

**A Correlation of**

**Elevate Science Modules  
Grades 6-8, ©2019**



**To the  
Arizona Science Standards 2018  
Grade 8**

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to the  
Arizona Science Standards (2018), Grade 8**

**Introduction**

This document demonstrates how ***Elevate Science* ©2019** meets the Arizona Science Standards, Grades 6-8. Correlation page references are to the Student and Teacher's Editions and cited at the page level.

Savvas Learning Company 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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Arizona Science Standards (2018) Grade 8	Elevate Science Modules Grades 6-8, ©2019
<b>Grade 8</b>	
<b>Eighth Grade: Focus on Cause and Effect; Energy and Matter; Stability and Change</b>	
<b>Physical Sciences: Students apply stability and change to explore chemical properties of matter and chemical reactions to further understand energy and matter.</b>	
<b>Physical Science Standards</b>	
8.P1U1.1 Develop and use a model to demonstrate that atoms and molecules can be combined or rearranged in chemical reactions to form new compounds with the total number of each type of atom conserved.	<b>Atoms and Chemical Reactions</b> <b>SE/TE:</b> Chemical Change, 80 Building and Breaking Chemical Bonds, 81 Evidence of Chemical Reactions, 82–83 Law of Conservation of Mass, 94–95 For related content, please see: Changes in Energy, 84 Energy Graphs for Chemical Reactions, 85 The Art of Chemical Change, 89 Chemical Equations, 91–93 Types of Chemical Reactions, 96  <b>Structure and Properties of Matter</b> <b>SE/TE:</b> Chemical Changes in Matter, 27–29
8.P1U1.2 Obtain and evaluate information regarding how scientists identify substances based on unique physical and chemical properties.	<b>Structure and Properties of Matter</b> <b>SE/TE:</b> Matter, 5–7 Video, 6 Literacy Connection, 7 Lesson 1 Check, 12
8.P4U1.3 Construct an explanation on how energy can be transferred from one energy store to another.	<b>Energy Transfer</b> <b>SE/TE:</b> Energy in Motion and Force, 5 Thermal Energy, 25 Energy Transformation and Transfer, 35 uDemonstrate Lab: 3,2,1...Liftoff!, 46–49 Thermal Energy and Heat, 55 Types of Heat Transfer, 63–65 Question It!, 67 Temperature, Energy, and Friction, 76 For related content, please see: Energy Changes and the Law of Conservation, 36–37 How Thermal Energy and Temperature Are Related, 57 Energy Conservation, 66

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8.P4U1.4 Develop and use mathematical models to explain wave characteristics and interactions.	<p><b>Waves and Information Technologies</b>  <b>SE/TE:</b>            Types of Waves, 5–7            Properties of Waves, 8–9            Wave Energy, 10            Reflection, Refraction, and Absorption, 15–17            Wave Interference, 18–21            The Behavior of Sound, 25–27            Factors Affecting the Speed of Sound, 28            Loudness and Pitch, 29–31            The Doppler Effect, 32            Characteristics of Electromagnetic Waves, 35            Models of Electromagnetic Wave Behavior, 36–37            Wavelength and Frequency, 38            The Electromagnetic Spectrum, 39–41            Light, Color, and Objects, 45–47            Reflecting Light, 48–50            Lenses, 51–52            For related content, please see:</p> <p><b>Energy Transfer</b>  <b>SE/TE:</b>            Conservation of Energy in Waves, 38</p>
8.P4U2.5 Develop a solution to increase efficiency when transferring energy from one source to another.	<p><b>Energy Transfer</b>  <b>SE/TE:</b>            Quest Kickoff, 52–53            Quest Check-In, 68            Quest Check-Ins, 79            Quest Findings, 83</p>
<b>Earth and Space Sciences: Students explore natural and human-induced cause-and-effect changes in Earth systems over time.</b>	
<b>Earth and Space Standards</b>	
8.E1U1.6 Analyze and interpret data about the Earth’s geological column to communicate relative ages of rock layers and fossils.	<p><b>Earth Systems</b>  <b>SE/TE:</b>            Describing the Ages of Rocks, 155            Determining the Relative Ages of Rocks, 156–158            For related content, please see:            Determining Absolute Ages of Rocks, 159–160            The Geologic Time Scale, 165</p>

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8.E1U3.7 Obtain, evaluate, and communicate information about data and historical patterns to predict natural hazards and other geological events.	<p><b>Earth Systems</b> <b>SE/TE:</b> Case Study: The Case of the Shrinking Sea, 34–35 Connect It!, 108 Model It!, 105</p> <p><b>Cycles Influencing Weather and Climate</b> <b>SE/TE:</b> How to Predict Weather, 31–33 Learning from Weather Maps, 34 Lesson 4 Check, 36 Lesson 1 Check, 70</p>
8.E1U3.8 Construct and support an argument about how human consumption of limited resources impacts the biosphere.	<p><b>Changing Earth and Human Activity</b> <b>SE/TE:</b> Natural Resources, 57 Fossil Fuels, 58–62 Using Energy Resources, 64 Reducing Fossil Fuel Usage, 67 Humans and Minerals, 80 Case Study: Phosphorus Fiasco, 82–83 Human Impacts, 88–89 Using Natural Resources, 108–109 Balancing Needs, 110 Causes of Pollution, 113 Outdoor Air Pollution, 114–116 Sources of Freshwater Pollution, 138–139 Sources of Ocean Pollution, 140–141 For related content, please see: Nuclear Energy, 63 Controlling Air Pollution, 118–119 Global to Local: Working Together to Reduce Air Pollution, 121 Land as a Resource, 123–124 Importance of Soil Management, 125–128 Sustainable Forest Management, 130–132 Water as a Resource, 137 Reducing Water Pollution, 142–143</p> <p><b>Cycles Influencing Weather and Climate</b> <b>SE/TE:</b> Recent Climate Change, 119–122</p> <p><b>Relationships Within Ecosystems</b> <b>SE/TE:</b> Human Impact, 103–104</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 traits within populations change over time.</b>	
<b>Life Science Standards</b>	
8.L3U1.9 Construct an explanation of how genetic variations occur in offspring through the inheritance of traits or through mutations.	<b>Diversity of Life</b> <b>SE/TE:</b> Diversity of Life, 37 Chromosomes and Variation, 38–39 Types of Mutations, 40–41 Environmental Factors, 42–43 Mutations in Reproduction, 44–46 How Natural Selection Works, 83 Genes and Natural Selection, 86–87 Mutations, 92–94
8.L3U3.10 Communicate how advancements in technology have furthered the field of genetic research and use evidence to support an argument about the positive and negative effects of genetic research on human lives.	<b>Diversity of Life</b> <b>SE/TE:</b> Artificial Selection, 49 Genetic Engineering, 50–53 Practical Uses for DNA, 54–56 Lesson 5 Check, 57 Topic 1 Review and Assess, 59 For related content, please see: uEngineer It! Reinventing DNA as Data Storage, 35
8.L4U1.11 Develop and use a model to explain how natural selection may lead to increases and decreases of specific traits in populations over time.	<b>Diversity of Life</b> <b>SE/TE:</b> How Natural Selection Works, 83 Model It!, 85 Genes and Natural Selection, 86–87 Evolution by Natural Selection, 81–87 Lesson 2 Check, 88
8.L4U1.12 Gather and communicate evidence on how the process of natural selection provides an explanation of how new species can evolve.	<b>Diversity of Life</b> <b>SE/TE:</b> Diversity of Life, 37 Mutations in Reproduction, 44–46 Evolution by Natural Selection, 81–87 Lesson 2 Check, 88

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