, 217
(S6E5.c) Construct an explanation of how to classify rocks by their formation and how rocks change through geologic processes in the rock cycle.	SE/TE: Describing Rocks, 129–130 How Rocks Form, 131–134 The Cycling of Earth’s Materials 137–140; Lab: The Rock Cycle in Action, 148–151 Lab: The Rock Cycle in Action, 148–151
(S6E5.d) Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition.	SE/TE: Weathering Earth’s Surface, 214–216 Soil Formation, 218 Soil and Organisms, 218–219 Changing Earth’s Surface, 223 Erosion and Deposition by Wind, 226–227 Glaciers Change Earth’s Surface, 243–245 Evidence-Based Assessment, 254–255
(S6E5.e) Develop a model to demonstrate how natural processes (weathering, erosion, and deposition) and human activity change rocks and the surface of the Earth.	SE/TE: Soil Formation, 218 Model It, 219 Mass Movement, 224–225 How Water Causes Erosion, 231–232 Water Erosion and Deposition Change Earth’s Surface, 233–236 Groundwater Changes Earth’s Surface, 237–238 Case Study: Buyer Beware, 241 Glacial Erosion, 245 Glacial Deposition, 246–247 Waves Change Earth’s Surface, 248–250

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(S6E5.f) Construct an explanation of how the movement of lithospheric plates, called plate tectonics, can cause major geologic events such as earthquakes and volcanic eruptions.	SE/TE: Evidence-Based Assessment, 202–203 Modeling Sea-Floor Spreading, 204–207 For supporting content, please see: Theory of Plate Tectonics, 167–170 Plate Boundaries, 171–174 Case Study: Australia on the Move, 176–177 Stress and Earth’s Crust, 179–180 New Landforms From Plate Movement, 181–182 Volcanoes and Plate Boundaries, 192–193 Volcano Landforms, 194–195
(S6E5.g) Construct an argument using maps and data collected to support a claim of how fossils show evidence of the changing surface and climate of the Earth.	SE/TE: Using Fossils, 369 Model It, 369 Case Study: Rewriting the History of Your Food, 374–375 The Geologic Time Scale, 377–379 Evidence-Based Assessment, 398–397 Core Sampling Through Time, 398–401 For supporting content, please see: Earth’s Climate History, 460
(S6E5.h) Plan and carry out an investigation to provide evidence that soil is composed of layers of weathered rocks and decomposed organic material.	SE/TE: For supporting content, please see: Soil Formation, 218 Model It!, 219

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(S6E6) Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth.	
(S6E6.a) Ask questions to determine the differences between renewable/sustainable energy resources (examples: hydro, solar, wind, geothermal, tidal, biomass) and nonrenewable energy resources (examples: nuclear: uranium, fossil fuels: oil, coal, and natural gas), and how they are used in our everyday lives.	SE/TE: Natural Resources, 265 Fossil Fuels, 266–270 Nuclear Energy, 271 Using Energy Resources, 272 Lesson 1 Check, 273 Reducing Fossil Fuel Usage, 275 Alternative Sources of Energy, 276–279 Lesson 2 Check, 280 Using Natural Resources, 316–317
(S6E6.b) Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.	SE/TE: Case Study: Phosphorous Fiasco, 290–291 Human Impacts, 296–297 Protecting the Ozone Layer, 327 Plan It, 333 Sustainable Forestry, 340 Case Study: Nothing Goes to Waste, 342–343 Reducing Water Pollution, 350–351 Plan It, 351 From Wastewater to Tap Water, 353 For supporting content, please see: Balancing Needs, 318 Controlling Air Pollution, 326 Sustainable Forest Management, 338–339 Evidence-Based Assessment, 356–357
(S6E6.c) Construct an argument evaluating contributions to the rise in global temperatures over the past century.	SE/TE: Recent Climate Change, 463–466 Lesson 2 Check, 467 Impact of Rising Temperatures, 471–474 Lesson 3 Check, 478 Evidence-Based Assessment, 482–483