

# 2nd Grade Unit 3 - The Earth's Land and Water

Content Area: **Science**  
Course(s): **Science Grade 2**  
Time Period: **MP3**  
Length: **22 days**  
Status: **Published**

## **NJSLS - Science**

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SCI.2-ESS2-2	Develop a model to represent the shapes and kinds of land and bodies of water in an area.
SCI.2-ESS2-3	Obtain information to identify where water is found on Earth and that it can be solid or liquid.

## **Science and Engineering Practices**

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### **Developing and Using Models**

Develop a model to represent patterns in the natural world. (2-ESS2-2)

### **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. (2-ESS2-3)

## **Disciplinary Core Ideas**

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### **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)

## **Crosscutting Concepts**

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## **Patterns**

Patterns in the natural world can be observed. (2-ESS2-2, 2-ESS2-3)

## **Rationale and Transfer Goals**

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Where do we find water?

In this unit of study, students use information and models to identify and represent the shapes and kinds of land and bodies of water in an area and where water is found on Earth. The crosscutting concept of patterns is called out as an organizing concept for these disciplinary core ideas. Students demonstrate grade-appropriate proficiency in developing and using models and obtaining, evaluating, and communicating information.

Students are also expected to use these practices to demonstrate an understanding of the core ideas.

## **Enduring Understandings**

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Maps show where things are located.

## **Essential Questions**

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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?

## **Content - What will students know?**

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- Patterns in the natural world can be observed.
- Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form.

- Maps show where things are located. One can map the shapes and kinds of land and water in any area.
- Patterns among bodies of water and types of landforms
- Shapes and kinds of land; found in an area

### **Skills - What will students be able to do?**

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- 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.
- 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. (Assessment does not include quantitative scaling in models.)

### **Activities - How will we teach the content and skills?**

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- Mystery Science Work of Water Anchor Phenomenon
- Mystery Science Work of Water Lesson 1
- Mystery Science Work of Water Lesson 2
- Mystery Science Work of Water Lesson 3
- Whole group instruction and discussion.
- Read Alouds
- Group and Individual Projects
- Hands-on discovery when possible; creating models
- Webquests/Internet “field trips”

### **Evidence/Assessments - How will we know what students have learned?**

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- Mystery Science Work of Water Lesson 1 Assessment
- Mystery Science Work of Water Lesson 2 Assessment
- Mystery Science Work of Water Lesson 3 Assessment
- Teacher Observation
- Student projects/models
- Exit Tickets
- Tests/Quizzes
- [Grade 2 Science Unit 3 Benchmark](#)

### **Spiraling for Mastery**

<b>Content or Skill for this Unit</b>	<b>Spiral Focus from Previous Unit</b>	<b>Instructional Activity</b>
N/A	Kindergarten: A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.	<a href="#">K-PS2-1 Activities</a>

### **21st Century Life and Careers**

WRK.9.1.2.CAP.1                      Make a list of different types of jobs and describe the skills associated with each job.

### **Career Readiness, Life Literacies, & Key Skills**

TECH.9.4.2.CI.1                      Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

TECH.9.4.2.CI.2                      Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).

TECH.9.4.2.CT.1                      Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).

TECH.9.4.2.CT.2                      Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).

TECH.9.4.2.CT.3                      Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

TECH.9.4.2.IML.3                      Use a variety of sources including multimedia sources to find information about topics such as climate change, with guidance and support from adults (e.g., 6.3.2.GeoGI.2,

## **Interdisciplinary Connections/Companion Standards**

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### **NJSLS ELA**

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)

### **NJSLS Mathematics**

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

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

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

### **English Language Arts**

Students gather information about the types of landforms and bodies of water from experiences or from text and digital resources. They can use this information to answer questions such as, “Where can water be found as solid ice or snow year round?” Students should also have the opportunity to use their research to publish a writing piece, with guidance and support from adults or collaboratively with peers, based on their findings about various landforms and bodies of water. Diagrams, drawings, photographs, audio or video recordings, poems, dioramas, models, or other visual displays can accompany students’ writing to help recount experiences or clarify thoughts and ideas.

### **Mathematics**

As students collect data about the size of landforms and bodies of water, these numbers can be used to answer questions, make comparisons, or solve problems. For example, If students know that a mountain is 996 feet in height, a lake is 550 feet deep, a river is 687 miles long, and a forest began growing about 200 years ago, have

students show each number in three ways using base-ten blocks, number words, and expanded form. A stream was 17 inches deep before a rainstorm and 33 inches deep after a rainstorm. How much deeper did it get during the rainstorm? As students engage in these types of mathematical connections, they are also modeling with mathematics and reasoning abstractly and quantitatively. When modeling with mathematics, students diagram situations mathematically (using equations, for example) and/or solve addition or subtraction word problems. When students reason abstractly and quantitatively, they manipulate symbols (numbers and other math symbols) abstractly and attend to the meaning of those symbols while doing so.