A Correlation of

Elevate Science Modules ©2019

To the

Massachusetts Science and Technology/Engineering Learning Standards, Grade 6

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A Correlation of Elevate Science Modules, Grades 6-8, ©2019
To the
Massachusetts Science and Technology/Engineering Learning Standards

Introduction

This document demonstrates how ***Elevate Science Modules ©2019*** meets the Massachusetts Science and Technology/Engineering Learning Standards, Grade 6. Correlation page references are to the Student and Teacher's Editions and cited at the page level.

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

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

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

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

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

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

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

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

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

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

Massachusetts Science and Technology /Engineering Learning Standards	Elevate Science Modules Grades 6-8, ©2019
Earth and Space Sciences 6.MS-ESS	
Earth's Place in the Universe 6.MS-ESS1	
6.MS-ESS1-1a Develop and use a model of the Earth-Sun-Moon system to explain the causes of lunar phases and eclipses of the Sun and Moon.	**Module SE/TE: Earth's Place in the Universe** The Two Sides of the Moon, 27 Model It! Solar and Lunar Eclipes, 31 Eclipses, 31 Lesson 3 Check, 34 Topic Review and Assess, 36-37
6.MS-ESS1-4 Analyze and interpret rock layers and index fossils to determine the relative ages of rock formations that result from processes occurring over long periods of time.	**Module SE/TE: Earth Systems** Quest Kick Off: How do paleontologists know where to look for fossils?, 152-153 Connect It!, 154 Relative Age, 155 Position of Rock Layers, 156 Using Fossils, 157 Lesson 1 Check, 161 Quest Check-In, 161 Quest Check-In, 180 Topic Review and Assess, 182-183 uDemonstrate Lab: Core Sampling Through Time, 186-189
6.MS-ESS1-5(MA) Use graphical displays to illustrate that Earth and its solar system are one of many in of the Milky Way galaxy, which is one of billions of galaxies in the universe.	**Module SE/TE: Earth's Place in the Universe** Hands-On Lab: Investigate, 83 Galaxies, 85 Extraordinary Science: Traveling Through the Milky Way, 91

Massachusetts Science and Technology /Engineering Learning Standards	Elevate Science Modules Grades 6-8, ©2019
6.MS-ESS2 Earth's Systems	
6.MS-ESS2-3 Analyze and interpret maps showing the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence that Earth's plates have moved great distances, collided, and spread apart.	**Module SE/TE: Earth Systems** Hypothesis of Continental Drift, 99-101 Evidence From Land Features, 100 Evidence From Fossils, 100 Lesson 1 Check, 106 Plate Boundaries, 113-116 Case Study: Australia on the Move, 118-119 Normal Fault, 122 Reverse Fault, 122 Folding, 123 New Landforms From Plate Movement, 123-124 Tension and Normal Faults, 123 Anticlines and Synclines, 124
6.MS-LS Life Science	
6.MS-LS1 From Molecules to Organisms: Structures and Processes	
6.MS-LS1-1 Provide evidence that all organisms (unicellular and multicellular) are made of cells.	**Module SE/TE: Systems, Reproduction, and Growth** Cellular Organization, 6 Hands-On Lab: Investigate, 7 Evidence-Based Assessment, 52-53 uDemonstrate Lab: It's Alive!, 54-57
6.MS-LS1-2 Develop and use a model to describe how parts of cells contribute to the cellular functions of obtaining food, water, and other nutrients from its environment, disposing of wastes, and providing energy for cellular processes.	**Module SE/TE: Systems, Reproduction, and Growth** Model It!: Bacterial Cell Structures, 30 Characteristics of Plants, 40-43 Cell Function, 63 Figure 2, 74 Hands On-Lab, 75 Model It!: The Substance of Life, 77 Hands-On Lab , 81 Model It: Raisins No More, 86 Model It!, 89 The Functions of Cell Division, 95 Evidence-Based Assessment, 104-105

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6.MS-LS1-3 Construct an argument supported by evidence that the body systems interact to carry out essential functions of life.	**Module SE/TE: Systems, Reproduction, and Growth** Lesson 4 Check, 49 Evidence-Based Assessment, 52-53 Organization of the Body, 115 Cells and Tissues, 116 Reproductive System, 119 Interactivity, 121 Lesson 1 Check, 122 Systems Working Together, 125-129 Case Study: Agents Of Infection, 134-135 The Digestive System as a Whole, 145
6.MS-LS4 Biological Evolution: Unity and Diversity	
6.MS-LS4-1 Analyze and interpret evidence from the fossil record to describe organisms and their environment, extinctions, and changes to life forms throughout the history of Earth.	**Module SE/TE: Systems, Reproduction, and Growth** Evolution and Classification, 22-23 Lesson 2 Check, 24 **Module SE/TE: Diversity of Life** Mary Anning's Fossils, 74 Lesson 1 Check, 79 The Fossil Record, 99-101 Early Earth, 102 Fossil Evidence of Evolution, 102-103 Fossils and Evolution Through Time, 103 Comparisons of Anatomy, 104-105 Lesson 4 Check, 109 Quest Check-In, 109 Topic Review and Assess, 122-123 uDemonstrate Lab: A Bony Puzzle, 126-129 **Module SE/TE: Cycles Influencing Weather and Climate** Earth's Climate History, 116 **Module SE/TE: Earth Systems** Case Study: Rewriting the History of Your Food, 162-163 Lesson 2 Check, 170 Connect It!, 172 Interactivity, 175 Topic Review and Assess, 182-183

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6.MS-LS4-2 Construct an argument using anatomical structures to support evolutionary relationships among and between fossil organisms and modern organisms.	**Module SE/TE: Systems, Reproduction, and Growth** Evolution and Classification, 22-23 **Module SE/TE: Diversity of Life** Connect It!, 98 The Fossil Record, 99-101 Fossil Evidence of Evolution, 102-103 Comparisons of Anatomy, 104-105 Homologous Structures, 104-105 Case Study: Could Dinosaurs Roar?, 110-111 Extraordinary Science: DNA, Fossils, and Evolution, 121 uDemonstrate Lab: A Bony Puzzle, 126-129 **Module SE/TE: Earth Systems** Case Study: Rewriting the History of Your Food, 162-163 Connect It!, 172
6.MS-PS Physical Science	
6.MS-PS1 Matter and Its Interactions	
6.MS-PS1-6 Plan and conduct an experiment involving exothermic and endothermic chemical reactions to measure and describe the release or absorption of thermal energy.	**Module SE/TE: Atoms and Chemical Reactions** Quest Kickoff: How can you design and build hot packs and cold packs?, 66-67 Exothermic Reaction, 84 Endothermic Reaction, 84 Changes in Energy, 84 Energy Graphs for Chemical Reaction, 85 Quest Check-In, 88 Quest Findings, 111

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6.MS-PS1-7(MA) Use a particulate model of matter to explain that density is the amount of matter (mass) in a given volume. Apply proportional reasoning to describe, calculate, and compare relative densities of different materials.	**Module SE/TE: Structure and Properties of Matter** Calculating Density, 18 Determining Density, 18-19 Model It!: Liquid Layers, 18 Math Toolbox: Densities of Unknown Substances, 20 Using Density, 20 Lesson 2 Check, 21 Topic Review and Assess, 34-35 **Module SE/TE: Cycles Influencing Weather and Climate** Model It!: Altitude and Air Density, 7 **Module SE/TE: Earth Systems** Math Toolbox: Calculate Density, 63 Evidence-Based Assessment, 88-
6.MS-PS1-8(MA) Conduct an experiment to show that many materials are mixtures of pure substances that can be separated by physical means into their component pure substances.	**Module SE/TE: Structure and Properties of Matter** Types of Mixtures, 11 uDemonstrate Lab: Help Out the Wildlife, 38-41 **Module SE/TE: Atoms and Chemical Reactions** Connect It!, 68 Homogeneous Mixture, 69 Separating Mixtures, 70 Plan It!: The Right Tool for the Job, 70 Lesson 1 Check, 76 Topic Review and Assess, 108-109

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6.MS-PS2 Motion and Stability: Forces and Interactions	
6.MS-PS2-4 Use evidence to support the claim that gravitational forces between objects are attractive and are only noticeable when one or both of the objects have a very large mass.	**Module SE/TE: Forces** Factors That Affect Gravity, 38 Universal Gravitation, 38 Literacy Connection: Write Arguments, 39 Weight and Mass, 39 Extraordinary Science: Spacetime Curvature and Gravitational Waves, 43 uDemonstrate Lab: Stopping on a Dime, 48-51 **Module SE/TE: Earth's Place in the Universe** Gravity, 21
6.MS-PS4 Waves and Their Applications in Technologies for Information Transfer	
6.MS-PS4-1 Use diagrams of a simple wave to explain that (a) a wave has a repeating pattern with a specific amplitude, frequency, and wavelength, and (b) the amplitude of a wave is related to the energy of the wave.	**Module SE/TE: Waves and Information Technologies** Properties of Waves, 8-9 Wave Energy, 10 Math Toolbox: Wave Properities , 10 Lesson 1 Check, 11 Hands-On Lab, 18
6.MS-PS4-2 Use diagrams and other models to show that both light rays and mechanical waves are reflected, absorbed, or transmitted through various materials.	**Module SE/TE: Waves and Information Technologies** Reflection, Refraction and Absorption, 15-17 Plan It!: Develop Models, 16 uEngineer It!: Say "Cheese!", 23 Connect It!, 24 The Behavior of Sound, 25-27 Reflection and Transmission, 26 Absorption, 26 Diffraction, 27 Model It!, 27 Model It!: Polarizing Glasses, 37 Model It!: Fun with Mirrors, 50 Topic Review and Assess, 54-55 uDemonstrate Lab: Making Waves, 58-61

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6.MS-PS4-3 Present qualitative scientific and technical information to support the claim that digitized signals (sent as wave pulses representing 0s and 1s) can be used to encode and transmit information.	**Module SE/TE: Waves and Information Technologies** uEngineer It!: A Life-Saving Mistake, 75 Signals and Information, 77-79 Electronic Signals, 78 Electromagnetic Signals, 79 Digital Signals, 80 Analog and Digital Signals, 80-82 Sampling Rate, 81 Binary Signals, 82 Sound Information, 83 Transmitting Signals, 83-84 Visual Information, 84 Quest Check-In, 85 Case Study: Super Ultra High Definition!, 86-87 Communications Systems, 91-93 Advantages of Digital Signals, 94-95 Noise, 94 Security, 95 Bandwidth, 95 Lesson 3 Check, 96 Quest Check-In, 96 Extraordinary Science: Beam Me Up!, 97 Topic Review and Assess, 98-99 Evidence-Based Assessment, 100-101 uDemonstrate Lab: Over and Out, 102-105
6.MS.ETS Technology/Engineering	
6.MS-ETS1 Engineering Design	
6.MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution. Include potential impacts on people and the natural environment that may limit possible solutions.	**Module SE/TE: Systems, Reproduction, and Growth** uDemonstrate Lab: Design and Build a Microscope, 106-109 **Module SE/TE: Changing Earth and Human Activity** Question It!: Moving Sand Dunes, 19 **Module SE/TE: Earth's Place in the Universe** uEngineer It: Power from the Tides, 35

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6.MS-ETS1-5(MA) Create visual representations of solutions to a design problem. Accurately interpret and apply scale and proportion to visual representations.	**Module SE/TE: Earth Systems** Model It!: Modeling the Cycling of Rock Material, 82 **Module SE/TE: Earth's Place in the Universe** Communicate the Solution, 111
6.MS-ETS1-6(MA) Communicate a design solution to an intended user, including design features and limitations of the solution.	**Module SE/TE: Changing Earth and Human Activity** Question It!: Moving Sand Dunes, 19
6.MS-ETS2 Materials, Tools, and Manufacturing	
6.MS-ETS2-1(MA) Analyze and compare properties of metals, plastics, wood, and ceramics, including flexibility, ductility, hardness, thermal conductivity, electrical conductivity, and melting point.	**Module SE/TE: Structure and Properties of Matter** Changing Water into Ice, 58 Math Toolbox: The Freezing Point, 59 Topic Review and Assess, 78-79 uDemonstrate Lab: Melting Ice, 82-85 **Module SE/TE: Energy Transfer** uDemonstrate Lab: Testing Thermal Conductivity, 84-87 **Module SE/TE: Earth Systems** Characteristics, 61 Mineral Properties, 62-63 Lesson 2 Check, 68 Topic Review and Assess, 86-87

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6.MS-ETS2-2(MA) Given a design task, select appropriate materials based on specific properties needed in the construction of a solution.	**Module SE/TE: Structure and Properties of Matter** uEngineeer It!: Gathering Speed with Sueprconductors, 33 **Module SE/TE: Energy Transfer** uEngineer It!: Prosthetics on the Move,, 21 **Module SE/TE: Cycles Influencing Weather and Climate** uEngineer It!: Catching Water with a Net, 21 **Module SE/TE: Energy Transfer** uDemonstrate Lab: 3, 2, 1. . . Liftoff!, 46-49
6.MS-ETS2-3(MA) Choose and safely use appropriate measuring tools, hand tools, fasteners, and common hand-held power tools used to construct a prototype.	**Module SE/TE: Energy Transfer** uEngineeer It! Shockwave to the Future, Design Challenge, 69 **Module SE/TE: Earth Systems** uEngineer It!: Designing to Prevent Destruction, 131