EXPLORING EARTH: RISING SEA TOPOGRAPHY

AGES

Children 8+ years

PROGRAM DESCRIPTION

This is a hands-on activity demonstrating ways to use topographical mapping techniques to track changes in sea level. The activity is connected to current NASA research. Together, participants and facilitators can discuss the effects of rising sea levels on coastal communities and the natural environment. Learners explore how to use topographical mapping techniques to track changes in sea level and have discussions about the effects of rising sea levels on the environment and coastal communities. See Resources for videos, Printables, and conversational prompts for this program. Suggested runtime: 45 min.

Image source: Shutterstock

SOURCE:

Program from the National Informal STEM Education Network (NISE Net); reprinted with permission.

GAME/ACTIVITY

MATERIALS AND PREPARATION

Materials:

- Translucent plastic bin
- Modeling clay
- Clear acrylic sheets (Plexiglass)
- Dry erase markers
- A large pitcher and water
- Blue food coloring
- Sponges or paper towels
- Activity sheet (see Resources)
- Facilitator guide (see Resources)

Before the program, fill the pitcher with water and a few drops of blue food coloring.

Use modeling clay to create a landform that will fit into the bottom of the translucent bin. (Alternatively, you can get children to create the landform as part of the program.)

During the program:

- Place the acrylic sheet over the basin. Use a marker to trace around the outside edge of the island landform.
- Add water to the basin until it comes up to the first mark. Now, replace the acrylic sheet back on top and trace the edge of the landform where it emerges from the water. Is your line in the same place?
- Keep adding small amounts of water and tracing the coastline until you have created a topographic map. Why do you think it's important to track changes in the coastline?

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

Videos and printables from *NISE Net*: https://bit.ly/2RHfI8h

A similar clay topographic map activity from *NASA*: https://go.nasa.gov/3yLfFZN

Books

Non-fiction

Using Topographic Maps (2016) by Tracy Nelson Maurer (children's)

Rising Seas (2018) by Keltie Thomas and Belle Wuthrich (children's)

Start Now! You Can Make a Difference (2020) by Chelsea Clinton (children's)

Fiction

Across the Risen Sea (2020) by Bren MacDibble (children's)

The Year the Maps Changed (2020) by Danielle Binks (children's)

The End of the World is Bigger Than Love (2020) by Davina Bell (YA)