

A Correlation of

**Oklahoma Elevate Science  
Grade 7, ©2022**



To the  
**Oklahoma  
2020 Academic Standards for Science  
Grade 7**

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

**Introduction**

This document demonstrates how ***Oklahoma Elevate Science*** ©2022 meets the Oklahoma 2020 Academic Standards for Science. Correlation page references are to the Student and Teacher Editions, and Savvas Realize™ digital resources.

Savvas Learning Company is proud to introduce ***Elevate Science*** Middle Grades – where exploration is the heart of science! Designed to address the rigors of new science standards, students will experience science up close and personal, using real-world, relevant phenomena to solve project-based problems. Our newest program prepares students for the challenges of tomorrow, building strong reasoning skills and critical thinking strategies as they engage in explorations, formulate claims, and gather and analyze data that promote evidence-based arguments. The blended print and digital curriculum covers all Next Generation Science Standards at every grade level.

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

**Transform** science classrooms by immersing students in active, three-dimensional learning. ***Elevate Science*** engages students with real-world tasks, open-ended Quests, uDemonstrate performance-based labs, and in the engineering/design process with uEngineer It! investigations.

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

**Innovate** learning by focusing on 21st century skills.

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

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

**Manage** the classroom with confidence.

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

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

Designed for today's classroom, preparing students for tomorrow's world. ***Elevate Science*** promises to:

- Elevate thinking.
- Elevate learning.
- Elevate teaching.

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

**Table of Contents**

<b>Matter and Its Interactions (PS1) .....</b>	<b>4</b>
<b>Energy (PS3).....</b>	<b>10</b>
<b>From Molecules to Organisms: Structure and Function (LS1).....</b>	<b>13</b>
<b>Ecosystems: Interactions, Energy, and Dynamics (LS2).....</b>	<b>15</b>
<b>Earth and Human Activity (ESS3).....</b>	<b>22</b>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Matter and Its Interactions (PS1)</b>	
<b>Performance Expectation</b>	
<b>7.PS1.1:</b> Develop models to describe the atomic composition of simple molecules and extended structures.	<p><b>SE/TE:</b> uConnect Lab: The Nuts and Bolts of Formulas, 6–7 Model It!: Molecules and Atoms, 13 Topic 1 Evidence-Based Assessment, 40-41 uConnect Lab: Modeling Matter, 102-103 Model It!: Models of an Atom, 109 Lesson 1 Check, #5, 113 Lesson 3 Check, #2, 136 Model It!: How Ions Form, 140</p> <p><b>Realize™ Digital Resources:</b> uInvestigate Lab: Modeling Atoms and Molecules Interactivity: Molecules and Extended Structures</p>
<b>Disciplinary Core Ideas</b>	
<b>7.PS1.1.DCI.1:</b> Substances are made from different types of atoms, which combine with one another in various ways.	<p><b>SE/TE:</b> Connect It!, 8 Matter, 9-11 Components of Matter, 12-14 Types of Mixtures, 15 Lesson 1 Check, #4, 16 Types of Mixtures, 171</p>
<b>7.PS1.1.DCI.2:</b> Atoms form molecules that range in size from two to thousands of atoms.	<p><b>SE/TE:</b> Molecules, 13 Compounds, 14 Lesson 1 Check, #5, 16 Literacy Connection: Determine Central Ideas, 106 Covalent Bonding, 142-144</p>
<b>7.PS1.1.DCI.3:</b> Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals).	<p><b>SE/TE:</b> Bonding and Periodic Properties, 132-135 Properties of Compounds, 145-146</p>
<b>Science and Engineering Practices</b>	
<b>7.PS1.1.SEP.1:</b> Developing and Using Models: Use a model to predict the relationships between systems or between components of a system.	<p><b>SE/TE:</b> uConnect Lab: The Nuts and Bolts of Formulas, 6–7 Model It!: Molecules and Atoms, 13 Topic 1 Evidence-Based Assessment, 40–41 uConnect Lab: Modeling Matter, 102-103 Lesson 1 Check, #5, 113</p>
<b>Crosscutting Concepts</b>	
<b>7.PS1.1.CCC.1:</b> Scale, Proportion, and Quantity: Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small.	<p><b>SE/TE:</b> Components of Matter, 12-14 Topic 1 Evidence-Based Assessment, 40–41 Thomson’s Model, Figure 2, 107 Model It!: Models of an Atom, 109 Lesson 1 Check, #4, 113</p>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.PS1.2:</b> Analyze and interpret patterns of data related to the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	<p><b>SE/TE:</b>            Quest Kickoff: How can you use science to make special effects?, 4-5            Chemical Changes in Matter, 31-32            uConnect Lab: What Happens When Chemicals React?, 168-169            Model It!: Wood Work, 182            Evidence of Chemical Reactions, 184-185            Types of Chemical Reactions, 198            uDemonstrate Lab: Evidence of Chemical Change, 214-217</p> <p><b>Realize™ Digital Resources:</b>            Quest: Lights! Camera! Action!            Interactivity: Analyze Exothermic and Endothermic Graphs</p>
<b>Disciplinary Core Ideas</b>	
<b>7.PS1.2.DCI.1:</b> Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it.	<p><b>SE/TE:</b>            Matter, 9-11            uDemonstrate Lab: Help Out the Wildlife, 42-45            Properties of Pure Substances, 203            Lesson 4 Check, #5, 207</p>
<b>7.PS1.2.DCI.2:</b> Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.	<p><b>SE/TE:</b>            Quest Kickoff: How can you use science to make special effects?, 4-5            Chemical Changes in Matter, 31-32            Evidence of Chemical Reactions, 184-185            Properties of Pure Substances, 203            Topic 4 Review and Assess, #16, 211            uDemonstrate Lab: Evidence of Chemical Change, 214-217</p>
<b>Science and Engineering Practices</b>	
<b>7.PS1.2.SEP.1:</b> Analyzing and Interpreting Data: Analyze and interpret data to determine similarities and differences in findings.	<p><b>SE/TE:</b>            Chemical Changes in Matter, 31            Math Toolbox: Energy in Chemical Reactions, 35            Lesson 1 Check, #1, 178            Literacy Connection: Cite Textual Evidence, 182            uDemonstrate Lab: Evidence of Chemical Change, 214-217</p>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Crosscutting Concepts</b>	
<b>7.PS1.2.CCC.1:</b> Patterns: Macroscopic patterns are related to the nature of microscopic and atomic-level structure.	<b>SE/TE:</b> uConnect Lab: The Nuts and Bolts of Formulas, 6-7 Components of Matter, 12-14 Changing Matter, 181-182 Building and Breaking Chemical Bonds, 183 Changes in Energy, 186 Affecting Rates of Reaction, 188-189 Quest Check-In, 190
<b>Performance Expectation</b>	
<b>7.PS1.3:</b> Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.*	<b>SE/TE:</b> Synthetic Materials, 201-204 Impact of Synthetic Materials, 205-206 Case Study: Is Plastic Really So Fantastic?, 208-209 Topic 4 Review and Assess, #14-17, 211  <b>Realize™ Digital Resources:</b> uInvestigate Lab: Making Plastic from Starch Interactivity: Describe the Impact of Synthetics Interactivity: The Impact of Synthetics
<b>Disciplinary Core Ideas</b>	
<b>7.PS1.3.DCI.1:</b> Each pure substance has characteristics, physical and chemical properties (for any bulk quantity under given conditions), that can be used to identify it.	<b>SE/TE:</b> Quest Check-In, 127 Properties of Pure Substances, 203 Lesson 4 Check, #5, 207 uDemonstrate Lab: Evidence of Chemical Change, 214-217  <b>Realize™ Digital Resources:</b> uInvestigate Lab: Making Plastic from Starch
<b>7.PS1.3.DCI.2:</b> Substances react chemically in characteristic ways.	<b>SE/TE:</b> Chemical Properties, 11 uConnect Lab: What Happens When Chemicals React?, 168-169 Connect It!, 180 Chemical Change, 182 Evidence of Chemical Reactions, 184-185 Connect It!, 192 Properties of Pure Substances, 203 Lesson 4 Check, #5, 207  <b>Realize™ Digital Resources:</b> uInvestigate Lab: Making Plastic from Starch

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

<b>Oklahoma 2020 Academic Standards for Science Grade 7</b>	<b>Oklahoma Elevate Science Grade 7, ©2022</b>
<b>7.PS1.3.DCI.3:</b> In a chemical process, the atoms that make up the original substances regroup into different molecules, and these new substances have different properties from those of the reactants.	<p><b>SE/TE:</b> Evidence of Chemical Reactions, 184-185 Properties of Pure Substances, 203 Synthetic Materials, 201-204 Topic 4 Review and Assess, #14, 211 uDemonstrate Lab: Evidence of Chemical Change, 214-217</p> <p><b>Realize™ Digital Resources:</b> ulInvestigate Lab: Making Plastic from Starch</p>
<b>7.PS1.3.DCI.4:</b> Engineering advances have led to important discoveries in virtually every field of science, and scientific discoveries have led to the development of entire industries and engineered systems.	<p><b>SE/TE:</b> Synthetic Materials, 201-204 Impact of Synthetic Materials, 205-206 Topic 4 Review and Assess, #15, 211</p> <p><b>Realize™ Digital Resources:</b> ulInvestigate Lab: Making Plastic from Starch</p>
<b>7.PS1.3.DCI.5:</b> The uses of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions.	<p><b>SE/TE:</b> Connect It!, 200 Synthetic Materials, 201-204 Impact of Synthetic Materials, 205-206 Case Study: Is Plastic Really So Fantastic?, 208-209 Topic 4 Review and Assess, #15, 211</p> <p><b>Realize™ Digital Resources:</b> ulInvestigate Lab: Making Plastic from Starch</p>
<b>Science and Engineering Practices</b>	
<b>7.PS1.3.SEP.1:</b> Obtaining, Evaluating, and Communicating Information: Gather, read, synthesize information from multiple appropriate sources, and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence.	<p><b>SE/TE:</b> Accidental Synthetics: SEP Evaluate Information, 203 Literacy Connection: Evaluate Information, 205 Reading Check: Evaluate Information, 206</p> <p><b>Realize™ Digital Resources:</b> ulInvestigate Lab: Making Plastic from Starch</p>
<b>Crosscutting Concepts</b>	
<b>7.PS1.3.CCC.1:</b> Structure and Function: Structures can be designed to serve particular functions by taking into account properties of different materials, and how materials can be shaped and used.	<p><b>SE/TE:</b> Properties of Pure Substances, 203 Polymers, 204 Lesson 4 Check, #4, 207 Topic 4 Review and Assess, #17, 211</p> <p><b>Realize™ Digital Resources:</b> ulInvestigate Lab: Making Plastic from Starch</p>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.PS1.5:</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.	<b>SE/TE:</b> Math Toolbox: Conservation of Mass, 33 Model It!: Formation of Ammonia, 194 Law of Conservation of Mass, 196-197 Mass Conserved, Figure 4, 196 A Rusting Car, Figure 6, 198 Lesson 3 Check, #5, 199 Topic 4 Review and Assess, #13, 211  <b>Realize™ Digital Resources:</b> ulnvestigate Lab: Is Matter Conserved? Interactivity: Model a Chemical Reaction
<b>Disciplinary Core Ideas</b>	
<b>7.PS1.5.DCI.1:</b> Substances react chemically in characteristic ways.	<b>SE/TE:</b> Chemical Properties, 11 Chemical Change, 182 Types of Chemical Reactions, 198
<b>7.PS1.5.DCI.2:</b> In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.	<b>SE/TE:</b> Chemical Change, 182 Properties of Pure Substances, 203 Topic 4 Review and Assess, #16, 211
<b>7.PS1.5.DCI.3:</b> The total number of each type of atom is conserved and thus, the mass does not change.	<b>SE/TE:</b> Math Toolbox: Conservation of Mass, 33 Law of Conservation of Mass, 196-197 Lesson 3 Check, #3, 199 Topic 4 Review and Assess, #13, 211
<b>7.PS1.5.DCI.4:</b> Laws are regularities or mathematical descriptions of natural phenomena.	<b>SE/TE:</b> Law of Conservation of Mass, 196-197 Lesson 3 Check, #3, 199 Scientific Theories and Laws, 508
<b>Science and Engineering Practices</b>	
<b>7.PS1.5.SEP.1:</b> Developing and Using Models: Develop a model to describe unobservable mechanics.	<b>SE/TE:</b> Model It!: Formation of Ammonia, 194 Mass Conserved, Figure 4, 196 A Rusting Car, Figure 6, 198 Lesson 3 Check, #5, 199 Topic 4 Review and Assess, #13, 211
<b>Crosscutting Concepts</b>	
<b>7.PS1.5.CCC.1:</b> Energy and Matter: Matter is conserved because atoms are conserved in physical and chemical processes.	<b>SE/TE:</b> Math Toolbox: Conservation of Mass, 33 Law of Conservation of Mass, 196-197 Lesson 3 Check, #4, 199



**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.PS1.6:</b> Construct, test, and modify a device that releases or absorbs thermal energy by chemical processes to solve a problem.*	<b>SE/TE:</b> Quest Kickoff: How can you design and build hot packs and cold packs?, 166-167 Quest Check-In, 190 Quest Check-In, 207 Quest Findings: Complete the Quest!, 213  <b>Realize™ Digital Resources:</b> Quest: Hot and Cool Chemistry, Check-In 2, Check-In 3
<b>Disciplinary Core Ideas</b>	
<b>7.PS1.6.DCI.1:</b> Some chemical reactions release energy, others store energy.	<b>SE/TE:</b> Thermal Energy and Changes in Matter, 35 Chemical Energy, 74 Quest Kickoff: How can you design and build hot packs and cold packs?, 166-167 Changes in Energy, 186 Energy Graphs for Chemical Reactions, 187
<b>7.PS1.6.DCI.2:</b> A solution needs to be tested, and then modified on the basis of the test results, in order to improve it.	<b>SE/TE:</b> Quest Kickoff: How can you design and build hot packs and cold packs?, 166-167 Test and Evaluate a Solution, 514 Redesign and Retest the Solution, 515
<b>7.PS1.6.DCI.3:</b> The iterative process of testing the most promising solutions and modifying what is proposed on the basis of the test results leads to greater refinement and ultimately to an optimal solution.	<b>SE/TE:</b> Quest Kickoff: How can you design and build hot packs and cold packs?, 166-167 Test and Evaluate a Solution, 514 Redesign and Retest the Solution, 515
<b>Science and Engineering Practices</b>	
<b>7.PS1.6.SEP.1:</b> Designing Solutions: Undertake a design project engaging in the design cycle, to construct and/or implement a solution that meets specific design criteria and constraints.	<b>SE/TE:</b> Quest Kickoff: How can you design and build hot packs and cold packs?, 166-167 Quest Findings: Complete the Quest!, 213 The Engineering Design Process, 512-515
<b>Crosscutting Concepts</b>	
<b>7.PS1.6.CCC.1:</b> Energy and Matter: The transfer of energy can be tracked as energy flows through a designed or natural system.	<b>SE/TE:</b> Quest Kickoff: How can you build a complicated machine to do something simple?, 48-49 Conservation of Energy in Transfers, 85 Quest Kickoff: How can you design and build hot packs and cold packs?, 166-167 Quest Findings: Complete the Quest!, 213

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Energy (PS3)</b>	
<b>Performance Expectation</b>	
<b>7.PS3.1:</b> Construct and interpret graphical displays of data to describe the proportional relationships of kinetic energy to the mass of an object and to the speed of an object.	<b>SE/TE:</b> Kinetic Energy, 63-64 Math Toolbox: Mass, Speed, and Kinetic Energy, 64 Topic 2 Review and Assess, #9, 90  <b>Realize™ Digital Resources:</b> Interactivity: Racing for Kinetic Energy Interactivity: Interpret Kinetic Energy Graphs
<b>Disciplinary Core Ideas</b>	
<b>7.PS3.1.DCI.1:</b> Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed.	<b>SE/TE:</b> Energy and Motion, 53 Lesson 1 Check, #1, 61 Kinetic Energy, 63-64 Lesson 2 Check, #1-2, 68 Energy at the Cookout: Figure 4, 76-77 Connect It!, 80 Math Toolbox: Home Runs and Air Density, 85 Lesson 4 Check, #4, 87 Topic 2 Review and Assess, #5, #9, 90
<b>Science and Engineering Practices</b>	
<b>7.PS3.1.SEP.1:</b> Analyze and Interpret Data: Construct and interpret graphical displays of data to identify linear and nonlinear relationships.	<b>SE/TE:</b> Math Toolbox: Mass, Speed, and Kinetic Energy, 64  <b>Realize™ Digital Resources:</b> Interactivity: Racing for Kinetic Energy Interactivity: Interpret Kinetic Energy Graphs
<b>Crosscutting Concepts</b>	
<b>7.PS3.1.CCC.1:</b> Scale, Proportion and Quantity: Proportional relationships (e.g., speed as a ratio of distance traveled to time taken) among different types of quantities provide information about the magnitude of properties and process.	<b>SE/TE:</b> Math Toolbox: Mass, Speed, and Kinetic Energy, 64 Math Toolbox: Home Runs and Air Density, 85  <b>Realize™ Digital Resources:</b> Interactivity: Racing for Kinetic Energy Interactivity: Interpret Kinetic Energy Graphs

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.PS3.2:</b> Develop a model to describe that when objects interacting at a distance change their arrangement, different amounts of potential energy are stored in the system.	<b>SE/TE:</b> Quest Kickoff: How can you build a complicated machine to do something simple?, 48-49 uConnect Lab: What Would Make a Card Jump?, 50-51 Potential Energy, 65-67 Electrical Energy, 75 Model It!: Transformation and Transfer in Demolition, 83 Lesson 4 Check, #4, 87 Topic 2 Evidence-Based Assessment, 92-93 uDemonstrate Lab: 3, 2, 1... Liftoff!, 94-97  <b>Realize™ Digital Resources:</b> uInvestigate Lab: Energy, Magnetism, and Electricity
<b>Disciplinary Core Ideas</b>	
<b>7.PS3.2.DC1.1:</b> A system of objects may also contain stored (potential) energy, depending on their relative positions.	<b>SE/TE:</b> Potential Energy, 65-67 Lesson 2 Check, #3, 68 Lesson 3 Check, #5, 78 Topic 2 Review and Assess, #6, 90
<b>7.PS3.2.DC1.2:</b> When two objects interact, each one exerts a force on the other that can cause energy to be transferred to or from the object.	<b>SE/TE:</b> Connect It!, 52 Energy in Motion and Force, 53-54 Force and Work, 55-57 Work Related to Energy and Power, 58-60 Lesson 1 Check, #2, 61 Quest Check-In, 61 Potential Energy, 65 Elastic Potential Energy, 67 Topic 2 Review and Assess, #6, 90
<b>Science and Engineering Practices</b>	
<b>7.PS3.2.SEP.1:</b> Developing and Using Models: Develop a model to predict and/or describe phenomena.	<b>SE/TE:</b> Stored-Up Energy, Figure 2, 65 Elastic Potential Energy, Figure 4, 67
<b>Crosscutting Concepts</b>	
<b>7.PS3.2.CCC.1:</b> Systems and System Models: Models can be used to represent systems and their interactions (such as inputs, processes, and outputs) and energy and matter flows within systems.	<b>SE/TE:</b> Quest Kickoff: How can you build a complicated machine to do something simple?, 48-49 Topic 2 Evidence-Based Assessment, 92-93

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.PS3.5:</b> Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	<p><b>SE/TE:</b>            Quest Kickoff: How can you build a complicated machine to do something simple?, 48-49            uConnect Lab: What Would Make a Card Jump?, 50-51            Kinetic and Potential Energy, 82            Energy Transformation and Transfer, 83            Energy Changes and the Law of Conservation, 84-86            Lesson 4 Check, #5, 87            Topic 2 Evidence-Based Assessment, 92-93            uDemonstrate Lab: 3, 2, 1...Liftoff!, 94-97</p> <p><b>Realize™ Digital Resources:</b>            uInvestigate Lab: Law of Conservation of Energy</p>
<b>Disciplinary Core Ideas</b>	
<b>7.PS3.5.DCI.1:</b> When the motion energy of an object changes, there is inevitably some other change in energy at the same time.	<p><b>SE/TE:</b>            uConnect Lab: What Would Make a Card Jump?, 50-51            Lesson 3 Check, #3, 78            Kinetic and Potential Energy, 82            Energy Transformation and Transfer, 83            Energy Changes and the Law of Conservation, 84-86            Lesson 4 Check, #4, 87</p>
<b>Science and Engineering Practices</b>	
<b>7.PS3.5.SEP.1:</b> Engaging in Argument from Evidence: Construct, use, and present oral and written arguments supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon.	<p><b>SE/TE:</b>            uConnect Lab: What Would Make a Card Jump?, 50-51            Lesson 3 Check, #5, 78            Lesson 4 Check, #5, 87            uDemonstrate Lab: 3, 2, 1...Liftoff!, 94-97</p>
<b>Crosscutting Concepts</b>	
<b>7.PS3.5.CCC.1:</b> Energy and Matter: The transfer of energy can be tracked as energy flows through a designed or natural system.	<p><b>SE/TE:</b>            uConnect Lab: What Would Make a Card Jump?, 50-51            Force, Figure 2, 54            Energy Transformation and Transfer, 83            Energy Changes and the Law of Conservation, 84-86            Lesson 4 Check, #3, 87</p>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>From Molecules to Organisms: Structure and Function (LS1)</b>	
<b>Performance Expectation</b>	
<b>7.LS1.6:</b> 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.	<b>SE/TE:</b> Connect It!, 224 Living Things and Energy, 225-227 Photosynthesis, 228-229 Expressing Photosynthesis, 230 Case Study: Florida’s Vital Seagrass in Peril, 234-235 Topic 5 Review and Assess, #7, #14, 244-245 Connect It!, 278  <b>Realize™ Digital Resources:</b> Interactivity: Making Food for Cells ulnvestigate Lab: Energy from the Sun
<b>Disciplinary Core Ideas</b>	
<b>7.LS1.6.DCI.1:</b> Plants, algae (including phytoplankton), and many microorganisms use the energy from light to make sugars (food) from carbon dioxide from the atmosphere and water through the process of photosynthesis, which also releases oxygen. These sugars can be used immediately or stored for growth or later use.	<b>SE/TE:</b> Living Things and Energy, 225-227 Photosynthesis, 228-229 Expressing Photosynthesis, 230-231 Lesson 1 Check, #1, #5, 232 Topic 5 Review and Assess, #4, 244 Carbon and Oxygen Cycles, 282-283 Interactions Between Cycles of an Ecosystem, Figure 3, 338
<b>7.LS1.6.DCI.2:</b> The chemical reaction by which plants produce complex food molecules (sugars) requires an energy input (i.e., from sunlight) to occur.	<b>SE/TE:</b> Photosynthesis, 228-229 Lesson 1 Check, #1, 232 Topic 5 Review and Assess, #6, #8, 244
<b>7.LS1.6.DCI.3:</b> In this reaction, carbon dioxide and water combine to form carbon-based organic molecules and release oxygen.	<b>SE/TE:</b> Photosynthesis, 228-229 Expressing Photosynthesis, 230 Lesson 1 Check, #5, 232 Topic 5 Review and Assess, #6, #8, 244 Carbon and Oxygen Cycles, 282-283
<b>Science and Engineering Practices</b>	
<b>7.LS1.6.SEP.1:</b> Constructing Explanations: Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students’ own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.	<b>SE/TE:</b> Connect It!, 224 Topic 5 Review and Assess, #7, #14, 244-245
<b>Crosscutting Concepts</b>	
<b>7.LS1.6.CCC.1:</b> Energy and Matter: Within a natural system, the transfer of energy drives the motion and/or cycling of matter.	<b>SE/TE:</b> Photosynthesis, 228-229 Lesson 1 Check, #1, 232 Interactions Between Cycles of an Ecosystem, Figure 3, 338

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.LS1.7:</b> Develop a model to describe how food molecules in plants and animals are broken down and rearranged through chemical reactions to form new molecules that support growth and/or release energy as matter moves through an organism.	<b>SE/TE:</b> Cellular Respiration Process, 238 Model It!, 239 Related Processes, Figure 3, 240 Lesson 2 Check, #2, 242 Topic 5 Review and Assess, #16, 245 uDemonstrate Lab: Cycling Energy and Matter, 248-251  <b>Realize™ Digital Resources:</b> Interactivity: Making Food for Cells uInvestigate Lab: Exhaling Carbon Dioxide
<b>Disciplinary Core Ideas</b>	
<b>7.LS1.7.DCI.1:</b> Within an individual organism, food moves through a series of chemical reactions in which it is broken down and rearranged to form new molecules, to support growth, or release energy.	<b>SE/TE:</b> Energy and Cellular Respiration, 237-240 Fermentation, 241 Lesson 2 Check, #4, 242
<b>7.LS1.7.DCI.2:</b> Cellular respiration in plants and animals involves chemical reactions with oxygen that release stored energy. In these processes, complex molecules containing carbon react with oxygen to produce carbon dioxide and other materials.	<b>SE/TE:</b> Energy and Cellular Respiration, 237-240 Lesson 2 Check, #1, #2, 242 Topic 5 Review and Assess, #16, 245 Carbon and Oxygen Cycles, 282-283
<b>Science and Engineering Practices</b>	
<b>7.LS1.7.SEP.1:</b> Developing and Using Models: Develop a model to predict and/or describe phenomena.	<b>SE/TE:</b> Releasing Energy, Figure 2, 238 Model It!, 239 Related Processes, Figure 3, 240 Lesson 2 Check, #2, 242 Topic 5 Review and Assess, #16, 245 uDemonstrate Lab: Cycling Energy and Matter, 248-251
<b>Crosscutting Concepts</b>	
<b>7.LS1.7.CCC.1:</b> Energy and Matter: Matter is conserved because atoms are conserved in physical and chemical processes.	<b>SE/TE:</b> Math Toolbox: Conservation of Matter in the Balance, 240 Lesson 2 Check, #5, 242

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Ecosystems: Interactions, Energy, and Dynamics (LS2)</b>	
<b>Performance Expectation</b>	
<p><b>7.LS2.1:</b> Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.</p>	<p><b>SE/TE:</b>            Quest Kickoff: What do you think is causing Pleasant Pond to turn green?, 254-255            Levels of Organization: CCC Systems, 261            Math Toolbox: Graphing Population Changes, 262            Factors That Limit Population Growth, 264            Case Study: The Case of the Disappearing Cerulean Warbler, 266-267            Topic 6 Review and Assess, #5, 288            uDemonstrate Lab: Last Remains, 292-295            Math Toolbox: Predator-Prey Interactions, 307            Lesson 1 Check, #3, 311            Ecosystem Disruptions and Population Survival, 316            Topic 7 Evidence-Based Assessment, 346-347            uDemonstrate Lab: Changes in an Ecosystem, 348-351</p> <p><b>Realize™ Digital Resources:</b>            Quest: Mystery at Pleasant Pond            Interactivity: To Cross or Not to Cross            Interactivity: Nutrients and Aquatic Organisms</p>
<b>Disciplinary Core Ideas</b>	
<p><b>7.LS2.1.DCI.1:</b> Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors.</p>	<p><b>SE/TE:</b>            Organisms and Habitats, 259-260            Lesson 1 Check, #4, 265            Competition and Predation, 305-307            Symbiotic Relationships, 308-310            Ecosystem Disruptions and Population Survival, 316            Lesson 2 Check, #2, 318            Lesson 3 Check, #3, 331            Case Study: The Dependable Elephant, 332-333</p>
<p><b>7.LS2.1.DCI.2:</b> In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction.</p>	<p><b>SE/TE:</b>            Factors That Limit Population Growth, 264            Competition, 305            Reading Check: Summarize, 307            Lesson 1 Check, #2, 311            Niche Diversity, 324</p>
<p><b>7.LS2.1.DCI.3:</b> Growth of organisms and population increases are limited by access to resources.</p>	<p><b>SE/TE:</b>            Factors That Limit Population Growth, 264            Lesson 1 Check, #5, 265            Case Study: The Case of the Disappearing Cerulean Warbler, 266-267            Topic 7 Review and Assess, #5, 288            Competition, 305            Population Size, 307            Lesson 1 Check, #3, 311</p>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Science and Engineering Practices</b>	
<b>7.LS2.SEP.1:</b> Analyzing and Interpreting Data: Analyze and interpret data to provide evidence for phenomena.	<b>SE/TE:</b> Math Toolbox: Graphing Population Changes, 262 Lesson 1 Check, #2-3, 265 Case Study: The Case of the Disappearing Cerulean Warbler, 266-267 Lesson 1 Check, #3, 311 Topic 7 Evidence-Based Assessment, 346-347 uDemonstrate Lab: Changes in an Ecosystem, 348-351
<b>Crosscutting Concepts</b>	
<b>7.LS2.1.CCC.1:</b> Cause and Effect: Cause and effect relationships may be used to predict phenomena in natural or designed systems.	<b>SE/TE:</b> Limited Space: CCC Cause and Effect, 264 Reading Check: Summarize Text, 264 Quest Check-In, 265 Lesson 1 Check, #3, #5, 311
<b>Performance Expectation</b>	
<b>7.LS2.2:</b> Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	<b>SE/TE:</b> uConnect Lab: How Communities Change, 300-301 Connect It!, 302 Competition and Predation, 305 Mutualism and Commensalism, 309 Lesson 1 Check, #4, 311 Succession, 313-314 Lesson 2 Check, #1, 318 Case Study: The Dependable Elephant, 332-333 Topic 7 Review and Assess, #5, 344 uDemonstrate Lab: Changes in an Ecosystem, 348-351  <b>Realize™ Digital Resources:</b> Interactivity: Symbiotic Relationships uInvestigate Lab: Competition and Predation
<b>Disciplinary Core Ideas</b>	
<b>7.LS2.2.DCI.1:</b> Predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. Although the species involved in these competitive, predatory, and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving, are shared.	<b>SE/TE:</b> Competition and Predation, 305-307 Symbiotic Relationships, 308-310 Lesson 1 Check, #2, 311 Case Study: The Dependable Elephant, 332-333 Topic 7 Review and Assess, #5, 344



**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Science and Engineering Practices</b>	
<b>7.LS2.2.SEP.1:</b> Constructing Explanations: Construct an explanation that includes qualitative or quantitative relationships between variables that predict and/or describe phenomena.	<b>SE/TE:</b> Lesson 1 Check, #4, 311 Case Study: The Dependable Elephant, 332-333 Topic 7 Review and Assess, #5, 344
<b>Crosscutting Concepts</b>	
<b>7.LS2.2.CCC.1:</b> Patterns: Patterns can be used to identify cause and effect relationships.	<b>SE/TE:</b> Lesson 1 Check, #5, 311 CCC Cause and Effect, 316 Case Study: The Dependable Elephant, 332-333 Topic 7 Evidence-Based Assessment, 346-347 Topic 8 Evidence-Based Assessment, 452-453
<b>Performance Expectation</b>	
<b>7.LS2.3:</b> Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	<b>SE/TE:</b> Living Things and Energy, 225-227 Model It!: Trace Energy to the Source, 227 Quest Kickoff: What do you think is causing Pleasant Pond to turn green?, 254-255 uConnect Lab: Every Breath You Take, 256-257 Energy and Matter Transfer, 272-275 Model It!: Food Web, 273 uEngineer It!: Eating Oil, 277 Model It!: Where does your water come from?, 280 The Carbon and Oxygen Cycles, SEP Develop Models, 282-283 Nitrogen Cycle, CCC System Models, 284 Lesson 3 Check, #3, 286 Topic 6 Review and Assess, #9, 288 Topic 6 Evidence-Based Assessment, 290-291 uDemonstrate Lab: Last Remains, 292-295 Interaction Between Cycles of an Ecosystem, Figure 3, 338 uDemonstrate Lab: Changes in an Ecosystem, 348-351  <b>Realize™ Digital Resources:</b> Quest: Mystery at Pleasant Pond uInvestigate Lab: Observing Decomposition, Following Water

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Disciplinary Core Ideas</b>	
<b>7.LS2.3.DCI.1:</b> Food webs are models that demonstrate how matter and energy is transferred between producers, consumers, and decomposers as the three groups interact within an ecosystem.	<b>SE/TE:</b> Food Webs, 272 Model It!: Food Web, 273 Lesson 2 Check, #1, 276 Topic 6 Review and Assess, #9, #12, 288-289 Topic 6 Evidence-Based Assessment, 290-291 uDemonstrate Lab: Last Remains, 292-295
<b>7.LS2.3.DCI.2:</b> Transfers of matter into and out of the physical environment occur at every level.	<b>SE/TE:</b> Energy and Matter Transfer, 272-275 Lesson 2 Check, #3, 276 Connect It!, 278 Conservation of Matter and Energy, 279 Water Cycle, 280-281 Carbon and Oxygen Cycles, 282-283 Nitrogen Cycle in Ecosystems, 284-285 Lesson 3 Check, #3, 286 Topic 6 Review and Assess, #17, 289
<b>7.LS2.3.DCI.3:</b> Decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments.	<b>SE/TE:</b> Decomposers, 271 Model It!: Food Web, 273 uEngineer It!: Eating Oil, 277 Extraordinary Science: An Appetite for Plastic?!, 287 Topic 6 Review and Assess, #17, 289 Topic 6 Evidence-Based Assessment, 290-291
<b>7.LS2.3.DCI.4:</b> The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem.	<b>SE/TE:</b> Energy and Matter Transfer, 272-275 Conservation of Matter and Energy, 279 Water Cycle, 280-281 Carbon and Oxygen Cycles, 282-283 Nitrogen Cycle in Ecosystems, 284-285 Topic 6 Review and Assess, #17, 289 Topic 6 Evidence-Based Assessment, 290-291 uDemonstrate Lab: Last Remains, 292-295

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Science and Engineering Practices</b>	
<b>7.LS2.3.SEP.1:</b> Developing and Using Models: Develop a model to describe phenomena.	<b>SE/TE:</b> uConnect Lab: Every Breath You Take, 256-257 Life and Death in an Alaskan Stream: SEP Develop Models, 270-271 Model It!: Food Web, 273 Model It!: Where does your water come from?, 280 The Carbon and Oxygen Cycles: SEP Develop Models, 282-283 Nitrogen Cycle: CCC Systems Models, 284 Lesson 3 Check, #3, 286 Topic 6 Review and Assess, #9, 288 uDemonstrate Lab: Last Remains, 292-295 Interaction Between Cycles of an Ecosystem, Figure 3, 338
<b>Crosscutting Concepts</b>	
<b>7.LS2.3.CCC.1:</b> Energy and Matter: The transfer of energy can be tracked as energy flows through a natural system.	<b>SE/TE:</b> Connect It!, 268 Energy and Matter Transfer, 272-275 Math Toolbox: Relationships in an Energy Pyramid, 275 Lesson 2 Check, #3, 276 Conservation of Matter and Energy, 279 Lesson 3 Check, #5, 286 Topic 6 Review and Assess, #8, 288
<b>Performance Expectation</b>	
<b>7.LS2.4:</b> Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	<b>SE/TE:</b> uConnect Lab: How Communities Change, 300-301 Succession, 313-314 Literacy Connection: Write Arguments, 314 Model It!: Pioneers, 315 Lesson 2 Check, #2, 318 Lesson 3 Check, #5, 331 Case Study: The Dependable Elephant, 332-333 Literacy Connection: Summarize Text, 340 Topic 7 Evidence-Based Assessment, 346-347 uDemonstrate Lab: Changes in an Ecosystem, 348-351  <b>Realize™ Digital Resources:</b> Quest: To Cross or Not to Cross Interactivity: A Butterfly Mystery uInvestigate Lab: Primary or Secondary

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Disciplinary Core Ideas</b>	
<b>7.LS2.4.DCI.1:</b> Ecosystems are dynamic in nature; their characteristics can vary over time.	<b>SE/TE:</b> Connect It!, 312 Succession, 313-314 Model It!: Pioneers, 315 Ecosystem Disruptions and Population Survival, 316-317 Lesson 2 Check, #1, 318 The Value of Biodiversity, 321-323 Factors Affecting Biodiversity, 324-326 Human Impact, 327-330
<b>7.LS2.4.DCI.2:</b> Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations.	<b>SE/TE:</b> uConnect Lab: How Communities Change, 300-301 Primary Succession, 313 Secondary Succession, 314 Ecosystem Disruptions and Population Survival, 316-317 Lesson 2 Check, #3, 318
<b>Science and Engineering Practices</b>	
<b>7.LS2.4.SEP.1:</b> Engaging in Argument from Evidence: Construct an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or model for a phenomenon.	<b>SE/TE:</b> uConnect Lab: How Communities Change, 300-301 Literacy Connection: Write Arguments, 314 Model It!: Pioneers, 315 Lesson 2 Check, #2, 318 Case Study: The Dependable Elephant, 332-333 Literacy Connection: Write Arguments, 340 uDemonstrate Lab: Changes in an Ecosystem, 348-351
<b>Crosscutting Concepts</b>	
<b>7.LS2.4.CCC.1:</b> Stability and Change: Small changes in one part of a system might cause large changes in another part.	<b>SE/TE:</b> Mature Communities, 314 CCC Analyze Systems, 324 Human Impact, 327

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.LS2.5:</b> Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	<p><b>SE/TE:</b>            Quest Kickoff: Should an Animal Crossing Be Constructed in My Community?, 298-299            Question It!: Endangered Species, 325            Quest Check-In, 331            Biodiversity in Ecosystems: Specify Design Constraints, 339            Design It!: Ecological Restoration, 341            Lesson 4 Check, #8, 342            uEngineer It!: From Bulldozers To Biomes, 343</p> <p><b>Realize™ Digital Resources:</b>            Quest: To Cross or Not to Cross            Interactivity: Walk This Way or That Way</p>
<b>Disciplinary Core Ideas</b>	
<b>7.LS2.5.DCI.1:</b> Biodiversity describes the variety of species found in Earth’s terrestrial and oceanic ecosystems.	<p><b>SE/TE:</b>            Connect It!, 320            The Value of Biodiversity, 321-323            Factors Affecting Biodiversity, 324-326            Lesson 3 Check, #1, 331            Biodiversity, 339</p>
<b>7.LS2.5.DCI.2:</b> The completeness or integrity of an ecosystem’s biodiversity is often used as a measure of its health.	<p><b>SE/TE:</b>            Connect It!, 320            The Value of Biodiversity, 321-323            Protecting Biodiversity, 329            Lesson 3 Check, #2, 331</p>
<b>7.LS2.5.DCI.3:</b> Changes in biodiversity can influence humans’ resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling.	<p><b>SE/TE:</b>            The Value of Biodiversity, 321-323            Human Impact, 327-330            Ecosystem Services, 335-338            Factors Impacting Ecosystem Services, 339-340            Conservation, 341            Lesson 4 Check, #7, 342</p>
<b>7.LS2.5.DCI.4:</b> There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.	<p><b>SE/TE:</b>            Question It!: Endangered Species, 325            Biodiversity in Ecosystems: Specify Design Constraints, 339            Design It!: Ecological Restoration, 341            The Engineering Design Process, 512-515</p>

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Science and Engineering Practices</b>	
<b>7.LS2.5.SEP.1:</b> Engaging in Argument from Evidence: Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.	<b>SE/TE:</b> Question It!: Endangered Species, 325 Quest Check-In, 331 Biodiversity in Ecosystems: Specify Design Constraints, 339 Design It!: Ecological Restoration, 341 Lesson 4 Check, #8, 342 uEngineer It!: From Bulldozers To Biomes, 343 The Engineering Design Process, 512-515
<b>Crosscutting Concepts</b>	
<b>7.LS2.5.CCC.1:</b> Stability and Change: Small changes in one part of a system might cause large changes in another part.	<b>SE/TE:</b> Damaging Biodiversity, 328 Quest Check-In, 331 Avocado Farms: CCC Identify Patterns, 340 Human Activities, 340
<b>Earth and Human Activity (ESS3)</b>	
<b>Performance Expectation</b>	
<b>7.ESS3.1:</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.	<b>SE/TE:</b> Coal Formation and Distribution, 361 Petroleum Formation and Distribution, 363 Lesson 1 Check, #5, 367 Connect It!, 376 Mineral Distribution, 381 Lesson 3 Check, #3, 383 Distribution of Groundwater, 389 Lesson 4 Check, #2, 392 Topic 8 Review and Assess, #5, #13, 394-395 Topic 8 Evidence-Based Assessment, 396-397 uDemonstrate Lab: To Drill or Not to Drill, 398-401  <b>Realize™ Digital Resources:</b> uInvestigate Lab: Fossil Fuels
<b>Disciplinary Core Ideas</b>	
<b>7.ESS3.1.DCI.1:</b> Humans depend on Earth’s land, ocean, atmosphere, and biosphere for many different resources.	<b>SE/TE:</b> Using Energy Resources, 366 Lesson 1 Check, #4, 367 Reducing Fossil Fuel Usage, 369 Alternative Sources of Energy, 370-383 Lesson 2 Check, #4, 374 Question It!: Minerals for Dinner?, 380 Humans and Minerals, 382 Quest Check-In, 383 Connect It!, 386 Human Impacts, 390-391 Lesson 4 Check, #3, 392 Using Natural Resources, 412-413 Land as a Resource, 427-428 Water as a Resource, 441

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

<b>Oklahoma 2020 Academic Standards for Science Grade 7</b>	<b>Oklahoma Elevate Science Grade 7, ©2022</b>
<b>7.ESS3.1.DCI.2:</b> Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes.	<b>SE/TE:</b> Connect It!, 358 Natural Resources, 359 Fossil Fuels, 360-364 Nuclear Energy, 365 Using Energy Resources, 366 Lesson 1 Check, #3, 367 Humans and Minerals, 382 Water on Earth, 387-389 Using Water, 390 Impact on the Earth System, 413 Land as a Resource, 427 Quest Check-In, 437 Water as a Resource, 441 Topic 10 Review and Assess #4, 450
<b>7.ESS3.1.DCI.3:</b> These resources are distributed unevenly around the planet as a result of past geologic processes.	<b>SE/TE:</b> Coal Formation and Distribution, 361 Petroleum Formation and Distribution, 363 Distribution of Uranium, 365 Lesson 1 Check, #5, 367 Distribution of Minerals, 380 Mineral Distribution, 381 Lesson 3 Check, #3, 383 Math Toolbox: Distribution of Water Resources, 388 Distribution of Groundwater, 389 Lesson 4 Check, #2, 392 Topic 8 Review and Assess, #5, #13, 394-395 Topic 8 Evidence-Based Assessment, 396-397 Water as a Resource, 441
<b>Science and Engineering Practices</b>	
<b>7.ESS3.1.SEP.1:</b> Constructing Explanations: Apply scientific ideas, principles, and evidence (including students' own investigations, models, theories, simulations, peer review) to provide an explanation of phenomena.	<b>SE/TE:</b> uConnect Lab: What's in a Piece of Coal?, 356-357 Coal Formation and Distribution: SEP Construct Explanations, 361 Lesson 1 Check, #5, 367 Connect It!, 376 Lesson 3 Check, #3, 383 Lesson 4 Check, #2, 392 Topic 8 Review and Assess, #5, #13, 394-395 Topic 8 Evidence-Based Assessment, 396-397 uDemonstrate Lab: To Drill or Not to Drill, 398-401
<b>Crosscutting Concepts</b>	
<b>7.ESS3.1.CCC.1:</b> Cause and Effect: Cause and effect relationships may be used to predict phenomena in natural or designed systems.	<b>SE/TE:</b> Lesson 1 Check, #2, 367 Lesson 3 Check, #3, 383 Water Scarcity: CCC Cause and Effect, 390 Lesson 4 Check, #4, 392 uDemonstrate Lab: To Drill or Not to Drill, 398-401

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.ESS3.3:</b> Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.*	<p><b>SE/TE:</b>            Case Study: U.S. Energy Consumption, 88-89            Design It!: Ecological Restoration, 341            Lesson 4 Check, #8, 342            uEngineer It!: From Bulldozers To Biomes, 343            uEngineer It!: Micro-Hydro Power, 375            Design It!: Sustainable Fishing, 391            Quest Kickoff: How can you help your school reduce its impact on Earth's systems?, 404-405            uConnect Lab: Finding a Solution for Your Pollution, 406-407            Quest Check-In, 415</p> <p><b>Realize™ Digital Resources:</b>            Quest: Shrinking Your Carbon Footprint            Virtual Lab: Frozen in Time</p>
<b>Disciplinary Core Ideas</b>	
<b>7.ESS3.3.DCI.1:</b> Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth's environments can have different impacts (negative and positive) for different living things.	<p><b>SE/TE:</b>            Human Impact, 283            Human Impact, 327            Damaging Biodiversity, 328            Biodiversity in Ecosystems, Figure 4, 339            Human Activities, 340            Human Impacts, 390-391            Using Natural Resources, 412-413            Connect It!, 416            Causes of Pollution, 417            Outdoor Air Pollution, 418-420            Connect It!, 426            Wetlands, 433            Sources of Freshwater Pollution, 442-443            Sources of Ocean Pollution, 444-445</p>
<b>7.ESS3.3.DCI.2:</b> Typically, as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise.	<p><b>SE/TE:</b>            Connect It!, 408            Using Natural Resources, 412-413            Balancing Needs, 414            Quest Check-In, 415            Controlling Air Pollution, 422-423</p>
<b>Science and Engineering Practices</b>	
<b>7.ESS3.3.SEP.1:</b> Constructing Explanations: Apply scientific principles to design an object, tool, process, or system.	<p><b>SE/TE:</b>            Case Study: U.S. Energy Consumption, 88-89            uEngineer It!: From Bulldozers To Biomes, 343            uEngineer It!: Micro-Hydro Power, 375            Design It!: Sustainable Fishing, 391            uConnect Lab: Finding a Solution for Your Pollution, 406-407            uDemonstrate Lab: Washing Away, 454-457</p>



**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Crosscutting Concepts</b>	
<b>7.ESS3.3.CCC.1:</b> Cause and Effect: Cause and effect relationships may be used to predict phenomena in natural or designed systems.	<b>SE/TE:</b> Case Study: U.S. Energy Consumption, 88-89 uConnect Lab: Finding a Solution for Your Pollution, 406-407 Lesson 1 Check, #2, 415 Lesson 2 Check, #4, 424 Connect It!, 426 Plan It!: Community Considerations, 429 Lesson 4 Check, #2, 448 Topic 9 Review and Assess, #4, 450
<b>Performance Expectation</b>	
<b>7.ESS3.4:</b> Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	<b>SE/TE:</b> Case Study: US Energy Consumption, 88-89 Math Toolbox: Natural Gas Consumption in the US, 364 uConnect Lab: Finding a Solution for Your Pollution, 406-407 Population Changes, 410 Using Natural Resources, 412-413 Reading Check: Develop an Argument, 414 Lesson 1 Check, #3, 415 Reading Check: Write Arguments, 420 Lesson 2 Check, #5, 424 Sustainability: SEP Engage in Argument, 434 Write About It, 436 Topic 9 Review and Assess, #18, 451 Topic 9 Evidence-Based Assessment, 452-453 uDemonstrate Lab: Washing Away, 454-457  <b>Realize™ Digital Resources:</b> Quest: Trash Backlash uInvestigate Lab: Doubling Time, Interactivity: Farming Lessons

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Disciplinary Core Ideas</b>	
<b>7.ESS3.4.DCI.1:</b> Typically, as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise.	<b>SE/TE:</b> Case Study: US Energy Consumption, 88-89 Math Toolbox: Natural Gas Consumption in the US, 364 Connect It!, 408 The Human Population, 409 Population Changes, 410 Using Natural Resources, 412-413 Balancing Needs, 414 Quest Check-In, 415 Smog, 419 Controlling Air Pollution, 422-423 Plan It!: Community Considerations, 429 Sustainable Forest Management, 434-436 Reducing Water Pollution, 446-447 uEngineer It!: From Wastewater to Tap Water, 449 uDemonstrate Lab: Washing Away, 454-457
<b>Science and Engineering Practices</b>	
<b>7.ESS3.4.SEP.1:</b> Engaging in Argument from Evidence: Construct an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or model for a phenomenon.	<b>SE/TE:</b> Case Study: US Energy Consumption, 88-89 Connect it!, 386 uConnect Lab: Finding a Solution for Your Pollution, 494-495 Reading Check: Develop an Argument, 414 Lesson 1 Check, #3, 415 Reading Check: Write Arguments, 420 Lesson 2 Check, #3, #5, 424 Write About It, 436 Lesson 3 Check, #3, 437 Case Study: Nothing Goes to Waste, 438-439 Plan It!: Reducing Waste in Factories, 447 Topic 9 Review and Assess, #18, 451 Topic 9 Evidence-Based Assessment, 452-453 uDemonstrate Lab: Washing Away, 454-457
<b>Crosscutting Concepts</b>	
<b>7.ESS3.4.CCC.1:</b> Cause and Effect: Cause and effect relationships may be used to predict phenomena in natural or designed systems.	<b>SE/TE:</b> Math Toolbox: Natural Gas Consumption in the US, 364 uConnect Lab: Finding a Solution for Your Pollution, 406-407 Impact of Agriculture: CCC Cause and Effect, 413 Causes of Pollution, 417 Effects of Acid Rain, 420 Lesson 2 Check, #4, 424 Connect It!, 526 Plant It!: Community Considerations, 429 Lesson 3 Check, #5, 437 Lesson 4 Check, #2, 448 Topic 9 Review and Assess, #4, 450 Topic 9 Evidence-Based Assessment, 452-453

**A Correlation of Oklahoma Elevate Science, Grade 7, ©2022  
To the  
Oklahoma 2020 Academic Standards for Science, Grade 7**

Oklahoma 2020 Academic Standards for Science Grade 7	Oklahoma Elevate Science Grade 7, ©2022
<b>Performance Expectation</b>	
<b>7.ESS3.5:</b> Obtain, evaluate, and communicate evidence of the factors that have caused changes in global temperatures over the past century.	<b>SE/TE:</b> Recent Climate Change, 479-482 Lesson 2 Check, #4, 483 Case Study: The Carbon Cycle, 484-485 Topic 10 Review and Assess, #9, 496 Topic 10 Evidence-Based Assessment, 498-499 uDemonstrate Lab: An Ocean of a Problem, 500-503  <b>Realize™ Digital Resources:</b> Interactivities: Climate Change Q & A In the Greenhouse; Virtual Lab: Frozen in Time
<b>Disciplinary Core Ideas</b>	
<b>7.ESS3.5.DCI.1:</b> Understanding atmospheric changes and reducing human vulnerability to whatever climate changes do occur depend on the understanding of climate science, engineering capabilities, and other kinds of knowledge (such as understanding of human behavior) and on applying that knowledge wisely in decisions and activities.	<b>SE/TE:</b> Carbon Dioxide Concentrations, 482 Quest Check-In, 483 Impact of Rising Temperatures, 487-491 Dealing with Climate Change, 492-493 Lesson 3 Check, #6, 494 uEngineer It!: Changing Climate Change, 495
<b>Science and Engineering Practices</b>	
<b>7.ESS3.5.SEP.1:</b> Communicating, Obtaining, and Evaluating Evidence: Gather, read, synthesize information from multiple appropriate sources, and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence.	<b>SE/TE:</b> Model It!: City Climates, 471 Reading Check: Cite Textual Evidence, 478 Literacy Connection: Cite Textual Evidence, 479 Reading Check: Integrate with Visuals, 482 Literacy Connection: Support Author’s Claim, 488 Reading Check: Support Author’s Claim, 490 Topic 10 Evidence-Based Assessment, 498-499 uDemonstrate Lab: An Ocean of a Problem, 500-503
<b>Crosscutting Concepts</b>	
<b>7.ESS3.5.CCC.1:</b> Stability and Change: Stability might be disturbed either by sudden events or gradual changes that accumulate over time.	<b>SE/TE:</b> Earth’s Climate History, 476 Natural Processes, 477 Math Toolbox: Ice Age Cooling Cycles, 478 Recent Climate Change, 479-482 Lesson 2 Check, #6, 483 Quest Check-In, 494

©2020 Savvas Learning Company LLC