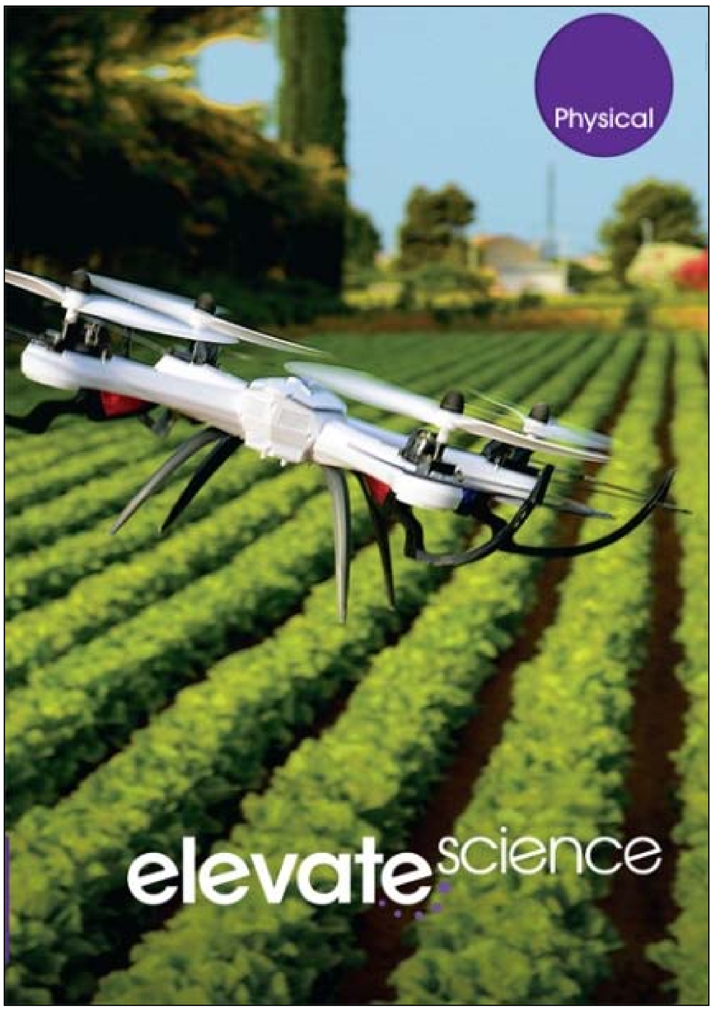
A Correlation of

Elevate Science
Physical ©2019



To the

Wisconsin Standards for Science
Physical Science
Grades 6-8

SAVVAS

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical 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 Life 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.

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Table of Contents

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
Physical Science Standards	
SCI.PS1 Students use science and engineering practices, crosscutting concepts, and an understanding of matter and its interactions to make sense of phenomena and solve problems.	
SCI.PS1.A Structures and Properties of Matter	
SCI.PS1.A.m The fact that matter is composed of atoms and molecules can be used to explain the properties of substances, diversity of materials, states of matter, phase changes, and conservation of matter.	**SE/TE:** Matter, 5 Physical Properties, 6 Chemical Properties, 7 Components of Matter, 8-10 Solids, Liquids, and Gases, 47 Describing Solids, 48-50 Describing Liquids, 51-52 Describing Gases, 53-54 Changes of State Between Solid and Liquid, 58-59 Changes of State Between Liquid and Gas, 60-62 Changing State from Solid to Gas, 63 Law of Conservation of Mass, 424-425 **Realize™ Digital Resources:** **Topic 1: Introduction to Matter** >Lesson 1, Describing and Classifying Matter>Interactivity: What Make's Up Matter? **Topic 2: Solids, Liquids, and Gases** >Lesson 1 States of Matter>uInvestigate Lab: Properties of Matter;>Interactivity: Properties of Solids, Liquids, and Gases >Lesson 2, Changes of State>Interactivity: Thermal Energy and Changes of State

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS1.B Chemical Reactions	
SCI.PS1.B.m Reacting substances rearrange to form different molecules, but the number of atoms is conserved. Some reactions release energy and others absorb energy.	**SE/TE:** Conservation of Mass, 28-29 Math Toolbox: Conservation of Mass, 29 Thermal Energy and Changes in Matter, 31 Math Toolbox: Energy in Chemical Reactions, 31 Lesson 1 Check, 32 Chemical Change, 410 Law of Conservation of Mass, 424-425 **TE Only:** Chemical Equations, 421 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Lesson 3, Modeling Chemical Reactions>Interactivity: Model a Chemical Reaction;>uInvestigate Lab: Is Matter Conserved?
SCI.PS1.C Nuclear Processes	
MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.	**SE/TE:** uConnect Lab: The Nuts and Bolts of Formulas, 3A-3B Model It!: Molecules and Atoms, 9 uConnect Lab: Modeling Matter, 332A-333A Model It!: Models of an Atom, 339 Lesson 3 Check, 366 Model It!: How Ions Form, 370 Lesson 4 Check, 377 Topic 8 Review and Assess, 386-387 uDemonstrate Lab: Shedding Light on Ions, 390-393 **Realize™ Digital Resources:** **Topic 1: Introduction to Matter** >Lesson 1, Describing and Classifying Matter>uInvestigate Lab: Modeling Atoms and Molecules;>Interactivity: Molecules and Extended Structures **Topic 8: Atoms and the Periodic Table** >Lesson 1, Atomic Theory>uInvestigate Lab: How Far Away Is the Electron;>Interactivity: Build an Atom

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
MS-PS1-2 Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	**SE/TE:** Quest Kickoff: How can you use science to make special effects?, 2-3 Math Toolbox: Energy In Chemical Reactions, 31 uConnect Lab: What Happens When Chemicals React?, 397A-397B Chemical Change, 410-411 Evidence of Chemical Reactions, 412-413 Lesson 1 Check, Analyze Data, 418 Model It!, 422 uDemonstrate Lab: Evidence of Chemical Change, 442-445 **Realize™ Digital Resources:** **Topic 1: Introduction to Matter** >Topic Launch>Quest Kickoff>Video: Lights! Camera! Action >Lesson 2, Measuring Matter>uInvestigate Lab: Observing Physical Properties >Lesson 3, Changes in Matter>Inquiry Warm-Up Lab: Is a New Substance Formed?; >Interactivity: Properties of Matter **Topic 8: Atoms and the Periodic Table** >Lesson 5, Acids and Bases>Inquiry Warm-Up Lab: What Can Cabbage Juice Tell You? ;>uInvestigate Lab: Properties of Acids and Bases **Topic 9: Chemical Reactions** >Lesson 2, Chemical Changes>Inquiry Warm-Up Lab: Presto Change-O!;>Interactivity: Evidence of Chemical Reactions;>Analyze Endothermic and Exothermic Graphs

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
MS-PS1-3 Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	**SE/TE:** Connect It!, 428 Synthetic Materials, 429-432 Artificial Synthetics, Figure 2: Evaluate Information, 431 Literacy Connection: Evaluate Information, 433 Reading Check: Evaluate Information, 434 Case Study: Is Plastic Really So Fantastic?, 436-437 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Lesson 4, Producing Useful Materials>Interactivity: Making Synthetic Materials;>Interactivity: Describe the Impact of Synthetics;>Interactivity: The Impact of Synthetics
MS-PS1-4 Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	**SE/TE:** Quest Kickoff: How can you use solids, liquids, and gases to lift a car?, 44-45 uConnect Lab: Solid, Liquid, or Gas?, 45A-45B Model It!: Crystalline and Amorphous Solids, 50 Lesson 1 Check, 54 Model It!: Dry Ice, 63 Model It!: SEP Develop Models, 71 How Pistons Work, Figure 6: Develop Models, 74 Topic 2 Review and Assess, 78-79 Evidence-Based Assessment, 80-81 uDemonstrate Lab: Melting Ice, 82-85 **Realize™ Digital Resources:** **Topic 2: Solids, Liquids, and Gases** >Topic Launch>Quest Kickoff>Video: Getting a Lift >Lesson 1, States of Matter>Interactivity: Properties of Solids, Liquids, and Gases >Lesson 2, Changes of State>Interactivity: Particle Motion and States of Matter >Lesson 3, Gas Behavior>uInvestigate Lab: Testing Charles's and Boyle's Laws

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
MS-PS1-5 Develop and use a model to describe how the total number of atoms does not change in a chemical reaction, and thus, mass is conserved.	**SE/TE:** Model It!: Formation of Ammonia, 423 A Rusting Car, Figure 6: SEP Use Models, 426 Lesson 3 Check, 427 Evidence-Based Assessment, 440-441 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Lesson 3, Modeling Chemical Reactions>Interactivity: Model a Chemical Reaction;>uInvestigate Lab: Is Matter Conserved?;>Model the Conservation of Mass
MS-PS1-6 Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	**SE/TE:** Quest Kickoff: How can you design and build hot packs and cold packs?, 396-397 Lesson 1 Quest Check-In, 406 Lesson 2 Quest Check-In, 418 Lesson 3 Quest Check-In, 427 Lesson 4 Quest Check-In, 435 Quest Findings, 441 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Video: Hot and Cool Chemistry >Lesson 1, Mixtures and Solutions>Quest Check-In Lab: Energy Salts >Lesson 2 Chemical Change>Virtual Lab: Chemistry of Glow Sticks;>Quest Check-In>Interactivity: Design Your Pack >Lesson 3, Modeling Chemical Reactions>Quest Check-In Lab: Pack Building >Lesson 4, Producing Useful Materials> Quest Check-In Lab: Heat It Up or Ice It Down >Topic Close>Quest Findings>Interactivity: Reflect on Your Pack

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS2 Students use science and engineering practices, crosscutting concepts, and an understanding of forces, interactions, motion and stability to make sense of phenomena and solve problems.	
SCI.PS2.A Forces and Motion	
SCI.PS2.A.m.i Motion and changes in motion can be qualitatively described using concepts of speed, velocity, and acceleration (including speeding up, slowing down, and/or changing direction).	**SE/TE:** Connect It!: 458 Calculating Speed, 459-461 Describing Velocity, 462 Determining Acceleration, 463-466 Lesson 2 Check, 467 Case Study: Finding Your Way with GPS, 468-469 Topic 10 Review and Assess, 490-491 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Topic 10: Forces and Motion** >Lesson 2, Speed, Velocity, and Acceleration>Interactivity: Up to Speed;>uInvestigate Lab: Walking the Walk;>Interactivity: Falling for Velocity;>Interactivity: How Forces Affect Motion
SCI.PS2.A.m.ii The role of the mass of an object must be qualitatively accounted for in any change of motion due to the application of a force (Newton's first and second law).	**SE/TE:** Newton's First Law of Motion, 471-472 Newton's Second Law of Motion, 473-474 Newtown's Laws together, 477 **Realize™ Digital Resources:** **Topic 10: Forces and Motion** >Lesson 3, Newton's Laws of Motion>Interactivity: The Ball Stops Rolling;>Interactivity: How Are Mass, Motion, and Force Related?

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS2.A.m.iii For any pair of interacting objects, the force exerted by the first object on the second object is equal in strength to the force that the second object exerts on the first, but in the opposite direction (Newton's third law).	**SE/TE:** Newton's Third Law of Motion, 475-477 **Realize™ Digital Resources:** **Topic 10: Forces and Motion** >Lesson 3, Newton's Laws of Motion>uInvestigate Lab: Newton Scooters;>Interactivity: Going, Going, Gone!
SCI.PS2.B Types of Interactions	
SCI.PS2.B.m Forces that act at a distance involve fields that can be mapped by their relative strength and effect on an object.	**SE/TE:** Quest Kickoff: How can you lift an object without making contact? uConnect Lab: Magnetic Poles, 239A-239B Electric Force, Fields and Energy, 241-243 Lesson 1 Check, 248 Extraordinary Science: Bumblebees and Electric Flowers, 249 Magnetic Fields, 253-256 Lesson 2 Check, 257 Lesson 2 Quest Check-In, 257 Magnetic Fields and Current, 260-261 Solenoids and Electromagnets, 262-263 Lesson 3 Check, 264 Lesson 3 Quest Check-In, 264 uEngineer It!: Electromagnetism in Action, 265 Magnetic Force on Moving Charges, 267-269 Topic 6 Review and Assess, 278-279 Evidence-Based Assessment, 280-281 Quest Findings, 281 uDemonstrate Lab: Planetary Detective, 282-285

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	Elevate Science ©2019 Physical
Continued: **SCI.PS2.B.m** Forces that act at a distance involve fields that can be mapped by their relative strength and effect on an object	**Continued:** **Realize™ Digital Resources:** **Topic 6: Electricity and Magnetism** >Topic Launch>Quest Kickoff>Video: Light as a Feather >Lesson 1, Electric Force>Inquiry Warm-Up Lab: Uncanny Attraction;>Quest Check-In>Interactivity: Apply Electrical Forces >Lesson 2, Magnetic Force>Virtual Lab: Get Your Bearings;>Interactivity: Modeling Magnetic Forces;>Quest Check-In Lab: Tracking Elevation >Lesson 3, Electromagnetic Force>uInvestigate Lab: Electric Current and Magnetism;>Interactivity: Electricity and Magnetism; Quest Check-In Lab: Building an Electromagnet >Topic Close>Quest Findings>Interactivity: Reflect on Your Levitating Device

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
MS-PS2-1 Apply Newton's third law to design a solution to a problem involving the motion of two colliding objects.	**SE/TE:** Quest Kickoff: How can you take the crash out of a collision?, 448-449 Lesson 1 Quest Check-In, 457 Lesson 2 Quest Check-In, 467 Lesson 3 Quest Check-In, 478 Evidence-Based Assessment, 492-493 uDemonstrate Lab: Stopping on a Dime, 494-497 Quest Findings, 493 **Realize™ Digital Resources:** **Topic 10: Forces and Motion** >Topic Launch>Quest Kickoff>Video: Build a Better Bumper Car >Lesson 1, Describing Force and Motion>Quest Check-In>Interactivity: Define Criteria and Constraints >Lesson 2, Speed, Velocity, and Acceleration>Quest Check-In>Interactivity: Mass, Speed, and Colliding Cars >Lesson 3: Newton's Laws of Motion>Quest Check-In>Interactivity: Apply Newton's Laws of Motion >Topic Close>Quest Findings>Interactivity: Reflect on Your Bumper Car
MS-PS2-2 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	**SE/TE:** uConnect Lab: Identifying Motion, 449A-449B Evidence-Based Assessment, 492-493 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Topic 10: Forces and Motion** >Lesson 1, Describing Motion and Force>uInvestigate Lab: Motion Commotion >Lesson 2, Speed, Velocity, and Acceleration>uInvestigate Lab: Walking the Walk >Lesson 3, Newton's Laws of Motion>uInvestigate Lab: Newton Scooters

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
MS-PS2-3 Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	**SE/TE:** Math Toolbox, 262 uEngineer It!: Electromagnetism in Action, 265 Question It!: Types of Current, 272 Case Study: The X-57 Maxwell, 276-277 Evidence-Based Assessment, 280-281 **Realize™ Digital Resources:** **Topic 6: Electricity and Magnetism** >Lesson 3, Electromagnetic Force>Interactivity: Electromagnetic Evidence
MS-PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.	**SE/TE:** Connect It!, 480 Factors That Affect Friction, 481-483 Literacy Connection, Write Arguments, 485 Lesson 4 Check, #5, 488 Evidence-Based Assessment, 492-493 uDemonstrate Lab: Stopping on a Dime, 494-497

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
MS-PS2-5 Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.	**SE/TE:** Quest Kickoff: How can you lift an object without making contact?, 238-239 uConnect Lab: Magnetic Poles, 239A-239B Lesson 1 Quest Check-In, 248 Lesson 2 Quest Check-In, 257 Lesson 3 Quest Check-In, 264 Lesson 4 Quest Check-In, 275 Quest Findings, 281 uDemonstrate Lab: Planetary Detective, 282-285 **Realize™ Digital Resources:** **Topic 6: Electricity and Magnetism** >Topic Launch>Quest Kickoff>Video: Light as a Feather >Lesson 1, Electric Force>Inquiry Warm-Up Lab: Uncanny Attractions;>Interactivity: Theremin;>Quest Check-In>Interactivity: Apply Electrical Forces >Lesson 2, Magnetic Force>Virtual Lab: Get Your Bearings;>Interactivity: Modeling Magnetic Forces;>Quest Check-In Lab: Tracking Levitation >Lesson 3, Electromagnetic Force>Interactivity: Electromagnetism;>Quest Check-In Lab: Building an Electromagnet >Lesson 4, Electric and Magnetic Interactions>uInvestigate Lab: Electric, Magnetic Motion;>Quest Check-In Lab: Electrifying Levitation >Topic Close>Quest Findings>Interactivity: Reflect on Your Levitating Device

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS3 Students use science and engineering practices, crosscutting concepts, and an understanding of energy to make sense of phenomena and solve problems.	
SCI.PS3.A Definitions of Energy	
SCI.PS3.A.m Kinetic energy can be distinguished from the various forms of potential energy.	**SE/TE:** Kinetic Energy, 101-102 Potential Energy, 103-105 Lesson 2 Check, 106 uEngineer It!: Prosthetics on the Move, 107 Energy at the Cookout: Figure 4, 114-115 Connect It!, 118 Kinetic and Potential Energy, 120 Topic 3 Review and Assess, 128-129 Evidence-Based Assessment, 130-131 temperature, Energy, and Friction, 162-163
SCI.PS3.B Conservation of Energy and Energy Transfer	
SCI.PS3.B.m Energy changes to and from each type can be tracked through physical or chemical interactions. The relationship between the temperature and the total energy of a system depends on the types, states, and amounts of matter.	**SE/TE:** Thermal Energy and Heat, 141 Temperature and Its Measurement, 142 How Thermal Energy and Temperature Are Related, 143-145 Types of Heat Transfer, 149-151 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 **Realize™ Digital Resources:** **Topic 4: Thermal Energy** >Lesson 1, Thermal Energy, Heat, and Temperature>Interactivity: Warming Your Hands;>uInvestigate Lab: Temperature and Thermal Energy

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
SCI.PS3.C Relationships Between Energy and Forces	
SCI.PS3.C.m When two objects interact, each one exerts a force on the other, and these forces can transfer energy between the interacting objects.	**SE/TE:** Electric Force, Fields, and Energy, 241-243 Static Electricity, 246-247 Magnetic Force and Energy, 251-252 Magnetic Fields, 253-255 Topic 6 Review and Assess, 278-279 Evidence-Based Assessment, 280-281 uDemonstrate Lab: Planetary Detective, 282-285 Newton's First Law of Motion, 471-472 Newton's Second Law of Motion, 473-474 Newton's Third Law of Motion, 475-477 Types of Friction, 482-483 Energy, Forces, and Motion, 486 **Realize™ Digital Resources:** **Topic 10: Forces and Motion** >Lesson 4, Friction and Gravitational Interactions>uInvestigate Lab: Observing Friction; Interactivity: The Pull of the Tides
SCI.PS3.D Energy in Chemical Processes and Everyday Life	
SCI.PS3.D.m Sunlight is captured by plants and used in a chemical reaction to produce sugar molecules for storing this energy. This stored energy can be released by respiration or combustion, which can be reversed by burning those molecules to release energy.	**SE/TE:** Chemical Changes in Matter, 27 Chemical Energy, 112 Energy at the Cookout, 114-115 Open Systems, 425
MS-PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object (emphasis on qualitative descriptions of relationships).	**SE/TE:** Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Reading Check: Integrate with Visuals, 195 Topic 3 Review and Assess, 128-129 **Realize™ Digital Resources:** **Topic 3: Energy** >Lesson 2, Kinetic Energy and Potential Energy>Interactivity: Racing for Kinetic Energy

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
MS-PS3-2 Develop a model to describe that when the distance between two objects changes, different amounts of potential energy are stored in the system (e.g., gravitational, magnetic or electrostatic potential energy).	**SE/TE:** Quest Kickoff: How can you build a complicated machine to do something simple?, 88-89 uConnect Lab: What Would Make a Card Jump?, 89A-89B Model It!: Transformation and Transfer in Demolition, 121 Topic 3 Review and Assess, 128-129 Evidence-Based Assessment, 130-131 Quest Findings, 131 uDemonstrate Lab: 3,2,1 . . . Liftoff, 132-135 Quest Kickoff: How can you lift an object without making contact?, 238-239 Connect It!, 250 Push or Pull: Figure 2, 252 Model It!: Combined Magnetic Field Lines, 255 Lesson 2 Check, 257 Topic 6 Review and Assess, 278-279 Evidence-Based Assessment, 280-281 uDemonstrate Lab: Planetary Detective, 282-285 Model It!, 487 **Realize™ Digital Resources:** **Topic 3: Energy** >Topic Launch>Quest Kickoff>Video: Outrageous Energy Contraptions >Lesson 2, Kinetic Energy and Potential Energy>uInvestigate Lab: Mass, Velocity, and Kinetic Energy; uInvestigate Lab: Energy, Magnetism, and Electricity;>Interactivity: Roller Coasters and Potential Energy;>Quest Check-In Lab: Build a Chain Reaction Machine >Lesson 4, Energy Change and Conservation>Quest Check-In Lab: Redesign and Retest a Chain-Reaction Machine >Topic Close>Quest Findings>Interactivity: Reflect on Your Chain-Reaction Machine

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
MS-PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	**SE/TE:** Quest Kickoff: How can you keep hot water from cooling down?, 138-139 Lesson 2 Quest Check-In, 154 Lesson 3 Quest Check-In, 165 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 **Realize™ Digital Resources:** **Topic 4: Thermal Energy** >Lesson 2, Heat Transfer>Quest Check-In>Interactivity: Contain the Heat >Lesson 3 Heat and Materials>Quest Check-In Lab: Keep the Heat In
MS-PS3-4 Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.	**SE/TE:** uConnect Lab: How Cold Is the Water?, 139A-139B Question It!, 153 Evidence-Based Assessment, 168-169 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 **Realize™ Digital Resources:** **Topic 4: Thermal Energy** >Lesson 1, Thermal Energy, Heat, and Temperature>Interactivity: Flow of Thermal Energy;>uInvestigate Lab: Temperature and Thermal Energy >Lesson 2, Heat Transfer>uInvestigate Lab: Visualizing Convection Currents >Lesson 3, Heat and Materials>uInvestigate Lab: Comparing How Liquids Cool;>Interactivity: Matter and Heat Transfer

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	Elevate Science ©2019 Physical
MS-PS3-5 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.	**SE/TE:** Quest Kickoff: How can you build a complicated machine to do something simple?, 88-89 uConnect Lab: What Would Make a Card Jump?, 89A-89B Energy at the Cookout, 114-115 Lesson 3 Check, 116 Energy Transformation and Transfer, 121 Model It!, 121 Lesson 4 Check, 125 Evidence-Based Assessment, 130-131 Quest Findings, 131 uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 Plan It!: Materials for Airplanes, 164 Evidence-Assessment, 168-169 **Realize™ Digital Resources:** **Topic 3: Energy** >Topic Launch>Quest Kickoff>Video: Outrageous Energy Contraptions >Topic Close>Quest Findings>Interactivity: Reflect on Your Chain-Reaction Machine **Topic 4: Thermal Energy** >Lesson 2, Heat Transfer>Interactivity: Heat and Reheat

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS4 Students use science and engineering practices, crosscutting concepts, and an understanding of waves and their applications in technologies for information transfer to make sense of phenomena and solve problems.	
SCI.PS4.A Wave Properties	
SCI.PS4.A.m A simple wave model has a repeating pattern with a specific wavelength, frequency, and amplitude, and mechanical waves need a medium through which they are transmitted. This model can explain many phenomena including sound and light. Waves can transmit energy.	**SE/TE:** Transverse Waves, 180 Longitudinal Waves, 181 Surface Waves, 181 Properties of Waves, 182-183 Wave Energy, 184 Math Toolbox: Wave Properties, 184 Lesson 1 Check, 185 Wave Interference, 192-193 Standing Waves, 194 Resonance, 195 Wavelength and Frequency, 212 The Electromagnetic Spectrum, 213 Math Toolbox: Frequencies and Waves of Light, 213 Lesson 4 Check, 216 Topic 5 Review and Assess, 228-229

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS4.B Electromagnetic Radiation	
SCI.PS4.B.m The construct of a wave is used to model how light interacts with objects.	**SE/TE:** Quest Kickoff: How can you design a system to stop a thief?, 176-177 Properties of Waves, 182-183 Model It!: Polarizing Glasses, 211 Particle Model of Light, 211 Lesson 4 Check, 216 Lesson 4 Quest Check-In, 216 Light, Color, and Objects, 218-219 Regular and Diffuse Reflection, 222 Plane Mirror Image, 223 Convex Mirror Image, 223 Model It!: Fun with Mirrors, 224 Convex Lenses, 225 Lesson 5 Check, 227 Lesson 5 Quest Check-In, 227 Topic 5 Review and Assess, 228-229 Evidence-Based Assessment, 230-231 Quest Findings, 231 uDemonstrate Lab: Making Waves, 232-235 **Realize™ Digital Resources:** **Topic 5: Waves and Electromagnetic Radiation** >Topic Launch>Quest Kickoff>Video: Design to Stop a Thief >Lesson 4, Electromagnetic Waves>Interactivity: Models of Light;>Quest Check-In>Interactivity: Optical Demonstration >Lesson 5, Light>uInvestigate Lab: Light Interacting With Matter; Interactivity: Predicting the Behavior of Light;>Quest Check-In Lab: An Optimal Optical Solution >Topic Close>Quest Findings>Interactivity: Reflect on Your Demonstration

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.PS4.C Information Technologies and Instrumentation	
SCI.PS4.C.m Waves can be used to transmit digital information. Digitized information is comprised of a pattern of 1s and 0s.	**SE/TE:** The Essential Question, 287 Quest Kickoff: What is the best way to record sound for my scenario?, 288-289 Analog and Digital Signals, 304-305 Lesson 2 Check, 309 Lesson 2 Quest Check-In, 309 Roger That, 316-317 Advantages of Digital Signals, 318-319 Lesson 3 Quest Check-In, 320 Topic 7 Review and Assess, 322-323 Evidence-Based Assessment, 324-325 Quest Findings, 325 uDemonstrate Lab: Over and Out, 326-329 **Realize™ Digital Resources:** **Topic 7: Information Technologies** >Topic Launch>Quest Kickoff>Video: Test, Testing . . . 1, 2, 3 >Lesson 2, Signals>Interactivity: Digitized Images;>Quest Check-In>Interactivity: Analog and Digital Recordings >Lesson 3, Communication and Technology>Interactivity: Film Cameras and Digital Cameras;>Quest Check-In>Interactivity: Evaluate Recording Technologies >Topic Close>Quest Findings>Interactivity: Reflect on Your Recording Method
MS-PS4-1 Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.	**SE/TE:** uConnect Lab: What Are Waves?, 177A-177B Properties of Waves, 182-183 Wave Energy, 184 Lesson 1 Check, 185 Math Toolbox: Wave Properties, 185 **Realize™ Digital Resources:** **Topic 5: Waves and Electromagnetic Radiation** >Lesson 1, Wave Properties>Modeling Waves

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
MS-PS4-2 Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.	**SE/TE:** Plan It!: Develop Models, 190 Model It!, 201 Lesson 2 Check, 207 Electromagnetic Waveform, 210 Model It!: Polarizing Glasses, 211 Math Toolbox: Frequencies and Waves of Light, 213 Model It!: Fun with Mirrors, 224 uDemonstrate Lab: Making Waves, 232-235 **Realize™ Digital Resources:** **Topic 5: Waves and Electromagnetic Radiation** >Lesson 2, Wave Interactions>uInvestigate Lab: Standing Waves and Wave Interference;>Interactivity: Model Wave Interactions >Lesson 3, Sound Waves>uInvestigate Lab: Understanding Sound >Lesson 4, Electromagnetic Waves>Interactivity: Build an Electromagnetic Wave;>Interactivity: Models of Light
MS-PS4-3 Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.	**SE/TE:** Quest Kickoff: What is the best way to record sound for my scenario?, 288-289 Analog and Digital Signals, 304-305 Lesson 2 Check, 309 Lesson 2 Quest Check-In, 309 Roger That, 316-317 Advantages of Digital Signals, 318-319 Lesson 3 Quest Check-In, 320 Topic 7 Review and Assess, 322-323 Evidence-Based Assessment, 324-325 Quest Findings, 325 uDemonstrate Lab: Over and Out, 326-329

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
Continued: **MS-PS4-3** Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.	**Continued:** **Realize™ Digital Resources:** **Topic 7: Information Technologies** >Topic Launch>Quest Kickoff>Video: Test, Testing . . . 1, 2, 3 >Lesson 2, Signals>Interactivity: Digitized Images;>Quest Check-In>Interactivity: Analog and Digital Recordings >Lesson 3, Communication and Technology>Interactivity: Film Cameras and Digital Cameras;>Quest Check-In>Interactivity: Evaluate Recording Technologies >Topic Close>Quest Findings>Interactivity: Reflect on Your Recording Method
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:** Components of Matter, 8-10 Math Toolbox, 29 uConnect Lab: Solid, Liquid, or Gas, 45A-45B Describing Solids, 48-50 uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 uConnect Lab: Continuous or Discrete?, 298A-298B Model It!: Be a Telegraph Operator, 302 Lesson 2 Check, 309 Topic 7 Review and Assess, 324-325 Case Study: Unlocking the Power of the Atom, 344-345 Lesson 2 Check, 357 Lesson 3 Check, 366 Topic 8 Review and Assess, 386-387 Evidence-Based Assessment, 388-389 Lesson 4 Check, 435 Case Study: Is Plastic Really So Fantastic?, 436-437 uDemonstrate Lab: Evidence of Chemical Change, 442-445

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Model It!: Types of Physical Changes, 26 uDemonstrate Lab: Helping Out the Wildlife, 38-41 Lesson 1 Check, 54, 99, 146, 248, 298 Lesson 3 Check, 75, 207 Lesson 5 Check, 227, 384 uConnect lab: Magnetic Poles, 239A-239B Topic 6 Review and Assess, 280-281 Hydrangeas and Acidity, 381 Lesson 2 Check, 418 Case Study: Is Plastic Really So Fantastic?, 436-437 Connect It!, 470-471 **TE Only:** Differentiated Instruction: Support Struggling Students, 87
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:** Connect It!, 14-15 Quest Findings, 81 Thomson's Model, 337 Lesson 1 Check, 343 Lesson 4 Check, 377 Math Toolbox: Graphing Kinetic Energy, 489 Topic 10 Review and Assess, 492-493

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Topic 3 Review and Assess, 130-131 Topic 7 Review and Assess, 322-323 uDemonstrate Lab: Over and Out, 326-329 Case Study: Finding Your Way with GPS, 468-469
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 Essential Question, 1, 237, 395 Lesson 1 Check, 54, 146 Lesson 1 Quest Check-In, 54 Lesson 2 Check, 64 Topic 2 Review and Assess, 78-79 uConnect Lab: What Would Make a Card Jump?, 89A-89B Model It!, 144 Lesson 3 Check, 427 **Realize™ Digital Resources:** **Topic 2: Solids, Liquids, and Gases** >Lesson 1, States of Matter>Quest Check-In>Interactivity: Design Your Lift

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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 5 Quest Check-In, 227 Topic 6 Review and Assess, 278-279 Lesson 1 Check, 298, 406 Lesson 3 Quest Check-In, 320 The Essential Question, 331 Connect It!, 334-335 Lesson 4 Check, 435 Topic 9 Review and Assess, 438-439 **Realize™ Digital Resources:** **Topic 5: Waves and Electromagnetic Radiation** >Lesson 5, Light>Quest Check-In Lab: An Optimal Optical Solution **Topic 7: Information Technologies** >Lesson 3, Communication and Technology>Quest Check-In>Interactivity: Evaluate Recording Technologies

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Model It!: Types of Physical Changes, 26 Lesson 3 Check, 75 The Essential Question, 87 Lesson 4 Quest Check-In, 125 Quest Findings, 131 Temperature and Melting, 143 Topic 4 Review and Assess, 166-167 Lesson 1 Check, 457 Lesson 2 Check, 467 Lesson 4 Check, 488 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Topic 3: Energy** >Lesson 4, Energy Change and Conservation>Quest Check-In Lab: Redesign and Retest a Chain-Reaction Machine
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.	**SE/TE:** Math Toolbox, 29 Question It!, 272 Server Farm, Figure 2, 314 Lesson 2 Check: Ask Questions, 418 Topic 10 Review and Assess, 490 **TE Only:** Focus on Mastery!/Using Phenomena, 175, 287, 395

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.SEP1.A.m.2 Ask questions to identify and clarify evidence and the premise(s) of an argument.	**SE/TE:** Question It!, 153 Conduct Research Projects, 153 Question It!: Apply Newton's Laws, 477 Science and Engineering Practices Handbook: Analyzing Scientific Explanations, 503 Science and Engineering Practices Handbook: Evidence and Opinion, 503
SCI.SEP1.A.m.3 Ask questions to determine relationships between independent and dependent variables and relationships in models.	**SE/TE:** uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135
SCI.SEP1.A.m.4 Ask questions to clarify or refine a model, an explanation, or an engineering problem.	**SE/TE:** Question It!: Types of Current, 272 Server Farm, Figure 2, 314 Science and Engineering Practices Handbook: Define the Problem, 506 Science and Engineering Practices Handbook: Develop Possible Solutions, 507 **TE Only:** Focus on Mastery!/Using Phenomena, 175
SCI.SEP1.A.m.5 Ask questions that require sufficient and appropriate empirical evidence to answer.	**SE/TE:** Math Toolbox, 29 Lesson 1 Check: Ask Questions, 99
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.	**Realize™ Digital Resources** **Topic 6: Electricity and Magnetism** >Lesson 3, Electromagnetic Force>Interactivity: Electromagnetic Evidence
SCI.SEP1.A.m.7 Ask questions that challenge the premise(s) of an argument or the interpretation of a data set.	**SE/TE:** Math Toolbox, 29 Analyzing Scientific Explanations, 503

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Lesson 1 Quest Check-In, 457 uDemonstrate Lab: Stopping on a Dime, 494-497 Science and Engineering Practices Handbook: Define the Problem, 506 Science and Engineering Practices Handbook: Develop Possible Solutions, 507 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Communicate the Solution, 509 **Realize™ Digital Resources** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 10: Forces and Motion** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Lesson 1, Describing Motion and Force>Quest Check-In>Interactivity: Define Criteria and Constraints >Lesson 3, Newton's Laws of Motion>uInvestigate Lab: Newton Scooters
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:** uConnect Lab: Solid, Liquid, or Gas, 45A-45B uDemonstrate Lab: Melting Ice, 82-85 uDemonstrate Lab: Over and Out, 326-329 Science and Engineering Practices Handbook: Scientific Models, 500

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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.	**SE/TE:** uConnect Lab: What Happens When Chemical React?, 397A-397B
SCI.SEP2.A.m.3 Use and develop a model of simple systems with uncertain and less predictable factors.	**SE/TE:** uConnect Lab: What Happens When Chemical React?, 397A-397B uEngineer It! Design Challenge, 479
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.	**SE/TE:** Evidence-Based Assessment, 80-81 uDemonstrate Lab: Melting Ice, 82-85 Lesson 2 Check, 154 Model It!: Friction and Energy Transformation, 162 Lesson 2 Check, 257 Model It!: Magnetic Field Strength, 261 Lesson 3 Check, 264 Lesson 1 Check, 298 uEngineer It! Design Challenge, 479 Science and Engineering Practices Handbook: Scientific Models, 500
SCI.SEP2.A.m.5 Develop and use a model to predict and describe phenomena.	**SE/TE:** uConnect Lab: The Nuts and Bolts of Formulas, 3A-3B Model It!: Molecules and Atoms, 9 Evidence-Based Assessment, 36-37 Model It! Crystalline and Amorphous Solids, 50 uEngineer It! Design Challenge, 265 uEngineer It! Design Challenge, 299 Model It!: Models of an Atom, 339 Lesson 3 Check, 343 Lesson 3 Check, 366 Model It!: How Ions Form, 370 Lesson 4 Check, 377 Topic 8 Review and Assess, 386-387 uEngineer It!, 407 Model It!: Wood Work, 410

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.SEP2.A.m.6 Develop a model to describe unobservable mechanisms.	**SE/TE:** uConnect Lab: The Nuts and Bolts of Formulas, 3A-3B Model It!: Molecules and Atoms, 9 Evidence-Based Assessment, 36-37 Model It! Crystalline and Amorphous Solids, 50 Model It!: Models of an Atom, 339 Lesson 3 Check, 343 Lesson 3 Check, 366 uEngineer It!, 367 Model It!: How Ions Form, 370 Lesson 4 Check, 377 Topic 8 Review and Assess, 386-387 Model It!: Wood Work, 410
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: 3, 2, 1 . . . Liftoff, 132-135 Science and Engineering Practices Handbook: Scientific Models, 500 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508
SCI.SEP3 Students plan and carry out investigations, in conjunction with using cross-cutting concepts and disciplinary core ideas, to make sense of phenomena and solve problems.	
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:	
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:** Connect It!: SEP Plan and Carry Out Investigations, 398 Plant It!: The Right Tool for the Job, 400 uDemonstrate Lab: Melting Ice, 82-85 uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 uDemonstrate Lab: Planetary Detective, 282-285 uDemonstrate Lab: Shedding Light on Ions, 390-393 Science and Engineering Practices Handbook: Science Experiments, 501 Science and Engineering Practices Handbook: Graphs, 505

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** uDemonstrate Lab: Testing Thermal Conductivity, 170-173 Quest Kickoff: How can you lift and object without making contact?, 238-239
SCI.SEP3.A.m.3 Evaluate the accuracy of various methods for collecting data.	**SE/TE:** uDemonstrate Lab: Help Out the Wildfire, 38-41 Tools of Science, 504-505
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.	**SE/TE:** uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 uDemonstrate Lab: Stopping on a Dime, 494-497 Science and Engineering Practices Handbook: Science Experiments, 501 Science and Engineering Practices Handbook: Math Skills/Graphs, 505 **Realize™ Digital Resources** **Topic 10: Forces and Motion** >Lesson 2, Speed, Velocity, and Acceleration>Interactivity: Motion Graphs
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: 3, 2, 1...Liftoff!, 132-135 uDemonstrate Lab: Stopping on a Dime, 494-497 Science and Engineering Practices Handbook: Science Experiments, 501 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 508

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Instantaneous and Average Speeds, 460 Average Speed, 460 Acceleration of a Plane, 464-465 Calculating Acceleration, 465 Graphing Acceleration, 466 Calculating Force, 473 Math Toolbox: Using Newton's Second Law, 474 Math Toolbox: Graphing Kinetic Energy, 489 **Realize™ Digital Resources** **Topic 3: Energy** >Lesson 2, Kinetic Energy and Potential Energy>Interactivity: Racing for Kinetic Energy
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:** Math Toolbox: Graphing Boyle's Law, 72 Question It!: Temporary Element Names, 353 Fog: Figure 3, 401 Forming Saltwater: Figure 5, 402 Math Toolbox: Concentration of Salt in Seawater, 403 Solubility and Temperature: Figure 6, 404 What Happened?: Data Profile, 405 Lesson 1 Check, 406 Science and Engineering Practices Handbook: Graphs, 505
SCI.SEP4.A.m.3 Distinguish between causal and correlational relationships in data.	"Causal vs. correlational" relationships are not specifically called out in *Elevate Science: Physical*. However, the importance of properly interpreting scientific data is addressed in labs and activities throughout. See also Science and Engineering Practices Handbook, pp. 474-485.

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.SEP4.A.m.4 Analyze and interpret data to provide evidence for explanations of phenomena.	**SE/TE:** Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Instantaneous and Average Speeds, 460 Average Speed, 460 Acceleration of a Plane, 464-465 Calculating Acceleration, 465 Graphing Acceleration, 466 Calculating Force, 473 Math Toolbox: Using Newton's Second Law, 474 **Realize™ Digital Resources** **Topic 3: Energy** >Lesson 2, Kinetic Energy and Potential Energy>Interactivity: Racing for Kinetic Energy
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:** Instantaneous and Average Speeds, 460 Average Speed, 460 **TE Only:** Professional Development, 460
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:** uDemonstrate Lab: Help the Wildlife, 38-41 uDemonstrate Lab: Over and Out, 326-329

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
SCI.SEP4.A.m.7 Analyze and interpret data to determine similarities and differences in findings.	**SE/TE:** Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Instantaneous and Average Speeds, 460 Average Speed, 460 Acceleration of a Plane, 464-465 Calculating Acceleration, 465 Graphing Acceleration, 466 Calculating Force, 473 Math Toolbox: Using Newton's Second Law, 474 **Realize™ Digital Resources** **Topic 3: Energy** >Lesson 2, Kinetic Energy and Potential Energy>Interactivity: Racing for Kinetic Energy
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:** Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Instantaneous and Average Speeds, 460 Average Speed, 460 Acceleration of a Plane, 464-465 Calculating Acceleration, 465 Graphing Acceleration, 466 Calculating Force, 473 Math Toolbox: Using Newton's Second Law, 474 **Realize™ Digital Resources** **Topic 3: Energy** >Lesson 2, Kinetic Energy and Potential Energy>Interactivity: Racing for Kinetic Energy

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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: Mass, Speed, and Kinetic Energy, 102 Question It!, 153 Math Toolbox: Reason Quantitatively, 416 Math Toolbox: Analyze Quantitative Relationships, 430
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: Physical*.
SCI.SEP5.A.m.3 Use mathematical representations to describe and support scientific conclusions and design solutions.	**SE/TE:** Plan It!: Develop Models, 190 Model It!, 201 Lesson 2 Check, 207 Electromagnetic Waveform, 210 Model It!: Polarizing Glasses, 211 Math Toolbox: Frequencies and Waves of Light, 213 Model It!: Fun with Mirrors, 224 uDemonstrate Lab: Making Waves, 232-235 **Realize™ Digital Resources:** **Topic 5: Waves and Electromagnetic Radiation** >Lesson 2, Wave Interactions>uInvestigate Lab: Standing Waves and Wave Interference;>Interactivity: Model Wave Interactions >Lesson 3, Sound Waves>uInvestigate Lab: Understanding Sound >Lesson 4, Electromagnetic Waves>Interactivity: Build an Electromagnetic Wave;>Interactivity: Models of Light

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
SCI.SEP5.A.m.4 Create algorithms (a series of ordered steps) to solve a problem.	**SE/TE:** Quest Kickoff, 88-89 uConnect Lab: 89A-89B Quest Findings, 131 Math Toolbox: Balanced Equations, 425
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:** Compounds, 10 Types of Mixtures, 11 Math Toolbox: Conservation of Mass, 29 Math Toolbox: Home Runs and Air Density, 123 Math Toolbox: Voltage Change in Transformers, 274 Sampling Rate, 305 Lesson 2 Check, 309 Masses of Atomic Particles, 341 Calculating Speed, 459
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:** uDemonstrate Lab: Help Out the Wildlife, 38-41
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.	Math Toolbox: Calculating Work, 95 Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Reading Check, 145 Case Study: Sound and Light at the Ballpark, 186-187 Review and Assess, 228 Math Toolbox: Determining Surface Area/Reason Quantitatively, 416 Math Toolbox: Nutrient Concentration/Analyze Quantitative Relationships, 430

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.SEP6.A.m.2 Construct an explanation using models or representations.	**SE/TE:** Evidence-Based Assessment, 36-37 uConnect Lab: What Are Waves?, 177A-177B Lesson Check, 343 SEP Use Models, 439
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:** Case Study: U.S. Energy Consumption, 126-127 uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 Case Study: Earth Power, 156-157 Case Study: Sound and Light at the Ballpark, 186-187 At the Boardwalk, 297 Connect It!, 300 Lesson Check, 320 uDemonstrate Lab: Over and Out, 326-329 Science and Engineering Practices Handbook: Scientific Explanations/Scientific Theories and Laws, 502 Science and Engineering Practices Handbook: Analyzing Scientific Explanations/Evidence and Opinions, 503
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:** The Essential Question, 1 Case Study: Rising to the Occasion, 76-77 Connect It!, 100 uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 Connect It!, 140 Reading Check, 145 Case Study: Sound and Light at the Ballpark, 186-187 Lesson Check, 196 Lesson Check, 227 Review and Assess, 228 Connect It!, 266 Lesson Check, 275 Review and Assess, 278 Connect It!, 300 Review and Assess, 323 Connect It!, 428 Lesson Check, 488

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.SEP6.A.m.5 Apply scientific reasoning to show why the data or evidence is adequate for the explanation.	**SE/TE:** uDemonstrate Lab: Help Out the Wildlife, 38-41 How Pistons Work, 74 Case Study: U.S. Energy Consumption, 126-127 Lesson 1 Check, 146 Case Study: Earth Power, 156-157 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 Topic 5 Review and Assess, 230-231 Lesson Check, 257 Connect It!, 266 Case Study: Super Ultra High Definition, 310-311 Lesson Check, 320 Lesson Check, 366 Lesson 2 Quest Check-In, 418 uDemonstrate Lab: Evidence of Chemical Change, 442-445 Topic 10 Review and Assess, 492-493 Science and Engineering Practices Handbook: Scientific Reasoning, 499 Science and Engineering Practices Handbook: Analyzing Scientific Explanations, 503 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Lesson 2, Chemical Change>Quest Check-In>Interactivity: Design Your Pack

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Quest Kickoff: How can you build a complicated machine to do something simple?, 88-89 Quest Kickoff: How can you keep hot water from cooling down?, 138-139 Lesson 2 Quest Check-In, 154 Lesson 3 Quest Check-In, 165 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 Quest Kickoff: How can you design and build hot packs and cold packs?, 396-397 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 509 **Realize™ Digital Resources:** **Topic 2: Energy** >Lesson 3, Other Forms of Energy>Quest Check-In Lab: Test and Evaluate a Chain-Reaction Machine >Lesson 4, Energy Change and Conservation>Quest Check-In Lab: Redesign and Retest a Chain-Reaction Machine **Topic 4: Thermal Energy** >Lesson 2, Heat Transfer>Quest Check-In>Interactivity: Contain the Heat >Lesson 3 Heat and Materials>Quest Check-In Lab: Keep the Heat In

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** Quest Kickoff: How can you design and build hot packs and cold packs?, 396-397 Lesson 1 Quest Check-In, 406 Lesson 2 Quest Check-In, 418 Lesson 3 Quest Check-In, 427 Lesson 4 Quest Check-In, 435 Quest Findings, 441 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Video: Hot and Cool Chemistry >Lesson 1, Mixtures and Solutions>Quest Check-In Lab: Energy Salts >Lesson 2 Chemical Change>Virtual Lab: Chemistry of Glow Sticks;>Quest Check-In>Interactivity: Design Your Pack >Lesson 3, Modeling Chemical Reactions>Quest Check-In Lab: Pack Building >Lesson 4, Producing Useful Materials> Quest Check-In Lab: Heat It Up or Ice It Down >Topic Close>Quest Findings>Interactivity: Reflect on Your Pack
SCI.SEP6.B.m.3 Optimize performance of a design by prioritizing criteria, making trade-offs, testing, revising, and retesting.	**SE/TE:** Quest Kickoff: How can you build a complicated machine to do something simple?, 88-89 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 509 **Realize™ Digital Resources:** **Topic 2: Energy** >Lesson 3, Other Forms of Energy>Quest Check-In Lab: Test and Evaluate a Chain-Reaction Machine >Lesson 4, Energy Change and Conservation>Quest Check-In Lab: Redesign and Retest a Chain-Reaction Machine

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Evidence and Opinions, 593
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: Help Out the Wildlife, 38-41 uDemonstrate Lab: Testing Thermal Conductivity, 170-17 uDemonstrate Lab: Making Waves, 232-235 uDemonstrate Lab: Stopping on a Dime, 494-497 Science and Engineering Practices Handbook: Communicate the Solution, 509 **TE Only:** Focus on Mastery!: Provide Critique, 496
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:** Quest Kickoff: How can you build a complicated machine to do something simple?, 88-89 uConnect Lab: What Would Make a Card Jump?, 89A-89B Energy at the cookout, 114-115 Lesson 3 Check, 116 Lesson 4 Check, 125 Quest Findings, 131 uDemonstrate Lab: 3, 2, 1 . . . Liftoff, 132-135 Plan It!: Materials for Airplanes, 164

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
Continued: **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.	**Continued:** **Realize™ Digital Resources:** **Topic 3: Energy** >Topic Launch>Quest Kickoff>Video: Outrageous Energy Contraptions >Topic Close>Quest Findings>Interactivity: Reflect on Your Chain-Reaction Machine **Topic 4: Thermal Energy** >Lesson 2, Heat Transfer>Interactivity: Heat and Reheat
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.	For supporting content, please see: **SE/TE:** Case Study: The X-57 Maxwell, 276-277 Case Study: Ultra High Super Definition!. 310-311
SCI.SEP7.A.m.5 Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.	**SE/TE:** uDemonstrate Lab: Help Out the Wildlife, 38-41 Science and Engineering Practices Handbook: Design a Solution/Test a Solution, 508 Science and Engineering Practices Handbook: Redesign and Retest a Solution, 509

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Case Study: An Epic Disaster!, 22-23 Extraordinary Science: Freeze That Scalpel, 65 Case Study: U.S. Energy Consumption, 126-127 Case Study: Earth Power, 156-157 Extraordinary Science: Bumblebees and Electric Flowers, 249 Case Study: Super Ultra High Definition, 310-311 Extraordinary Science: Beam Me Up, 321 Case Study: Unlocking the Power of the Atom, 344-345 Case Study: Finding Your Way with GPS, 468-469 Case Study: U.S. Energy Consumption, 126-127 Literacy Connection: Determine Central Ideas, 292, 303, 336, 339, 347 **TE Only:** Professional Development: Beyond the Content, 302
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;** Case Study: An Epic Disaster!, 22-23 Math Toolbox: Mass, Speed, and Kinetic Energy, 102 Case Study: U.S. Energy Consumption, 126-127 Case Study: Unlocking the Power of the Atom, 344-345 Extraordinary Science: Acids in the Body, 385 Math Toolbox: Reason Quantitatively, 416 Math Toolbox: Analyze Quantitative Relationships, 430

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** Accidental Synthetics, Figure 2: Evaluate Information, 431 Literacy Connection: Evaluate Information, 433 Reading Check: Evaluate Information, 434 Case Study: Is Plastic Really So Fantastic?, 436-437 Science and Engineering Practices Handbook: Evidence and Opinions, 503 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Lesson 4, Producing Useful Materials>Interactivity: Making Synthetic Materials;>Interactivity: Describe the Impact of Synthetics;>Interactivity: The Impact of Synthetics
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: Scientific Reasoning, 499 Science and Engineering Practices Handbook: Analyzing Scientific Explanations, 503 **TE Only:** Professional Development: Develop Classroom Strategies, 500
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:** Topic 2 Review and Assess, 78-79 Topic 3 Review and Assess, 128-129 Lesson 3 Check, 165 Lesson 3 Check, 207 Lesson 4 Check, 216 Lesson 1 Quest Check-In, 298 Connect It!, 300 Topic 7 Review and Assess, 322-323 Lesson 1 Check, 343 Lesson 4 Quest Check-In, 435 Lesson 3 Check, 478

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Lesson 1 Quest Check-In, 457 uDemonstrate Lab: Stopping on a Dime, 494-497 Science and Engineering Practices Handbook: Define the Problem, 506 Science and Engineering Practices Handbook: Develop Possible Solutions, 507 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Communicate the Solution, 509 **Realize™ Digital Resources** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 10: Forces and Motion** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Lesson 1, Describing Motion and Force>Quest Check-In>Interactivity: Define Criteria and Constraints >Lesson 3, Newton's Laws of Motion>uInvestigate Lab: Newton Scooters

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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: Help Out the Wildlife, 38-41 Science and Engineering Practices Handbook: Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Redesign and Retest the Solution, 509 **Realize™ Digital Resources:** **Topic 3: Energy** >Lesson 4, Energy Change and Conservation>Quest Check-In Lab: Redesign and Retest a Chain-Reaction Machine
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:** Quest Kickoff: How can you design and build hot packs and cold packs?, 396-397 Lesson 1 Quest Check-In, 406 Lesson 2 Quest Check-In, 418 Lesson 3 Quest Check-In, 427 Lesson 4 Quest Check-In, 435 Quest Findings, 441 Science and Engineering Practices Handbook: Define the Problem, 506-507 Science and Engineering Practices Handbook: Develop Possible Solutions, 507 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Communicate the Solution, 509 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Lesson 1, Mixtures and Solutions>Quest Check-In Lab: Energy Salts >Lesson 2 Chemical Change>Virtual Lab: Chemistry of Glow Sticks;>Quest Check-In>Interactivity: Design Your Pack >Lesson 3, Modeling Chemical Reactions>Quest Check-In Lab: Pack Building

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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: Develop Possible Solutions, 507
SCI.ETS1.B.m.iv Models of all kinds are important for testing solutions.	**SE/TE:** Math Toolbox: Calculating Volume, 17 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uEngineer It!: Generating Energy from Potholes, 479 Science and Engineering Practices Handbook: Scientific Models, 500 Science and Engineering Practices Handbook: Scientific Explanations, 502 Science and Engineering Practices Handbook: Design a Solution, 508
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:** Quest Kickoff: How can you design and build hot packs and cold packs?, 396-397 Lesson 1 Quest Check-In, 406 Lesson 2 Quest Check-In, 418 Lesson 3 Quest Check-In, 427 Lesson 4 Quest Check-In, 435 Quest Findings, 441 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Video: Hot and Cool Chemistry >Lesson 1, Mixtures and Solutions>Quest Check-In Lab: Energy Salts >Lesson 2 Chemical Change>Virtual Lab: Chemistry of Glow Sticks;>Quest Check-In>Interactivity: Design Your Pack >Lesson 3, Modeling Chemical Reactions>Quest Check-In Lab: Pack Building >Lesson 4, Producing Useful Materials> Quest Check-In Lab: Heat It Up or Ice It Down >Topic Close>Quest Findings>Interactivity: Reflect on Your Pack

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** Quest Kickoff: How can you design and build hot packs and cold packs?, 396-397 Lesson 1 Quest Check-In, 406 Lesson 2 Quest Check-In, 418 Lesson 3 Quest Check-In, 427 Lesson 4 Quest Check-In, 435 Quest Findings, 441 **Realize™ Digital Resources:** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Video: Hot and Cool Chemistry >Lesson 1, Mixtures and Solutions>Quest Check-In Lab: Energy Salts >Lesson 2 Chemical Change>Virtual Lab: Chemistry of Glow Sticks;>Quest Check-In>Interactivity: Design Your Pack >Lesson 3, Modeling Chemical Reactions>Quest Check-In Lab: Pack Building >Lesson 4, Producing Useful Materials> Quest Check-In Lab: Heat It Up or Ice It Down >Topic Close>Quest Findings>Interactivity: Reflect on Your Pack
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:** uDemonstrate Lab: Help Out the Wildlife, 38-41 Science and Engineering Practices Handbook: Design a Solution/Test a Solution, 508 Science and Engineering Practices Handbook: Redesign and Retest a Solution, 509

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Lesson 1 Quest Check-In, 457 uDemonstrate Lab: Stopping on a Dime, 494-497 Science and Engineering Practices Handbook: Define the Problem, 506 Science and Engineering Practices Handbook: Develop Possible Solutions, 507 Science and Engineering Practices Handbook: Design a Solution/Test and Evaluate a Solution, 508 Science and Engineering Practices Handbook: Communicate the Solution, 509 **Realize™ Digital Resources** **Topic 9: Chemical Reactions** >Topic Launch>Quest Kickoff>Document: Quest Rubric **Topic 10: Forces and Motion** >Topic Launch>Quest Kickoff>Document: Quest Rubric >Lesson 1, Describing Motion and Force>Quest Check-In>Interactivity: Define Criteria and Constraints >Lesson 3, Newton's Laws of Motion>uInvestigate Lab: Newton Scooters
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:** uEngineer It!: Gathering Speed with Superconductors, 33 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uDemonstrate Lab: Stopping on a Dime, 494-497

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** uEngineer It!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say “Cheese!”, 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Engineering Design Notebook** >Topic 1: Introduction to Matter>Magnets, Trains, and Super Speed >Topic 3: Energy>Reaching Out with Prosthetics >Topic 4: Thermal Energy>Fire It Up! >Topic 5: Waves and Electromagnetic Radiation>A Camera Without a Lens? >Topic 6: Electricity and Magnetism>Build a Magnetic Sorter >Topic 7: Information Technologies>Build a Soccer Practice Partner >Topic 9: Chemical Reactions>Clean, Clear Water >Topic 10: Forces and Motion>Sticking a Soft Landing

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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.	
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:** uEngineer It!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say “Cheese!”, 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Engineering Design Notebook** >Topic 1: Introduction to Matter>Magnets, Trains, and Super Speed >Topic 3: Energy>Reaching Out with Prosthetics >Topic 4: Thermal Energy>Fire It Up! >Topic 5: Waves and Electromagnetic Radiation>A Camera Without a Lens? >Topic 6: Electricity and Magnetism>Build a Magnetic Sorter >Topic 7: Information Technologies>Build a Soccer Practice Partner >Topic 9: Chemical Reactions>Clean, Clear Water >Topic 10: Forces and Motion>Sticking a Soft Landing

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
SCI.ETS2.A.m.ii Science and technology drive each other forward.	**SE/TE:** uEngineer It!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say "Cheese!", 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Engineering Design Notebook** >Topic 1: Introduction to Matter>Magnets, Trains, and Super Speed >Topic 3: Energy>Reaching Out with Prosthetics >Topic 4: Thermal Energy>Fire It Up! >Topic 5: Waves and Electromagnetic Radiation>A Camera Without a Lens? >Topic 6: Electricity and Magnetism>Build a Magnetic Sorter >Topic 7: Information Technologies>Build a Soccer Practice Partner >Topic 9: Chemical Reactions>Clean, Clear Water >Topic 10: Forces and Motion>Sticking a Soft Landing

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Case Study: An Epic Disaster, 22 Case Study: U.S. Energy Consumption, 126-127 Impact of Synthetic Materials, 433-434 Case Study: Is Plastic Really So Fantastic, 436-437
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:** The Information Age, 313-314 Communication Systems, 315-317 Advantages of Digital Signals, 318 Extraordinary Science: Beam Me Up!, 321
SCI.ETS2.B.m.iii Technology use varies over time and from region to region.	**SE/TE:** uEngineer It!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say "Cheese!", 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497
MS-LS2-5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	Please see *Elevate Science: Life*, 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.

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	**SE/TE:** uEngineer It!: Shockwave to the Future, 155 uEngineer It! Making Water Safe to Drink, 407
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.	
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.	
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!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say “Cheese!”, 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
SCI.ETS3.A.m.iii Science and engineering are influenced by what is valued in society.	**SE/TE:** uEngineer It!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say "Cheese!", 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497 **Realize™ Digital Resources:** **Engineering Design Notebook** >Topic 1: Introduction to Matter>Magnets, Trains, and Super Speed >Topic 3: Energy>Reaching Out with Prosthetics >Topic 4: Thermal Energy>Fire It Up! >Topic 5: Waves and Electromagnetic Radiation>A Camera Without a Lens? >Topic 6: Electricity and Magnetism>Build a Magnetic Sorter >Topic 7: Information Technologies>Build a Soccer Practice Partner >Topic 9: Chemical Reactions>Clean, Clear Water >Topic 10: Forces and Motion>Sticking a Soft Landing

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** Science and Engineering Practices Handbook: The Meaning of Science, 498-499 Science and Engineering Practices Handbook: Science Processes, 500-501 Science and Engineering Practices Handbook: Scientific Knowledge, 502-503 Science and Engineering Practices Handbook: The Engineering Process, 506-509
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!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say “Cheese!”, 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497

Wisconsin Standards for Science Physical Science, Grades 6-8	**Elevate Science ©2019 Physical**
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:** **Realize™ Digital Resources:** **Engineering Design Notebook** >Topic 1: Introduction to Matter>Magnets, Trains, and Super Speed >Topic 3: Energy>Reaching Out with Prosthetics >Topic 4: Thermal Energy>Fire It Up! >Topic 5: Waves and Electromagnetic Radiation>A Camera Without a Lens? >Topic 6: Electricity and Magnetism>Build a Magnetic Sorter >Topic 7: Information Technologies>Build a Soccer Practice Partner >Topic 9: Chemical Reactions>Clean, Clear Water >Topic 10: Forces and Motion>Sticking a Soft Landing
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!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say “Cheese!”, 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uDemonstrate Lab: Evidence of Chemical Change, 442-445 uEngineer It!:Generating Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** **Realize™ Digital Resources:** **Engineering Design Notebook** >Topic 1: Introduction to Matter>Magnets, Trains, and Super Speed >Topic 3: Energy>Reaching Out with Prosthetics >Topic 4: Thermal Energy>Fire It Up! >Topic 5: Waves and Electromagnetic Radiation>A Camera Without a Lens? >Topic 6: Electricity and Magnetism>Build a Magnetic Sorter >Topic 7: Information Technologies>Build a Soccer Practice Partner >Topic 9: Chemical Reactions>Clean, Clear Water >Topic 10: Forces and Motion>Sticking a Soft Landing
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:** Components of Matter, 8 Development of Atomic Theory, 334-335 The First Theories on Atoms, 336 Rutherford’s Theory, 338 Reading Check: Determine Central Ideas, 339 Lesson 1 Check, 343 Science and Engineering Practices Handbook: Scientific Explanations/Scientific Theories and Laws, 502

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
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:** Components of Matter, 8 Development of Atomic Theory, 334-335 The First Theories on Atoms, 336 Rutherford's Theory, 338 Reading Check: Determine Central Ideas, 339 Lesson 1 Check, 343 Science and Engineering Practices Handbook: Scientific Inquiry, 500 Scientific Explanations/Scientific Theories and Laws, 502
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:** **SE/TE:** uEngineer It!: Gathering Speed with Superconductors, 33 uEngineer It!: Prosthetics on the Move, 107 uEngineer It!: Shockwave to the Future, 155 uDemonstrate Lab: Testing Thermal Conductivity, 170-173 uEngineer It!: Say "Cheese!", 197 uEngineer It!: Electromagnetism in Action, 265 uEngineer It!: A Life-Saving Mistake, 299 Quest Kickoff: How can you design and build hot packs and cold packs, 396-397 uEngineer It!: Making Water Safe to Drink, 407 uEngineer It!: Energy from Potholes, 479 uDemonstrate Lab: Stopping on a Dime, 494-497
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).	For supporting content related to the resources expended on space exploration, please see *Elevate Science: Earth*, Topic 12: Solar System and the Universe, Lesson 2: Learning About the Universe.
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, Lesson 5: Genetic Technologies.

A Correlation of Elevate Science: Physical ©2019
To the
Wisconsin Standards for Science, Physical Science, Grades 6-8

Wisconsin Standards for Science **Physical Science, Grades 6-8**	**Elevate Science ©2019** **Physical**
MS-ETS3-3 Mathematically evaluate products of chemical and physical changes to support ideas of atomic theory (PS1.A.m).	**TE Only:** Professional Development: Content Refresher, 4 Conservation of Mass, 28 Reading Check: Infer, 29 Math Toolbox: Conservation of Mass, 29 Formulas, 422 Model It!: Formation of Ammonia, 422 Chemical Reactions and Equations, 423