

6. Approximately how many active volcanoes are there in the world?
7. Can volcanic eruptions be predicted?
8. Name three areas of molten rock found below the Earth's surface.
9. What is the difference between a sill and a dike?
10. Name five states in the U.S. which have evidence of present or past volcanic activity.

Answers

9. A dike is a vertical tube of molten magma while a sill is a horizontal tube.
10. Many states have evidence of present or past volcanic activity. These include:

Hawaii
 Alaska
 California
 Oregon
 Wyoming
 Utah
 New Mexico
 Washington
 Arizona
 Nevada
 Montana
 Idaho
 Colorado
 Maine
 Texas
 New Jersey

4. 1) Cinder Cones
 2) Composite Volcano
 3) Shield Volcano
 4) Lavadome
5. Geysers and Hot Springs.
6. 500-600.
7. Yes, but limited and not exactly precise.
8. Batholith, Laccolith and a stock.

1. Named after the little island of volcano in the Mediterranean Sea where people believed it was the Chimney of the forge of Vulcan, the blacksmith of the Roman gods.
2. The "Ring of Fire".
3. Natural radioactivity produces heat. The rock itself insulates or keeps in the heat until it builds up enough to actually melt the rock surrounding it. This is usually in excess of 2,000 degrees F.

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The Physical Geography Series

Volcanoes of the United States

KG1150

TEACHER'S GUIDE

Glossary

Volcano - A cone-shaped hill or mountain built around a vent that connects with a reservoir of molten rock below the surface of the earth.

Lava - Molten rock flowing from a volcano.

Magma - Molten rock which is found below the earth's Surface.

Pumice - Volcanic material which is so light that it can actually float on water. The material contains lots of air spaces inside which make the material very light.

Cinder Cone - Volcano formed by cinders which come out of a volcanic vent and then settled.

Composite Cone - A volcano built of alternating layers of lava flows and volcanic ash and cinders (also called strato-volcanoes).

Lava Flows - Hardened lava after it flows out of a volcanic crater or vent.

Caldera - A large depression formed by the collapse of a volcano.

Lava Dome - Lava cones built from a very thick, pasty lava.

Batholith - A very large area of molten magna below the earth's surface.

Laccolith - A molten region which lifts up the supporting rock above it.

Shield Volcano - A broad, gently sloping volcano formed when its lava pours out in all directions from a central vent (Mauna Loa is a good example).

Suggested Teaching Activities

1. Using a large map of the United States have students identify where volcanoes can be located.

2. Using a large map of the world which has been set up for the entire year, have students bring in newspaper articles of recent volcanic eruptions and have them pin or tape them to the map where the eruptions took place.

3. Using a plastic litre bottle of soda, demonstrate to your students how a volcanic eruption uses gas pressure to drive it out of its vent. Shake a warm bottle vigorously and then open the cap slowly. The soda has carbon dioxide (CO₂) put into it at the factory. Shaking the bottle helps to free the gas which carries the liquid through the opening. Have towels ready because there could be a mess!

4. Using a world map locate the following volcanoes and identify them with a marker.

Mount Etna
Vesuvius
Icelandic Volcanoes
Kilimanjaro
Fuji
Paricutin
Hawaiian Islands
Mt. Pelee

5. Using a map of the U.S. locate the following volcanic areas and identify them with a marker:
Craters of the Moon
Mt. Hood
Mt. Baker

Capulin Mountain
Mauna Loa
San Francisco Peaks
Crater Lake
Lassen Peak
Cascade Mountains
Mt. St. Helens
Mt. Rainier
Kilauea
Sunset Crater
Mt. Shasta
Mammoth Lake
Amboy Crater
Wrangel-St. Elias
Yellowstone National Park

6. If lava samples are available in your school collection bring out the following for your students to observe:

Pumice
Lava
Scoria
Rhyolite
Andesite
Lava Bomb

Quiz

1. What is the origin of the word "volcano"?
2. Name the circle of volcanoes which surround the Pacific Ocean basin.
3. What causes the rock to melt underground?
4. List the four major volcano shapes.
5. Name two results of a "dying volcano".