A Correlation of

Elevate Science

Kindergarten, ©2019

To the

Kansas College and Career Ready Standards for Science

Topic Arrangement

Pearson

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Introduction

The following document demonstrates how the ***Elevate Science, ©2019*** program supports the Kansas College and Career Ready Standards for Science, Kindergarten. For each standard, correlation references are to the Student Edition and Teacher Edition where applicable.

Elevate Science is a comprehensive K-5 science program that focuses on active, student-centered learning. It builds students' critical thinking, questioning, and collaboration skills, and fuels interest in STEM and creative problem solving while supporting literacy development for elementary-age learners. Developed to support Kansas College and Career Ready Standards for Science (NGSS), ***Elevate Science*** integrates three dimensional learning of the Scientific and Engineering Practices, Crosscutting Concepts (CCC), and Disciplinary Core Ideas (DCIs).

The ***Elevate Science*** blended print and digital curriculum engages students in phenomena-based inquiry and hands-on investigations.

- Problem–based learning Quests put students on a journey of discovery
- Engineering-focused features infuse STEM learning
- Coding and innovation engage students and build 21st century skills

The Teacher's Edition of ***Elevate Science*** helps elementary educators teach science with confidence: Scaffolding, ELD, differentiated instruction, and an instructional organization based upon the 5E learning model, (Engage, Explore, Explain, Extend/Elaborate, Evaluate), provide all the support needed for successful teaching practices. Professional development offers point-of-use support. A full-view approach to inquiry and testing provides new options for a variety of hands-on labs and assessments for three-dimensional learning.

Elevate Science 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 argument. 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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Kansas College and Career Ready Standards for Science, Kindergarten	**Elevate Science Kindergarten ©2019**
Forces and Interactions: Pushes and Pulls	
Performance Expectation K-PS2-1	
Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. **Clarification Statement:** Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other. **Assessment Boundary:** Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.	**SE/TE**: 1–10, 12–28, 32–35
Disciplinary Core Ideas	
PS2.A: Forces and Motion Pushes and pulls can have different strengths and directions.	**SE/TE**: 1–10, 13, 20–28, 32–35
Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.	**SE/TE**: 1–5, 7–10, 12–27, 30–35
PS2.B: Types of Interactions When objects touch or collide, they push on one another and can change motion.	**SE/TE**: 12–19, 21–22, 24–25, 30–31
PS3.C: Relationship Between Energy and Forces A bigger push or pull makes things speed up or slow down more quickly. *(secondary to K-PS2-1)*	**SE/TE**: 9, 15, 20–25

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Science and Engineering Practices	
Planning and Carrying Out Investigations With guidance, plan and conduct an investigation in collaboration with peers.	**SE/TE**: 4, 7, 13, 16–19, 26, 34–35
Crosscutting Concepts	
Cause and Effect Simple tests can be designed to gather evidence to support or refute student ideas about causes.	**SE/TE**: 4, 7, 15, 16–19, 26, 34–35
Performance Expectation K-PS2-2	
Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. **Clarification Statement:** Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn. **Assessment Boundary:** Assessment does not include friction as a mechanism for change in speed.	**SE/TE:** 10, 13–27, 30–31, 34–35, 115
Disciplinary Core Ideas	
PS2.A: Forces and Motion Pushes and pulls can have different strengths and directions.	**SE/TE:** 1–10, 13, 20–28, 32–35
Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.	**SE/TE:** 1–5, 7–10, 12–27, 30–35
ETS1.A: Defining Engineering Problems A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.	**SE/TE:** 38–39

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Science and Engineering Practices	
Analyzing and Interpreting Data Analyze data from tests of an object or tool to determine if it works as intended.	**SE/TE:** 16–19, 117
Crosscutting Concepts	
Cause and Effect Simple tests can be designed to gather evidence to support or refute student ideas about causes.	**SE/TE:** 4, 7, 15, 16–19, 26, 34-35
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment	
Performance Expectation K-LS1-1	
Use observations to describe patterns of what plants and animals (including humans) need to survive. **Clarification Statement:** Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and that all living things need water.	**SE/TE:** 79, 87, 146–148, 151, 157, 164–169, 171, 175, 178, 180–181, 184–185
Disciplinary Core Ideas	
LS1.C: Organization for Matter and Energy Flow in Organisms All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	**SE/TE:** 150–152, 154–163, 202
Science and Engineering Practices	
Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.	**SE/TE:** 79, 87, 123, 146–148, 151, 157, 165, 171, 175, 184–185

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Connections to Nature of Science Scientists look for patterns and order when making observations about the world.	**SE/TE:** 171, 184–185
Crosscutting Concepts	
Patterns Patterns in the natural and human designed world can be observed and used as evidence.	**SE/TE:** 152, 166, 184–185
Performance Expectation K-ESS2-2	
Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. **Clarification Statement:** Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.	**SE/TE:** 188–192, 200–210, 226–229
Disciplinary Core Ideas	
ESS2.E: Biogeology Plants and animals can change their environment.	**SE/TE:** 186–190, 198–209, 220, 224–225
ESS3.C: Human Impacts on Earth Systems Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. *(secondary to K-ESS2-2)*	**SE/TE:** 204–209, 224–225
Science and Engineering Practices	
Engaging in Argument from Evidence Construct an argument with evidence to support a claim.	**SE/TE:** 190, 199, 226–227, EM7, EM10
Crosscutting Concepts	
Systems and System Models Systems in the natural and designed world have parts that work together.	**SE/TE:** 162–163, 202, 215

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Performance Expectation K-ESS3-1	
Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live. **Clarification Statement:** Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas, and grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.	**SE/TE:** 152–156, 158–165, 170, 178–179, 194–195, 197–198, 207
Disciplinary Core Ideas	
ESS3.A: Natural Resources Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.	**SE/TE:** 160, 166, 180–181, 194, 206
Science and Engineering Practices	
Developing and Using Models Use a model to represent relationships in the natural world.	**SE/TE:** 109, 126, 129, 157, 193, 199, 208
Crosscutting Concepts	
Systems and System Models Systems in the natural and designed world have parts that work together.	**SE/TE:** 151, 160, 166, 168, 169, 202, 215

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Performance Expectation K-ESS3-3	
Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. **Clarification Statement:** Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.	**SE/TE:** 190–191, 206–221, 226–227
Disciplinary Core Ideas	
ESS3.C: Human Impacts on Earth Systems Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.	**SE/TE:** 204–209, 224–225
ETS1.B: Developing Possible Solutions Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	**SE/TE:** 82, 84–85, 146–147, 162–163, 176–178
Science and Engineering Practices	
Obtaining, Evaluating, and Communicating Information Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.	**SE/TE:** 106, 129
Crosscutting Concepts	
Patterns Patterns in the natural and human designed world can be observed and used as evidence.	**SE/TE:** 118, 152, 166, 207–209, 216
Cause and Effect Events have causes that generate observable patterns.	**SE/TE:** 133, 195, 205, 207–209, 213

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Weather and Climate	
Performance Expectation K-PS3-1	
Make observations to determine the effect of sunlight on Earth's surface. **Clarification Statement:** Examples of Earth's surface could include sand, soil, rocks, and water. **Assessment Boundary:** Assessment of temperature is limited to relative measures such as warmer/cooler.	**SE/TE:** 72–76, 78–93, 96–97
Disciplinary Core Ideas	
PS3.B: Conservation of Energy and Energy Transfer Sunlight warms Earth's surface.	**SE/TE:** 72–76, 78–93, 96–97
Science and Engineering Practices	
Planning and Carrying Out Investigations Make observations (firsthand or from media) to collect data that can be used to make comparisons.	**SE/TE:** 18–19, 43, 49, 57, 60–61, 70–71, 76, 92–93, 109, 117, 148, 176–177, 184–185, EM7
Connections to Nature of Science Scientists use different ways to study the world.	**SE/TE:** 76–77, 100–101, 132–133
Crosscutting Concepts	
Cause and Effect Events have causes that generate observable patterns.	**SE/TE:** 79, 88–93, 118–121, 124–125

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Performance Expectation K-PS3-2	
Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on an area. **Clarification Statement:** Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.	**SE/TE:** 74–75, 81–82, 89, 90, 92–94, 114–115
Disciplinary Core Ideas	
PS3.B: Conservation of Energy and Energy Transfer Sunlight warms Earth's surface.	**SE/TE:** 72–76, 78–93, 96–97
Science and Engineering Practices	
Constructing Explanations and Designing Solutions Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem.	**SE/TE:** 92–93, 114–115, 162–163, 211, 216–217, EM10
Crosscutting Concepts	
Cause and Effect Events have causes that generate observable patterns.	**SE/TE:** 86, 88–94

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Performance Expectation K-ESS2-1	
Use and share observations of local weather conditions to describe patterns over time. **Clarification Statement:** Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. **Assessment Boundary:** Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.	**SE/TE:** 106–108, 110, 113, 118–129
Disciplinary Core Ideas	
ESS2.D: Weather and Climate Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.	**SE/TE:** 104–105, 108–121, 125, 138–139
Science and Engineering Practices	
Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.	**SE/TE:** 79, 87, 123, 146–148, 151, 157, 165, 171, 175, 184–185
Connections to Nature of Science Scientists look for patterns and order when making observations about the world.	**SE/TE:** 118–121, 124–125, 133
Crosscutting Concepts	
Patterns Patterns in the natural and human designed world can be observed and used as evidence.	**SE/TE:** 118–121, 124–125

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Performance Expectation K-ESS3-2	
Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. **Clarification Statement:** Emphasis is on local forms of severe weather.	**SE/TE:** 106–107, 129–138
Disciplinary Core Ideas	
ESS3.B: Natural Hazards Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.	**SE/TE:** 104–105, 127–136
ETS1.A Defining and Delimiting an Engineering Problem Asking questions, making observations, and gathering information are helpful in thinking about problems. *(secondary to K-ESS3-2)*	**SE/TE:** 38–39, 87, 114–115, 134–135, 162–163, 218–219
Science and Engineering Practices	
Asking Questions and Defining Problems Ask questions based on observations to find more information about the designed world.	**SE/TE:** 64, 70–71, 128, 134–135
Obtaining, Evaluating, and Communicating Information Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.	**SE/TE:** 123, 140–141, EM9
Crosscutting Concepts	
Cause and Effect Events have causes that generate observable patterns.	**SE/TE:** 129–133

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Interdependence of Science, Engineering, and Technology People encounter questions about the natural world every day.	**SE/TE:** 104, 106, 128–129
Influence of Engineering, Technology, and Science on Society and the Natural World People depend on various technologies in their lives; human life would be very different without technology.	**SE/TE:** 132–133, 137
Engineering Design	
Performance Expectation K-2-ETS1-1	
Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	**SE/TE:** 38–39, 87, 114–117, 136–137, 164–165, 220–221, EM11
Disciplinary Core Ideas	
ETS1.A Defining and Delimiting Engineering Problems A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.	**SE/TE:** 38–39
Asking questions, making observations, and gathering information are helpful in thinking about problems.	**SE/TE:** 38–39, 87, 114–115, 134–135, 162–163, 217–219
Before beginning to design a solution, it is important to clearly understand the problem.	**SE/TE:** 92–93, 218–219, EM10
Science and Engineering Practices	
Asking Questions and Defining Problems Ask questions based on observations to find more information about the designed world.	**SE/TE:** 64, 70–71, 134–135

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Define a simple problem that can be solved through the development of a new or improved object or tool.	**SE/TE:** 64, 114–115, 162–163, 218–219
Performance Expectation K-2-ETS1-2	
Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	**SE/TE:** 11, 62–63, 82, 84–85, 116–117, 136–137, 148–149, 164–165, 180, 219, EM11
Disciplinary Core Ideas	
ETS1.B Developing Possible Solutions Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	**SE/TE:** 82, 84–85, 146–147, 162–163, 176–178
Science and Engineering Practices	
Developing and Using Models Develop a simple model based on evidence to represent a proposed object or tool.	**SE/TE:** 11, 62–63, 82, 84–85, 162–163, 219
Crosscutting Concepts	
Structure and Function The shape and stability of structures of natural and designed objects are related to their function/s.	**SE/TE:** 28, 82, 84–85, 94, 162–163

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Performance Expectation K-2-ETS1-3	
Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	**SE/TE:** 26, 116–117
Disciplinary Core Ideas	
ETS1.C Optimizing the Design Solution Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	**SE/TE:** 26, 62–63
Science and Engineering Practices	
Analyzing and Interpreting Data Analyze data from tests of an object or tool to determine if it works as intended.	**SE/TE:** 16–19, 117