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Social Studies

INSTRUCTOR GUIDE

3



Reading Physical and Topographic Maps

Lesson Objectives

By the end of this lesson, your student will be able to:

- identify the differences between physical and topographic maps

Supporting Your Student

Read (*Physical Maps*)

Your student has probably seen a physical map before. Remind them that many physical maps show higher elevations above sea level in darker shades of brown, and deeper elevations in the ocean as darker shades of blue. Compare the intensity of the color to the intensity of the depth or height of the feature. The higher the mountain or the deeper the ocean, the darker the color.

Read (*Topographic Maps*)

While reading this section, have your student trace the lines of the island with their finger. Encourage them to notice the smaller circles inside the larger circles. Have your student use clay to create a mountain. Have them use their finger to trace around the outside of the mountain at the bottom, middle, and top. Emphasize that the circle around the bottom of the mountain is larger than the one at the top. Connect this experience to how the contour lines often make bigger circles at the bottom of a mountain and smaller ones at the top.

Practice

To help your student distinguish the similarities and differences between physical and topographic maps, you might have them write a list of map features on a separate sheet of paper. Have them brainstorm a list of anything that they can remember about maps as well as what they remember about physical and topographic maps. Then, discuss each item on the list one by one and ask them questions to help them decide whether it is a feature of a physical map, topographic map, or both. For example, if your student said that maps show different bodies of water like oceans, lakes, and rivers, you could ask them, “Do physical maps show water?” and “Do topographic maps also show water?” Using guiding questions can help your student decide where to write that

information. You might also use a search engine to look up examples of physical and topographic maps and look at them side by side. Doing so can help your student compare the similarities and differences more easily.

Learning Styles

Auditory learners may enjoy becoming a teacher to teach about this lesson. Tell your student that you want to learn everything there is to know about physical and topographic maps, and have them explain what they know. Talk to your student about what they are learning so they can hear you review the material with them as well.

Visual learners may enjoy looking at all different types of maps. You can go to a local library or search online for an atlas. Go through the different types of map that are in the atlas. Describe each map and review different map features.

Kinesthetic learners may enjoy creating a three-dimensional topographic map. You can also search up an atlas on the Internet. Have your student walk around the room touching a wall. If there is furniture, have your student move their hands along the furniture. They can describe what they are feeling, like flat walls, peaks of chairs, or mountains on desks. Have your student draw a topographic map using what they felt as they walked around the room.

Extension Activities

Park Time Fun

Take your student on a trip to their local park, and bring paper, crayons, and a pencil. Have your student sit in the center of the park. Have your student slowly look around and sketch the shape of the land that they see. Have your student complete a full rotation of where they sit. When they are finished, they should have a rough sketch of a physical map. Make sure your student shows the height or depths of hills and valleys on their maps by using darker colors.

Underwater Map

Get a tin foil tray and clay or sand. Have your student create a landscape by shaping the clay or sand in the

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tray. Once they have created their land, fill the rest of the tray with water. Have your student close their eyes and feel the different parts of their landscapes. Take the tray away before they open their eyes. Have your student sketch the lines of the land that they felt, creating a topographic map. Or, they can sketch the landforms they felt, creating a physical map. You can go online to find pictures of underwater physical maps to help your student understand what the different elevations on the sea floor look like.

Answer Key

Explore

Answers will vary. Possible answers: The map has three-dimensional mountains and flat blue areas. It could show mountains and water. It is three-dimensional and shows the shape of the land.

Practice

Answers may vary. Possible answers:

(Topographic Maps) use lines and circles to show heights or elevations

(Physical Maps) use colors and textures to show different landforms, are very detailed

(Both) show the height of landforms and show different landforms

Show What You Know

1. B
2. A
3. A
4. B
5. B
6. A

