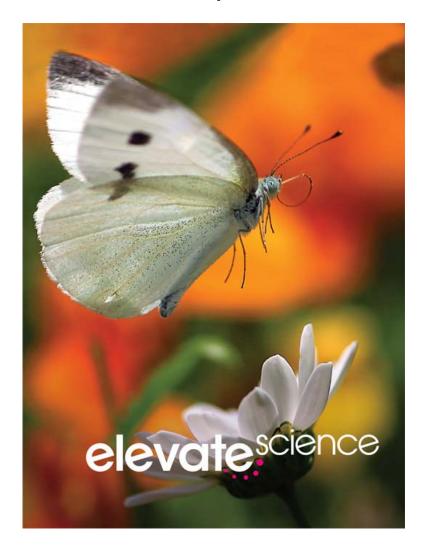
A Correlation of

Elevate Science Grade 2, ©2019



To the

Utah Science and Engineering Education Standards (SEEd)

Grade 2

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INTRODUCTION

The second-grade SEEd standards provide a framework for students to construct explanations for how matter on Earth's surface changes. Students investigate how living things live in habitats and have body structures that best fit their needs. Students use models to explain the forms and properties of matter. Additionally, students design solutions to problems that exist in these areas.

Strand 2.1: CHANGES IN THE EARTH'S SURFACE

Earth has an ancient history of slow and gradual surface changes, punctuated with quick but powerful geologic events like volcanic eruptions, flooding, and earthquakes. Water and wind play a significant role in changing Earth's surface. The effects of wind and water can cause both slow and quick changes to the surface of the Earth. Scientists and engineers design solutions to slow or prevent wind or water from changing the land.

Standard 2.1.1 Develop and use models illustrating the patterns of landforms and water on Earth.

Examples of models could include valleys, canyons, or floodplains and could depict water in the solid or liquid state. (ESS2.B)

SE/TE:

ulnvestigate Lab: How can you make a map of a special place?, 83

Quest Check-In Lab: How can you model landforms?, 88-89

ulnvestigate Lab: Where is the best place to cross the water?, 91

ulnvestigate lab: Why do map makers use different maps?, 99

Quest Check-In Lab: How far is it from here to

there?, 102

Quest Findings: Map Your Hike!, 104

Realize™ Digital Resources: Earth's Land and Water

>Topic Launch>Quest Kickoff: Map Your Hike
>Lesson 1, Describe Earth's Surface>Video:
Describe Earth's Surface; >Interactivity: Landforms
>Lesson 2, Water on Earth>Video: Water on Earth;
>Interactivity: Water, Water Everywhere;
>Lesson 3, Map Land and Water>Video: Map Land and Water; >Interactivity: Map and Go
>Topic Close>Quest Findings: Interactivity>Map Your Hike

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Standard 2.1.2 Construct an explanation about changes in Earth's surface that happen quickly or slowly. Emphasize the contrast between fast and slow changes. Examples of fast changes could include volcanic eruptions, earthquakes, or landslides. Examples of slow changes could include the erosion of mountains or the shaping of canyons. (ESS1.C)	SE/TE: Jumpstart Discovery!, 118 ulnvestigate Lab: How do volcanoes change Earth?, 119 Volcanoes, 120 Earthquakes, 121 Interactivity, 122 Floods and Landslides, 122 Jumpstart Discovery!, 124 ulnvestigate Lab: How do mountains change?, 125 Earth Movement and Mountains, 126 Interactivity: Changing Land, 126 Erosion and Deposition, 127 STEM Quest Check-In Lab: How does the ocean affect a coastal town?, 128 Solve it with Science: What if slow changes on Earth stopped?, 129 Assessment, 142-143 Evidence-Based Assessment, 144-145 Realize™ Digital Resources: Earth's Processes >Topic Launch>Quest Kickoff: Save the Town! >Lesson 1, Earth Changes Quickly: Earth Changes Quickly; >Interactivity: Quick Changes on Earth >Lesson 2, Earth Changes Slowly>Video: Earth Changes Slowly; >Interactivity>Slow Changes on Earth; >Quiz: Earth Change Earth Change Earth Change Earth; >Interactivity: How People Can Change Earth; >Interactivity: How People Change Earth

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Standard 2.1.3 Design solutions to slow or prevent wind or water from changing the shape of land. Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs. Examples of solutions could include retaining walls, dikes, windbreaks, shrubs, trees, and grass to hold back wind, water, and land. (ESS2.A, ESS2.C, ETS1.A, ETS1.B, ETS1.C)	SE/TE: uConnect Lab: Which solution is better?, 116 ulnvestigate Lab: How do plants protect fields from wind?, 131 Quest Check-In Lab: How can you protect a coastal town from erosion?, 136-137 uEngineer It!: Stop Wind Erosion, 138-139 Quest Findings!: Save the Town, 140 uDemonstrate Lab: How can you compare different solutions?, 146-147
	Realize™ Digital Resources: Earth's Land and Water >Topic Launch>Quest Kickoff: Map Your Hike >Topic Close>Quest Findings: Map Your Hike Earth's Processes >Topic Launch>Quest Kickoff: Save the Town! >Lesson 3, People Can Change Earth>Video: People Can Change Earth; >Interactivity: How People Change Earth; >uEngineer It! Interactivity: Protect the House and Land; >Quiz: People Can Change Earth

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Strand 2.2: LIVING THINGS AND THEIR HABITATS

Living things (plants and animals, including humans) need water, air, and resources from the land to survive and live in habitats that provide these necessities. The physical characteristics of plants and animals reflect the habitat in which they live. Animals also have modified behav- iors that help them survive, grow, and meet their needs. Humans sometimes mimic plant and animal adaptations to survive in their environment.

Standard 2.2.1 Obtain, evaluate, and communicate information about patterns of living things (plants and animals, including humans) in different habitats.

Emphasize the diversity of living things in land and water habitats. Examples of patterns in habitats could include descriptions of temperature or precipitation and the types of plants and animals found in land habitats. (LS2.C, LS4.C, LS4.D)

SE/TE:

uConnect Lab: What is out there? 194

Literacy Connection: Main Idea and Details: Tide

Pools, 195

Jumpstart Discovery!, 196

ulnvestigate Lab: Who lives in a grassland?, 197

Habitats, 198

Living Things and Their Habitats, 199

Interactivity: Your Home Is Your Habitat, 199

Quest Connection, 199 Jumpstart Discovery!, 204

Forests, 206 Deserts, 206 Tundra, 206

Science Practice Toolbox: Plan an Investigation, 207

Grasslands, 208

Interactivity: Compare Land Habitats, 208 Quest Check-In: Habitat Diversity, 209

The Ocean, 212-213

Connecting Concepts Toolbox: Structure and

Function, 213

Rivers and Streams, 214

Wetlands, 215

Interactivity: Explore Water Habitats, 215

Quest Check-In: Why Some Animals Live in Water,

216

Assessment, 220-221

Evidence-Based Assessment, 222-223

uDemonstrate Lab: How can you compare diversity

in two habitats?, 224-225

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(Continued)	(Continued) Realize™ Digital Resources: Habitats >Lesson 1, Identify Habitats>Video: Identify Habitats; >Interactivity: Your Home Is Your Habitat >Lesson 2, Living Things in Land Habitats >Video: Living Things in Land Habitats; >Interactivity: Compare Land Habitats >Lesson 3, Living Things in Water Habitats>Video: Living Things in Water Habitats; >Interactivity: Explore Water Habitats
Standard 2.2.2 Plan and carry out an investigation of the structure and function of plant and animal parts in different habitats. Emphasize how different plants and animals have different structures to survive in their habitat. Examples could include the shallow roots of a cactus in the desert or the seasonal changes in the fur coat of a wolf. (LS1.A, LS4.A, LS4.D)	SE/TE: uInvestigate Lab: What is inside a seed or a bulb?, 155 Plant Life Cycles, 157 Plant Parts, 165 Interactivity: How Plant Parts Help Plants, 165 Quest Check-In Lab: How can you see the parts of a plant work? 166-167 Jumpstart Discovery!, 174 uInvestigate Lab: How can you model how animals spread seeds?, 175 Seeds Can Travel, 176 uDemonstrate Lab: How does a plant make oxygen?, 188-189 Living Things and Their Habitats, 199 uInvestigate: How do plants survive in water?, 211 Connecting Concepts Toolbox: Structure and Function: 213 Quest Check-In, 216 Realize™ Digital Resources: Plants and Animals >Lesson 2, Plant Needs>Interactivity: How Plant Parts Help Plants >Lesson 4, Animals Can Help Plants Reproduce> Video: Animals Can Help Plants Reproduce Habitats >Lesson 1, Identify Habitats>Interactivity: Your Home is Your Habita

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Standard 2.2.3 Develop and use a model that mimics the function of an animal dispersing seeds or pollinating plants. Examples could include plants that have seeds with hooks or barbs that attach themselves to animal fur, feathers, or human clothing, or dispersal through the wind, or consumption of fruit and the disposal of the pits or seeds. (LS2.A)	SE/TE: uInvestigate Lab: How can you model how animals spread seeds?, 175 Seeds Can Travel, 176 Pollen Can Travel, 177 Quest Check-In Lab: What is pollination?, 178-179 uEngineer It! Design STEM: Here's the Buzz, 180-181 Realize™ Digital Resources: Plants and Animals >Lesson 4, Animals Can Help Plants Reproduce >Video: Animals Can Help Plants Reproduce; >Interactivity: How Seeds and Pollen are Dispersed; >Quiz: Animals Can Help Plants Reproduce
Standard 2.2.4 Design a solution to a human problem by mimicking the structure and function of plants and/or animals and how they use their external parts to help them survive, grow, and meet their needs. Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs. Examples could include a human wearing a jacket to mimic the fur of an animal or a webbed foot to design a better swimming fin. (LS1.A, LS1.D, ETS1.A, ETS1.B, ETS1.C)	SE/TE: uEngineer It! Model STEM, Design a Nutcracker, 12- 13 STEM uInvestigate Lab: What can beavers teach engineers?, 15 Supporting Content: uEngineer It! Design STEM: Here's the Buzz, 180-181 Realize™ Digital Resources: Plants and Animals >Lesson 4, Animals Can Help Plants Reproduce>uEngineer It! Video: Here's the Buzz

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Strand 2.3: PROPERTIES OF MATTER

All things are made of matter which exists with different forms and properties. Matter can be described and classified by its observable properties. Materials with certain properties are well-suited for specific uses. Heating or cooling some types of matter may or may not irreversibly change their properties.

Standard 2.3.1 Plan and carry out an investigation to classify different kinds of materials based on patterns in their observable properties.

Examples could include sorting materials based on similar properties such as strength, color, flexibility, hardness, texture, or whether the materials are solids or liquids. (PS1.A)

SE/TE:

uConnect Lab: Which object is bigger?, 4

Jumpstart Discovery!, 6

ulnvestigate Lab: What is different?, 7

Matter Everywhere, 8

Interactivity: Explore Solids, Liquids, and Gases, 9

Describe Matter, 10

Quest Check-In: Build with Solids, Liquids, and

Gasses, 11

Observe Properties, 17

Interactivity: Observe Properties of Matter, 18

Quest Check-In: Observe, Measure, Test, 19

ulnvestigate Lab: Which package fits the blocks?, 21

Everyday Solids, 23

Interactivity: The Most Useful Tool for a Job, 23

Assessment, 36-37

Evidence-Based Assessment, 38-39

uDemonstrate Lab: What makes something sink or

float?, 40-41

Realize™ Digital Resources: Properties of Matter

>Lesson 1, Describe Matter>Interactivity: Explore

Solids, Liquids, and Gases

>Lesson 2, Properties of Matter>Interactivity:

Observe Properties of Matter

>Lesson 3, Use Solids>Interactivity: The Most Useful

Tool for a Job

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Standard 2.3.2 Construct an explanation showing how the properties of materials influence their intended use and function. Examples could include using wood as a building material because it is lightweight and strong or the use of concrete, steel, or cotton due to their unique properties. (PS1.A)	SE/TE: Quest Check-In: Build with Solids, Liquids, and Gases, 11 uEngineer It! Model STEM: Design a Nutcracker!, 12-13 STEM uInvestigate Lab: What can beavers teach engineers?, 15 Observe Properties, 17 Test Properties, 18 Quest Check-In: Observe, Measure, Test, 19 uInvestigate Lab: Which package fits the blocks?, 21 Uses of Solids, 22 Interactivity: The Most Useful Tool for the Job, 23 STEM Quest Check-In Lab: How do you use shapes when building?, 24-25 Quest Connection, 28 Crosscutting Concepts Toolbox: Constructing Explanations, 29 Quest Check-In: Liquid and Gas Toys, 32 Quest Findings: Toy Building Kit, 34 Assessment, 36-37 uDemonstrate Lab: What makes something sink or float?, 40-41 STEM Quest Check-In Lab: What materials make a bridge strong?, 64 Quest Findings: Building Bridges, 68 Realize™ Digital Resources: Properties of Matter >Lesson 3, Use Solids>Video: Use Solids; >Interactivity: The Most Useful Tool for the Job >Lesson 4, Use Liquids and Gases>Video: Use Liquids and Solids

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Standard 2.3.3 Develop and use a model to describe how an object, made of a small set of pieces, can be disassembled and reshaped into a new object with a different function. Emphasize that a great variety of objects can be built from a small set of pieces. Examples of pieces could include wooden blocks or building bricks. (PS1.A)	SE/TE: STEM Quest Check-In Lab: How do you use shapes when building?, 24-25 STEM uConnect Lab: How can you use all of the materials?, 46 STEM uInvestigate Lab: What can you build?, 61 Objects Can Be Assembled from Other Objects, 62-63 Interactivity: Choices Matter, 62 Quest Connection, 63 STEM uDemonstrate Lab: How can you make something new?, 74-75 Realize™ Digital Resources: Changing Matter >Topic Launch>Quest Kickoff: Building Bridges >Lesson 3, Matter Within Objects>Video: Matter Within Objects; >Interactivity: Choices Matter; >Topic Close>Quest Findings: Building Bridges
Standard 2.3.4 Obtain, evaluate, and communicate information about changes in matter caused by heating or cooling. Emphasize that some changes can be reversed and some cannot. Examples of reversible changes could include freezing water or melting crayons. Examples of irreversible changes could include cooking an egg or burning wood. (PS1.B)	SE/TE: ulnvestigate Lab: How does heating and cooling change matter?, 55 Heating and Cooling, 57 Reversible or Not, 58 Interactivity: Turn Up the Heat and Chill Out, 58 Quest Check-In: How does temperature change matter over time?, 59 Assessment, 70-71 Evidence-Based Assessment, 72-73 Realize™ Digital Resources: Changing Matter >Lesson 2, Temperature and Matter>Video: Temperature Matters; >Interactivity: Turn Up the Heat and Chill Out; >Quiz: Temperature and Matter

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