A Correlation of

Elevate Science
Course 2, ©2019

To the

Iowa Core
Science Standards
Grade 7

Pearson

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Introduction

This document demonstrates how the ***Elevate Science ©2019*** program supports the Iowa Core Science Standards, Grade 7. Correlation page references are to the Student and Teacher's Editions and cited at the page level.

Pearson 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.

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Motion and Stability: Forces and Interactions (MS-PS2)	
(MS-PS2-3) Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	**SE/TE:** 450–453, 454–457, 472–479, 480–489, 490–495
(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.	This standard is addressed in Elevate Science, Course 3: **SE/TE:** 150–158
(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:** 450–453, 454–462, 464–471, 492–495, 496–499
Energy (MS-PS3)	
(MS-PS3-2) Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	**SE/TE:** 452–462, 464–471, 492–495, 496–499 This standard is also addressed in Elevate Science, Course 1: **SE/TE:** 86–87, 88–89, 100–106, 107, 117, 128–129, 130–135 This standard is also addressed in Elevate Science, Course 3: **SE/TE:** 150–158
(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.	This standard is addressed in Elevate Science, Course 1: **SE/TE:** 136–137, 140–146, 148–154, 156–157, 158–173
(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.	This standard is addressed in Elevate Science, Course 1: **SE/TE:** 86–87, 108–116, 118–125, 126–127, 128–137, 148–154, 158–169

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Earth's Place in the Universe (MS-ESS1)	
(MS-ESS1-1) Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	This standard is addressed in Elevate Science, Course 3: **SE/TE:** 428–437, 438–439, 440–448, 450–458, 460–461, 464–467
(MS-ESS1-2) Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.	This standard is addressed in Elevate Science, Course 3: **SE/TE:** 472–483, 496–505, 506–514, 518–523
(MS-ESS1-3) Analyze and interpret data to determine scale properties of objects in the solar system.	This standard is addressed in Elevate Science, Course 3: **SE/TE:** 472–483, 484–485, 486–494
(MS-ESS1-4) Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.	This standard is addressed in Elevate Science, Course 3: **SE/TE:** 298–299, 302–309, 310–311, 312–318, 320–328
From Molecules to Organisms: Structures and Processes (MS-LS1)	
(MS-LS1-4) Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.	**SE/TE:** 136–137, 150–158, 160–168, 182–185
(MS-LS1-5) Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.	**SE/TE:** 136–139, 170–179, 180–181, 182–185, 186–189
(MS-LS1-6) Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	**SE/TE:** 40–48, 49, 60–61, 214
(MS-LS1-7) Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.	**SE/TE:** 40–48, 50–57, 58–59, 60–61, 94

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Ecosystems: Interactions, Energy, and Dynamics (MS-LS2)	
(MS-LS2-1) Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	**SE/TE:** 190–193, 194–201, 202–203, 224–225, 228–231, 232–233, 241, 245–252, 278–285
(MS-LS2-2) Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	**SE/TE:** 201, 212, 232–233, 236, 239, 243, 245–252, 266–267, 278–279, 282–285
(MS-LS2-3) Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	**SE/TE:** 1, 40–48, 49, 60–61, 190–193, 204–212, 213, 214–222, 224–231, 268–276, 282–285
(MS-LS2-4) Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	**SE/TE:** 232–233, 246–252, 254–265, 266–267, 274, 278–285
Heredity: Inheritance and Variation of Traits (MS-LS3)	
(MS-LS3-1) Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.	This standard is addressed in Elevate Science, Course 3**:** **SE/TE:** 182–183, 194–202, 204–215, 281–285
Engineering Design (MS-ETS1)	
(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:** 64–67, 234–235, 252, 265, 288–289, 330–333, 513 This standard is also addressed in Elevate Science, Course 1: **SE/TE:** 38–41, 55, 106, 322–325 This standard is also addressed in Elevate Science, Course 3: **SE/TE:** 66–67, 84, 85, 118–119, 382–383, 495, 533

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(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:** 252, 265, 479, 489, 513, 540–543 This standard is also addressed in Elevate Science, Course 1: **SE/TE:** 55, 106, 125, 165, 322–325 This standard is also addressed in Elevate Science, Course 3: **SE/TE:** 66–67, 84, 85, 106–107, 118–119, 334–337, 340–341, 382–383, 412, 495
(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:** 489, 513 This standard is also addressed in Elevate Science, Course 1: **SE/TE:** 33, 116, 165, 170–173, 413, 430–433 This standard is also addressed in Elevate Science, Course 3: **SE/TE:** 66–67, 84, 85, 97, 112–115, 164–167, 225, 230–233, 533, 535
(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:** 64–67, 132–135, 265, 330–333, 415, 424–425, 479, 489, 513, 540–543 This standard is also addressed in Elevate Science, Course 1: **SE/TE:** 33, 82–85, 106, 132–135, 154, 174–175, 378–381, 382–383, 413, 425, 430–433 This standard is also addressed in Elevate Science, Course 3: **SE/TE:** 66–67, 84, 85, 112–115, 118–119, 164–167, 334–337