A Correlation of

Elevate Science

Grade 5, ©2019

To the

New Jersey Science Model Curriculum

Grade 5

SAVVAS

A Correlation of Elevate Science 2019, Grade 5 ©2019
To the
New Jersey Science Model Curriculum, Grade 5

Introduction

The following document demonstrates how the ***Elevate Science, ©2019*** program supports the New Jersey Model Curriculum for Science. 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.

SE = Teacher Edition **TE = Teacher Edition**

Table of Contents

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Unit 1: Properties of Matter	
Unit Summary:	
When matter changes, does its weight change? In this unit of study, students describe that matter is made of particles too small to be seen by developing a model. The crosscutting concept of scale, proportion, and quantity is called out as an organizing concept for these disciplinary core ideas. Students demonstrate grade-appropriate proficiency in developing and using models, planning and carrying out investigations, and use these practices to demonstrate understanding of the core ideas. This unit is based on 5-PS1-3 and 5-PS1-1.	**This unit is addressed in the following Topic(s) and Lessons:** **Topic 1: Properties of Matter** Lesson 1: Observe Matter Lesson 2: Model Matter Lesson 3: Properties of Matter
Student Learning Objectives:	
Make observations and measurements to identify materials based on their properties. (5-PS1-3)	**SE/TE:** uInvestigate Lab: How do we describe materials?, 7 Quest Check-In Lab: How can you observe matter?, 14 uInvestigate Lab: How can you use properties to identify solids?, 27 Quest Findings: Identify the Mystery Material, 34 uDemonstrate Lab: How do you know what it is?, 40-41 **Realize™ Digital Resources:** Properties of Matter>Topic Launch>Quest Kickoff>Video>Identify the Mystery Material; Properties of Matter>Lesson 1, Observe Matter>Video>Observe Matter; Interactivity>Measuring Matter; Lesson 3, Properties of Matter>Video>Properties of Matter; Interactivity>Measuring Matter; Interactivity>Matter and Its Properties; Properties of Matter>Topic Close>Quest Findings>Interactivity>Identify the Mystery Material

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Develop a model to describe that matter is made of particles too small to be seen. (5-PS1-1)	**SE/TE:** uInvestigate Lab: How can you detect matter without seeing it?, 17 Visual Literacy Connection: What is the matter?, 20-21 Quest Check-In Lab: How do you know that matter is still there?, 23 **Realize™ Digital Resources:** Properties of Matter>Lesson 2, Model Matter>Video>Model Matter; Virtual Lab>Water as Fuel; Interactivity>Matter Is Everywhere
Unit 2: Changes to Matter	
Unit Summary:	
If I have a frozen water bottle that weighs 500 mg, how much will it weigh if the water melts? In this unit of study, students develop an understanding of the idea that regardless of the type of change that matter undergoes, the total weight of matter is conserved. Students determine whether the mixing of two or more substances results in new substances. The crosscutting concepts of *cause and effect* and *scale, proportion, and quantity* are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in *planning and carrying out investigations* and *using mathematics and computational thinking*. Students are expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 5-PS1-4 and 5-PS1-2.	**This unit is addressed in the following Topic(s) and Lessons:** **Topic 2: Changes in Matter** Lesson 1: States of Matter Lesson 2: Physical Changes Lesson 3: Chemical Changes Lesson 4: Mixtures and Solutions

New Jersey Science Model Curriculum **Grade 5**	**Elevate Science** **Grade 5 ©2019**
Student Learning Objectives:	
Conduct an investigation to determine whether the mixing of two or more substances results in new substances. (5-PS1-4)	**SE/TE:** uInvestigate Lab: How can you separate a mixture?, 79 uDemonstrate Lab: How does mass change when you make glop?, 94-95 **Realize™ Digital Resources:** Changes in Matter>Topic Launch>STEM Quest Kickoff>Video>Find the Right Mix—and Step on It!; Changes in Matter>Lesson 3, Chemical Changes>Interactivity>Chemical Changes; Lesson 4, Mixtures and Solutions>Virtual Lab>Special Effects with Matter; Interactivity> Mixtures and Solutions; Changes in Matter>Topic Close>STEM Quest Findings>Interactivity>Find the Right Mix—and Step on It!
Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. (5-PS1-2)	**SE/TE:** uConnect Lab: What happens to mass when objects are mixed?, 46 uInvestigate Lab: Is goop solid or liquid?, 49 uInvestigate Lab: Which properties are affected by temperature?, 57 uInvestigate Lab: How can you identify chemical changes?, 65 **Realize™ Digital Resources:** Changes in Matter>Lesson 1, States of Matter>Interactivity>The States of Matter; Quiz>States of Matter; Lesson 2, Physical Changes>Interactivity>Changing States

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Unit 3: Energy and Matter in Ecosystems	
Unit Summary:	
What happens to the matter and energy that are part of each organism? In this unit of study, students develop an understanding of the idea that plants get the materials they need for growth chiefly from air and water. Using models, students can describe the movement of matter among plants, animals, decomposers, and the environment, and they can explain that energy in animals' food was once energy from the sun. The crosscutting concepts of energy and matter and systems and system models are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in developing and using models and engaging in argument from evidence. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 5-LS1-1, 5-LS2-1, and 5-PS3-1.	**This unit is addressed in the following Topic(s) and Lessons:** **Topic 8: Energy and Food** Lesson 1: Energy in Food Lesson 2: How Plants Make Food Lesson 3: How Animals Use Food **Topic 9: Matter and Energy in Ecosystems** Lesson 1: Ecosystems Lesson 2: Organisms Within Ecosystems Lesson 3: Change Within Ecosystems Lesson 4: Matter and Energy Transfer Within Ecosystems
Student Learning Objectives:	
Support an argument that plants get the materials they need for growth chiefly from air and water. (5-LS1-1)	**SE/TE:** uInvestigate Lab: What matter do plants need to make food?, 329 How Plants Gain Mass, 331 Engineering Toolbox: Growing Plants in Space, 333 **Realize™ Digital Resources:** Energy and Food>Lesson 2, How Plants Make Food>Video> How Plants Make Food; Virtual Lab>Solving Crop Problems; Interactivity>Photosynthesis

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. (5-LS2-1)	**SE/TE:** uDemonstrate Lab: How does matter move through an ecosystem?, 352-353 uInvestigate Lab: How can matter change in an ecosystem?, 369 uInvestigate Lab: How does change affect organisms in an ecosystem?, 379 Quest Check-In Lab: How does change affect organisms in an ecosystem?, 384-385 uInvestigate Lab: How does matter move through an ecosystem?, 387 uDemonstrate Lab: How can you model matter cycles in the Earth system?, 402-403 **Realize™ Digital Resources:** Matter and Energy in Ecosystems>Topic Launch>STEM Quest Kickoff>Video>Public Relations Gone Wild!; Matter and Energy in Ecosystems>Lesson 2, Organisms Within Ecosystems>Video> Organisms Within Ecosystems; Inter activity> Explore Organism Interactions; Matter and Energy in Ecosystems>Topic Launch>STEM Quest Kickoff>Video>Public Relations Gone Wild!

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. (5-PS3-1)	**SE/TE:** uConnect Lab: How much food do you need?, 318 uInvestigate Lab: How is the sun involved in your meals?, 321 uInvestigate Lab: How do animals get energy from the sun?, 339 **Realize™ Digital Resources:** Energy and Food>Topic Launch>Quest Kickoff>Video>Plan Your Plate!; Lesson 1, Energy in Food>Video> Energy in Food; Interactivity>Energy in Food Chains; Lesson 3, How Animals Use Food>Video> How Animals Use Food; Inter activity> Ectotherms and Endotherms; Energy and Food>Topic Close>Quest Findings>Interactivity>Plan Your Plate!
Unit 4: Water on the Earth	
Unit Summary:	
How do individual communities use science ideas to protect Earth's resources and environment? In this unit of study, students describe and graph data to provide evidence about the distribution of water on Earth. The crosscutting concepts of *scale, proportion, quantity* and *systems, and systems models* are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in *using mathematics and computational thinking* and in *obtaining, evaluating, and communicating information*. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 5-ESS2-2 and 5-ESS3-1.	**This unit is addressed in the following Topic(s) and Lessons:** **Topic 4: Earth's Water** Lesson 2: Earth's Freshwater Lesson 3: Earth's Ocean **Topic 5: Human Impacts on Earth's Systems** Lesson 1: Earth's Natural Resources Lesson 2: Earth's Energy Resources Lesson 3: Human Activity and Earth's Systems Lesson 4: Protection of Earth's Resources and Environment

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Student Learning Objectives	
Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. (5-ESS2-2)	**SE/TE:** uBe a Scientist: Modeling Water Distribution, 158 Where is Water?, 164 Evidence-Based Assessment, 176-177 **Realize™ Digital Resources:** Earth's Water>Topic Launch>Quest Kickoff>Video>Water, Water Everywhere; Earth's Water>Lesson 2, Earth's Freshwater>Video> Earth's Freshwater; Interactivity>Earth's Underground Water; Lesson 3, Earth's Ocean>Interactivity>Earth's Waters; Earth's Water>Topic Close>Quest Findings>Interactivity>Water, Water Everywhere
Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. (5-ESS3-1)	**SE/TE:** Quest Kickoff: Take Care of Earth – It's Our Home!, 182-183 uConnect Lab: How can we reuse materials to design new products?, 184 uEngineer It!: Make Energy the Solar Way, 194-195 Quest Check-in, 203 uInvestigate Lab: How can you collect rainwater?, 213 Environmental Conservation, 215 Quest Check-In: Increase Conservation, 220 Evidence-Based Assessment, 226-227 uDemonstrate Lab: How can you use the energy of water?, 228-229

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
(Continued)	(Continued) **Realize™ Digital Resources:** Human Impacts on Earth's Systems, Topic Launch>Quest Kickoff>Video>Take Care of Earth—It's Our Home!; Human Impacts on Earth's Systems>Lesson 1, Earth's Natural Resources>Video> Earth's Natural Resources; Interactivity>Drinkable Water; Lesson 2, Earth's Energy Resources>Video>Earth's Energy Resources; Interactivity>How We Use Earth's Resources; Lesson 3, Human Activity and Earth's Systems>Video> Human Activity and Earth's Systems ; Interactivity>Causes of Environmental Damage; Lesson 4, Protection of Earth's Resources and Environments>Video> Protection of Earth's Resources and Environments; Virtual Lab>Electronics and Our Earth; Interactivity>Go Green; Human Impacts on Earth's Systems, Topic Close>Quest Findings>Interactivity>Take Care of Earth—It's Our Home!

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Unit 5: Earth Systems	
Unit Summary:	
How do individual communities use science ideas to protect Earth's resources and environment? In this unit of study, students are able to describe ways in which the geosphere, biosphere, hydrosphere, and atmosphere interact. The crosscutting concept of systems and system models is called out as an organizing concept for this disciplinary core idea. Students are expected to demonstrate grade-appropriate proficiency in developing and using models, obtaining, evaluating, and communicating information. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 5-ESS2-1 and 5-ESS3-1.	**This unit is addressed in the following Topic(s) and Lessons:** **Topic 3: Earth's Systems** Lesson 1: Geosphere and Biosphere Lesson 2: Hydrosphere and Atmosphere Lesson 3: Interactions Among Earth's Systems **Topic 5: Human Impacts on Earth's Systems** Lesson 1: Earth's Natural Resources Lesson 2: Earth's Energy Resources Lesson 3: Human Activity and Earth's Systems Lesson 4: Protection of Earth's Resources and Environment

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Student Learning Objectives:	
Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact (5-ESS2-1)	**SE/TE:** Visual Literacy Connection: What are parts of Earth's geosphere and biosphere?, 106-107 uInvestigate Lab: How does greenhouse work?, 111 Visual Literacy Connection: What are parts of Earth's hydrosphere?, 112-113 Quest Connectiion, 114 Quest Check-in Lab: Where are Earth's spheres?, 116-117 Quest Findings, 130 uDemonstrate Lab: How are the spheres represented in a terrarium?, 136-137 **Realize™ Digital Resources:** Earth's Systems>Topic Launch>Quest Kickoff>Video>Connect the Spheres; Earth's Systems>Lesson 1, Geosphere and Biosphere>Video> Geosphere and Biosphere; Interactivity>The Organic Geosphere; Lesson 2, Hydrosphere and Atmosphere>Video> Hydrosphere and Atmosphere; Interactivity>Is There Enough Water?; Lesson 4, Interactions Among Earth's Spheres>Video> Interactions Among Earth's Spheres; Virtual Lab>Build Your Dream Park; Interactivity> Interactions Among Earth's Spheres; Earth's Systems>Topic Close>Quest Findings>Interactivity>Connect the Spheres

Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. (5-ESS3-1)	**SE/TE:** Quest Kickoff: Take Care of Earth – It's Our Home!, 182-183 uConnect Lab: How can we reuse materials to design new products?, 184 uEngineer It!: Make Energy the Solar Way, 194-195 Quest Check-in, 203 uInvestigate Lab: How can you collect rainwater?, 213 Environmental Conservation, 215 Quest Check-In: Increase Conservation, 220 Evidence-Based Assessment, 226-227 uDemonstrate Lab: How can you use the energy of water?, 228-229 **Realize™ Digital Resources:** Human Impacts on Earth's Systems, Topic Launch>Quest Kickoff>Video>Take Care of Earth—It's Our Home!; Human Impacts on Earth's Systems>Lesson 1, Earth's Natural Resources>Video> Earth's Natural Resources; Interactivity>Drinkable Water; Lesson 2, Earth's Energy Resources>Video>Earth's Energy Resources; Interactivity>How We Use Earth's Resources; Lesson 3, Human Activity and Earth's Systems>Video> Human Activity and Earth's Systems ; Interactivity>Causes of Environmental Damage; Lesson 4, Protection of Earth's Resources and Environments>Video> Protection of Earth's Resources and Environments; Virtual Lab>Electronics and Our Earth; Interactivity>Go Green; Human Impacts on Earth's Systems, Topic Close>Quest Findings>Interactivity>Take Care of Earth—It's Our Home!

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Unit 6: Interactions Within the Earth, Sun, and Moon System	
Unit Summary:	
What patterns do we notice when observing the sky? In this unit of study, students develop an understanding of patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. The crosscutting concepts of patterns, cause and effect, and scale, proportion, and quantity are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in analyzing and interpreting data and engaging in argument from evidence. Students are also expected to use these practices to demonstrate an understanding of the core ideas. This unit is based on 5-PS2-1, 5-ESS1-1, and 5-ESS1-2.	**This unit is addressed in the following Topic(s) and Lessons:** **Topic 6: Solar System** Lesson 1: Brightness of the Sun and Other Stars Lesson 2: Inner Solar System Lesson 3: Outer Solar System **Topic 7: Patterns in Space** Lesson 1: Earth's Gravitational Forces Lesson 2: Earth's Movements in Space Lesson 3: Patterns Over time.
Student Learning Objectives:	
Support an argument that the gravitational force exerted by Earth on objects is directed down. (5-PS2-1)	**SE/TE:** Gravitational Force, 280 Gravity on Earth, 281 uBe a Scientist: Explore Gravity, 281 Quest Check-In Lab: How does gravity affect matter?, 283 **Realize™ Digital Resources:** Patterns in Space>Lesson 1, Earth's Gravitational Forces> Video>Earth's Gravitational Forces; Virtual Lab>Gravity Here and There; Interactivity>The Force of Gravity

New Jersey Science Model Curriculum Grade 5	Elevate Science Grade 5 ©2019
Support an argument that the apparent brightness of the sun and stars is due to their relative distances from the Earth. (5-ESS1-1)	**SE/TE:** uInvestigate Lab: How are distance and brightness related?, 237 Plan It!, 241 Stars and Constellations, 297 **Realize™ Digital Resources:** Solar System>Topic Launch>STEM Quest Kickoff>Video>Keeping the Planets in Order; Solar System>Lesson 1, Brightness of the Sun and Other Stars>Video> Brightness of the Sun and Other Stars; Interactivity>The Sun and Other Stars; Solar System>Topic Close>STEM Quest Findings>Interactivity>Keeping the Planets in Order
Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. (5-ESS1-2)	**SE/TE:** uInvestigate: How are we spinning?, 235 Quest Check-in: Sun up, sun down, 292 uInvestigate Lab: What star patterns can you see?, 295 Visual Literacy Connection: How do we identify star patterns in the sky?, 298-299 Quest Findings: Plan a trip around the world of patterns, 306 uDemonstrate Lab: What can we tell from shadows?, 312-313 **Realize™ Digital Resources:** Patterns In Space>Topic Launch>Quest Kickoff>Video>Plan a Trip Around the World of Patterns; Lesson 2, Earth's Movements in Space>Video> Earth's Movements in Space; Interactivity>Earth's Rotation: Day and Night; Lesson 3, Patterns Over Time>Video> Patterns Over Time; Interactivity>Phases of the Moon; Patterns In Space>Topic Close>Quest Findings>Interactivity>Plan a Trip Around the World of Patterns