

Questions

1. A dormant volcano will never erupt again.
2. A steep-sided volcanic cone built from both lava and pyroclastic materials, e.g. ash, is called a composite volcano.
3. Lava is cooled extrusive magma.
4. A magma chamber is the subterranean cavity containing the liquid and semi-liquid magma which feeds a volcano.
5. The 'Ring of Fire' is found around the edge of the Atlantic Ocean.
6. The Mid-Atlantic Ridge is the result of sea floor spreading.
7. A pyroclastic flow is composed of 50% lava and 50% ash.
8. There are approximately 1,500 active volcanoes in the world.
9. Lava is usually between 700°C and 1,600°C when it is erupted.
10. Hawaiian volcanoes, e.g. Mauna Loa, have infrequent, very explosive eruptions.
11. Fewer than one quarter of all the volcanoes in the world are located around the 'Ring of Fire'.
12. Yellowstone is a dormant supervolcano.
13. Geysers are springs which throw boiling water high in the air. They are the result of trapped water underground being heated by magma.
14. Volcanic soils are generally infertile.
15. There is rarely any seismic activity (earthquakes or tremors) associated with eruptions.
16. Due to the high concentration of volcanoes, Iceland is able to use geothermal energy to heat water.
17. Shield volcanoes are associated with fluid basic lava.
18. In some countries, volcanoes provide income from tourism.
19. Composite volcanoes are found on constructive plate margins.
20. A crater filled with solid lava is called a caldera.

Eruption of Mount St. Helens volcano May 18th 1980

http://vulcan.wr.usgs.gov/Images/jpg/MSH/Images/MSH80_msh_eruption_05-18-80_Krimmel_80S3-141_bw_med.jpg

Photograph by Robert Krimmel courtesy of the United States Geological Survey



Answers

1. **False** – A dormant volcano is ‘sleeping’ and may erupt again in the future. The dormant Soufrière Hills volcano on the Caribbean island of Montserrat was actually thought to be extinct before activity began again in 1995.
2. **True** – A composite volcano, also known as a stratovolcano is a tall, conical volcano built up by many layers of hardened lava, tephra, pumice, and volcanic ash.
3. **True** – Lava is both the molten rock expelled by a volcano during an eruption and the resulting rock after solidification and cooling.
4. **True** – A magma chamber is a large underground pool of liquid rock commonly found between 1 km and 10 km under the surface. If it finds a way to the surface, then the result will be a volcanic eruption; consequently many volcanoes are situated over magma chambers.
5. **False** – ‘The Ring of Fire’ is the region of mountain-building earthquakes and volcanoes which surrounds the Pacific Ocean.
6. **True** – The Mid-Atlantic Ridge is the result of sea floor spreading at a constructive plate boundary located along the floor of the Atlantic Ocean, and part of the longest mountain range in the world.
7. **False** – A pyroclastic flow is a fluidised mixture of solid to semi-solid fragments and superheated, expanding gases which flows down the flank of a volcano.
8. **True** – The exact number of volcanoes is unknown as it depends on the exact definition of a ‘volcano.’ During the past 10,000 years, there are about 1,500 volcanoes on land that have been active, but the even larger number of submarine volcanoes is unknown. There are about 600 volcanoes that have had known eruptions during recorded history.
9. **True** – The temperature of the lava can range from about 700°C to about 1,600°C. The temperature depends on the depth of the magma, the speed of the eruption and many other factors such as its gas content, viscosity and composition etc.
10. **False** – Lava eruptions from Mauna Loa are silica-poor, and consequently very fluid; the eruptions tend to be frequent and non-explosive and the volcano has a relatively shallow gradient.
11. **False** – Over half of the world’s volcanoes arise in the ‘Ring of Fire’ around the edges of the Pacific Ocean.

12. **True** – A supervolcano is capable of producing a volcanic eruption with an ejecta volume greater than 1,000 cubic kilometres. The last full-scale eruption of the supervolcano at Yellowstone happened approximately 640,000 years ago and ejected approximately 1,000 cubic kilometres of rock, dust and volcanic ash into the sky.
13. **True** – Geysers exist in only a few places on Earth and generally all are located in or near active volcanic areas where the effect is due to the proximity of magma.
14. **False** – Well weathered volcanic soils are generally well drained but retain water well. They are rich in nutrients essential for plant growth and are easy to till.
15. **False** – Seismic activity in the form of both earthquakes and tremors always occur as the volcano is about to erupt. They generally represent important warnings of a forthcoming eruption.
16. **True** – Due to the high concentration of volcanoes, Iceland has an advantageous position for the generation of geothermal energy. Five major geothermal power plants exist in Iceland and the energy is used for both heating and the production of electricity.
17. **True** – A shield volcano is a type of volcano usually built almost entirely of fluid lava flows. They are named for their large size and low profile, resembling a warrior's shield.
18. **True** – Volcanoes often produce spectacular scenery and tourism associated with volcanoes is not a new phenomenon. Indeed people have travelled to areas of volcanic activity for many centuries for activities as diverse as sightseeing, mountaineering, volcano boarding, camping as well as hot air balloon rides over the volcanic landforms.
19. **False** – Composite volcanoes are found on destructive plate margins.
20. **False** – A caldera is a sunken crater generally associated with a supervolcano.