

Second grade Science Units for upload on the school website.

Unit 1 Summary: Earth Systems: Processes that Shape the Earth
In this unit, students will understand that the Earth has many states of water which are typically determined by Geographic location. These states of water can be in the form of a solid or a liquid. Along with states of water, the Earth has many different land formations determined by Geographic location. Weathering directly affects the surface of the land. Wind and water can directly affect the shape of the land. Earth's events can occur quickly or they can occur slowly. Humans can negatively and positively affect the changes of the Earth's surface.

Title of Unit:

Earth Systems: Processes that Shape the Earth

Subject Area:

Science

Next Generation Science Standards: 1-ESS1 Earth's Place in the Universe

Students who demonstrate understanding can:

2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

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.

2-ESS2-1 Compare multiple solutions designed to slow or prevent wind and water from changing the shape of the land.

ESS2-A: Earth Materials and Systems: Wind and water can change the shape of the Land.

2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in the area.

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.

2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.

ESS2-C: The Roles of Water in Earth's Surface Processes: Water is found in the ocean, river, lakes, and ponds. Water exists as solid ice and in liquid form.

I Can Statements

I can use information from several sources to give evidence that Earth events can happen quickly or slowly.

I can compare multiple solutions that are meant to slow or prevent wind or water from changing the shape of the land.

I can develop a model to represent the shapes and kinds of land and bodies of water in the area.

I can gain information to identify where water is found on Earth and that it can be solid or liquid.

Academic Vocabulary		
ON LEVEL		ADVANCED
Soil	Pond	Eruption
Change	Stream	Hurricane
Earth	Wind	Weathering
Events	Map	Volcano
Slowly	Ocean	Earthquake
Rapidly	Mountain	Erosion
Flood	Plain	System
Wind	Hill	
Sand	Swamp	
Rock	Island	
Water	Canyon	
Land	Cliff	
River	Valley	
Lake	Rain	
Landforms		

Assessments:

Formative	Summative
<p>Samples could be</p> <ul style="list-style-type: none"> --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down --Stop Light --Snowball <p>Common Formative</p> <ul style="list-style-type: none"> --Weathering and Erosion Worksheet 	<p>Attached in hard copy</p>

Lesson Sequence

Varies per teacher and class

Resources**-Science Clubhouse Workshop lessons****--Reading A-Z Close Reading Pack**

- Frost Wedging
- Flooding
- Glaciers
- Erosion

--Youtube Videos

- Bill Nye the Science Guy on Erosion
- Weathering, Erosion, and Deposition

-United Streaming

- Magic School Bus Rocks and Rolls

-Curriculum Crafter

- Vocabulary

-Teachers Pay Teachers

- Erosion and Weathering by Laura Hoomes
- Changing the Earth Surface
- Understanding Weathering and Erosion-Water and Rock Lab
- Understanding Weathering and Erosion-Wind and Sand Lab
- Weathering and Erosion Venn Diagram
- Common Core Interactive Science Notebook
- Weathering and Erosion Scoot/Task cards
- Weathering and Erosion Book

-Internet Search

- Photographs of Weathering and Erosion

Unit 2 Summary: Structures and Properties of Matter

In this unit students will understand that some physical changes can be reversed and others are permanent. Heating and cooling a substance may cause changes that can be observed. Sometimes these changes are reversible and sometimes they are not. 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. Different properties are suited to different purposes. A great variety of objects can be built from a small set of pieces.

Title of Unit:

Structure and Properties of Matter

Subject Area:

Science

Next Generation Science Standards: 2-PS1 Structures and Properties of Matter

Students who demonstrate understanding can:

2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of matter by their observable properties.

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.

2-PS1-3 Make observations to construct evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.

2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

I Can Statements

I can plan and construct an investigation to describe and classify kinds of materials.

I can study data collected from testing different materials to figure out which materials have the properties that are best for certain purposes.

I can make observations to explain how an object made of a small set of pieces can be taken apart and made into a new object.

I can construct an argument with evidence that some changes caused by heating or cooling can be reversed and some can not.

Academic Vocabulary	
ON LEVEL	ADVANCED
classify gas	analyze
materials flexible	irreversible
properties	construct
observe	data
describe	reversible
temperature	argument
solid	energy
liquid	flexibility
substance	absorbency
matter	
color	
texture	
hardness	
strength	
patterns	

Assessments:

Formative	Summative
<p>Samples could be</p> <ul style="list-style-type: none"> --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down --Stop Light --Snowball <p>Common Formative</p> <ul style="list-style-type: none"> --Matter Quiz 	<p>Attached in hard copy</p>

<p>Lesson Sequence Varies per teacher and class</p>	<p>Resources</p> <ul style="list-style-type: none"> -<i>Science Clubhouse Workshop lessons</i> --<i>Science A-Z</i> <ul style="list-style-type: none"> • Mixing Matter-Coffee and Tea: Solutions • Mixing Matter-Concrete • Mixing Matter-Alloys • Solids, Liquids, and Gases --<i>Youtube Videos</i> <ul style="list-style-type: none"> • Matter Chatter (song for kids about solids, liquids, and gases) • Bill Nye the Science Guy & States of Matter • Physical Science for Children-Solids, Liquids, and Gases -<i>United Streaming</i> <ul style="list-style-type: none"> • Properties of Matter Part 1 • Properties of Matter Part2-Solids, Liquids, and Gases • First Look-Solids, Liquids, and Gases • Magic School Bus Meets Molly Cule -<i>Curriculum Crafter</i> <ul style="list-style-type: none"> • Vocabulary -<i>Teachers Pay Teachers</i> <ul style="list-style-type: none"> • States of Matter Freebie! • Structures and Properties of Matter -<i>Internet Search</i> <ul style="list-style-type: none"> • Photographs of solids, liquids, and gasses

Unit 3 Summary: Interdependent Relationships in Ecosystems

In this unit students will understand that plants and animals only thrive in appropriate conditions. Plants depend on water and light to grow. Plants depend on animals for pollination or to move their seeds around. There are many different kinds of living things in any area, and they exist in different places on land and in water.

Title of Unit:

Interdependent Relationships in Ecosystems

Subject Area:

Science

Next Generation Science Standards: 2-LS2 Interdependent Relationships in Ecosystems

Students who demonstrate understanding can:

2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.

2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

I Can Statements

I can plan and construct an investigation to determine if plants need sunlight and water to grow.

I can develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

I can make observations of plants and animals to compare the diversity of life in different habitats.

ON LEVEL		ADVANCED
seed	salt water	disperse
plant	jungle	pollinate
seedling	rainforest	germinate
sunlight	ocean	ecosystem
energy		relationship
depend		investigate
model		diversity
observe		temperature
describe		tundra
habitat		wetland
forest		adaptation
grassland		
desert		
mountain		
fresh water		

Assessments:

Formative	Summative
<p>Samples could be</p> <ul style="list-style-type: none"> --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down --Stop Light --Snowball <p>Common Formative</p> <ul style="list-style-type: none"> --Plant Quiz 	<p>Attached in hard copy</p>

<p>Lesson Sequence Varies per teacher and class</p>	<p>Resources</p> <ul style="list-style-type: none"> -<i>Science Clubhouse Workshop lessons</i> --<i>Science A-Z</i> <ul style="list-style-type: none"> • Mixing Matter-Coffee and Tea: Solutions • Mixing Matter-Concrete • Mixing Matter-Alloys • Solids, Liquids, and Gases --<i>Youtube Videos</i> <ul style="list-style-type: none"> • Bill Nye the Science Guy and Life Cycles • Plant Life Cycles -<i>United Streaming</i> <ul style="list-style-type: none"> • A First Look: Plants • How Plants Grow • Plant Life Cycles • Plants Grow and Reproduce • Magic School Bus Gets Planted -<i>Curriculum Crafter</i> <ul style="list-style-type: none"> • Vocabulary -<i>Teachers Pay Teachers</i> <ul style="list-style-type: none"> • Interactive Science Journal • 2nd Grade Science Quick Pack: Plants -<i>Power Point</i> <ul style="list-style-type: none"> • Habitats • Seed Dispersal