

A Correlation of  
**Elevate Science Modules**  
©2019



To the  
**New Jersey Science Module Curriculum**  
**Grade 6**

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

## **Introduction**

This document demonstrates how ***Elevate Science Modules* ©2019** meets the New Jersey Science Model Curriculum. Correlation page references are to the Student and Teacher’s Editions and cited at the page level. Pearson is proud to introduce ***Elevate Science Modules*** for 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.

©2019 Pearson K12 Learning LLC. All Rights Reserved.

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

**Table of Contents**

|   |           |
|---|-----------|
| <b>Unit 1: Growth, Development, and Reproduction of Organisms .....</b> | <b>4</b>  |
| <b>Unit 2: Matter and Energy in Organisms and Ecosystems.....</b>       | <b>7</b>  |
| <b>Unit 3: Interdependent Relationships in Ecosystems .....</b>         | <b>13</b> |
| <b>Unit 4: Force and Motion .....</b>                                   | <b>16</b> |
| <b>Unit 5: Types of Interactions.....</b>                               | <b>19</b> |
| <b>Unit 6: Astronomy .....</b>  | <b>23</b> |
| <b>Unit 7: Weather and Climate.....</b>                                 | <b>28</b> |

A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6

| New Jersey Science Model Curriculum<br>Grade 6   | Elevate Science<br>Grade 6 ©2019  |
|--|---|
| <b>Unit 1: Growth, Development, and Reproduction of Organisms</b>  |   |
| <b>Unit Summary</b>  |   |
| <p><b><i>What influences the growth and development of an organism?</i></b><br/>Students use data and conceptual models to understand how the environment and genetic factors determine the growth of an individual organism. They connect this idea to the role of animal behaviors in animal reproduction and to the dependence of some plants on animal behaviors for their reproduction. Students provide evidence to support their understanding of the structures and behaviors that increase the likelihood of successful reproduction by organisms. The crosscutting concepts of <i>cause and effect</i> and <i>structure and function</i> provide a framework for understanding the disciplinary core ideas. Students demonstrate grade-appropriate proficiency in <i>analyzing and interpreting data, using models, conducting investigations, and communicating information</i>. Students are also expected to use these practices to demonstrate understanding of the core ideas.<br/>This unit is based on MS-LS1-4 and MS-LS1-5.</p> | <p><b>This unit is addressed in the following Module(s), Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Systems, Reproduction, and Growth</b><br/><b>Topic 4: Reproduction and Growth</b><br/>Lesson 2: Plants Structures for Reproduction<br/>Lesson 3: Animal Behaviors for Reproduction<br/>Lesson 4: Factors Influencing Growth<br/>Case Study: Warmer Waters, Fewer Fish</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>  | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|---|--|
| <b>Student Learning Objectives</b>  |  |
| <p><b>Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. (MS-LS1-4)</b></p> | <p><b>Module: Systems, Reproduction, and Growth<br/>SE/TE:</b><br/> uConnect Lab: To Care or Not to Care, p. 178<br/> Connect It!, 192<br/> Plant Reproduction, 193<br/> Structures for Reproduction, 196-199<br/> uInvestigate Lab: Modeling Flowers, 198<br/> Model It!: Flower to Fruit, 199<br/> Lesson 2 Check, 200<br/> uEngineer It! Sustainable Design STEM: Gardening in Space, 201<br/> Connect It!, 202<br/> Animal Behavior, 203-205<br/> Reproductive Strategies, 206-209<br/> Math Toolbox: Survivorship Curves, 207<br/> uInvestigate Lab: Behavior Cycles, 208<br/> Lesson 3 Check, 210<br/> Extraordinary Science: Avian Artists, 211<br/> Topic 4 Review and Assess, 224-225<br/> Evidence-Based Assessment, 226-227</p> <p><b>Realize™ Digital Resources:</b> Reproduction and Growth&gt;Topic Launch&gt;uConnect Lab: To Care or Not to Care; Lesson 2, Plant Structures for Reproduction&gt;Interactivity: Designer Flowers; Video: Plants Structures for Reproduction; uInvestigate: Modeling Flowers; Interactivity: Plants and Pollinators; Lesson 3, Animal Structures for Reproduction&gt;Interactivity: They're Acting Like Animals!; Video: Animal Behaviors for Reproduction; uInvestigate Lab: Behavior Cycles; Interactivity: Fireflies; Quest Check-In&gt;Interactivity: The Mating Game</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <p style="text-align: center;"><b>New Jersey Science Model Curriculum<br/>Grade 6</b></p>  | <p style="text-align: center;"><b>Elevate Science<br/>Grade 6 ©2019</b></p>  |
|--|--|
| <p><b>Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. (MS-LS1-5)</b></p> | <p><b>Module: Systems, Reproduction, and Growth</b><br/> <b>SE/TE:</b><br/>           Quest Kickoff: How can we reduce the impact of construction on plants and animals, 180-181<br/>           Connect It!, 212<br/>           Growth and Development of Structures, 213<br/>           uInvestigate Lab: Watching Roots Grow, 214<br/>           Plant Responses and Growth, 214-216<br/>           Animal Growth, 217-220<br/>           Math Toolbox: Human Malnutrition and Height, 220<br/>           Lesson 4 Check, 221<br/>           Case Study: Warmer Waters, Fewer Fish, 222-223<br/>           Topic 4 Review and Assess, 224-225<br/>           Evidence-Based Assessment, 226-227<br/>           Quest Findings: Complete the Quest!, 227<br/>           uDemonstrate Lab: Clean and Green, 228-231</p> <p><b>Realize™ Digital Resources:</b> Reproduction and Growth&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Construction Without Destruction; Reproduction and Growth&gt;Lesson 2, Quest Check-In&gt;Interactivity: Protect the Plants; Lesson 4, Factors Influencing Growth&gt;Interactivity: Growing and Thriving; uInvestigate Lab: Watching Roots Grow; Interactivity: Breeding Bigger Bovines; Interactivity: See How They Grow; Interactivity: Growing Crops; Reproduction and Growth&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity: Reflect on Your Basketball Court Plans; uDemonstrate Lab: Clean and Green</p> |

A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6

| New Jersey Science Model Curriculum<br>Grade 6   | Elevate Science<br>Grade 6 ©2019   |
|--|--|
| <b>Unit 2: Matter and Energy in Organisms and Ecosystems</b>   |  |
| <b>Unit Summary</b>  |  |
| <p><b><i>How and why do organisms interact with their environment and what are the effects of these interactions?</i></b></p> <p>Students <i>analyze and interpret data, develop models, construct arguments,</i> and demonstrate a deeper understanding of the cycling of matter, the flow of energy, and resources in ecosystems. They are able to study patterns of interactions among organisms within an ecosystem. They consider biotic and abiotic factors in an ecosystem and the effects these factors have on populations. They also understand that the limits of resources influence the growth of organisms and populations, which may result in competition for those limited resources. The crosscutting concepts of <i>matter and energy, systems and system models, patterns, and cause and effect</i> provide a framework for understanding the disciplinary core ideas. Students demonstrate grade-appropriate proficiency in analyzing and interpret data, developing models, and constructing arguments. Students are also expected to use these practices to demonstrate understanding of the core ideas.</p> <p>This unit is based on MS-LS2-1, MS-LS2-2, and MS-LS2-3.</p> | <p><b>This unit is addressed in the following Module, Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Relationships Within Ecosystems</b><br/> <b>Topic 2: Ecosystems</b><br/> Lesson 1: Living Things and the Environment<br/> Case Study: The Case of the Disappearing Cerulean Warbler<br/> Lesson 2: Energy Flow in the Ecosystems<br/> Lesson 3: Cycles of Matter</p> <p><b>Module: Relationships Within Ecosystems</b><br/> <b>Topic 3: Populations, Communities, and Ecosystems</b><br/> Lesson 1: Interactions in Ecosystems<br/> Lesson 2: Dynamic and Resilient Ecosystems<br/> Case Study: The Dependable Elephant<br/> Lesson 4: Ecosystem Services</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| <b>Student Learning Objectives</b>   |  |
| <b>Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. (MS-LS2-1)</b> | <b>Module: Relationships Within Ecosystems<br/>SE/TE:</b><br>Inquiry Warm-Up Lab: Lining Up the Neighborhood, 37<br>Organisms and Habitats, 37-38<br>Ecosystem Organization, 39<br>Populations, 40-41<br>Math Toolbox: Graphing Population Changes, 40<br>uInvestigate Lab: Elbow Room, 41<br>Factors That Limit Population Growth, 42<br>Lesson 1 Check, 43<br>Case Study: The Dependable Elephant, 44-45<br>Energy Roles in an Ecosystem, 47-49<br>Energy and Matter Transfer, 50-53<br>Lesson 2 Check, 54<br>uEngineer It! Sustainable Design STEM, 55<br>Extraordinary Science: An Appetite for Plastic, 65<br>Topic 3 Review and Assess, 66-67<br>uDemonstrate Lab: Last Remains, 70-73<br>Competition and Predation, 81-83<br>uInvestigate Lab: Competition and Predation, 82<br>Symbiotic Relationships, 84-86<br>Lesson 1 Check, 87<br>Connect It!, 88<br>Succession, 89-91<br>uInvestigate Lab: Primary or Secondary, 92<br>Ecosystem Disruption and Population Survival, 92-93<br>Lesson 2 Check, 94<br>Topic 4 Review and Assess, 120-121<br>Evidence-Based Assessment, 122-123 |



**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b> | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| (Continued)  | <p>(Continued)</p> <p>uDemonstrate Lab: Changes in an Ecosystem, 124-127</p> <p><b>Realize™ Digital Resources:</b> Ecosystems&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Mystery at Pleasant Pond; Lesson 1, Living Things and the Environment&gt;Inquiry Warm-Up Lab: Lining Up the Neighborhood; Interactivity: There’s No Place Like Home; Interactivity: An Ecological Mystery; uInvestigate Lab: Elbow Room; Lesson 3, Cycling of Matter&gt;Ecosystems&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest&gt;Interactivity: Reflections on a Pond; uDemonstrate Lab: Last Remains; Lesson 1, Interactions in Ecosystems&gt;Interactivity: Competition in Daily Life; Interactivity: Life on the Reef; uInvestigate Lab: Competition and Predation; Interactivity: Symbiotic Relationships; Interactivity: Shared Interactions; Lesson 2, Dynamic and Resilient Ecosystems&gt;Interactivity: Succession in an Ecosystem; Video&gt;Energy Flow in an Ecosystem; uInvestigate Lab: Primary or Secondary; Interactivity: A Butterfly Mystery; Interactivity: Community Opinions; Populations, Communities, and Ecosystems&gt;Topic Close&gt;uDemonstrate Lab: Changes in an Ecosystem</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <p style="text-align: center;"><b>New Jersey Science Model Curriculum<br/>Grade 6</b></p>  | <p style="text-align: center;"><b>Elevate Science<br/>Grade 6 ©2019</b></p>  |
|--|--|
| <p><b>Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. (MS-LS2-2)</b></p> | <p><b>Module: Relationships Within Ecosystems</b><br/> <b>SE/TE:</b><br/>           Connect It!, 78<br/>           Adaptations and Survival, 79-80<br/>           Competition and Predation, 81-83<br/>           uInvestigate Lab: Competition and Predation, 82<br/>           Symbiotic Relationships, 84-86<br/>           Lesson 1 Check, 87<br/>           Succession, 89-91<br/>           uInvestigate Lab: Primary or Secondary, 92<br/>           Ecosystem Disruption and Population Survival, 92-93<br/>           Changes to Population,92<br/>           Lesson 2 Check, 94<br/>           Case Study: The Dependable Elephant, 108-109<br/>           Topic 4 Review and Assess, 120-121<br/>           uDemonstrate Lab: Changes in an Ecosystem, 124-127</p> <p><b>Realize™ Digital Resources:</b> : Lesson 1, Interactions in Ecosystems&gt;Interactivity: Competition in Daily Life; Interactivity: Life on the Reef; uInvestigate Lab: Competition and Predation; Interactivity: Symbiotic Relationships; Interactivity: Shared Interactions; Lesson 2, Dynamic and Resilient Ecosystems&gt;Interactivity: Succession in an Ecosystem; Video&gt;Energy Flow in an Ecosystem; uInvestigate Lab: Primary or Secondary; Interactivity: A Butterfly Mystery; Interactivity: Community Opinions; Populations, Communities, and Ecosystems&gt;Topic Close&gt;uDemonstrate Lab: Changes in an Ecosystem</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>  | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|---|--|
| <p><b>Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. (MS-LS2-3)</b></p> | <p><b>Module: Relationships Within Ecosystems</b><br/> <b>SE/TE:</b><br/>           uInvestigate Lab: Observing Decomposers, 49<br/>           Model It!: Food Webs, 51<br/>           Math Toolbox: Relationships in an Energy Pyramid, 53<br/>           Lesson 2 Check, 54<br/>           Connect It!, 56<br/>           Ecosystem in a Jar, 57<br/>           Model It! Where does your water come from?, 58<br/>           uInvestigate Lab: Following Water, 59<br/>           Lesson 3 Check, 64<br/>           Topic 3 Review and Assess, 66-67<br/>           Evidence-Based Assessment, 68-69<br/>           uDemonstrate Lab: Last Remains, 70-73<br/>           Connect It!, 110<br/>           Interactions Between Cycles of an Ecosystem, 114<br/>           uInvestigate Lab: Ecosystem Impacts, 116<br/>           Design It!: Ecological Restoration, 117<br/>           Lesson 4 Check, 118<br/>           uEngineer It! Sustainable Design STEM: From Bulldozers to Biomes, 119<br/>           uDemonstrate Lab: Changes in an Ecosystem, 124-127</p> <p><b>Realize™ Digital Resources:</b> Ecosystems&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Mystery at Pleasant Pond; Lesson 2: Energy Flow in Ecosystems&gt;Interactivity: Energy Roles and Flows; uInvestigate Lab: Observing Decomposers; Virtual Lab: Chesapeake Bay Ecosystem Crisis; Interactivity: A Changing Ecosystem; Lesson 3, Cycling of Matter&gt;Interactivity: Recycling Your Energy; uInvestigate Lab: Following Water; Interactivity: Cycles of Matter; Interactivity: Earth’s Recyclables; Interactivity: Matter and Energy in a Pond;</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <p align="center"><b>New Jersey Science Model Curriculum<br/>Grade 6</b></p> | <p align="center"><b>Elevate Science<br/>Grade 6 ©2019</b></p>   |
|--|--|
| <p>(Continued)</p>   | <p>(Continued)<br/>Lesson 4, Ecosystem Services&gt;Interactivity: Maintaining Healthy Ecosystems; uInvestigate Lab: Ecosystem Impacts; Interactivity: Walk This Way; Populations, Communities, and Ecosystems&gt;Topic Close&gt;uDemonstrate Lab: Changes in an Ecosystem; Ecosystems&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest&gt;Interactivity: Reflections on a Pond; uDemonstrate Lab: Last Remains</p> |

A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6

| New Jersey Science Model Curriculum<br>Grade 6  | Elevate Science<br>Grade 6 ©2019   |
|---|--|
| <b>Unit 3: Interdependent Relationships in Ecosystems</b>   |  |
| <b>Unit Summary</b>   |  |
| <p><b><i>What happens to ecosystems when the environment changes?</i></b><br/>Students build on their understandings of the transfer of matter and energy as they study patterns of interactions among organisms within an ecosystem. They consider biotic and abiotic factors in an ecosystem and the effects these factors have on a population. They construct explanations for the interactions in ecosystems and the scientific, economic, political, and social justifications used in making decisions about maintaining biodiversity in ecosystems. The crosscutting concept of <i>stability and change</i> provide a framework for understanding the disciplinary core ideas.</p> <p>This unit includes a two-stage engineering design process. Students first evaluate different engineering ideas that have been proposed using a systematic method, such as a tradeoff matrix, to determine which solutions are most promising. They then test different solutions, and combine the best ideas into a new solution that may be better than any of the preliminary ideas. Students demonstrate grade appropriate proficiency in <i>asking questions, designing solutions, engaging in argument from evidence, developing and using models, and designing solutions</i>. Students are also expected to use these practices to demonstrate understanding of the core ideas.</p> <p>This unit is based on MS-LS2-4, MS-LS2-5, MS-ETS1-1, and MS-ETS1-3.</p> | <p><b>This unit is addressed in the following Module, Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Relationships Within Ecosystems</b><br/><b>Topic 3: Populations, Communities, and Ecosystems</b><br/>Lesson 2: Dynamic and Resilient Ecosystems<br/>Lesson 3: Biodiversity<br/>Case Study: The Dependable Elephant<br/>Lesson 5: Ecosystem Services</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| <b>Student Learning Objectives</b>   |  |
| <p><b>Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. (MS-LS2-4)</b></p> | <p><b>Module: Relationships Within Ecosystems<br/>SE/TE:</b><br/>           Connect It!, 88<br/>           Succession, 89-91<br/>           uInvestigate Lab: Primary or Secondary, 92<br/>           Ecosystem Disruptions and Population Survival, 92-93<br/>           Lesson 3 Check, 94<br/>           Connect It!, 96<br/>           The Value of Biodiversity, 97-99<br/>           uInvestigate Lab: Modeling Keystone Species, 99<br/>           Factors Affecting Biodiversity, 100-102<br/>           Question It!: Endangered Species, 101<br/>           Human Impact, 103-106<br/>           Lesson 3 Check, 107<br/>           Case Study: The Dependable Elephant, 108-109<br/>           Topic 3 Review and Assess, 120-121<br/>           Evidence-Based Assessment, 122-123<br/>           uDemonstrate Lab: Changes in an Ecosystem, 124-127</p> <p><b>Realize™ Digital Resources:</b> Populations, Communities, and Ecosystems&gt;Topic Launch&gt;uConnect Lab: How Communities Change; Lesson 2, Dynamic and Resilient Ecosystems&gt;Interactivity: Succession in an Ecosystem; uInvestigate: Primary or Secondary; Interactivity: A Butterfly Mystery; Lesson 3, Biodiversity&gt;Interactivity: Biodiversity and Humans; uInvestigate Lab: Modeling Keystone Species; Interactivity: Biodiversity in the Amazon; Interactivity: Impacts on Biodiversity; Populations, Communities, and Ecosystems&gt;Topic Close: uDemonstrate Lab: Changes in an Ecosystem</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <p style="text-align: center;"><b>New Jersey Science Model Curriculum<br/>Grade 6</b></p>  | <p style="text-align: center;"><b>Elevate Science<br/>Grade 6 ©2019</b></p>  |
|--|--|
| <p><b>Evaluate competing design solutions for maintaining biodiversity and ecosystem services. (TM) (MS-LS2-5)</b></p>   | <p><b>Module: Relationships Within Ecosystems</b><br/><b>SE/TE:</b><br/>Factors Affecting Biodiversity, 100-102<br/>Question It!: Endangered Species, 101<br/>Human Impact, 103-106<br/>Lesson 3 Check, 107<br/>Math Toolbox: Restoring Water, 113<br/>uInvestigate Lab: Ecosystem Impacts, 116<br/>Design It!: Ecological Restoration, 117<br/>Lesson 4 Check, 118<br/>uEngineer It! Sustainable Design, STEM: From Bulldozers to Biomes, 119</p> <p><b>Realize™ Digital Resources:</b> Populations, Communities, and Ecosystems&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;To Cross or Not to Cross; Lesson 3, Biodiversity&gt;uInvestigate Lab: Modeling Keystone Species; Quest Check-In Lab: Design and Model a Crossing; Lesson 4, Ecosystem Services&gt;uInvestigate Lab: Ecosystem Impacts; Interactivity: Walk This Way; uEngineer It! Sustainable Design STEM: From Bulldozers to Biomes; Populations, Communities, and Ecosystems&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity: Reflect on Your Animal Crossing</p> |
| <p><b>Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. (MS-ETS1-1)</b></p> | <p><b>Module: Relationships Within Ecosystems</b><br/><b>SE/TE:</b><br/>The Engineering and Design Process, 136-139</p>  |

A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6

| New Jersey Science Model Curriculum<br>Grade 6  | Elevate Science<br>Grade 6 ©2019   |
|---|--|
| <p><b>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. (MS-ETS1-3)</b></p>   | <p><b>Module: Relationships Within Ecosystems</b><br/><b>SE/TE:</b><br/>The Engineering and Design Process, 136-139</p>  |
| <p><b>Unit 4: Force and Motion</b></p>  |  |
| <p><b>Unit Summary</b></p>  |  |
| <p><b><i>How can we predict the motion of an object?</i></b><br/>Students use <i>system and system models</i> and <i>stability and change</i> to understanding ideas related to why some objects will keep moving and why objects fall to the ground. Students apply Newton’s third law of motion to related forces to explain the motion of objects. Students also apply an engineering practice and concept to solve a problem caused when objects collide. The crosscutting concepts of <i>system and system models</i> and <i>stability and change</i> provide a framework for understanding the disciplinary core ideas. Students demonstrate proficiency in <i>asking questions, planning and carrying out investigations, designing solutions, engaging in argument from evidence, developing and using models, and constructing explanations and designing solutions</i>. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on MS-PS2-1, MS-PS2-2, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, and MS-ETS1-4.</p> | <p><b>This unit is addressed in the following Module, Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Forces</b><br/><b>Topic 1: Forces and Motion</b><br/>Lesson 1: Describing Motion and Force<br/>Lesson 2: Speed, Velocity and Acceleration<br/>Lesson 3: Newton’s Laws of Motion</p> |



**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>  | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|---|---|
| <b>Student Learning Objectives</b>  |   |
| <p><b>Apply Newton’s Third Law to design a solution to a problem involving the motion of two colliding objects. (TM) (MS-PS2-1)</b></p> | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           Quest Kickoff: How can you take the crash out of a collision?, 2-3<br/>           Newton’s Third Law of Motion, 29-31<br/>           uInvestigate Lab: Newton Scooters, 29<br/>           Lesson 3 Check, 32<br/>           Topic 1 Evidence-Based Assessment, 46-47<br/>           uDemonstrate Lab: Stopping on a Dime, 48-51</p> <p><b>Realize™ Digital Resources:</b> Forces and Motion&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Build a Better Bumper Car; Forces and Motion&gt;Lesson 3, Newton’s Laws of Motion&gt;Video&gt;Newton’s Laws of Motion; uInvestigate Lab: Newton Scooters; Interactivity: Going, Going, Gone!; Forces and Motion&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on Your Bumper Car Solution</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| <p><b>Plan an investigation to provide evidence that the change in an object’s motion depends on the sum of the forces on the object and the mass of the object. (MS-PS2-2)</b></p>  | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           Inquiry Warm-Up Lab: Is the Force with You?, 5<br/>           uInvestigate Lab: Motion Commotion, 6<br/>           Model It!: Forces in a Tug-of War, 9<br/>           uInvestigate Lab: Walking the Walk, 14<br/>           Model It!: Acceleration, 17<br/>           Acceleration of a Plane, 18-19<br/>           Case Study: Finding Your Way with GPS, 22-23<br/>           uInvestigate Lab: Newton Scooters, 29<br/>           Topic 1 Evidence-Based Assessment, 46-47<br/>           uDemonstrate Lab: Stopping on a Dime, 48-51</p> <p><b>Realize™ Digital Resources:</b> Forces and Motion&gt;Lesson 1, Describing Motion and Force&gt;Virtual Lab: Launching a Spacecraft into Motion&gt;uInvestigate Lab: Motion Commotion; Lesson 2, Speed, Velocity and Acceleration&gt;uInvestigate Lab: Walking the Walk; Lesson 3, Newton’s Laws of Motion&gt; uInvestigate Lab: Newton Scooters</p> |
| <p><b>Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. (MS-ETS1-1)</b></p> | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           The Engineering and Design Process, 110-113</p>   |
| <p><b>Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. (MS-ETS1-2)</b></p>  | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           The Engineering and Design Process, 110-113</p>   |

A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6

| New Jersey Science Model Curriculum<br>Grade 6   | Elevate Science<br>Grade 6 ©2019   |
|--|--|
| <b>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. (MS-ETS1-3)</b>   | <b>Module: Forces</b><br><b>SE/TE:</b><br>The Engineering and Design Process, 110-113  |
| <b>Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved. (MS-ETS1-4)</b>   | <b>Module: Forces</b><br><b>SE/TE:</b><br>The Engineering and Design Process, 110-113  |
| <b>Unit 5: Types of Interactions</b>   |  |
| <b>Unit Summary</b>  |  |
| <p><b><i>Is it possible to exert on an object without touching it?</i></b><br/>Students use <i>cause and effect</i>; <i>system and system models</i>; and <i>stability and change</i> to understand ideas that explain why some materials are attracted to each other while others are not. Students apply ideas about gravitational, electrical, and magnetic forces to explain a variety of phenomena including beginning ideas about why some materials attract each other while others repel. In particular, students develop understandings that gravitational interactions are always attractive but that electrical and magnetic forces can be both attractive and negative. Students also develop ideas that objects can exert forces on each other even though the objects are not in contact, through fields. Students are expected to consider the influence of science, engineering, and technology on society and the natural world. Students are expected to demonstrate proficiency in <i>asking questions</i>, <i>planning and carrying out investigations</i>, <i>designing solutions</i>, and <i>engaging in argument</i>. Students are also expected to use these practices to demonstrate understanding of the core ideas.<br/>This unit is based on MS-PS2-3, MS-PS2-4, and MS-PS2-5.</p> | <p><b>This unit is addressed in the following Module, Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Forces</b><br/><b>Topic 1: Forces and Motion</b><br/>Lesson 4: Friction and Gravitational Interactions</p> <p><b>Topic 2: Electricity and Magnetism</b><br/>Lesson 1: Electric Force<br/>Lesson 2: Magnetic Force<br/>Lesson 3: Electromagnetic Force<br/>Lesson 4: Electric and Magnetic Interactions<br/>Case Study: The X-57 Maxwell</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|--|---|
| <b>Student Learning Objectives</b>   |   |
| <p><b>Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. (MS-PS2-5)</b></p> | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           uConnect Lab: Magnetic Poles, 52<br/>           Quest Kickoff: How can you lift an object without making contact?, 54-55<br/>           Inquiry Warm-Up Lab: Uncanny Attractions, 57<br/>           uInvestigate Lab: Detecting Charges, 62<br/>           Quest Check-In, 64<br/>           uInvestigate Lab: Detecting Fake Coins, 68<br/>           Quest Check-In Lab: Tracking Levitation, 73<br/>           Topic 2 Review and Assess, 94-95<br/>           Evidence-Based Assessment, 96-97<br/>           uDemonstrate Lab: Planetary Detective, 98-101</p> <p><b>Realize™ Digital Resources:</b> Electricity and Magnetism&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Light as a Feather; Electricity and Magnetism&gt;Lesson 1, Electric Force&gt;Inquiry Warm-Up Lab: Uncanny Attractions; Interactivity: Apply Electrical Forces; Lesson 2, Magnetic Force&gt;Interactivity: Interaction of Magnetic Fields; Virtual Lab: Get Your Bearings; uInvestigate Lab: Detecting Fake Coins; Interactivity: Modeling Magnetic Forces; Electricity and Magnetism&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on Your Levitating Devise; uDemonstrate Lab: Planetary Detective, 98-101</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| <p><b>Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. (MS-PS2-3)</b></p> | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           Literary Connection: Cite Textual Evidence, 75<br/>           uInvestigate Lab: Electric Current and Magnetism, 76<br/>           Lesson 3 Check, 80<br/>           uEngineer It! Impact on Society, STEM, 81<br/>           Inquiry Warm-Up Lab: How Generators Work, 83<br/>           uInvestigate Lab: Electric, Magnetic Motion, 85<br/>           Question It!: Types of Current, 88<br/>           Lesson 4 Check, 91<br/>           Quest Check-In Lab: Electrifying Levitation, 91<br/>           Case Study: The X-57 Maxwell, 92-93<br/>           Topic 2 Review and Assess, 94-95<br/>           Evidence-Based Assessment, 96-97<br/>           uDemonstrate Lab: Planetary Detective, 98-101</p> <p><b>Realize™ Digital Resources:</b> Electricity and Magnetism&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Light as a Feather; Lesson 3, Electromagnetic Force&gt;Interactivity: Electricity and Magnetism; Interactivity: Electromagnetism; uInvestigate Lab: Electric Current and Magnetism; Interactivity: Electromagnetic Evidence; Lesson 4, Electric and Magnetic Interactions&gt;Interactivity: Electric Motors; uInvestigate Lab: Electric Magnetic Motion; Interactivity: Electricity and Magnetism; Interactivity: Generators; Electricity and Magnetism&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on Your Levitating Device; uDemonstrate Lab: Planetary Detective, 98-101</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <p style="text-align: center;"><b>New Jersey Science Model Curriculum<br/>Grade 6</b></p>  | <p style="text-align: center;"><b>Elevate Science<br/>Grade 6 ©2019</b></p>  |
|--|--|
| <p><b>Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. (MS-PS2-4)</b></p> | <p><b>Module: Forces</b><br/> <b>SE/TE:</b><br/>           Factors That Affect Gravity, 38-41<br/>           Lesson 4 Check, 42<br/>           Extraordinary Science: Spacetime Curvature and Gravitational Waves, 43<br/>           Topic 1 Review and Assess, 44-45<br/>           Evidence-Based Assessment, 46-47<br/>           uDemonstrate Lab: Stopping on a Dime, 48-51</p> <p><b>Realize™ Digital Resources:</b> Forces and Motion&gt;Lesson 4, Friction and Gravitational Interactions&gt;Interactivity: Exploring Gravity; Interactivity: The Pull of the Tides; Forces and Motion&gt;Topic Close&gt; uDemonstrate Lab: Stopping on a Dime</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|--|---|
| <b>Unit 6: Astronomy</b>   |   |
| <b>Unit Summary</b>  |   |
| <p>This unit is broken down into three sub-ideas: the universe and its stars, Earth and the solar system, and the history of planet Earth. Students examine the Earth’s place in relation to the solar system, the Milky Way galaxy, and the universe. There is a strong emphasis on a systems approach and using models of the solar system to explain the cyclical patterns of eclipses, tides, and seasons. There is also a strong connection to engineering through the instruments and technologies that have allowed us to explore the objects in our solar system and obtain the data that support the theories explaining the formation and evolution of the universe. Students examine geosciences data in order to understand the processes and events in Earth’s history. The crosscutting concepts of <i>patterns, scale, proportion, and quantity</i> and <i>systems and systems models</i> provide a framework for understanding the disciplinary core ideas. Students are expected to demonstrate proficiency in <i>developing and using models</i> and <i>analyzing and interpreting data</i>. Students are also expected to use these practices to demonstrate understanding of the core ideas.</p> <p>This unit is based on MS-ESS1-1, MS-ESS1-2, and MS-ESS1-3.</p> | <p><b>This unit is addressed in the following Module, Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Earth’s Place in the Universe</b><br/> <b>Topic 1: Earth-Sun-Moon System</b><br/>           Lesson 1: Movement in Space<br/>           Case Study: The Ptolemaic Model: Explaining the Unexplained<br/>           Lesson 2: Earth’s Movement in Space<br/>           Lesson 3: Phases and Eclipses<br/> <b>Topic 2: Solar System and the Universe</b><br/>           Lesson 1: Solar System Objects<br/>           Case Study: Comparing Solar System Objects<br/>           Lesson 3: Stars<br/>           Lesson 4: Galaxies</p> |
| <b>Student Learning Objectives</b>   |   |
| <p>Generate and analyze evidence (through simulations or long term investigations) to explain why the Sun’s apparent motion across the sky changes over the course of a year. (ESS1.B)</p>   | <p><b>Realize™ Digital Resources:</b> Earth, Sun, Moon System&gt;Topic Launch&gt;uConnect Lab: What Is At the Center?; Lesson 1, Movement in Space&gt;Video: Movement in Space;</p>   |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| <p><b>Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. (MS-ESS1-1)</b></p> | <p><b>Module: Earth’s Place in the Universe</b><br/> <b>SE/TE:</b><br/>           uConnect Lab: What Is at the Center?, 0<br/>           Quest Kickoff: How are tides related to our place in space?, 2-3<br/>           uInvestigate Lab: Watching the Skies, 6<br/>           Models of the Solar System, 10-12<br/>           Model It!: Models of the Universe, 12<br/>           Lesson 1 Check, 13<br/>           Quest Check-In, 13<br/>           Case Study: The Ptolemaic Model: Explaining the Unexplained, 14-15<br/>           Inquiry Warm-Up Lab: Patterns: Day and Night, 17<br/>           Design It!: Develop Models, 18<br/>           Lesson 2 Check, 24<br/>           Quest Check-In, 24<br/>           uInvestigate Lab: How Does the moon Move?, 28<br/>           Lunar Motion, 28<br/>           Moon Phases, 29<br/>           Types of Eclipses, 30<br/>           Model It!: Solar and Lunar Eclipses, 31<br/>           Lesson 3 Check, 34<br/>           Quest Check-In, 34<br/>           Topic 1 Review and Assess, 36-37<br/>           Evidence-Based Assessment, 38-39<br/>           Quest Findings: Complete the Quest, 39<br/>           uDemonstrate Lab: Modeling Lunar Phases, 40-43</p> |



**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <p style="text-align: center;"><b>New Jersey Science Model Curriculum<br/>Grade 6</b></p>   | <p style="text-align: center;"><b>Elevate Science<br/>Grade 6 ©2019</b></p>  |
|---|--|
| <p>(Continued)</p>  | <p>(Continued)<br/><b>Realize™ Digital Resources:</b> Earth-Sun-Moon System&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;It’s as Sure as the Tides; Lesson 1, Movement in Space&gt;uInvestigate Lab: Watching the Skies; Interactivity: Discovery of the Solar System; Case Study&gt;The Ptolemaic Model: Explaining the Unexplained; Lesson 2, Earth’s Movement in Space&gt;Inquiry Warm-Up Lab: Patterns Day and Night; Interactivity: Patterns in Earth’s Rotation and Revolution; Video&gt;Earth’s Movement in Space; Lesson 3, Phases and Eclipses&gt;uInvestigate Lab: How Does the moon Move?&gt;Interactivity: Our View of the Moon; Interactivity: Moon Phases and Eclipses; Virtual Lab: Shadows in Space; Interactivity: Eclipses; Earth-Sun-Moon System&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;It’s as Sure as the Tides; uDemonstrate Lab: Modeling Lunar Phases</p> |
| <p>Develop and use a model that shows how gravity causes smaller objects to orbit around larger objects at increasing scales, including the gravitational force of the sun causes the planets and other bodies to orbit around it holding together the solar system. (ESS1.A; ESS1.B)</p> | <p><b>Module: Earth’s Place in the Universe</b><br/><b>SE/TE:</b><br/>Lesson 2: Earth’s Movement in Space, 16-25<br/>uConnect Lab: Planetary Measures, 44<br/>Inquiry Warm-Up Lab: Ring Around the Sun, 49<br/>uInvestigate Lab: Pulling Planets, 51</p>   |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|--|---|
| <p><b>Analyze and interpret data to determine scale properties of objects in the solar system. (MS-ESS1-3)</b></p> | <p><b>Module: Earth’s Place in the Universe</b><br/> <b>SE/TE:</b><br/>           STEM Quest Kickoff: How do we look for things that can’t be seen?, 46-47<br/>           Inquiry Warm-Up Lab: Ring Around the Sun, 49<br/>           uInvestigate Lab: Pulling Planets, 51<br/>           uInvestigate Lab: Layers of the Sun, 53<br/>           Model It!: The Sun’s Atmosphere, 54<br/>           Lesson 1 Check, 59<br/>           Quest Check-In, 59<br/>           Case Study: Comparing Solar System Objects, 60-61<br/>           Inquiry Warm-Up Lab: How Does Distance Affect an Image?, 63<br/>           Plan It!: Use Models, 65<br/>           uInvestigate Lab: Space Exploration Vehicle, 65<br/>           History of Space Exploration, 66-69<br/>           Lesson 2 Check, 70<br/>           Quest Check-In, 70<br/>           uEngineer It!, Defining the Problem, STEM, 71<br/>           Topic 2 Review and Assess, 92-93<br/>           uDemonstrate Lab: Scaling Down the Solar System, 96-99</p> <p><b>Realize™ Digital Resources:</b> Solar System and the Universe&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Searching for a Star; Lesson 1, Solar System Objects&gt;Interactivity: Distance Learning; Case Study &gt;Comparing Solar System Objects; Lesson 2, Learning About the Universe&gt;Inquiry Warm-Up Lab: How Does Distance Affect an Image?; Interactivity: Eyes in the Sky; Lesson 3, Stars &gt;uInvestigate Lab: How Far Is That Star?; Solar System and the Universe&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on Searching for a Star; uDem. Lab: Scaling Down the Solar System</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| <p><b>Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. (MS-ESS1-2)</b></p> | <p><b>Module: Earth’s Place in the Universe</b><br/> <b>SE/TE:</b><br/>           uConnect Lab: Planetary Measures, 44<br/>           STEM Quest Kickoff: How do we look for things that can’t be seen?, 46-47<br/>           Inquiry Warm-Up Lab: Ring Around the Sun, 49<br/>           uInvestigate Lab: Pulling Planets, 51<br/>           uInvestigate Lab: Layers of the Sun, 53<br/>           Lesson 1 Check, 59<br/>           Quest Check-In, 59<br/>           uInvestigate Lab: How Far Is That Star?, 79<br/>           Lesson 3 Check, 81<br/>           uInvestigate Lab: Model the Milky Way, 83<br/>           Model It!: Eclipsing Binary Stars, 84<br/>           Lesson 4 Check<br/>           Topic 2 Review and Assess, 92-93<br/>           Evidence-Based Assessment, 94-95<br/>           uDemonstrate Lab: Scaling Down the Solar System, 96-99</p> <p><b>Realize™ Digital Resources:</b> Solar System and the Universe&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Searching for a Star; Lesson 1, Solar System Objects&gt;Inquiry Warm-Up Lab: Ring Around the Sun; Interactivity: Solar System; uInvestigate Lab: Pulling Planets; uInvestigate Lab: Layers of the Sun; Interactivity: Anatomy of the Sun; Virtual Lab: A New Home; Lesson 3, Stars&gt;Interactivity: Lives of Stars; Lesson 4, Galaxies&gt;uInvestigate Lab: Model the Milky Way; Interactivity: Model a Galaxy; Solar System and the Universe&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on Searching for a Star; uDemonstrate Lab: Scaling Down the Solar System</p> |

A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6

| New Jersey Science Model Curriculum<br>Grade 6  | Elevate Science<br>Grade 6 ©2019  |
|---|---|
| <b>Unit 7: Weather and Climate</b>  |   |
| <b>Unit Summary</b>   |   |
| <p><b><i>What factors interact and influence weather and climate?</i></b><br/>This unit is broken down into three sub-ideas: Earth's large-scale systems interactions, the roles of water in Earth's surface processes, and weather and climate. Students make sense of how Earth's geosystems operate by modeling the flow of energy and cycling of matter within and among different systems. A systems approach is also important here, examining the feedbacks between systems as energy from the Sun is transferred between systems and circulates through the ocean and atmosphere. The crosscutting concepts of <i>cause and effect</i>, <i>systems and system models</i>, and <i>energy and matter</i> are called out as frameworks for understanding the disciplinary core ideas. In this unit, students are expected to demonstrate proficiency in <i>developing and using models</i> and <i>planning and carrying out investigations</i> as they make sense of the disciplinary core ideas. Students are also expected to use these practices to demonstrate understanding of the core ideas.<br/>This unit is based on MS-ESS2-4, MS-ESS2-5, and MS-ESS2-6.</p> | <p><b>This unit is addressed in the following Module, Topic(s), and Lessons in Elevate Science. Grade 6:</b></p> <p><b>Module: Cycles Influencing Weather and Climate</b><br/><b>Topic 1: Weather in the Atmosphere</b><br/>Lesson 1: The Atmosphere Around You<br/>Lesson 2: Water in the Atmosphere<br/>Lesson 3: Air Masses<br/>Lesson 4: Predicting Weather Changes<br/>Case Study: The Case of the Runaway Hurricane</p> <p><b>Topic 2: Energy in the Atmosphere and Ocean</b><br/>Lesson 1: Energy in the Earth's Atmosphere<br/>Lesson 2: Patterns of Circulation in the Atmosphere<br/>Lesson 3: Patterns of Circulation in the Ocean<br/>Case Study: Hurricanes in the Making</p> <p><b>Topic 3: Climate</b><br/>Lesson 1: Climate Factors</p> <p><b>Module: Earth's Systems</b><br/><b>Topic 1: Introduction to Earth's Systems</b><br/>Lesson 3: The Hydrosphere<br/>Case Study: The Case of the Shrinking Sea</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>   | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|--|---|
| <b>Student Learning Objectives</b>   |   |
| <p><b>Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. (MS-ESS2-4)</b></p> | <p><b>Module: Cycles Influencing Weather and Climate SE/TE:</b><br/> uConnect Lab: Puddle Befuddlement, 0<br/> Inquiry Warm-Up Lab: Water in the Air, 13<br/> uInvestigate Lab: How Clouds and Fog Form?, 14<br/> Forming a Cloud, 14<br/> Interactivity: Water Cycle, 15<br/> Water Droplets, 16<br/> Model It!: Identify Patterns, 19<br/> Lesson 2 Check, 20<br/> Case Study: The Case of the Shrinking Sea, 34-35<br/> Topic 1 Review and Assess, 36-37<br/> Evidence-Based Assessment, 38-39<br/> Quest Findings: Complete the Quest!, 39<br/> uDemonstrate Lab: Modeling a Watershed, 40-43<br/> Topic 1 Review and Assess, 50-51<br/> uDemonstrate Lab: Water from Trees, 54-57<br/> Evidence-Based Assessment, 94-95</p> <p><b>Realize™ Digital Resources:</b> Weather in the Atmosphere&gt;Lesson 2, Water in the Atmosphere&gt;Inquiry Warm-Up Lab: Water in the Air; uInvestigate Lab: How Clouds and Fog Form; Interactivity: Water Cycle; Weather in the Atmosphere&gt;Topic Close&gt;uDemonstrate Lab: Water from Trees</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b> | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|--|---|
| (Continued)  | (Continued)<br><b>Module: Earth's Systems</b><br><b>SE/TE:</b><br>Quest Kickoff: How can you predict the effects of a forest fire?, 2-3<br>uInvestigate Lab: Water on Earth, 27<br>Lesson 3 Check, 33<br>Quest Check-In, 33<br><br><b>Realize™ Digital Resources:</b> Introduction to Earth's Systems>Topic Launch>Quest Kickoff>Video>Reflect on Forest Fires; Introduction to Earth's Systems> Lesson 3, The Hydrosphere>Virtual Lab: Changes in the Water Cycle; uInvestigate Lab: Water on Earth; Introduction to Earth's Systems>Topic Close>Quest Findings>Complete the Quest!>Interactivity: Reflect on Forest Fires; uDemonstrate Lab: Modeling a Watershed |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>  | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|---|--|
| <p><b>Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. (MS-ESS2-5)</b></p> | <p><b>Module: Cycles Influencing Weather and Climate</b><br/> <b>SE/TE:</b><br/>           Quest Kickoff: How can you prepare for severe weather?, 2-3<br/>           Interactivity: Mountaintop Meal Preparations, 5<br/>           Lesson 1 Check, 11<br/>           Document: Sinking and Rising, 23<br/>           Interactivity: When Air Masses Collide, 24<br/>           Types of Air Masses, 24<br/>           uInvestigate Lab: Weather Fronts, 25<br/>           Model It!: Develop Models, 27<br/>           Lesson 3 Check, 28<br/>           Quest Check-In, 29<br/>           Interactivity: Using Air Masses to Predict Weather, 33<br/>           Lesson 4 Check, 36<br/>           Case Study: The Case of the Runaway Hurricane, 48-49<br/>           Topic 1 Review and Assess, 50-51<br/>           Evidence-Based Assessment, 52-53</p> <p><b>Realize™ Digital Resources:</b> Weather in the Atmosphere&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Preparing a Plan; Weather in the Atmosphere&gt;Lesson 1, The Atmosphere Around You&gt;Interactivity: Mountaintop Meal Preparations; uInvestigate Lab: Effects of Altitude on the Atmosphere; Interactivity: Layers of Atmosphere; Interactivity: Patterns in the Wind; Lesson 3, Air Masses&gt; Interactivity: Sinking and Rising; Interactivity: When Air Masses Collide; uInvestigate Lab: Weather Fronts; Interactivity: Mapping Out the Weather; Lesson 4, Predicting Weather Changes&gt; uInvestigate Lab: Tracking Weather; Interactivity: Using Air Masses to Predict Weather; Weather in the Atmosphere&gt;Topic Close&gt; Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on PSA</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>  | <b>Elevate Science<br/>Grade 6 ©2019</b>  |
|---|---|
| <p>Explain how variations in density result from variations in temperature and salinity drive a global pattern of interconnected ocean currents. (ESS2.C)</p>                               | <p><b>Module: Cycles Influencing Weather and Climate</b><br/><b>SE/TE</b><br/>Exploring the Ocean, 31-32<br/>Deep Ocean Currents, 87-88<br/>Plan It!: Sea Ice and Salinity, 87</p>  |
| <p>Use a model to explain the mechanisms that cause varying daily temperature ranges in a coastal community and in a community located in the interior of the country. (ESS2.C; ESS2.D)</p> | <p><b>Module: Cycles Influencing Weather and Climate</b><br/><b>SE/TE</b><br/>Inquiry-Warm Up Lab: How Does Latitude Affect Climate, 105<br/>Latitude and Temperature, 106<br/>Major Ocean Currents, 107<br/>Prevailing Winds, 108-109<br/>uInvestigate Lab: Classifying Climates, 110<br/>Model It!: City Climates, 111<br/>Lesson 1 Check, 112<br/>Quest Check-In, 112<br/>Extraordinary Science: Urban Heat Islands, 113</p> |



**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b>  | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|---|--|
| <p><b>Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. (MS-ESS2-6)</b></p> | <p><b>Module: Cycles Influencing Weather and Climate</b><br/> <b>SE/TE:</b><br/>           Model It!: Altitude and Air Density, 7<br/>           uInvestigate Lab: Effects of Altitude on the Atmosphere, 8<br/>           Lesson 1 Check, 11<br/>           uInvestigate Lab: Tracking Weather, 32<br/>           Lesson 4 Check, 36<br/>           Topic 1 Review and Assess, 50-51<br/>           Evidence-Based Assessment, 52-53<br/>           uConnect Lab: Does a Plastic Bag Trap Heat?, 58<br/>           Quest Kickoff: What is the most efficient way for a container ship to cross the Atlantic, 60-61<br/>           uInvestigate Lab: Heating Earth’s Surface, 67<br/>           Model It!: Develop Models, 69<br/>           Lesson 1 Check, 70<br/>           Quest Check-In Lab: Choose Your Speed, 70<br/>           Inquiry Warm-Up Lab: Turn, Turn, Turn, 73<br/>           Model It!: Earth Is Heating Up, 76-77<br/>           Global Wind Belts, 78<br/>           uInvestigate Lab: United States Precipitation, 79<br/>           Lesson 2 Check, 80<br/>           Quest Check-In, 80<br/>           uInvestigate Lab: Modeling Ocean Current Formation, 84<br/>           Surface Currents, 84-85<br/>           Plan It!: Sea Ice and Salinity, 87<br/>           Lesson 3 Check, 89<br/>           Quest Check-In, 69<br/>           Case Study: Hurricanes in the Making, 90-91<br/>           Topic 2 Review and Assess, 92-93<br/>           Quest Findings: Complete the Quest!, 95<br/>           uDemonstrate Lab: Not All Heating Is Equal, 96-99</p> |

**A Correlation of Elevate Science 2019, Grade 6 ©2019  
To the  
New Jersey Science Model Curriculum, Grade 6**

| <b>New Jersey Science Model Curriculum<br/>Grade 6</b> | <b>Elevate Science<br/>Grade 6 ©2019</b>   |
|--|--|
| (Continued)  | <p>(Continued)</p> <p>Inquiry-Warm Up Lab: How Does Latitude Affect Climate, 105<br/>           Latitude and Temperature, 106<br/>           Major Ocean Currents, 107<br/>           Prevailing Winds, 108-109<br/>           uInvestigate Lab: Classifying Climates, 110<br/>           Model It!: City Climates, 111<br/>           Lesson 1 Check, 112<br/>           Quest Check-In, 112<br/>           Extraordinary Science: Urban Heat Islands, 113</p> <p><b>Realize™ Digital Resources:</b> Weather in the Atmosphere&gt;Lesson 1, The Atmosphere Around You&gt;uInvestigate Lab: Effects of Altitude on the Atmosphere; Lesson 4, Predicting Weather Changes&gt;uInvestigate Lab: Tracking Weather; Energy in the Atmosphere and Ocean&gt;Topic Launch&gt;Quest Kickoff&gt;Video&gt;Crossing the Atlantic; Energy in the Atmosphere and Ocean&gt;Lesson 1, Energy in Earth’s Atmosphere&gt;uInvestigate Lab: Heating Earth’s Surface; Quest Check-In Lab: Choose Your Speed; Lesson 2, Patterns of Circulation in the Atmosphere&gt; Inquiry Warm-Up Lab: Turn, Turn, Turn; Interactivity: Wind Across the Globe; Interactivity: Where the Wind Blows; uInvestigate Lab: United States Precipitation; Lesson 3, Patterns of Circulation in the Ocean&gt;uInvestigate Lab: Modeling Ocean Current Formation; Interactivity: Oceanic Circulation; Quest Check-In&gt;Interactivity: Find Your Advantage; Energy in the Atmosphere and Ocean&gt;Topic Close&gt;Quest Findings&gt;Complete the Quest!&gt;Interactivity&gt;Reflect on Crossing the Atlantic; uDemonstrate Lab: Not All Heating Is Equal</p> |