Unit 1 How Did Oregon Get Here?

Overview

In this unit students will explore Oregon's geological history and the state's earliest residents.

During the course of the unit they will:

1. Discover that God is still at work in His created physical world.
2. Learn that land changes constantly through wind and water erosion, volcanic action, and plate tectonics. And learn about Oregon's volcanoes and coastline.
3. Begin to understand the concepts of plate tectonics and erosion.
4. Work as a group to begin a topographical map of Oregon.

Materials Needed

1. A copy of *Exploring Oregon* for each student.
2. Copies of Worksheets 1-A and 1-B for each student. Note: The jigsaw puzzle (1-A) will not be an exact fit. To keep the fold from affecting too many puzzle pieces, the distance between eastern and western continents is not in scale.
3. Chalkboard/marker board, newsprint chart and markers, or overhead projector and transparencies.
4. Sink or tub, water, and two plates for the demonstration of plate tectonics.
5. If your class has access to Microsoft Encarta you can find an interesting demonstration of the continental drift theory by searching "Pangaea." Click on the "Continental Geology" link to access an animation showing how continents might have separated.

Facts to Learn

1. When God separated water from land, all the land may have been in one large continent.
2. Many scientists believe that earth's continents ride on plates that float on earth's molten core.
3. The Columbia River scoured out Columbia Gorge.

Present Your Material

Distribute textbooks to your students.

Ask: What do you know about Oregon?

List student contributions. You may wish to make a permanent list on newsprint chart or transparency. Following this list, make a list of things students would like to know about Oregon. The children in this book spend much of their summer vacation exploring Oregon. Ask students to read from the introduction through the end of "In the Beginning" in Unit 1. Ask students to write answers to the questions at the end of this section using complete sentences.

You may wish to have students create an Oregon notebook. If so, ask them to copy the two lists neatly to put in the notebook. As the Oregon study continues they will be adding their worksheets and other assigned or chosen special projects. If answers to students' questions about Oregon are not found in the textbook, explore these as a group or help the questioners to research the answers.

Activities

1. Find two lightweight plates. Fill a sink with water and float the plates. Force one to slide under the other one. What happens?
2. Make photocopies for each student of Worksheet 1-A. Use heavy paper or mount each sheet on cardboard. Ask students to cut out the continents and the largest islands. Then have them try to fit the pieces together like a jigsaw puzzle. Pieces will not be exact, but they will fit together roughly. This illustrates one reason scientists believe that at one time the world was one huge continent.
3. Give the students two photocopies of the map of Oregon (1-B). On one map they will try to locate various cities, rivers, and mountain ranges. The other map they will glue to cardboard. This map will be their guide for making a salt-clay relief map. The salt-clay recipe comes from Craft Fun! by Kim Solga and Priscilla Hershberger (Copyright 1997 by F&W Publications, Inc., North Light Books, 1507 Dana Avenue, Cincinnati, Ohio 45207).

The recipe is as follows:
Mix 1½ cups of white flour, 1½ cups salt, 1 tablespoon of oil, and enough water to make a smooth, soft clay (about ½ cup). Store in plastic container in the refrigerator. Salt clay will dry hard if you leave it out overnight.

4. For extra credit, encourage students to visit http://www.jimloy.com, and click on geology/weather.

Changing Mountains and Coastline

Materials Needed

1. Oregon relief map showing mountains, etc.
2. Students should have one copy of Worksheet 1-B that is punched for three-hole notebook.

Facts to Learn

1. Oregon has few natural harbors. There are harbors at Portland, Tillamook, Newport, and Coos Bay.
2. Oregon's coastline is nearly 300 miles long.
3. Low mountains make up Oregon's Coast Range. Mary's Peak, near Corvallis, is the highest mountain in the Coast Range.
4. Volcanoes make up the High Cascades. Volcanic action did much to shape Oregon as we know it today.

Present Your Material

Ask students to read "Changing Mountains and Coastline" and answer the questions using complete sentences.

Ask: What did you learn about Oregon's coastline? Display a map of Oregon; show the children Oregon's few indentations. On their copies of Worksheet 1-B, have them use pencils to mark Astoria, Portland, Tillamook, Coos Bay, and Brookings on their maps.

Have students tell you what surprised them in what they read in this section. List their responses on the chalkboard. You may wish to make another list of facts they found that did not surprise them.

Activities

1. Build a dirt barrier across the middle of a deep pan. Fill one side of the pan with water. Using your hand, make waves. What happens? (Do some experimenting with this. If local soil is sandy, this may not work well.)
2. Have students continue work on filling in their own Oregon maps. They could mark mountain ranges with inverted V's. Students should also add to the map the town where they live and mark Oregon's harbors.
3. Begin work on your relief map of Oregon.
4. No matter where you live in Oregon you may find a volcano close enough for a class trip. In western Oregon try Mount Tabor, located in a Portland city park. Larch Mountain and

Rocky Butte are other extinct volcanoes in the Portland area. You may combine this field trip with a visit to Oregon City's McLoughlin House at a later date. Central Oregon offers many volcanic sites: Pilot Butte on the east side of Bend, Lava Butte and Lava Lands center south of Bend. For a more extended central Oregon trip visit Fort Rock Natural Area. On the same trip arrange a tour of Fort Rock Cave and the Homestead Museum at Fort Rock, or visit Newberry Caldera. In southern Oregon, Pelican Butte between Medford and Klamath Falls offers an accessible choice. In early fall and summer you might visit Crater Lake. In southwestern Oregon visit Cape Blanco State Park to see abandoned mining equipment. You might also visit Battle Rock Wayside in Port Orford, Geisel Monument, and Curry County Museum in Gold Beach for more historic sights and information. In eastern Oregon you can find gold-mining equipment at Sumpter Valley Dredge State Park in Sumpter off Highway 7, about 30 miles west of Baker City. This park is open from May through October.

The First Oregonians

Materials Needed

1. Worksheet 1-C
2. World map or globe.

Facts to Learn

1. The first people in North America probably walked across a land bridge that connected Asia to Alaska.
2. The earliest Oregonians lived in what is now eastern and central Oregon.
3. Scientists have found evidence of early Oregonians near Fort Rock and in Newberry Crater.

Present Your Material

Ask students to read "The First Oregonians" and write answers to questions at the end of the section. On a world map point out Bering Strait, the narrow gap between Alaska and Siberia. Call attention to the "Beringia" map found on page 15. On your relief map of Oregon show the Newberry Volcano area.

Activities

1. Make photocopies and distribute Worksheet 1-C. Using the definitions given, have students find the hidden vocabulary words.

Answers to 1-C:

2. Continue work on your relief map of Oregon.
3. Have students add Fort Rock and Newberry Volcano to their fill-in maps.