A Correlation of

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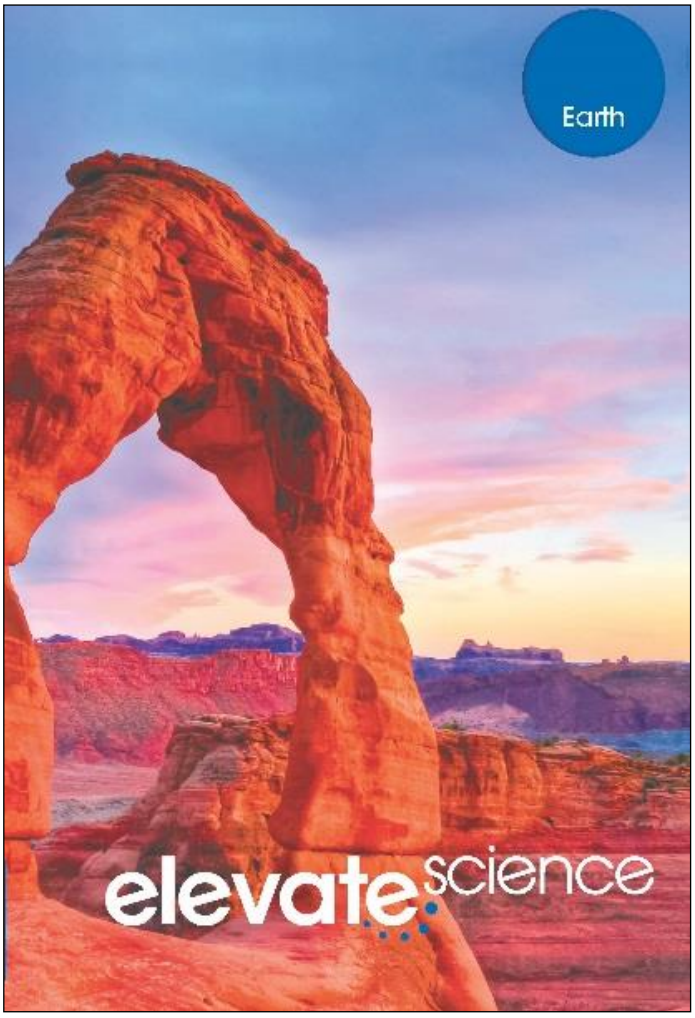

To the

Wisconsin Standards for Science
Earth Science
Grades 6-8

SAVVAS

A Correlation of Elevate Science: Earth ©2019 to the
Wisconsin Standards for Science, Earth and Space Science, Grades 6-8

Introduction

This document demonstrates how ***Elevate Science Life, Earth, and Physical ©2019*** Topics and themes align to the Wisconsin Standards for Middle School Earth Sciences. Correlation references are to the Student and Teacher's Editions and cited at the page level in print, as well as Realize™ digital assets.

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

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

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

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

Innovate learning by focusing on 21st century skills.
Students are encouraged to think, collaborate, and innovate! With ***Elevate Science***, students explore STEM careers, experience engineering activities, and discover our scientific and technological world. The content, strategies, and resources of Elevate Science equip the science classroom for scientific inquiry and science and engineering practices.

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

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

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

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

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

Digital Resources: ">" indicates one click to reach each digital asset on the Realize platform.
SE = Student Edition **TE= Teacher Edition**

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Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
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Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
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Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
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Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
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Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.ESS3 Students use science and engineering practices, crosscutting concepts, and an understanding of the Earth and human activity to make sense of phenomena and solve problems.	
SCI.ESS3.A Natural Resources	
SCI.ESS3.A.m Humans depend on Earth's land, oceans, fresh water, atmosphere, and biosphere for different resources, many of which are limited or not renewable. Resources are distributed unevenly around the planet as a result of past geologic processes.	**SE/TE:** The Essential Question, 261 Quest Kickoff: How could natural resources have saved a ghost town?, 262-263 Natural Resources, 265 Fossil Fuels, 266-270 Nuclear Energy, 271 Using Energy Resources, 272 Lesson 1 Check, 273 Lesson 1 Quest Check-In, 273 Reducing Fossil Fuel Usage, 275 Alternative Sources of Energy, 276-279 Lesson 2 Check, 280 Lesson 2 Quest Check-In, 275 Distribution of Minerals, 286-287 Humans and Mineral, 288 Lesson 3 Check, 289 Lesson 3 Quest Check-In, 289 Case Study: Phosphorus Fiasco, 290-291 Water on Earth, 293-295 Human Impacts, 296 Lesson 4 Check, 298 Lesson 4 Quest Check-In, 294 Topic 9 Review and Assess, 300-301 Evidence-Based Assessment, 302-303 Quest Findings, 303 uDemonstrate Lab: To Drill or Not to Drill, 304-307

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Continued: **SCI.ESS3.A.m** Humans depend on Earth's land, oceans, fresh water, atmosphere, and biosphere for different resources, many of which are limited or not renewable. Resources are distributed unevenly around the planet as a result of past geologic processes.	**Continued:** **Realize™ Digital Resources:** **Topic 6: Distribution of Natural Resources** >Topic Launch>Quest Kickoff>Video: Predicting Boom or Bust >Lesson 1, Nonrenewable Resources>Inquiry Warm-Up Lab: Using Resources;>uInvestigate Lab: Fossil Fuels;>Interactivity: Distribution of Fossil Fuels;>Video: Nonrenewable Resources;>Interactivity: Fossil Fuel Sources; Quest Check-In>Interactivity: Surviving on Fossil Fuels >Lesson 2, Renewable Energy Resources>Interactivity: Renewable Resources in Your Community;>Interactivity: Using Renewable Resources;>Interactivity: Renewable Resource Ranges;>Quest Check-In>Interactivity: Renewable Energy >Lesson 3, Mineral Resources>Interactivity: Distribution of Minerals; Quest Check-In>Interactivity: Surviving on Minerals >Lesson 4, Water Resources>Interactivity: Drinkable Water;>uInvestigate Lab: An Artesian Well;>Interactivity: Wetland Restoration;>Interactivity: Water Worth;>Quest Check-In>Interactivity: Surviving on Water >Topic Close>Quest Findings>Interactivity: Reflect on Boomtowns

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.ESS3.B Natural Hazards	
SCI.ESS3.B.m Patterns can be seen through mapping the history of natural hazards in a region and understanding related geological forces.	**SE/TE:** Winter Storms, 84 Thunderstorms, 85 Hurricanes, 86 How Hurricanes Move, 87 Tornadoes, 88 Floods and Droughts, 89 Lesson 5 Check, 91 Earthquakes, 183-185 Earthquake Risks and Tsunamis, 186-187 Volcanoes and Plate Boundaries, 192-193 Predicting Volcano Hazards, 199 **Realize™ Digital Resources:** **Topic 2: Weather in the Atmosphere** >Lesson 5, Severe Weather and Floods>uInvestigate Lab: Predicting Hurricanes;>Virtual Lab: Hurricane Season;>Interactivity: Not in Kansas Anymore **Topic 4: Plate Tectonics** >Lesson 3, Earthquakes and Tsunami Hazards>uInvestigate Lab: Analyze Date to Identify Patterns;>Interactivity: Locating Earthquakes;>Interactivity: Placing a Bay Area Stadium >Lesson 4, Volcanoes and Earth's Surface>uInvestigate Lab: Modeling Volcanoes;>Interactivity: Volcanoes Changing Earth's Surface

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.ESS3.C Human Impacts on Earth Systems	
SCI.ESS3.C.m Human activities have altered the hydrosphere, atmosphere, and lithosphere which in turn has altered the biosphere. Changes to the biosphere can have different impacts for different living things. Activities and technologies can be engineered to reduce people's impacts on Earth.	**SE/TE:** Using Natural Resources, 316 Balancing Needs, 317 Causes of Air Pollution, 321 Outdoor Air Pollution, 322-324 Controlling Air Pollution, 326-327 Human Impacts, 396-397 The Greenhouse Effect, 410 Quest Kickoff: How can I help reduce my school's carbon footprint?, 446-447 Studying Earth's Climate, 459-462 Recent Climate Change, 463-466 Lesson 2 Quest Check-In, 467 Impacts of Rising Temperatures, 471-475 Dealing with Climate Change, 476-477 Lesson 3 Check-In, 478 Topic 10 Review and Assess, 480-481 Evidence-Based Assessment, 482-483 uDemonstrate Lab: An Ocean of a Problem, 484-487 **Realize™ Digital Resources:** **Topic 10: Climate** >Topic Launch>Quest Kickoff>Video: Shrinking Your Carbon Footprint >Lesson 2, Climate Change>Interactivity: Regional Climate Change;>uInvestigate Lab: What Is the Greenhouse Effect?;>Interactivity: Human Impact on Climate Change;>Quest Check-In Lab: Energy Savings at School >Lesson 3, Effects of a Changing Climate>uInvestigate Lab: Thermal Expansion of Water;>Interactivity: Methane Management;>Interactivity: Emission Reduction;>Quest Check-In>Interactivity: Make a Difference

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.ESS3.D Global Climate Change	
SCI.ESS3.D.m Evidence suggests human activities affect global warming. Decisions to reduce the impact of global warming depend on understanding climate science, engineering capabilities, and social dynamics.	**SE/TE:** Quest Kickoff: How can I help reduce my school's carbon footprint?, 446-447 Studying Earth's Climate, 459-462 Recent Climate Change, 463-466 Lesson 2 Quest Check-In, 467 Impacts of Rising Temperatures, 471-475 Dealing with Climate Change, 476-477 Lesson 3 Check-In, 478 Topic 10 Review and Assess, 480-481 Evidence-Based Assessment, 482-483 uDemonstrate Lab: An Ocean of a Problem, 484-487 **Realize™ Digital Resources:** **Topic 10: Climate** >Topic Launch>Quest Kickoff>Video: Shrinking Your Carbon Footprint >Lesson 2, Climate Change>Interactivity: Regional Climate Change;>uInvestigate Lab: What Is the Greenhouse Effect?;>Interactivity: Human Impact on Climate Change;>Quest Check-In Lab: Energy Savings at School >Lesson 3, Effects of a Changing Climate>uInvestigate Lab: Thermal Expansion of Water;>Interactivity: Methane Management;>Interactivity: Emission Reduction;>Quest Check-In>Interactivity: Make a Difference >Topic Close>Quest Findings>Interactivity: Reflect on Shrinking Your Carbon Footprint

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	**SE/TE:** Quest Kickoff: How could natural resources have saved a ghost town?, 262-263 Coal Formation and Distribution, Figure 3: SEP Construct Explanations, 267 Lesson 1 Check, 273 Connect It!: SEP Construct Explanations, 282-283 Case Study: Phosphorus Fiasco, 290-291 Lesson 4 Check, 298 Topic 6 Review and Assess, 300-301 Evidence-Based Assessment, 302-303 Quest Findings, 303 uDemonstrate Lab: To Drill or Not to Drill, 304-307 **Realize™ Digital Resources:** **Topic 6: Distribution of Natural Resources** >Topic Launch>Quest Kickoff: Video: Predicting Boom or Bust >Lesson 1, Nonrenewable Energy Resources>Interactivity: Distributions of Natural Resources >Lesson 3, Mineral Resources>uInvestigate Lab: Cool Crystals;>Quest Check-In>Interactivity: Surviving on Water >Topic Close>Quest Findings>Interactivity: Reflect on Boomtowns
MS-ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	**SE/TE:** Quest Kickoff: How can you prepare for severe weather?, 46-47 Connect It!: SEP Analyze Data, 82-83 Case Study: The Case of a Runaway Hurricane, 92-93 Evidence-Based Assessment, 96-97 Quest Findings, 97 Quest Kickoff: How safe is it to hike around Mount Rainier?, 154-155 Model It!: Triangulation, 184

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
Continued: **MS-ESS3-2** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	**Continued:** Math Toolbox: Finding an Epicenter, 185 uEngineer It!: Designing to Prevent Destruction, 189 Math Toolbox: Magma Composition, 197 Lesson 4 Check, 199 Lesson 4 Quest Check-In, 199 Evidence-Based Assessment, 202-203 Quest Findings, 203 uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 uConnect Lab: How Does Gravity Affect Materials on a Slope?, 208, 211A-211B Math Toolbox: Major Landslides and Mudflows, 225 Lesson 2 Check, 228 Evidence-Based Assessment, 254-255 uDemonstrate Lab: Materials on a Slope, 256-259 **Realize™ Digital Resources:** **Topic 2: Weather in the Atmosphere** >Topic Launch>Quest Kickoff>Video: Preparing a Plan >Lesson 2, Water in the Atmosphere>Quest Check-In>Interactivity: Weather and Severe Weather >Lesson 5, Severe Weather and Floods>uInvestigate Lab: Predicting Hurricanes;>Interactivity: Tinkering with Technology >Topic Close>Quest Findings>Interactivity: Reflect on Your PSA **Topic 4: Plate Tectonics** >Topic Launch>Quest Kickoff>Video: To Hike or Not to Hike >Lesson 3, Earthquake and Tsunami Hazards>uInvestigate Lab: Analyze Earthquake Data to Identify Patterns;>Interactivity: Placing a Bay Area Stadium

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	**SE/TE:** uEngineer It!: Micro-Hydro Power, 281 **Realize™ Digital Resources:** **Topic 6: Distribution of Natural Resources** >Lesson 2, Renewable Energy Resources>uInvestigate Lab: The Power of Wind; Interactivity: Renewable Resource Rangers
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	**SE/TE:** Reading Check: Cite Evidence, 265 Petroleum Formation and Distribution, Figure 5: SEP Engage in Argument, 269 Lesson 1 Check, 273 Topic 6 Review and Assess, 300-301 uConnect Lab: Finding a Solution for Your Pollution, 308, 311A-311B Quest Kickoff: How can you help your school reduce its impact on Earth's systems?, 310-311 Lesson 1 Check, 319 Lesson 2 Check, 329 Sustainability, Figure 8: Engage in Argument, 338 Lesson 3 Check, 341 Lesson 3 Quest Check-In, 341 Case Study: Nothing Goes to Waste, 342-343 Connect It!: SEP Provide Evidence, 433-435 Water Pollution, Figure 2: Claim, Evidence, Reasoning, 346 Reading Check: Draw Evidence, 347 Plan It!: Reduce Waste in Factories/Construct Arguments, 351 Lesson 4 Check, 352 Topic 7 Review and Assess, 354-355 Evidence Based Assessment, 356-357 Quest Findings, 357 uDemonstrate Lab: Washing Away, 358-361 Humans and Global Warming, Figure 5: SEP Engage in Argument, 464

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **MS-ESS3-4** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	**Continued:** **Realize™ Digital Resources:** **Topic 7: Human Impacts on the Environment** >Lesson 1, Population Growth and Resource Consumption>Virtual Lab: Electricity Usage >Lesson 2, Air Pollution>Quest Check-In Lab: Trash vs. Water >Lesson 3, Impacts on Land>Interactivity: Ride the Light Rail;>Quest Check-In>Interactivity: Life of a Landfill >Lesson 4, Water Pollution>Interactivity: Water Cycle Interrupted; Interactivity: Research Water Pollution
MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.	**SE/TE:** Quest Kickoff: How can I help reduce my school's carbon footprint?, 446-447 Lesson 2 Check, Ask Questions, 467 Evidence-Based Assessment, 482-483 Quest Findings, 483 **Realize™ Digital Resources:** **Topic 10: Climate** >Topic Launch>Quest Kickoff>Video: Shrinking Your Carbon Footprint >Topic Close>Quest Findings>Interactivity: Reflect on Shrinking Your Carbon Footprint

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
6-8 Crosscutting Concepts	
SCI.CC1 Students use science and engineering practices, disciplinary core ideas, and patterns to make sense of phenomena and solve problems.	
Patterns	
SCI.CC1.m Students recognize macroscopic patterns are related to the nature of microscopic and atomic-level structure. They identify patterns in rates of change and other numerical relationships that provide information about natural and human-designed systems. They use patterns to identify cause and effect relationships and use graphs and charts to identify patterns in data.	**SE/TE:** Math Toolbox: Arctic Sea Ice, 9 Lesson 4 Check, 80 Lesson 2 Check, 228 Lesson 2 Check, 424 Topic 9 Review and Assess, 438-439 Lesson 1 Check, 456 The Essential Question, 489 Lesson 1 Quest Check-In, 501 Lesson 2 Check, 512 Lesson 3 Check, 522 Lesson 3 Quest Check-In, 522 Topic 11 Evidence-Based Assessment, 526-527 **Realize™ Digital Resources:** **Topic 11: Earth-Sun-Moon System** >Lesson 2, Earth's Movement in Space>Interactivity: Patterns in Earth's Rotation and Revolution

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.CC2 Students use science and engineering practices, disciplinary core ideas, and cause and effect relationships to make sense of phenomena and solve problems.	
Cause and Effect	
SCI.CC2.m Students classify relationships as causal or correlational, and recognize correlation does not necessarily imply causation. They use cause and effect relationships to predict phenomena in natural or designed systems. They also understand that phenomena may have more than one cause, and some cause and effect relationships in systems can only be explained using probability.	**SE/TE:** Lesson 2 Check, 22 Lesson 3 Check, 73 Lesson 3 Check, 188 Lesson 3 Check, 239 Lesson 4 Check, 251 Topic 5 Review and Assess, 254-255 Topic 6 Review and Assess, 302-302 Quest Findings, 303 The Essential Question, 309 Lesson 2 Check, 328 Connect It!: CCC Cause and Effect, 330-331 Lesson 2 Check, 424 Lesson 2 Quest Check-In, 424 Topic 9 Review and Assess, 436-437 Lesson 1 Check, 456 Lesson 1 Quest Check-In, 456 Topic 10 Review and Assess, 480-481 Lesson 3 Check, 522 **Realize™ Digital Resources:** **Topic 2: Weather in the Atmosphere** >Lesson 2, Water in the Atmosphere>Quest Check-In>Interactivity: Weather and Severe Weather >Lesson 3 Air Masses>Quest Check-In>Interactivity: All About Air Masses **Topic 5: Earth Surface Systems** >Lesson 3, Water Erosion>Quest Check-In Lab: Ingenious Island Part II **Topic 9: Energy in the Atmosphere and Ocean** >Lesson 2, Patterns of Circulation in the Atmosphere>Quest Check-In>Interactivity: Wind at Your Back **Topic 10: Climate** >Lesson 1, Climate Factors>Quest Check-In>Interactivity: Footprint Steps

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.CC3 Students use science and engineering practices, disciplinary core ideas, and an understanding of scale, proportion and quantity to make sense of phenomena and solve problems.	
Scale, Proportion, and Quantity	
SCI.CC3.m Students observe time, space, and energy phenomena at various scales using models to study systems that are too large or too small. They understand phenomena observed at one scale may not be observable at another scale, and the function of natural and designed systems may change with scale. They use proportional relationships (e.g., speed as the ratio of distance traveled to time taken) to gather information about the magnitude of properties and processes. They represent scientific relationships through the use of algebraic expressions and equations.	**SE/TE:** uConnect Lab: Build a Model of Earth, 105A-105B Earthquake Magnitude: Figure 10, 185 Math Toolbox: Major Landslides and Mudflows, 225 uDemonstrate Lab: Materials on a Slope, 256-259 uConnect lab: What's in a Piece of Coal?, 263A-263B Case Study: Phosphorus Fiasco, 290-291 Case Study: Nothing Goes to Waste, 342-343 Radioactive Decay and Half-Life: Figure 5, 371 Question It!: Modeling Geologic Time, 381 Lesson 2 Check, 382 Math Toolbox: Gravity vs. Distance, 510 uConnect Lab: Planetary Measures, 535A-535B Connect It!, 570-571 Math Toolbox: Scientific Notation, 575 uDemonstrate Lab: Scaling Down the Solar System, 584-587

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.CC4 Students use science and engineering practices, disciplinary core ideas, and an understanding of systems and models to make sense of phenomena and solve problems.	
Systems and System Models	
SCI.CC4.m Students understand systems may interact with other systems: they may have sub-systems and be a part of larger complex systems. They use models to represent systems and their interactions—such as inputs, processes, and outputs—and energy, matter, and information flows within systems. They also learn that models are limited in that they only represent certain aspects of the system under study.	**SE/TE:** The Essential Question, 1 Topic 1 Review and Assess, 36-37 Lesson 2 Check, 64 Connect It!, 190-191 Lesson 2 Quest Check-In, 228 Quest Findings, 255 Connect It!, 292-293 Topic 11 Review and Assess, 524-525 uConnect Lab: Planetary Measures, 535A-535B **Realize™ Digital Resources:** **Topic 5: Earth's Surface Systems** >Lesson 2, Erosion and Deposition>Quest Check-In Lab: Ingenious Island Part I >Topic Close>Quest Findings>Interactivity: Reflect on Your Ingenious Island
SCI.CC5 Students use science and engineering practices, disciplinary core ideas, and an understanding of energy and matter to make sense of phenomena and solve problems.	
Energy and Matter	
SCI.CC5.m Students understand matter is conserved because atoms are conserved in physical and chemical processes. They also understand that within a natural or designed system the transfer of energy drives the motion and cycling of matter. Energy may take different forms (e.g., energy in fields, thermal energy, and energy of motion). The transfer of energy can be tracked as energy flows through a designed or natural system.	**SE/TE:** The Earth System, 5-7 System Feedback, 8-9 Model It!: Sea Ice and Climate, 8 Topic 1 Review and Assess, 36-37 Lesson 2 Check, 64 u Connect Lab: Build a Model Earth, 105A-105B The Flow of Energy, 134 Connect It!, 406 Connect It!, 492

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SCI.CC6 Students use science and engineering practices, disciplinary core ideas, and an understanding of structure and function to make sense of phenomena and solve problems.	
Structure and Function	
SCI.CC6.m Students model complex and microscopic structures and systems and visualize how their function depends on the shapes, composition, and relationships among their parts. They analyze many complex natural and designed structures and systems to determine how they function. They design structures to serve particular functions by taking into account properties of different materials, and how materials can be shaped and used.	**SE/TE:** Lesson 3 Check, 33 Lesson 4 Check, 199 Radio Telescope: Figure 2, 552 Lesson 1 Check, 547 Lesson 2 Check, 558
SCI.CC7 Students use science and engineering practices, disciplinary core ideas, and an understanding of stability and change to make sense of phenomena and solve problems.	
Stability and Change	
SCI.CC7.m Students explain stability and change in natural or designed systems by examining changes over time, and considering forces at different scales, including the atomic scale. They understand changes in one part of a system might cause large changes in another part, systems in dynamic equilibrium are stable due to a balance of feedback mechanisms, and stability might be disturbed by either sudden events or gradual changes that accumulate over time.	**SE/TE:** Math Toolbox: Arctic Sea Ice, 9 Model It!: Predict North America's Movement, 163 Connect It!, 166 Lesson 3 Check, 188 uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 Lesson 1 Check, 220 Connect It!, 222-223 Lesson 3 Check, 239 Connect It!, 242-243 Lesson 4 Check, 251 Topic 5 Review and Assess, 252-253 Topic 5 Evidence-Based Assessment, 254-255 uDemonstrate Lab: Materials on a Slope, 256-259 The Essential Question, 363 Lesson 2 Check, 382 The Essential Question, 445 Lesson 2 Check, 467

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Continued: SCI.CC7.m Students explain stability and change in natural or designed systems by examining changes over time, and considering forces at different scales, including the atomic scale. They understand changes in one part of a system might cause large changes in another part, systems in dynamic equilibrium are stable due to a balance of feedback mechanisms, and stability might be disturbed by either sudden events or gradual changes that accumulate over time.	**Continued:** **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Lesson 1, Matter and Energy in Earth's Systems>Quest Check-In>Interactivity: Fire and the Earth's Spheres
6-8 Science and Engineering Practices	
SCI.SEP1 Students ask questions and define problems, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP1.A Asking Questions	
SCI.SEP1.A.m Students ask questions to specify relationships between variables and clarify arguments and models. This includes the following:	
SCI.SEP1.A.m.1 Ask questions that arise from careful observation of phenomena, models, or unexpected results, to clarify or seek additional information.	**TE Only:** Focus on Mastery!/Using Phenomena, 103 Focus on Mastery!/Using Phenomena, 261 Focus on Mastery!/Using Phenomena, 363 Focus on Mastery!: Anchoring Phenomenon, 535
SCI.SEP1.A.m.2 Ask questions to identify and clarify evidence and the premise(s) of an argument.	**SE/TE:** Evidence-Based Assessment, 482-483 **TE Only:** Differentiated Instruction, 445 **Realize™ Digital Resources:** **Topic 10: Climate** >Lesson 2, Climate Change>Interactivity: Climate Change Q & A
SCI.SEP1.A.m.3 Ask questions to determine relationships between independent and dependent variables and relationships in models.	**SE/TE:** uDemonstrate Lab: Scaling Down the Solar System, 584-587 Science Experiments, 591

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.SEP1.A.m.4 Ask questions to clarify or refine a model, an explanation, or an engineering problem.	This standard is addressed by "uEngineer it!" labs and investigations throughout *Elevate Science: Earth*. See, for example: **SE/TE:** uEngineer it!: A Daring Bridge, 23 uEngineer it!: Catching water with a net, 65 uEngineer it!: Designing to Prevent Destruction, 189 uEngineer it! Micro-Hydro Power, 281
SCI.SEP1.A.m.5 Ask questions that require sufficient and appropriate empirical evidence to answer.	**SE/TE:** Supporting Content: Literacy Connection: Cite Textual Evidence, 86 Literacy Connection: Cite Textual Evidence, 158 Literacy Connection: Cite Textual Evidence, 231 Literacy Connection: Cite Textual Evidence, 271 Literacy Connection: Support and Author's claim: 296 Evidence and Opinion, 593
SCI.SEP1.A.m.6 Ask questions that can be investigated within the scope of the classroom, outdoor environment, and museums and other public facilities with available resources and, when appropriate, frame a hypothesis based on observations and scientific principles.	This standard is addressed by "uConnect" labs and investigations throughout *Elevate Science: Earth*. See, for example: **SE/TE:** uConnect Lab: What interactions occur within the Earth System?, 3A-3B uConnect Lab: How are the Earth's continents linked together?, 155A-155B uConnect Lab: How Does Gravity Affect uConnect Lab: Materials on a Slope?, 211A-211B uConnect Lab: What's in a Piece of Coal?, 263A-263B uConnect Lab: Does a Plastic Bag Trap Heat?, 405A-405B uConnect Lab: What is at the Center?, 491A-491B

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.SEP1.A.m.7 Ask questions that challenge the premise(s) of an argument or the interpretation of a data set.	Supporting Content: **SE/TE:** Literacy Connection: Support and Author's claim: 296 Evidence and Opinion, 593 **TE Only:** Focus on Mastery!/Anchoring Phenomenon, 311
SCI.SEP1.B Defining Problems	
SCI.SEP1.B.m Students define a design problem that can be solved through the development of an object, tool, process, or system, and includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions.	**SE/TE:** Quest Kickoff: How can I design and build an artificial island?, 210-211 Design It!: Adapting for Climate Change, 476 **TE Only:** Focus on Mastery!/SEP Design Solutions, 477 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 2: Weather in the Atmosphere** >Lesson 5, Severe Weather and Floods>Interactivity: Tinkering with Technology **Topic 5: Earth's Surface Systems** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 10: Climate** >Engineering Design Notebook: Passive Solar Energy **Topic 11: Earth-Sun-Moon System** >Engineering Design Notebook: Design a Tide Engine **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.SEP2 Students develop and use models, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP2.A Developing Models	
SCI.SEP2.A.m Students develop, use, and revise models to describe, test, and predict more abstract phenomena and design systems. This includes the following:	
SCI.SEP2.A.m.1 Evaluate limitations of a model for a proposed object or tool.	**SE/TE:** uDemonstrate Lab: Modeling a Watershed, 40-43 uDemonstrate Lab: The Rock Cycle in Action, 148-151 uDemonstrate Lab: Materials on a Slope, 256-259 uDemonstrate Lab: To Drill or Not to Drill, 304-307 Quest Kickoff: How are tides related to our place in space?, 490-491 uConnect Lab: What Is at the Center?, 491A-491B Quest Findings, 527 Evidence-Based Assessment, 582-583 uDemonstrate Lab: Scaling Down the Solar System, 584-587 **Realize™ Digital Resources:** **Topic 11: Earth-Sun-Moon System** >Topic Close>Quest Findings>Interactivity: Reflect on Searching for a Star
SCI.SEP2.A.m.2 Develop or modify a model—based on evidence—to match what happens if a variable or component of a system is changed.	**Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 1, Solar System Objects>Interactivity: Solar System;>Virtual Lab: A New Home
SCI.SEP2.A.m.3 Use and develop a model of simple systems with uncertain and less predictable factors.	**SE/TE:** uConnect Lab: What Is at the Center?, 491A-491B
SCI.SEP2.A.m.4 Develop and/or revise a model to show the relationships among variables, including those that are not observable but predict observable phenomena.	**Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 1, Solar System Objects> Interactivity: Solar System;>Virtual Lab: A New Home

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.SEP2.A.m.5 Develop and use a model to predict and describe phenomena.	**SE/TE:** This Science and Engineering Practice is addressed throughout *Elevate Science: Earth*. See representative content: Model It!: Sea Ice and Climate, 8 uConnect Lab: What Is at the Center?, 491A-491B Quest Kickoff: How are tides related to our place in space?, 490-491 Model It!: Models of the Universe, 500 Design It!: SEP Develop Models, 506 Moon Phases: Figure 3, 517 Two Types of Eclipses: Figure 4, 518 Model It!: Solar and Lunar Eclipses, 519 Evidence-Based Assessment, 526-527 Quest Findings, 527 uDemonstrate Lab: Modeling Lunar Phases, 528-531 Connect It!: SEP Use Models, 536-537 Model It!: The Sun's Layers, 542 Case Study: Comparing Solar System Objects, 548-549 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Lesson 1, Matter and Energy in Earth's System>uInvestigate Lab: Where Heat Flows;>Interactivity: Thermal Energy and the Cycling of Matter **Topic 11: Earth-Sun-Moon System** >Topic Launch>Quest Kickoff>Video: How are tides related to our place in space? >Lesson 1, Movement in Space>uInvestigate Lab: Watching the Skies;>Interactivity: Discovery of the Solar System;>Interactivity: Interpreting the Night Sky >Lesson 2, Earth's Movement in Space>Inquiry Warm-Up Lab: Patterns/Day and Night;>Interactivity: Seasons on Earth >Lesson 3, Phases and Eclipses>uInvestigate Lab: How Does the Moon Move

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SCI.SEP2.A.m.6 Develop a model to describe unobservable mechanisms.	**SE/TE:** Connect It!: SEP Use Models, 536-537 Model It!: The Sun's Layers, 542 Case Study: Comparing Solar System Objects, 548-549 **Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 1, Solar System Objects>Inquiry Warm-Up Lab: Ring Around the Sun;>uInvestigate Lab: Pulling Planets;>Interactivity: Solar System;>uInvestigate Lab: Layers of the Sun;> Interactivity: Solar System;>Virtual Lab: A New Home;>Interactivity: Anatomy of the Sun
SCI.SEP2.A.m.7 Develop and use a model to generate data to test ideas about phenomena in natural or designed systems, including those representing inputs and outputs, and those at unobservable scales.	**SE/TE:** uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 Materials on a Slope, 256-259 **Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 1, Solar System Objects> Interactivity: Solar System;>Virtual Lab: A New Home
SCI.SEP3 Students plan and carry out investigations, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SC SCI.SEP3.A Planning and Conducting Investigations	
SCI.SEP3.A.m Students plan and carry out investigations that use multiple variables and provide evidence to support explanations or solutions. This includes the following:	**SE/TE:** uConnect Lab: How Does Gravity Affect Materials on a Slope, 211A-211B uDemonstrate Lab: Materials on a Slope, 2 56-259 Science Experiments, 591

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SCI.SEP3.A.m.1 Individually and collaboratively plan an investigation, identifying: independent and dependent variables and controls, tools needed to do the gathering, how measurements will be recorded, and how many data are needed to support a claim.	**SE/TE:** uDemonstrate Lab: Materials on a Slope, 256-259 uConnect Lab: Does a Plastic Bag Trap Heat?, 405A-405B Science Experiments, 591
SCI.SEP3.A.m.2 Conduct an investigation. Evaluate and revise the experimental design to produce data that serve as the basis for evidence to meet the goals of the investigation.	**SE/TE:** uConnect Lab: Does a Plastic Bag Trap Heat?, 405A-405B uDemonstrate Lab: An Ocean of a Problem, 484-487 **TE Only:** Focus on Mastery!/Identify Variables, 591
SCI.SEP3.A.m.3 Evaluate the accuracy of various methods for collecting data.	**SE/TE:** Tools of Science: Measurement, 594
SCI.SEP3.A.m.4 Collect data under a range of conditions that serve as the basis for evidence to answer scientific questions or test design solutions.	This standard is addressed by labs and investigations throughout *Elevate Science: Earth*. Please see for examples: **SE/TE:** uConnect Lab: What interactions occur within the Earth System?, 3A-3B uEngineer it!: A Daring Bridge, 23 uEngineer it!: Catching water with a net, 65 uConnect Lab: How are the Earth's continents linked together?, 155A-155B uEngineer it!: Designing to Prevent Destruction, 189 uConnect Lab: How Does Gravity Affect uConnect Lab: Materials on a Slope?, 211A-211 uDemonstrate Lab: Materials on a Slope, 256-259B uConnect Lab: What's in a Piece of Coal?, 263A-263B uEngineer it! Micro-Hydro Power, 281 uConnect Lab: Does a Plastic Bag Trap Heat?, 405A-405B uConnect Lab: What is at the Center?, 491A-491B

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SCI.SEP3.A.m.5 Collect data about the performance of a proposed object, tool, process, or system under a range of conditions.	**SE/TE:** uDemonstrate Lab: The Rock Cycle in Action, 148-151 uDemonstrate Lab: Materials on a Slope, 256-259 uEngineer It!: Micro-Hydro Power, 281 uDemonstrate Lab: Core Sampling Through Time, 398-401 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 4: Plate Tectonics** >Engineering Design Notebook: Prepare for a Big Wave **Topic 7: Human Impacts on the Environment** >Engineering Design Notebook: Buying Water Once and Using It Twice **Topic 10: Climate** >Engineering Design Notebook: Passive Solar Energy **Topic 11: Earth-Sun-Moon System** >Engineering Design Notebook: Design a Tide Engine

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.SEP4 Students analyze and interpret data, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP4.A Analyze and Interpret Data	
SCI.SEP4.A.m Students extend quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis. This includes the following:	
SCI.SEP4.A. m.1 Construct, analyze, or interpret graphical displays of data and large data sets to identify linear and nonlinear relationships.	**SE/TE:** uConnect Lab: What Is at the Center, 491A-491B Math Toolbox: Halley's Comet, 494 Heliocentric Timeline: Figure 8, 499 Connect It! SEP Analyze and Interpret Data, 504-505 Lunar Motion: Figure 2, 516 Moon Phases: Figure 3, 517 Two Types of Eclipses: Figure 4, 518 Spring and Neap Tides: Figure 5, 521 Evidence-Based Assessment, 526-527
SCI.SEP4.A. m.2 Use graphical displays (e.g., maps, charts, graphs, and tables) of large data sets to identify temporal and spatial relationships.	**SE/TE:** Global Winds: Figure 6, 54 Types of Air Masses: Integrate with Visuals, 68 Math Toolbox: Isobars, 78 Weather Maps: Figure 4, 79 Lake-Effect Snow: Figure 2, 84 The Case of the Runaway Hurricane, 92-93 Evidence-Based Assessment, 96-97 Evidence for Continental Drift: Interpret Visuals, 158-159 Mid-Ocean Ridges: Interpret Visuals, 160 Oceanic and Continental Crust: Interpret Visuals, 168 200 Million Years of Plate Motions: Interpret Visuals, 169 Plate Map: Figure 6, 171 Model It!: Triangulation, 184 Models of the Solar System, 498-500 Case Study: The Ptolemaic Model/Explaining the Unexplained, 502-503 Connect It!, 504-505 Orbital Motion: Figure 6, 511 Motion of the Moon, 516-517

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.SEP4.A.m.3 Distinguish between causal and correlational relationships in data.	**SE/TE:** Math Toolbox: Natural Gas Consumption in the U.S., 270
SCI.SEP4.A.m.4 Analyze and interpret data to provide evidence for explanations of phenomena.	**SE/TE:** uConnect Lab: Planetary Measures, 535A-535B Connect It!, 550-551 Lesson 3 Check, 569 Lesson 4 Check, 578 uDemonstrate Lab: Scaling Down the Universe, 584-587 **Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 1, Solar System Objects>Interactivity: Distance Learning
SCI.SEP4.A.m.5 Apply concepts of statistics and probability (including mean, median, mode, and variability) to analyze and characterize data, using digital tools when feasible.	**SE/TE:** Tools of Science: Math Skills, 595
SCI.SEP4.A.m.6 Consider limitations of data analysis (e.g., measurement error), and seek to improve precision and accuracy of data with better technological tools and methods (e.g., multiple trials).	**SE/TE:** uConnect Lab: How Does Gravity Affect Materials On a Slope?, 211A-211B Test and Evaluate a Solution, 598
SCI.SEP4.A.m.7 Analyze and interpret data to determine similarities and differences in findings.	**SE/TE:** Connect It!, 536-537 Test and Evaluate a Solution, 598

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.SEP4.A.m.8 Analyze data to define an optimal operational range for a proposed object, tool, process, or system that best meets criteria for success.	**SE/TE:** uDemonstrate Lab: Materials on a Slope, 256-259 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 11: Earth-Sun-Moon System** >Engineering Design Notebook: Design a Tide Engine
SCI.SEP5 Students use mathematics and computational thinking, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP5.A Qualitative and Quantitative Data	
SCI.SEP5.A.m Students identify patterns in large data sets and use mathematical concepts to support explanations and arguments. This includes the following:	
SCI.SEP5.A.m.1 Decide when to use qualitative vs. quantitative data.	**SE/TE:** Math Toolbox: Tallest Mountains/Analyze Quantitative Relationships, 14 Math Toolbox: Isobars/Analyze Quantitative Relationships, 78 Math Toolbox: Wind Power/ Analyze Quantitative Relationships, 278 Math Toolbox: Energy Usage/Analyze Quantitative Relationships, 326 Math Toolbox: Analyzing El Nino Data/Analyze Quantitative Relationships, 430 Math Toolbox: Rising Sea Levels/Represent Quantitative Relationships, 473
S SCI.SEP5.A.m.2 Use digital tools (e.g., computers) to analyze very large data sets for patterns and trends.	This standard is beyond the scope of *Elevate Science: Earth*.
SCI.SEP5.A.m.3 Use mathematical representations to describe and support scientific conclusions and design solutions.	**SE/TE:** Math Toolbox: Scientific Notation, 575

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.SEP5.A.m.4 Create algorithms (a series of ordered steps) to solve a problem.	**SE/TE:** uDemonstrate Lab: Materials on a Slope, 256-259 uConnect Lab: Finding a Solution to Your Pollution, 311A-311B **TE Only:** The Engineering Design Process, 596
SCI.SEP5.A.m.5 Apply mathematical concepts and processes (such as ratio, rate, percent, basic operations, and simple algebra) to scientific and engineering questions and problems.	**SE/TE:** Math Toolbox: Measuring Precipitation, 62 Case Study: Phosphorus Fiasco, 290-291 Lesson 1 Check, 319 Math Toolbox: Energy Usage, 326 Determining Absolute Ages of Rocks, 371
SCI.SEP5.A.m.6 Use digital tools and mathematical concepts and arguments to test and compare proposed solutions to an engineering design problem.	**SE/TE:** Supporting content only: The Engineering Design Process, 596-599
SCI.SEP6 Students construct explanations and design solutions, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP6.A Construct an Explanation	
SCI.SEP6.A.m Students construct explanations supported by multiple sources of evidence consistent with scientific ideas, principles, and theories. This includes the following:	
SCI.SEP6.A.m.1 Construct an explanation that includes qualitative or quantitative relationships between variables that predict and describe phenomena.	**SE/TE:** Math Toolbox: Tallest Mountains/Analyze Quantitative Relationships, 14 Math Toolbox: Isobars/Analyze Quantitative Relationships, 78 Math Toolbox: Wind Power/ Analyze Quantitative Relationships, 278 Math Toolbox: Energy Usage/Analyze Quantitative Relationships, 326 Math Toolbox: Analyzing El Nino Data/Analyze Quantitative Relationships, 430 Math Toolbox: Rising Sea Levels/Represent Quantitative Relationships, 473

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SCI.SEP6.A.m.2 Construct an explanation using models or representations.	**SE/TE:** uConnect Lab: What Is at the Center?, 491A-491B Heliocentric Model, 499 Model It!: Models of the Universe, 500 Lesson 1 Check, 501 Case Study: The Ptolemaic Model/Explaining the Unexplained, 502-503 Design It!: Earth's Movements, 506 **Realize™ Digital Resources:** **Topic 11: Earth-Sun-Moon System** >Lesson 1, Movement in Space>Interactivity: Interpreting the Night Sky >Lesson 2, Earth's Movement in Space>Video: Earth's Movement in Space
SCI.SEP6.A.m.3 Construct a scientific explanation based on valid and reliable evidence obtained from sources, including the students' own experiments. Solutions should build on the following assumption: 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.	**SE/TE:** Quest Kickoff: How safe is it to hike around Mount Rainier?, 154-155 Lesson 2 Quest Check-In, 175 Case Study: Australia On the Move, 176-177 Lesson 3 Check, 188 Divergent and Convergent Boundaries: SEP Construct Explanations, 192Math Toolbox: Magma Composition/SEP Construct Explanations, 197 Lesson 4 Check, 199 Topic 4 Review and Assess, 200-201 Evidence-Based Assessment, 202-203 Quest Findings, 203 uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 Connect It!: SEP Construct Explanations, 212-213 Lesson 1 Check, 220 Lesson 2 Check, 228 Connect It!: SEP Construct Explanations, 230-231 Groundwater Erosion and Deposition, Figure 7: SEP Construct Explanations, 237 Glacial Erosion, Figure 2: SEP Construct Explanations, 245

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	Realize™ Digital Resources: **Topic 4: Plate Tectonics** >Topic Launch>Quest Kickoff>Video: To Hike or Not to Hike >Lesson 1, Evidence of Plate Motions>Interactivity: Land and Sea-Floor Patterns >Lesson 2, Plate Tectonics and Earth's Surface>Quest Check-In>Interactivity: Mount Rainier's Threat >Lesson 4, Volcanoes and Earth's Surface>Interactivity: Volcanoes Changing Earth;>uInvestigate Lab: Moving Volcanoes >Topic Close>Quest Findings>Interactivity: Reflect on Mount Rainier's Safety **Topic 5: Earth's Surface Systems** >Lesson 3, Water Erosion>Interactivity: Learning from Rocks;>Interactivity: Carving a Canyon;>Interactivity: Karst Topography; Interactivity: Mammoth Caves >Lesson 4, Glacial and Wave Erosion>Interactivity: Coastline Management
SCI.SEP6.A.m.4 Apply scientific ideas, principles, and evidence to construct, revise, or use an explanation for real world phenomena, examples, or events.	**SE/TE:** Scientific Theories and Laws, 592 Analyzing Scientific Explanations, 593 Evidence and Opinions, 593
SCI.SEP6.A.m.5 Apply scientific reasoning to show why the data or evidence is adequate for the explanation.	**SE/TE:** Evidence-Based Assessment, 96-97 Question It!: Minerals for Dinner?, 286 Mineral Distribution: Reasoning, 287 Connect It!: Apply Scientific Reasoning, 312 Evidence-Based Assessment, 356-357 uDemonstrate Lab: Washing Away, 358-361 Lesson 1 Check, 373 Evidence-Based Assessment, 396-397 uDemonstrate Lab: Core Sampling Through Time, 398-401 uDemonstrate Lab: Modeling Lunar Phases, 528-531 Scientific Reasoning, 589 Analyzing Scientific Explanations, 593

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SCI.SEP6.B Design Solutions	
SCI.SEP6.B.m Students design solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories. This includes the following:	
SCI.SEP6.B.m.1 Apply scientific ideas or principles to design, construct, and test a design of an object, tool, process, or system.	**SE/TE:** uEngineer It!: Micro-Hydro Power, 281 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 598 **Realize™ Digital Resources:** **Topic 6: Distribution of Natural Resources** >Lesson 2, Renewable Energy Resources>uInvestigate Lab: The Power of Wind; Interactivity: Renewable Resource Rangers
SCI.SEP6.B.m.2 Undertake a design project, engaging in the design cycle, to construct and implement a solution that meets specific design criteria and constraints.	**SE/TE:** uDemonstrate Lab: The Rock Cycle in Action, 148-151 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's System** >Engineering Design Notebook: Building a Bridge **Topic 2: Weather in the Atmosphere** >Engineering Design Notebook: Harvesting Water **Topic 8: History of Earth** >Engineering Design Notebook: Build a Timeline to the Distant Past **Topic 10: Climate** >Engineering Design Notebook: Passive Solar Energy **Topic 11: Earth-Sun-Moon System** >Engineering Design Notebook: Design a Tide Engine **Topic 12: Solar System and the Universe** >Engineering Design Notebook: Mars or Bust

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.SEP6.B.m.3 Optimize performance of a design by prioritizing criteria, making trade-offs, testing, revising, and retesting.	**SE/TE:** uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 Redesign and Retest the Solution, 599
SCI.SEP7 Students engage in argument from evidence in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP7.A Argue from Evidence	
SCI.SEP7.A.m Students construct a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world. This includes the following:	
SCI.SEP7.A.m.1 Compare and critique two arguments on the same topic. Analyze whether they emphasize similar or different evidence and interpretations of facts.	**SE/TE:** Human Activities, 464-465 Models of the Universe, 498-500 Lesson 1 Check, 501
SCI.SEP7.A.m.2 Respectfully provide and receive critiques about one's explanations, procedures, models, and questions by citing relevant evidence and posing and responding to questions that elicit pertinent elaboration and detail.	**SE/TE:** uDemonstrate Lab: An Ocean of a Problem, 484-487 **TE Only:** Professional Development, 464
SCI.SEP7.A.m.3 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 or a solution to a problem.	**SE/TE:** Water Power: SEP Engage in Argument, 277 Lesson 2 Check, 280 Lesson 2 Quest Check-In, 280 Topic 6 Review and Assessment, 300-301 Reading Check: Develop and Argument, 318 Lesson 1 Check, 319 Lesson 2 Check, 328 Sustainability: SEP Engage in Argument, 338 Lesson 3 Check, 341 Case Study: Nothing Goes to Waste, 342-343 Plan It!: Reducing Waste in Factories, 351 Lesson 4 Check, 352 Topic 7 Review and Assess, 354-355 Evidence-Based Assessment, 356-357 uDemonstrate Lab: Washing Away, 358-361 **Realize™ Digital Resources:** **Topic 6: Distribution of Natural Resources** >Lesson 2, Renewable Energy Resources>Quest Check-In>Interactivity: Renewable Energy

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SCI.SEP7.A.m.4 Make an oral or written argument that supports or refutes the advertised performance of a device, process, or system. Based the argument on empirical evidence concerning whether or not the technology meets relevant criteria and constraints.	While students have many opportunities to present or argue from evidence and/or test designs, this standard is not specifically addressed in *Elevate Science: Earth*.
SCI.SEP7.A.m.5 Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.	**SE/TE:** Case Study: The Carbon Cycle, 468-469 **Realize™ Digital Resources:** **Topic 7: Human Impacts on the Environment** >Engineering Design Notebook: Buying Water Once and Using It Twice
SCI.SEP8 Students will obtain, evaluate and communicate information, in conjunction with using crosscutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
SCI.SEP8.A Obtain, Evaluate, and Communicate Information	
SCI.SEP8.A.m Students evaluate the merit and validity of ideas and methods. This includes the following:	
SCI.SEP8.A.m.1 Critically read scientific texts adapted for classroom use to determine the central ideas, to obtain scientific and technical information, and to describe patterns in and evidence about the natural and designed world(s).	**SE/TE:** Reading Check: Determine Central Ideas, 180 Lesson 2 Check, 280 Literacy Connection: Determine Central Ideas, 408 Reading Check: Determine Central Ideas, 409 Literacy Connection: Determine Central Ideas, 551

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SCI.SEP8.A.m.2 Clarify claims and findings by integrating text-based qualitative and quantitative scientific information with information contained in media and visual displays.	**SE/TE:** Math Toolbox: Tallest Mountains/Analyze Quantitative Relationships, 14 Math Toolbox: Isobars/Analyze Quantitative Relationships, 78 Math Toolbox: Wind Power/ Analyze Quantitative Relationships, 278 Math Toolbox: Energy Usage/Analyze Quantitative Relationships, 326 Math Toolbox: Analyzing El Nino Data/Analyze Quantitative Relationships, 430 Math Toolbox: Rising Sea Levels/Represent Quantitative Relationships, 473
SCI.SEP8.A.m.3 Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication. Describe how they are supported or not supported by evidence and evaluate methods used.	**SE/TE:** Every lesson in Elevate Science/Earth Science provides students the opportunity to Connect with content, Investigate content, and Synthesize content. Please see for examples: Literacy Connection: Support Author's Claim, 472 Science and Engineering Practices Handbook: The Meaning of Science, 588 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Topic Launch>Quest Kickoff>Document: Quest Rubric
SCI.SEP8.A.m.4 Evaluate data, hypotheses, and conclusions in scientific and technical texts in light of competing information or accounts.	**SE/TE:** Science and Engineering Practices Handbook: The Meaning of Science, 588 Science and Engineering Practices Handbook: Analyzing Scientific Explanations, 593
SCI.SEP8.A.m.5 Communicate scientific and technical information (e.g., about a proposed object, tool, process, or system) in writing and through oral presentations.	**SE/TE:** uConnect Lab: What Interactions Occur Within the Earth System? 3A-3B Lesson 2 Check, 558 Science and Engineering Practices Handbook: Science Experiments, 591Science and Engineering Practices Handbook: Communicating the Solution, 599

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6-8 Engineering, Technology, and the Application of Science	
SCI.ETS1 Students use science and engineering practices, crosscutting concepts, and an understanding of engineering design to make sense of phenomena and solve problems.	
SCI.ETS1.A Defining and Delimiting Engineering Problems	
SCI.ETS1.A.m The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful. Specification of constraints includes consideration of scientific principles and other relevant knowledge that are likely to limit possible solutions.	**SE/TE:** uEngineer It!: Catch Water with a Net, 65 Quest Kickoff: How can you depict Earth processes in a movie script?, 104-105 Quest Kickoff: How can I design and build an artificial island?, 210-211 Quest Kickoff: How could natural resources have saved a ghost town?, 262-263 Quest Kickoff: How can you help your school reduce its impact on Earth's systems? Design It!: Adapting for Climate Change, 476 uEngineer It!: Blast Off, 559 Define the Problem, 596-597 Design a Solution/Test and Evaluate a Solution, 598 Communicate the Solution, 599 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 2: Weather in the Atmosphere** >Lesson 5, Severe Weather and Floods>Interactivity: Tinkering with Technology **Topic 3: Minerals and Rocks in the Geosphere** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 5: Earth's Surface Systems** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 6: Distribution of Natural Resources** >Topic Launch>Quest Kickoff>Document: Quest Rubric

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
	Topic 7: Human Impacts on the Environment >Topic Launch>Quest Kickoff>Document: Quest Rubric >Lesson 3, Impacts on Land>Interactivity: Ride the Light Rai **Topic 10: Climate** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Engineering Design Notebook: Passive Solar Energy **Topic 11: Earth-Sun-Moon System** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Engineering Design Notebook: Design a Tide Engine **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe
SCI.ETS1.B Developing Possible Solutions	
SCI.ETS1.B.m.i A solution needs to be tested and then modified on the basis of the test results in order to improve it.	**SE/TE:** uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 598 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 599 **Realize™ Digital Resources:** **Topic 4: Plate Tectonics** >Engineering Design Notebook: Prepare for a Big Wave **Topic 7: Human Impacts on the Environment** >Engineering Design Notebook: Buying Water Once and Using It Twice **Topic 10: Climate** >Engineering Design Notebook: Passive Solar Energy

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.ETS1.B.m.ii There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.	**SE/TE:** uEngineer It!: Catch Water with a Net, 65 Quest Kickoff: How can you depict Earth processes in a movie script?, 104-105 Quest Kickoff: How can I design and build an artificial island?, 210-211 Quest Kickoff: How could natural resources have saved a ghost town?, 262-263 Quest Kickoff: How can you help your school reduce its impact on Earth's systems? Design It!: Adapting for Climate Change, 476 uEngineer It!: Blast Off, 559 Science and Engineering Practices Handbook: Define the Problem, 596-597 Science and Engineering Practices Handbook: Evaluate a Solution, 598 Science and Engineering Practices Handbook: Communicate the Solution, 599 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 2: Weather in the Atmosphere** >Lesson 5, Severe Weather and Floods>Interactivity: Tinkering with Technology **Topic 3: Minerals and Rocks in the Geosphere** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 5: Earth's Surface Systems** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 6: Distribution of Natural Resources** >Topic Launch>Quest Kickoff>Document: Quest Rubric

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **SCI.ETS1.B.m.ii** There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.	**Continued:** **Topic 7: Human Impacts on the Environment** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Lesson 3, Impacts on Land>Interactivity: Ride the Light Rail **Topic 10: Climate** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Engineering Design Notebook: Passive Solar Energy **Topic 11: Earth-Sun-Moon System** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Engineering Design Notebook: Design a Tide Engine **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe
SCI.ETS1.B.m.iii Sometimes parts of different solutions can be combined to create a solution that is better than any of its predecessors.	**SE/TE:** Science and Engineering Practices Handbook: Test and Evaluate a Solution, 598 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 599
SCI.ETS1.B.m.iv Models of all kinds are important for testing solutions.	**SE/TE:** Science and Engineering Practices Handbook: Scientific Models, 590 Science and Engineering Practices Handbook: Design a Solution, 598 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 598 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 599

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SCI.ETS1.C Optimizing the Design Solution	
SCI.ETS1.C.m.i Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process—that is, some of those characteristics may be incorporated into the new design.	**SE/TE:** Science and Engineering Practices Handbook: Design a Solution, 598 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 598 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 599
SCI.ETS1.C.m.ii 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.	**SE/TE:** Science and Engineering Practices Handbook: Design a Solution, 598 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 598 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 599
MS-ETS1-1 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.	**SE/TE:** uEngineer It!: Catch Water with a Net, 65 Quest Kickoff: How can you depict Earth processes in a movie script?, 104-105 Quest Kickoff: How can I design and build an artificial island?, 210-211 Quest Kickoff: How could natural resources have saved a ghost town?, 262-263 Quest Kickoff: How can you help your school reduce its impact on Earth's systems? Design It!: Adapting for Climate Change, 476 uEngineer It!: Blast Off, 559 Science and Engineering Practices Handbook: Define the Problem, 596-597 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 598 Science and Engineering Practices Handbook: Communicate the Solution, 599

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Continued: **MS-ETS1-1** 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.	**Continued:** **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 2: Weather in the Atmosphere** >Lesson 5, Severe Weather and Floods>Interactivity: Tinkering with Technology **Topic 3: Minerals and Rocks in the Geosphere** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 5: Earth's Surface Systems** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 6: Distribution of Natural Resources** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 7: Human Impacts on the Environment** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Lesson 3, Impacts on Land>Interactivity: Ride the Light Rail **Topic 10: Climate** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Engineering Design Notebook: Passive Solar Energy **Topic 11: Earth-Sun-Moon System** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Engineering Design Notebook: Design a Tide Engine **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	**SE/TE:** uDemonstrate Lab: The Rock Cycle in Action, 148-151 uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 **Realize™ Digital Resources:** **Topic 7: Human Impacts on the Environment** >Engineering Design Notebook: Buying Water Once and Using It Twice
MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	**SE/TE:** uDemonstrate Lab: The Rock Cycle in Action, 148-151 uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 uDemonstrate Lab: Materials on a Slope, 256-259 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >Engineering Design Notebook: Building a Bridge **Topic 11: Earth-Sun-Moon System** >Engineering Design Notebook: Design a Tide Engine
MS-ETS1-4 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.	**SE/TE:** uDemonstrate Lab: Modeling Sea-Floor Spreading, 204-207 uDemonstrate Lab: Materials on a Slope, 256-259 uDemonstrate Lab: Core Sampling through Time, 398-401
SCI.ETS2 Students use science and engineering practices, crosscutting concepts, and an understanding of the links among Engineering, Technology, Science, and Society to make sense of phenomena and solve problems.	**SE/TE:** Science and Engineering Practices Handbook: The Meaning of Science, 588-589 Science and Engineering Practices Handbook: Science Processes, 590-591 Science and Engineering Practices Handbook: Scientific Knowledge, 592-593 Science and Engineering Practices Handbook: The Engineering Process, 596-599

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SCI.ETS2.A Interdependence of Science, Engineering, and Technology	
SCI.ETS2.A.m.i 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.	**SE/TE:** Case Study: Comparing Solar System Objects, 548-549 Collecting Space Data, 551-553 History of Space Exploration, 554-557 It's All Connected: The Slow Acceptance of Continental Drift, 165 **Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 2, Learning About the Universe>Inquiry Warm-Up Lab: How Does Distance Affect an Image?;>Interactivity: Space Exploration;>Interactivity: Telescopes;>uInvestigate Lab: Space Exploration Vehicle;>Video: Learning About the Universe;>Interactivity: Eyes in the Sky;>uEngineer It!>Interactivity: Launch a Space Probe
SCI.ETS2.A.m.ii Science and technology drive each other forward.	**SE/TE:** Case Study: Comparing Solar System Objects, 548-549 Collecting Space Data, 551-553 History of Space Exploration, 554-557 It's All Connected: The Slow Acceptance of Continental Drift, 165 **Realize™ Digital Resources:** **Topic 12: Solar System and the Universe** >Lesson 2, Learning About the Universe>Inquiry Warm-Up Lab: How Does Distance Affect an Image?;>Interactivity: Space Exploration;>Interactivity: Telescopes;>uInvestigate Lab: Space Exploration Vehicle;>Video: Learning About the Universe;>Interactivity: Eyes in the Sky;>uEngineer It!>Interactivity: Launch a Space Probe

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
SCI.ETS2.B Influence of Engineering, Technology, and Science on Society and the Natural World	
SCI.ETS2.B.m.i All human activity draws on natural resources and has both short and long-term consequences, positive as well as negative, for the health of people and the natural environment.	**SE/TE:** Reading Check: Cite Evidence, 265 Petroleum Formation and Distribution, Figure 5: SEP Engage in Argument, 269 Lesson 1 Check, 273 Topic 6 Review and Assess, 300-301 uConnect Lab: Finding a Solution for Your Pollution, 308, 311A-311B Quest Kickoff: How can you help your school reduce its impact on Earth's systems?, 310-311 Lesson 1 Check, 319 Lesson 2 Check, 329 Sustainability, Figure 8: Engage in Argument, 338 Lesson 3 Check, 341 Lesson 3 Quest Check-In, 341 Case Study: Nothing Goes to Waste, 342-343 Connect It!: SEP Provide Evidence, 433-345 Water Pollution, Figure 2: Claim, Evidence, Reasoning, 346 Reading Check: Draw Evidence, 347 Plan It!: Reduce Waste in Factories/Construct Arguments, 351 Lesson 4 Check, 352 Topic 7 Review and Assess, 354-355 Evidence Based Assessment, 356-357 Quest Findings, 357 uDemonstrate Lab: Washing Away, 358-361 Humans and Global Warming, Figure 5: SEP Engage in Argument, 464 **Realize™ Digital Resources:** **Topic 7: Human Impacts on the Environment** >Lesson 1, Population Growth and Resource Consumption>Virtual Lab: Electricity Usage >Lesson 2, Air Pollution>Quest Check-In Lab: Trash vs. Water >Lesson 3, Impacts on Land>Interactivity: Ride the Light Rail;>Quest Check-In>Interactivity: Life of a Landfill

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.ETS2.B.m.ii The uses of technologies are driven by people's needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions.	**SE/TE:** uDemonstrate Lab: The Rock Cycle in Action, 148-151 **Realize™ Digital Resources:** **Topic 2: Weather in the Atmosphere** >Engineering Design Notebook: Harvesting Water **Topic 7: Human Impacts on the Environment** >Engineering Design Notebook: Buying Water Once and Using It Twice **Topic 12: Solar System and the Universe** >Engineering Design Notebook: Mars or Bust
SCI.ETS2.B.m.iii Technology use varies over time and from region to region.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **SCI.ETS2.B.m.iii** Technology use varies over time and from region to region.	**Continued:** **Topic 3: Minerals and Rocks in the Geosphere** >uEngineer It!>Interactivity: Designing Satellites **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction **Topic 5: Earth's Surface Systems** >uEngineer It!>Interactivity: Landslide Prevention **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 7: Human Impacts on the Environment** >uEngineer It!>Engineering Video: From Wastewater to Tap Water **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks **Topic 9: Energy in the Atmosphere and Ocean** >uEngineer It!>Engineering Video: Windmills of the Future **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 11: Earth-Sun-Moon System** >uEngineer It!>Engineering Video: Power from Tides **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe
MS-LS2-5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	Please see *Elevate Science: Life*, Topic 5: Ecosystems, and Topic 6: Populations, Communities, and Ecosystems.
MS-LS4-5 Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.	Please see *Elevate Science: Life*, Topic 7: Genes and Heredity, Lesson 5: Genetic Technologies.

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MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	**SE/TE:** uEngineer It!: Micro-Hydro Power, 281 Quest Kickoff, Check-Ins, Findings: How can I help reduce my school's carbon footprint?, 446 **Realize™ Digital Resources:** **Topic 6: Distribution of Natural Resources** >Lesson 2, Renewable Energy Resources>uInvestigate Lab: The Power of Wind; Interactivity: Renewable Resource Rangers
SCI.ETS3 Students use science and engineering practices, crosscutting concepts, and an understanding of the nature of science and engineering to make sense of phenomena and solve problems.	This standard is covered throughout *Elevate Science: Earth*. See for examples: **SE/TE:** Science and Engineering Practices Handbook: The Meaning of Science, 588-589 Science and Engineering Practices Handbook: Science Processes, 590-591 Science and Engineering Practices Handbook: Scientific Knowledge, 592-593 Science and Engineering Practices Handbook: The Engineering Process, 596-599

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.ETS3.A Science and Engineering Are Human Endeavors	
SCI.ETS3.A.m.i Individuals and teams from many nations, cultures and backgrounds have contributed to advances in science and engineering.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.ETS3.A.m.ii Scientists and engineers are persistent, use creativity, reasoning, and skepticism, and remain open to new ideas.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559 Scientific Attitudes, 589 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink **Topic 3: Minerals and Rocks in the Geosphere** >uEngineer It!>Interactivity: Designing Satellites **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction **Topic 5: Earth's Surface Systems** >uEngineer It!>Interactivity: Landslide Prevention **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 7: Human Impacts on the Environment** >uEngineer It!>Engineering Video: From Wastewater to Tap Water

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **SCI.ETS3.A.m.ii** Scientists and engineers are persistent, use creativity, reasoning, and skepticism, and remain open to new ideas.	**Continued:** **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks? **Topic 9: Energy in the Atmosphere and Ocean** >uEngineer It!>Engineering Video: Windmills of the Future **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 11: Earth-Sun-Moon System** >uEngineer It!>Engineering Video: Power from Tides **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe
SCI.ETS3.A.m.iii Science and engineering are influenced by what is valued in society.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **SCI.ETS3.A.m.iii** Science and engineering are influenced by what is valued in society.	**Continued:** **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink **Topic 3: Minerals and Rocks in the Geosphere** >uEngineer It!>Interactivity: Designing Satellites **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction **Topic 5: Earth's Surface Systems** >uEngineer It!>Interactivity: Landslide Prevention **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 7: Human Impacts on the Environment** >uEngineer It!>Engineering Video: From Wastewater to Tap Water **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks **Topic 9: Energy in the Atmosphere and Ocean** >uEngineer It!>Engineering Video: Windmills of the Future **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 11: Earth-Sun-Moon System** >uEngineer It!>Engineering Video: Power from Tides **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
SCI.ETS3.B Science and Engineering Are Unique Ways of Thinking with Different Purposes	
SCI.ETS3.B.m.i Science asks questions to understand the natural world and assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation. Science carefully considers and evaluates anomalies in data and evidence.	**SE/TE:** The Meaning of Science, 588-589 Science Processes, 590-591 Scientific Knowledge, 592-593 The Engineering Process, 596-599
SCI.ETS3.B.m.ii Engineering seeks solutions to human problems, including issues that arise due to human interaction with the environment. It uses some of the same practices as science and often applies scientific principles to solutions.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink **Topic 3: Minerals and Rocks in the Geosphere** >uEngineer It!>Interactivity: Designing Satellites **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **SCI.ETS3.B.m.ii** Engineering seeks solutions to human problems, including issues that arise due to human interaction with the environment. It uses some of the same practices as science and often applies scientific principles to solutions.	**Continued:** **Topic 5: Earth's Surface Systems** >uEngineer It!>Interactivity: Landslide Prevention **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 7: Human Impacts on the Environment** >uEngineer It!>Engineering Video: From Wastewater to Tap Water **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks **Topic 9: Energy in the Atmosphere and Ocean** >uEngineer It!>Engineering Video: Windmills of the Future **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 11: Earth-Sun-Moon System** >uEngineer It!>Engineering Video: Power from Tides **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.ETS3.B.m.iii Science and engineering have direct impacts on the quality of life for all people. Therefore, scientists and engineers need to pursue their work in an ethical manner that requires honesty, fairness and dedication to public health, safety and welfare.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink **Topic 3: Minerals and Rocks in the Geosphere** >uEngineer It!>Interactivity: Designing Satellites **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction **Topic 5: Earth's Surface Systems** >uEngineer It!>Interactivity: Landslide Prevention **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 7: Human Impacts on the Environment** >uEngineer It!>Engineering Video: From Wastewater to Tap Water

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	**Elevate Science ©2019 Earth**
Continued: **SCI.ETS3.B.m.iii** Science and engineering have direct impacts on the quality of life for all people. Therefore, scientists and engineers need to pursue their work in an ethical manner that requires honesty, fairness and dedication to public health, safety and welfare.	**Continued:** **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks **Topic 9: Energy in the Atmosphere and Ocean** >uEngineer It!>Engineering Video: Windmills of the Future **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 11: Earth-Sun-Moon System** >uEngineer It!>Engineering Video: Power from Tides **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe
SCI.ETS3.C Science and Engineering Use Multiple Approaches to Create New Knowledge and Solve Problems	
SCI.ETS3.C.m.i A theory is an explanation of some aspect of the natural world. Scientists develop theories by using multiple approaches. Validity of these theories and explanations is increased through a peer review process that tests and evaluates the evidence supporting scientific claims.	**SE/TE:** Mid-Ocean Ridges, 160 Sea-Floor Spreading, 161 It's All Connected: The Slow Acceptance of Continental Drift, 165 Lesson 2 Check, 175 Scientific Reasoning, 588 Scientific Explanations/Scientific Theories and Laws, 592 Analyzing Scientific Explanations/Evidence and Opinions, 593
SCI.ETS3.C.m.ii Theories are explanations for observable phenomena based on a body of evidence developed over time. A hypothesis is a statement that can be tested to evaluate a theory. Scientific laws describe cause and effect relationships among observable phenomena.	**SE/TE:** Hypothesis of Continental Drift, 157-159 Mid-Ocean Ridges, 160 Sea-Floor Spreading, 161 It's All Connected: The Slow Acceptance of Continental Drift, 165 Lesson 2 Check, 175 Scientific Reasoning, 588 Scientific Inquiry, 590 Scientific Explanations/Scientific Theories and Laws, 592 Analyzing Scientific Explanations/Evidence and Opinions, 593

Wisconsin Standards for Science Earth & Space Science, Grades 6-8	Elevate Science ©2019 Earth
SCI.ETS3.C.m.iii Engineers develop solutions using multiple approaches and evaluate their solutions against criteria such as cost, safety, time and performance. This evaluation often involves trade-offs between constraints to find the optimal solution.	**SE/TE:** uEngineer It!: A Daring Bridge, 23 uEngineer It!: Catching Water with a Net, 65 uEngineer It!: Examining Earth's Interior from Space, 117 uEngineer It!: Designing to Prevent Destruction, 189 uEngineer It!: Ground Shifting Advances/Maps Help Predict, 221 Careers: Civil Engineers Save the Day, 229 uEngineer It!: Micro-Hydro Power, 281 uEngineer It!: From Wastewater to Tap Water, 353 uEngineer It!: Tiny Fossil, Big Accuracy, 383 uEngineer It!: Windmills of the Future, 425 uEngineer It!: Changing Climate Change, 479 uEngineer It!: Power from Tides, 523 uEngineer It!: Blast Off, 559 **Realize™ Digital Resources:** **Topic 1: Introduction to Earth's Systems** >uEngineer It!>Engineering Video: A Daring Bridge **Topic 2: Weather in the Atmosphere** >uEngineer It!>Interactivity: Making Water Safe to Drink **Topic 3: Minerals and Rocks in the Geosphere** >uEngineer It!>Interactivity: Designing Satellites **Topic 4: Plate Tectonics** >uEngineer It!>Engineering Video: Designing to Prevent Destruction **Topic 5: Earth's Surface Systems** >uEngineer It!>Interactivity: Landslide Prevention **Topic 6: Distribution of Natural Resources** >uEngineer It!>Engineering Video: Micro-Hydro Power **Topic 7: Human Impacts on the Environment** >uEngineer It!>Engineering Video: From Wastewater to Tap Water **Topic 8: History of Earth** >uEngineer It!>Interactivity: How Old Are These Rocks

Wisconsin Standards for Science **Earth & Space Science, Grades 6-8**	**Elevate Science ©2019** **Earth**
Continued: **SCI.ETS3.C.m.iii** Engineers develop solutions using multiple approaches and evaluate their solutions against criteria such as cost, safety, time and performance. This evaluation often involves trade-offs between constraints to find the optimal solution.	**Topic 9: Energy in the Atmosphere and Ocean** >uEngineer It!>Engineering Video: Windmills of the Future **Topic 10: Climate** >uEngineer It!>Engineering Video: Changing Climate Change **Topic 11: Earth-Sun-Moon System** >uEngineer It!>Engineering Video: Power from Tides **Topic 12: Solar System and the Universe** >uEngineer It!>Interactivity: Launch a Space Probe
MS-ETS3-1 Construct an argument supported by evidence about the values held by different societies based on the resources expended for exploration and understanding of the universe (ESS1.B.m).	Supporting Content: **SE/TE:** History of Space Exploration, 554-557
MS-ETS3-2 Evaluate information and evidence about issues related to genetically modifying organisms and identify questions that can, and cannot, be answered by science (LS3.B.m).	Please see *Elevate Science: Life* Topic 7: Genes and Heredity
MS-ETS3-3 Mathematically evaluate products of chemical and physical changes to support ideas of atomic theory (PS1.A.m).	Please see *Elevate Science: Physical*, Topic 8: Atoms and the Periodic Table, Lesson 1: Atomic Theory