

A Correlation of
Elevate Science
Course 2, ©2019



To the
Nebraska
College and Career Ready Standards
for Science, Grade 7

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Introduction

This document demonstrates how the ***Elevate Science* ©2019** program supports Nebraska College and Career Ready Standards for Science. Correlation page references are to the Student and Teacher’s Editions and cited at the page level.

Savvas 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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SC.7.3 Structure and Properties of Matter	
SC.7.3.1 Gather, analyze, and communicate evidence of the structure, properties, and interactions of matter.	
SC.7.3.1.A Develop models to describe the atomic composition of simple molecules.	SE/TE: This standard is addressed in Elevate Science Course 1, Topic 1: Introduction to Matter.
SC.7.3.1.B Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	SE/TE: This standard is addressed in Elevate Science Course 3, Topic 2: Chemical Reactions.
SC.7.3.1.C Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	SE/TE: This standard is addressed in Elevate Science Course 1, Topic 1: Introduction to Matter; and Topic 2: Solids, Liquids, and Gases.
SC.7.5 Chemical Reactions	
SC.7.5.2 Gather, analyze, and communicate evidence of chemical reactions.	
SC.7.5.2.A Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	SE/TE: This standard is addressed in Elevate Science Course 3, Topic 2: Chemical Reactions.
SC.7.5.2.B Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.	SE/TE: This standard is addressed in Elevate Science Course 3, Topic 2, Lesson 2: Chemical Change.
SC.7.5.2.C Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	SE/TE: This standard is addressed in Elevate Science, Course 1, Topic 4: Thermal Energy.
SC.7.5.2.D Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	SE/TE: uDemonstrate Lab: Design and Build a Microscope, 64-67 Design It!: Ecological Restoration, 275 Design It!: Sustainable Fishing, 323 uDemonstrate Lab: To Drill or Not to Drill, 330-333 Topic 8 Review and Assess, 444-445 uDemonstrate Lab: Making Waves, 446-449 uDemonstrate Lab: Over and Out, 540-543

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SC.7.7 Interdependent Relationships in Ecosystems	
SC.7.7.3 Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.	
SC.7.7.3.A Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	SE/TE: Evidence-Based Assessment, 184-185 Lesson 1 Check, 201 Case Study: The Case of the Disappearing Cerulean Warbler, 202-203 Energy Roles in an Ecosystem, 205-207 Lesson 2 Check, 212 Connect It!, 236 Competition and Predation, 239-241 Symbiotic Relationships, 242-244 Lesson 1 Check, 243 Quest Check-In, 243 Math Toolbox: Room to Roam, 260 Case Study: The Dependable Elephant, 266-267 uDemonstrate Lab: Changes in an Ecosystem, 282-285
SC.7.7.3.B Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	SE/TE: The Value of Biodiversity, 255-257 Hands-On Lab: Modeling Keystone Species, 257 Question It!: Endangered Species, 259 Factors Affecting Biodiversity, 258-260 Math Toolbox: Room to Roam, 260 Human Impact, 261-264 Lesson 3 Check, 265 Case Study: The Dependable Elephant, 266-267 Ecosystem Services, 269-272 Factors Impacting Ecosystem Services, 273-274 Conservation, 275 Design It!: Ecological Restoration, 275 Lesson 4 Check, 276 uEngineer It!: From Bulldozers to Biomes, 277
SC.7.7.3.C Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	SE/TE: Question It!: Endangered Species, 259 Lesson 4 Check, 276 uEngineer It!: From Bulldozers to Biomes, 277 Design It!: Ecological Restoration, 275

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SC.7.7.3.D Apply scientific principles to design a method for monitoring and increasing positive human impact on the environment.	SE/TE: Human Impact, 261 uEngineer It!: From Bulldozers to Biomes, 277 Plan It!: Household Energy Use, 298 Interactivity, 305 Micro-Hydro Power, 307
SC.7.8 Matter and Energy in Organisms and Ecosystems	
SC.7.8.4 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter in organisms and ecosystems.	
SC.7.8.4.A Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	SE/TE: Energy From the Sun, 42 Photosynthesis, 44-45 Hands-On Lab: Energy from the Sun, 45 Expressing Photosynthesis, 46-47 Lesson 5 Check, 48 uEngineer It!: An Artificial Leaf, 49
SC.7.8.4.B Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as matter moves through an organism.	SE/TE: Energy and Cellular Respiration, 51-54 Lesson 6 Check, 57 Food and Energy, 95-97 Figure 3, 99
SC.7.8.4.C Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	SE/TE: Topic 4 Opener: Ecosystems, 190-191 Biotic Factors, 196 Abiotic Factors, 196 Populations, 198-199 Math Toolbox: Graphing Population Changes, 198 Factors That Limit Population Growth, 200 Lesson 1 Check, 201 Case Study: The Case of the Disappearing Cerulean Warbler, 202-203 uDemonstrate Lab: Last Remains, 228-231 Math Toolbox: Predator-Prey Interactions, 241 Population Size, 241 Evidence-Based Assessment, 280-281 uDemonstrate Lab: Changes in an Ecosystem, 282-285

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<p>SC.7.8.4.D Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.</p>	<p>SE/TE: Topic 4 Opener: Ecosystems, 190-191 Energy Roles in an Environment, 205-207 Hands-On Lab: Observing Decomposers, 207 Energy and Matter Transfer, 208 Model It! Food Web, 209 Energy Pyramids, 210 Energy Availability, 211 Math Toolbox: Relationships in an Energy Pyramid, 211 Connect It!, 214 Conservation of Matter and Energy, 215 Water Cycle, 216-217 Hands-On Lab: Following Water, 217 Model It! Where does your water come from?, 216 Carbon and Oxygen Cycles, 218-219 Nitrogen Cycle in Ecosystems, 220-221 Lesson 3 Check, 222 Topic Review and Assess, 224-227 Supporting Services, Figure 3, 272</p>
<p>SC.7.8.4.E Construct an argument supported by evidence that changes to physical or biological components of an ecosystem affect populations.</p>	<p>SE/TE: Case Study: The Case of the Disappearing Cerulean Warbler, 202-203 Connect It!, 246 Succession, 247-248 Secondary Succession, 249 Ecosystem Disruptions and Population Survival, 250-251 Hands-On Lab: Primary and Secondary Succession, 250 Lesson 2 Check, 252 uDemonstrate Lab: Changes in an Ecosystem, 282-285</p>

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SC.7.13 Earth's Systems	
SC.7.13.5 Gather, analyze, and communicate evidence of the flow of energy and cycling of matter associated with Earth's materials and processes.	
SC.7.13.5.A Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.	SE/TE: uEngineer It!: An Artificial Leaf, 49 Carbon and Oxygen Cycles, Figure 4, 218-219 Lesson 3 Check, 222 Natural Resources, 290 Fossil Fuels, 291-296 uInvestigate: Fossil Fuels, 292 Nuclear Energy, 297 Lesson 1 Check, 299 Alternative Sources of Energy, 302-305 Model It! Solar Cells, 302 Hands-On Lab: The Power of Wind, 304 Lesson 2 Check, 306 uEngineer It! Micro-Hydro Power, 307 Topic 6 Review and Assess, 326
SC.7.13.5.B Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	SE/TE: Minerals and Ores, 308-312 Mineral Distribution, 313 Lesson 3 Check, 315 Quest Check-In, 315 Case Study: Phosphorus Fiasco, 316-317 Water on Earth, 319-321 Math Toolbox: Distribution of Water Resources, 320 Lesson 4 Check, 324 Topic 6 Review and Assess, 328-329 Using Natural Resources, 342-343 uDemonstrate Lab: To Drill or Not to Drill, 330-333 Water as a Resource, 371

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SC.7.13.5.C Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	SE/TE: The Human Population, 339 Human Activity, 342 Impact on the Earth System, 343 Lesson 1 Check, 345 Balancing Needs, 344 Acid Rain, 350 Lesson 2 Check, 354 Land as Resource, 357-358 Importance of Soil Management, 359-361 Math Toolbox: Causes of Land Degradation, 361 Lesson 3 Check, 367 Quest Check-In, 367 Sources of Fresh Water Pollution, 372-373 Sources of Ocean Pollution, 374-375 Lesson 4 Check, 378 uDemonstrate Lab: Washing Away, 384-387 Plan It!: Reducing Waste in Factories, 377 Topic Review and Assess, 380-381 uDemonstrate Lab: Washing Away, 384-387
SC.7.14 History of Earth	
SC.7.14.6 Gather, analyze, and communicate evidence to explain Earth's history.	
SC.7.14.6.A Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	SE/TE: This standard is addressed in Elevate Science Course 1, Topic 5, Lesson 2: Surface Features in the Geosphere; and Elevate Science Course 3, Topic 6, Lesson 2: Geologic Time Scale.
SC.7.14.6.B Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of past plate motions.	SE/TE: This standard is addressed in Elevate Science, Course 1, Topic 8, Lesson 1: Evidence of Plate Motions; and Elevate Science, Course 3, Topic 6: History of Earth.
SC.7.14.6.C Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	SE/TE: This standard is addressed in Elevate Science, Course 1, Topic 8: Plate Tectonics.