Grade 2 Science

Link Community Charter School

UNITS (3/3 SELECTED)	SUGGESTED DURATION
Unit 1: Solids and Liquids	*55 lessons*
Unit 2: Insects and Plants	*55 lessons*
Unit 3: Pebbles, Sand and Silt	*40 lessons*

Unit 1: Solids and Liquids

Grade 2 Science - *Last Updated on December 13, 2023*

STANDARDS ADDRESSED

New Jersey (NJSLS) - Grade 2 - Science (2020)

2-PS1-1 2-ESS2-3

Unit 1: Solids and Liquids

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DESIRED RESULTS

Established Goals

In second grade science, students will be studying two FOSS units and three Project Lead the Way Launch Units. In the first unit, Matter and its interactions, students will learn about the structures, properties and states of matter. The corresponding Launch Unit, Properties of Matter, students will analyze data from materials testing and designing an insulating cover. The second Launch Unit, Grids and Games, students will explore how mathematics is used in animation by using addition and subtraction to move characters on a number grid. The third unit, in Foss, is Insects and Plants. Students will see the life cycle of insects unfold. Students observe butterflies change from larvae to pupa to adult. The fourth Launch unit, Form and Function, students learn about pollination, seed dispersal by animals and seed germination. Students create a pollinator

Transfer

Students will be able to independently use their learning to...

engage with the structures, properties and states of matter. Students will also learn the properties of matter, and analyze data from materials testing and designing an insulating cover.

Meaning

Big Ideas & Understandings	Essential Questions
Students will understand that... • 1. Matter can be described and classified by its observable properties. Different properties are suited for different purposes. 2. Living things have predictable and observable stages in their life cycle. 3. Plants depend on water and light to grow and animals for pollination or to move their seeds around. The stability and shape of plants and seeds are related to their function and needs. 4. People control computers to help them do things that they could not do without a computer 5. Animals disperse seeds and pollinate plants in a	Students will keep considering... • How do properties of materials influence their uses? 2. Why can some changes caused by heating or cooling not be reversed? 3. How do humans use computers to solve problems? 4. How does the function of an object influence its form? 5. What are the behaviors of insects at different stages of their life cycle? 6. How does nature influence design

Meaning	
variety of ways.	

Acquisition	
Knowledge	**Skills**
Students will know... • Students can apply the scientific process to evaluate investigations or the design process to create design solutions to solve a problem. (Skill/ Product) • Students can organize and communicate information. (Skill) • Students can develop and interpret models. • Students can support a claim with evidence. (Skill/Product/Reasoning	Students will be skilled at... • applying the scientific process to evaluate investigations or to the design process to create design solutions • Organizing and communicating information. (Skill) • Developing and interpreting models. • supporting a claim with evidence. (Skill/Product/ Reasoning

ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:	Performance Task(s):
	Other Evidence:

LEARNING PLAN

Summary of Key Learning Events and Instruction:

SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Unit 2: Insects and Plants

Grade 2 Science - *Last Updated on December 13, 2023*

STANDARDS ADDRESSED

Unit 2: Insects and Plants

Grade 2 Science - *Last Updated on December 13, 2023*

DESIRED RESULTS

Established Goals
The Foss Insects and Plants Module provides students with life science core ideas dealing with structure and function of living things, growth and development of plants and animals, interactions of organisms with their environment, and biodiversity of organisms on land and in water. Students build on the science concepts of growth and development of plants and animals from grades K–1 by observing new organisms over time.

Transfer
Students will be able to independently use their learning to...

Meaning	
Big Ideas & Understandings	**Essential Questions**
Students will understand that... • **Big Idea #1** • **Big Idea #2** • **Big Idea #3**	Students will keep considering... • **Essential Question #1** ◦ **Instructional Question #1** ◦ **Instructional Question #2** ◦ **Instructional Question #3** • **Essential Question #2** ◦ **Instructional Question #1** ◦ **Instructional Question #2** ◦ **Instructional Question #3** • **Essential Question #3** ◦ **Instructional Question #1** ◦ **Instructional Question #2** ◦ **Instructional Question #3**

Acquisition	
Knowledge	**Skills**
Students will know...	Students will be skilled at...

Unit 2: Insects and Plants

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Acquisition	
• Acquired Knowledge #1 • Acquired Knowledge #2 • Acquired Knowledge #3 • ...	• Acquired Skill #1 • Acquired Skill #2 • Acquired Skill #3 • ...
• Acquired Knowledge #1 • Acquired Knowledge #2 • Acquired Knowledge #3 • ...	• Acquired Skill #1 • Acquired Skill #2 • Acquired Skill #3 • ...
• Acquired Knowledge #1 • Acquired Knowledge #2 • Acquired Knowledge #3 • ...	• Acquired Skill #1 • Acquired Skill #2 • Acquired Skill #3 • ...

ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

LEARNING PLAN

SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Unit 3: Pebbles, Sand and Silt

Grade 2 Science - *Last Updated on December 3, 2023*

STANDARDS ADDRESSED

Unit 3: Pebbles, Sand and Silt

Grade 2 Science - *Last Updated on December 3, 2023*

DESIRED RESULTS

Established Goals
In this module, students observe the properties of rocks and soil, study the results of weathering and erosion, locate natural sources of water, and determine how to represent the shapes and kinds of land and bodies of water on Earth. They use simple tools to observe, describe, analyze, and sort solid earth materials and learn how the properties of the materials are suited to different purposes. Students explore how wind and water change the shape of the land and compare ways to slow the process of erosion. The investigations complement the students' experiences in the Solids and Liquids Module with a focus on earth materials and the influence of engineering and science on society and the natural world.

Transfer
Students will be able to independently use their learning to...

Meaning	
Big Ideas & Understandings	**Essential Questions**
Students will understand that... •	Students will keep considering... **Investigation 1: First Rocks** ● What are properties of rocks and how do they change? ● What happens when rocks rub together? ● What happens when rocks are placed in water? ● How are river rocks the same? ● What are the properties of schoolyard rocks? ● How many ways can rocks be sorted? Investigation 2: River Rocks ● How are small pieces of rock made and moved to change landforms? ● How can rocks be separated by size? ● How else can rocks be sorted by size? ● Is there an earth material smaller than sand? ● What earth material is smaller than silt? ● How does water and wind change landforms? **Investigation 3: Using Rocks ●** • How are different sizes of rock used as resources

Meaning	
	to make useful objects? • How do people use earth materials? • What does sand do for sandpaper? • How can we make a sand sculpture? • What makes clay useful in making objects like beads? • How are bricks made? • **Investigation 4: Heating Earth** • How can we apply what we know about the ways that land and water interact? • What is soil? • How do soils differ? • Where is water found in our community? • How can soil erosion be reduced?

Acquisition	
Knowledge	**Skills**
Students will know... •	Students will be skilled at... •

ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

LEARNING PLAN

SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION