

Unit 5: Earth's Systems

Content Area: **Science**

Course(s):

Time Period: **Generic Time Period**

Length: **4 weeks**

Status: **Published**

Disciplinary Core Ideas

ESS2.A: Earth Materials and Systems

- Wind and water can change the shape of the land. (2-ESS2-1)

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-ESS2-2)

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. (2-ESS2-3)

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. (*secondary to 2-ESS2-1*)

Standards

Science —

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

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

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

ELA/Literacy —

RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-ESS2-1)

RI.2.9 Compare and contrast the most important points presented by two texts on the same topic. (2-ESS2-1)

W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (2-ESS2-3)

W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-ESS2-3)

SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of

experiences when appropriate to clarify ideas, thoughts, and feelings. (2-ESS2-2)

Mathematics —

MP.2 Reason abstractly and quantitatively. (2-ESS2-1),(2-ESS2-2)

MP.4 Model with mathematics. (2-ESS2-1),(2-ESS2-2)

MP.5 Use appropriate tools strategically. (2-ESS2-1)

2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2-ESS2-2)

2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. (2-ESS2-1)

Essential Questions

Where do we find water?

Guiding Questions:

How can we identify where water is found on Earth and if it is solid or liquid?

In what ways can you represent the shapes and kinds of land and bodies of water in an area?

Student Learning Objectives

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

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

Concepts taught:

1. Patterns in the natural world can be observed.
2. Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form.
3. Patterns in the natural world can be observed.
4. Maps show where things are located. One can map the shapes and kinds of land and water in any area.

Students who understand will be able to...

Students who understand concepts 1-2:

- Observe patterns in the natural world.
- 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.
- Obtain information to identify where water is found on Earth and to communicate that it can be a solid or liquid.

Students who understand concepts 3-4:

- Observe patterns in the natural world.
- Develop a model to represent patterns in the natural world.
- Develop a model to represent the shapes and kinds of land and bodies of water in an area.

Activities

Find examples of erosion around school property.

Create models using ice cubes to demonstrate erosion by glaciers.

Mystery Science

-Work of Water Unit:

-Mystery 1: If you floated down a river, where would you end up?

Materials & Resources

Science Textbooks - McGraw Hill 2002

*Chapter 5, Lesson 2 Erosion

150 Science Experiments

www.mysteryscience.com

Ngss.nsta.org

Nonfiction texts

Assessments

Class Discussion

Vocabulary game - using vocabulary cards

Land/Water Model Project

End of unit written test

Label bodies of water on a map

Mystery Science Assessments

Accommodations and Modifications

-Use of scribe

-Partnered with classmate

- Use of scribe
- Adaptive computer to type assignments
- Adjustable tables and lab equipment within reach
- Flexible seating
- Additional time and/or small-group for testing
- Additional time and/or small-group for assignments
- Captioned videos
- Visual and tactile instructional demonstrations
- Computer with voice output, spelling and grammar checker
- Preferential seating
- Tactile drawings and graphs, and three-dimensional models
- Directions repeated/clarified. Check for understanding.