

Geoscientist: Images of Earth

NGSS Standard: 4-ESS2-2



Adventure Description:

In this adventure, you will think like a geoscientist and map the ocean floor, searching for an underwater volcano!



Activity

Step 1: Background on Geoscientists and Mapping the Ocean Floor (5 minutes)

- Play [Video: Images of Earth](#).
- Explain that a geoscientist studies the Earth. A geoscientist can specialize in any part of the Earth, like oceans or volcanoes.
- Explain to students that geoscientists are working on mapping the ocean floor. 95% of the ocean floor is not mapped.

Step 2: Creating a Volcano and Ocean Floor (15 minutes)

- Explain to students that they will be creating and mapping an ocean floor!
- Next, provide students with [Handout: Steps to Create an Ocean Floor](#).
- Explain to students that they will first complete Steps 1 and 2, making the ocean floor.
- Each group will receive a box, which will be the ocean floor. Groups will decide how many volcanoes will be in their box and where they will be located. Then, they will put the volcanoes in the ocean.
- Provide groups with the following materials:
 - Box
 - A piece of construction paper (regular printer paper will also work)
 - An assortment of building supplies that are hard and durable (egg cartons, paper towel rolls, cardboard)
 - Tape
 - Tip: DO NOT have students use glue! It is far too messy for this activity. Only provide students with tape.

Please contact Allison Bischoff, Director of Customer Service, at allison@rozzylearningcompany.com or 314-272-2560 with questions.

- Have groups spend 12-15 minutes creating their ocean floor.

Step 3: Covering Ocean Floor (5 minutes)

- Explain to groups that they will now complete Step 3, covering the ocean floor.
- Groups will need to tape a piece of paper around the edges of the box. It is important that the paper is not loose- it needs to be tightly taped. It is also important that the inside of the box is totally covered. There are pictures of Step 3 on the handout so students can see how to cover the box.
- Note: If the paper is too small to fit on the box, two pieces of paper can be taped to cover it.

Step 4: Map the Ocean Floor (15 minutes)

- Explain to students that they will now map another group's ocean floor.
- [Handout: Steps to Map an Ocean Floor](#)
- Have groups switch boxes with another group.
- Provide groups with the following:
 - Medium or large paper clip
 - [Handout: Grid Paper](#)
- Explain to students that they will now search for volcanoes and map their locations on the ocean floor.

Step 5: Wrap Up (10 minutes)

- Have groups remove the paper from the top of the box and see if there were correct in where they mapped the volcanoes.
- Have a class discussion about whether groups able to find all of the volcanoes. Were they correct in where the marked volcanoes on the grid?
- As a class, discuss how difficult it is to map features that are underwater. That is why 95% of the ocean floor hasn't been mapped!
- Ask students what types of tools would help them map the ocean floor more accurately (ex: a video camera would help because students could see what was under the water).

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Materials List

Provided online:

- Video: Images of Earth
- Handout: Steps to Create an Ocean Floor
- Handout: Steps to Map An Ocean Floor
- Handout: Grid Paper

Not provided (each pair of students needs):

- Box
- Piece of construction paper (regular printer paper will also work)
- Assortment of building supplies that are hard and durable (ex: egg cartons, paper towel rolls, cardboard pieces, etc.)
- Tape
- Medium or large paper clip

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