A Correlation of

Elevate Science

Grade 2, ©2019

ARCHDIOCESE of MILWAUKEE

Office for Schools

To the

Next Generation Science Standards

Archdiocese of Milwaukee
Science Curriculum for Grade 2

Pearson

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Introduction

The following document demonstrates how the ***Elevate Science ©2019*** program supports the Archdiocese of Milwaukee's current science curriculum for Grade 2, through concurrent implementation of the Next Generation Science Standards. 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 Next Generation Science Standards (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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Next Generation Science Standards	Elevate Science ©2019
2-PS1 Matter and Its Interactions	
Performance Expectation 2-PS1-1	
Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. **Clarification Statement:** Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.	**SE/TE:** 4, 6–7, 21, 24–25, 32, 34, 40–41
Disciplinary Core Ideas	
PS1.A: Structure and Properties of Matter Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties.	**SE/TE:** 6–13, 14-19, 20-25, 42–43, 50, 54–59, 65
Science and Engineering Practices	
Planning and Carrying Out Investigations Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question.	**SE/TE:** 4, 7, 21, 24–25, 32, 34, 40–41
Crosscutting Concepts	
Patterns Patterns in the natural and human designed world can be observed.	**SE/TE:** 17, 56–57, 59

Next Generation Science Standards	Elevate Science ©2019
Performance Expectation 2-PS1-2	
Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose **Clarification Statement:** Examples of properties could include, strength, flexibility, hardness, texture, and absorbency. **Assessment Boundary**: Assessment of quantitative measurements is limited to length.	**SE/TE:** 11, 15, 19, 21, 24–25, 32, 34, 40–41, 46, 64, 66–68
PS1.A: Structure and Properties of Matter Different properties are suited to different purposes.	**SE/TE:** 1–3, 11, 15, 20–34, 44–45, 50, 57, 59
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:** 11, 15, 19, 21, 24–25, 32, 34, 40–41, 46, 64, 66–68
Crosscutting Concepts	
Cause and Effect Simple tests can be designed to gather evidence to support or refute student ideas about causes.	**SE/TE:** 5, 9, 10, 15, 18, 22, 27, 28, 40–41
Influence of Engineering, Technology, and Science on Society and the Natural World Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world.	**SE/TE:** 10–15, 22–29 **TE only:** 8

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Next Generation Science Standards	Elevate Science ©2019
Performance Expectation 2-PS1-3	
Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. **Clarification Statement:** Examples of pieces could include blocks, building bricks, or other assorted small objects.	**SE/TE:** 60–67, 74–75
Disciplinary Core Ideas	
PS1.A: Structure and Properties of Matter Different properties are suited to different purposes.	**SE/TE:** 60–67, 74–75
A great variety of objects can be built up from a small set of pieces.	**SE/TE:** 60–67, 74–75
Science and Engineering Practices	
Constructing Explanations and Designing Solutions Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.	**SE/TE:** 61, 64, 74–75
Crosscutting Concepts	
Energy and Matter Objects may break into smaller pieces and be put together into larger pieces, or change shapes.	**SE/TE:** 48–53, 62–63, 74–75

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Next Generation Science Standards	Elevate Science ©2019
Performance Expectation 2-PS1-4	
Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. **Clarification Statement:** Examples of reversible changes could include materials such as water and butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.	**SE/TE:** 55–59
Disciplinary Core Ideas	
PS1.B: Chemical Reactions Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.	**SE/TE:** 54–59
Science and Engineering Practices	
Engaging in Argument from Evidence Construct an argument with evidence to support a claim.	**SE/TE:** 55, 57, 59
Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena Scientists search for cause and effect relationships to explain natural events.	**TE:** 57
Crosscutting Concepts	
Cause and Effect Events have causes that generate observable patterns.	**SE/TE:** 54–59

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Next Generation Science Standards	Elevate Science ©2019
2-LS2 Ecosystems: Interactions, Energy, and Dynamics	
Performance Expectation 2-LS2-1	
Plan and conduct an investigation to determine if plants need sunlight and water to grow. **Assessment Boundary:** Assessment is limited to testing one variable at a time.	**SE/TE:** 163, 188–189
Disciplinary Core Ideas	
LS2.A: Interdependent Relationships in Ecosystems Plants depend on water and light to grow.	**SE/TE:** 156, 162–164, 188–189
Science and Engineering Practices	
Planning and Carrying Out Investigations Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question.	**SE/TE:** 163, 188–189
Crosscutting Concepts	
Cause and Effect Events have causes that generate observable patterns.	**SE/TE:** 162–167

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Performance Expectation 2-LS2-2	
Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	**SE/TE:** 175, 178–181
Disciplinary Core Ideas	
LS2.A: Interdependent Relationships in Ecosystems Plants depend on animals for pollination or to move their seeds around.	**SE/TE:** 172, 174–182
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:** 175, 178–181
Science and Engineering Practices	
Developing and Using Models Develop a simple model based on evidence to represent a proposed object or tool.	**SE/TE:** 175, 178–181
Crosscutting Concepts	
Structure and Function The shape and stability of structures of natural and designed objects are related to their function(s).	**SE/TE:** 174–176

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2-LS4 Biological Evolution: Unity and Diversity	
Performance Expectation 2-LS4-1	
Make observations of plants and animals to compare the diversity of life in different habitats. **Clarification Statement:** Emphasis is on the diversity of living things in each of a variety of different habitats. **Assessment Boundary:** Assessment does not include specific animal and plant names in specific habitats.	**SE/TE:** 190–191, 194–201, 204–216, 220–225
Disciplinary Core Ideas	
LS4.D: Biodiversity and Humans There are many different kinds of living things in any area, and they exist in different places on land and in water.	**SE/TE:** 190–191, 194–201, 204–216, 220–225
Science and Engineering Practices	
Planning and Carrying Out Investigations Make observations (firsthand or from media) to collect data which can be used to make comparisons.	**SE/TE:** 194, 197, 206–215, 224–225
Scientific Knowledge is Based on Empirical Evidence Scientists look for patterns and order when making observations about the world.	**TE:** 206

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Next Generation Science Standards	**Elevate Science ©2019**
2-ESS1 Earth's Place in the Universe	
Performance Expectation 2-ESS1-1	
Use information from several sources to provide evidence that Earth events can occur quickly or slowly. **Clarification Statement:** Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly. **Assessment Boundary**: Assessment does not include quantitative measurements of timescales.	**SE/TE:** 116, 118–129, 142–145
Disciplinary Core Ideas	
ESS1.C: The History of Planet Earth Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.	**SE/TE:** 116, 118–129
Science and Engineering Practices	
Constructing Explanations and Designing Solutions Make observations from several sources to construct an evidence-based account for natural phenomena.	**SE/TE:** 116, 118–129
Crosscutting Concepts	
Stability and Change Things may change slowly or rapidly.	**SE/TE:** 116, 118–129

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2-ESS2 Earth's Systems	
Performance Expectation 2-ESS2-1	
Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. **Clarification Statement:** Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.	**SE/TE:** 116, 130–140, 146–147
Disciplinary Core Ideas	
ESS2.A: Earth Materials and Systems Wind and water can change the shape of the land.	**SE/TE:** 112–115, 127–128, 132–133, 140
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:** 123, 136–140, 146–147
Science and Engineering Practices	
Constructing Explanations and Designing Solutions Compare multiple solutions to a problem.	**SE/TE:** 116, 130–140, 146–147
Crosscutting Concepts	
Stability and Change Things may change slowly or rapidly.	**SE/TE:** 116, 130–140, 146–147
Influence of Engineering, Technology, and Science on Society and the Natural World Developing and using technology has impacts on the natural world.	**SE/TE:** 96–97, 132–139
Science Addresses Questions About the Natural and Material World Scientists study the natural and material world.	**SE/TE:** 114, 136–137, 141

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Performance Expectation 2-ESS2-2	
Develop a model to represent the shapes and kinds of land and bodies of water in an area. **Assessment Boundary:** Assessment does not include quantitative scaling in models.	**SE/TE:** 83, 88–89, 104, 110–111, 136–137
Disciplinary Core Ideas	
ESS2.B: Plate Tectonics and Large-Scale System Interactions Maps show where things are located. One can map the shapes and kinds of land and water in any area.	**SE/TE:** 78–79, 83, 88–89, 91, 98–102, 104–105
Science and Engineering Practices	
Developing and Using Models Develop a model to represent patterns in the natural world.	**SE/TE:** 83, 88–89, 104, 110–111, 136–137
Crosscutting Concepts	
Patterns Patterns in the natural world can be observed.	**SE/TE:** 84–89, 91–95, 99, 102
Performance Expectation 2-ESS2-3	
Obtain information to identify where water is found on Earth and that it can be solid or liquid.	**SE/TE:** 90–97
Disciplinary Core Ideas	
ESS2.C: The Roles of Water in Earth's Surface Processes Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form.	**SE/TE:** 90–97

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Science and Engineering Practices	
Obtaining, Evaluating, and Communicating Information Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question.	**SE/TE:** viii, 78–80, 82–83, 90–97, 104, 107, EM14–EM23
Crosscutting Concepts	
Patterns Patterns in the natural world can be observed.	**SE/TE:** 91–95
K-2-ETS1 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:** 2–3, 12–13, 44–45, 66–67, 74–75, 116, 138–139, EM10 **TE only:** 41, 75, 111, 147, 189, 225
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.	**SE/TE:** 2–3, 12–13, 44–45, 66–67, 74–75, 116, 138–139, EM10
Asking questions, making observations, and gathering information are helpful in thinking about problems.	**SE/TE:** 2–3, 12–13, 44–45, 66–67, 74–75, 116, 138–139, 226, EM2–EM3
Before beginning to design a solution, it is important to clearly understand the problem.	**SE/TE:** 66–67, 123, 136–137, 146–147, EM10

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Science and Engineering Practices	
Asking Questions and Defining Problems Ask questions based on observations to find more information about the natural and/or designed world.	**SE/TE:** 24–25, 105, 155, 183, 188–189, 202–203 **TE:** 41, 75, 111, 147, 189, 225
Define a simple problem that can be solved through the development of a new or improved object or tool.	**SE/TE:** 2–3, 12–13, 44–45, 66–67, 74–75, 96–97, 114–116, 138–139, 180–181, 202–203
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:** 12–13, 15, 24–25, 62, 66–67, 74–75, 96–97, 123, 131, 136–137, 175, 180–181, 202–203, 211, EM6–EM7
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:** 12–13, 15, 24–25, 62, 66–67, 74–75, 96–97, 123, 131, 136–137, 175, 180–181, 202–203, 211, EM6–EM7, EM9, EM13
Science and Engineering Practices	
Developing and Using Models Develop a simple model based on evidence to represent a proposed object or tool.	**SE/TE:** 12–13, 15, 96–97, 116, 131, 136–137
Crosscutting Concepts	
Structure and Function The shape and stability of structures of natural and designed objects are related to their function(s).	**SE/TE:** 24–25, 74–75, 133–140, 146–147, 175–181, 213
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:** 140, 146–147

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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:** 123, 140, 146–147, EM12–EM13
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:** 15, 61, 175