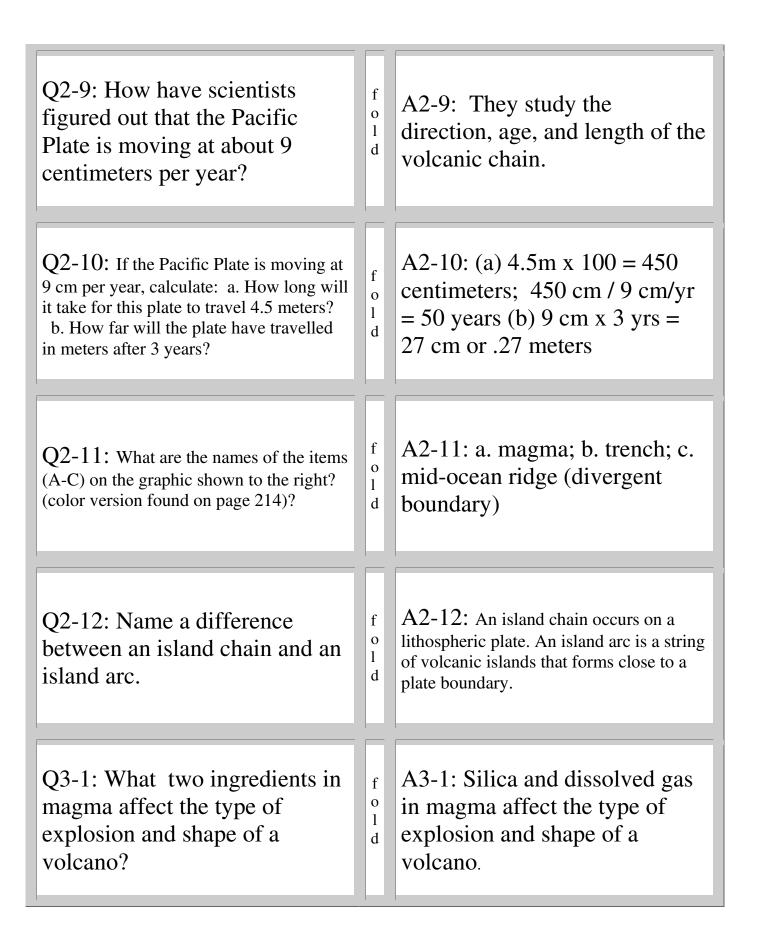
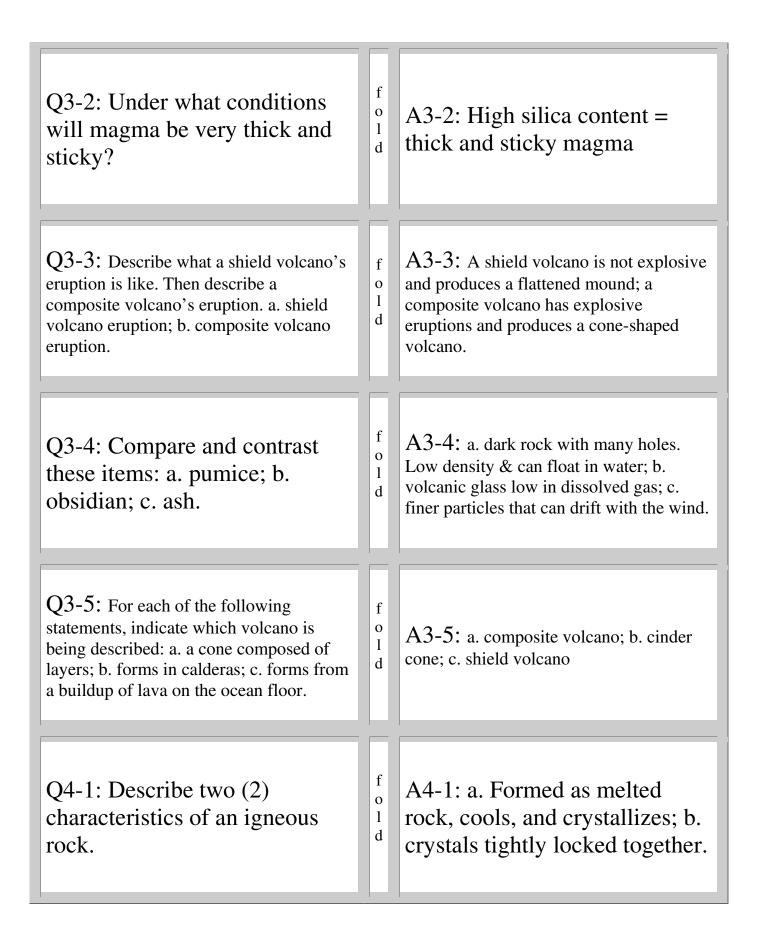
## Earth Science Chapter 10 - Volcanoes - Quiz Questions (#1- #6)

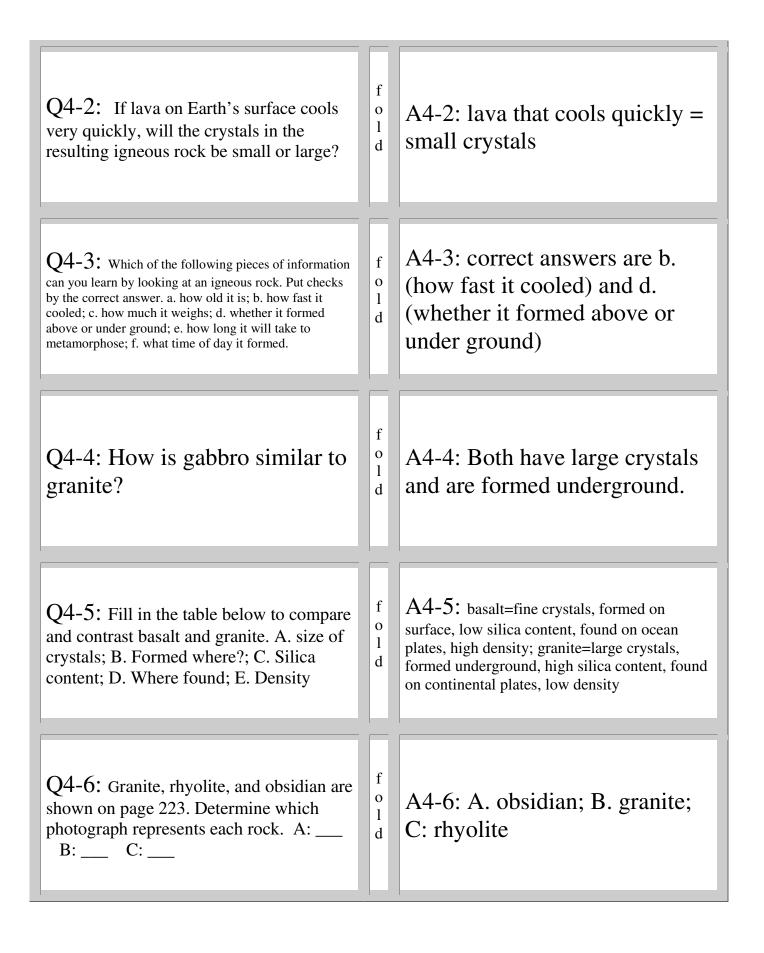
Front - Question		Back - Answer
Q1-1: What is the difference between magma and lava?	f o l d	A1-1: Magma is underground melted rock. Lava is magma that has reached Earth's surface and cooled.
Q1-2: Imagine a volcano with only one vent. What change might cause a second vent to appear on the side of the volcano?	f o l d	A1-2: A second vent could appear on the side of the volcano if a still or dike broke through to the surface.
Q1-3: About 7,000 years ago, Mount Mazama erupted and the summit (top) of the volcano collapsed forming a depression that was filled with rain and melted snow. The depression is now called Crater Lake. Mount Mazama is an extinct volcano. What is the best term to describe the depression that holds Crater Lake?	f o l d	A1-3: The depression is called a caldera.
Q1-4: Which kind of volcano is being described below? Use one of these terms: active, dormant, or extinct. a. No longer erupting; b. Could be described as "sleeping"; c. May erupt in the future but is not erupting at present or recently; d. Erupting on a regular basis; e. The volcano is eroding and a volcanic rock is exposed.	f o l d	A1-4: A. extinct, B. dormant, C. dormant, D. active, E. extinct

Q1-5: What is the difference between a dormant volcano and an active volcano?	f o l d	A1-5: A dormant volcano is not currently active, but may become active in the future. An active volcano is erupting or has erupted recently and is expected to erupt again in the near future.
Q1-6: Based on your reading in this section, answer these questions: a. Under what conditions of temperature and pressure does a solid rock begin to melt? b. Under what conditions of temperature and water content does a solid rock begin to melt?	f o l d	A1-6: A rock begins to melt at low temperature and high water content –or- a rock begins to melt at high temperature and low water content.
Q2-1: What did early map makers notice about the locations of volcanoes?	f o 1 d	A2-1: Volcanoes were located along coastlines.
Q2-2: What causes the region called the Ring of Fire?	f o l d	A2-2: The Ring of Fire is caused by subduction of the Pacific Plate under other plates.
Q2-3: If you could melt a piece of quartz in some lava, would the lava get more sticky or less sticky? Explain your answer.	f o l d	A2-3: Adding this mineral to lava makes it stickier.

Q2-4: Where is runny lava found: (a) On a continental plate, or (b) on an oceanic plate? Why?	f o l d	A2-4: This type of lava is found at mid-ocean ridges or hot spots because it is low in silica content.
Q2-5: Where is thick and sticky lava found: (a) On a continental plate, or (b) on an oceanic plate? Why?	f o l d	A2-5: This type of lava is found on continental plates.
Q2-6: When volcanic island chains are formed, what moves? Pick the correct answer: a. the mantle plume; b. the plate above the mantle plume; c. both the plate and the plume; d. nothing moves	f o l d	A2-6: The correct answer is (b).
Q2-7: Which of the Hawaiian Islands formed first and how long ago did it form?	f o l d	A2-7: The first Hawaiian Island was Kauai, which formed 3.8 to 5.6 million years ago.
Q2-8: What kind of geologic formation is Loihi? Is it a part of the Hawaiian chain? Explain your answer.	f o l d	A2-8: Loihi is an undersea volcano. It is part of the Hawaiian chain, a volcanic island chain that continues to move over a hot spot.







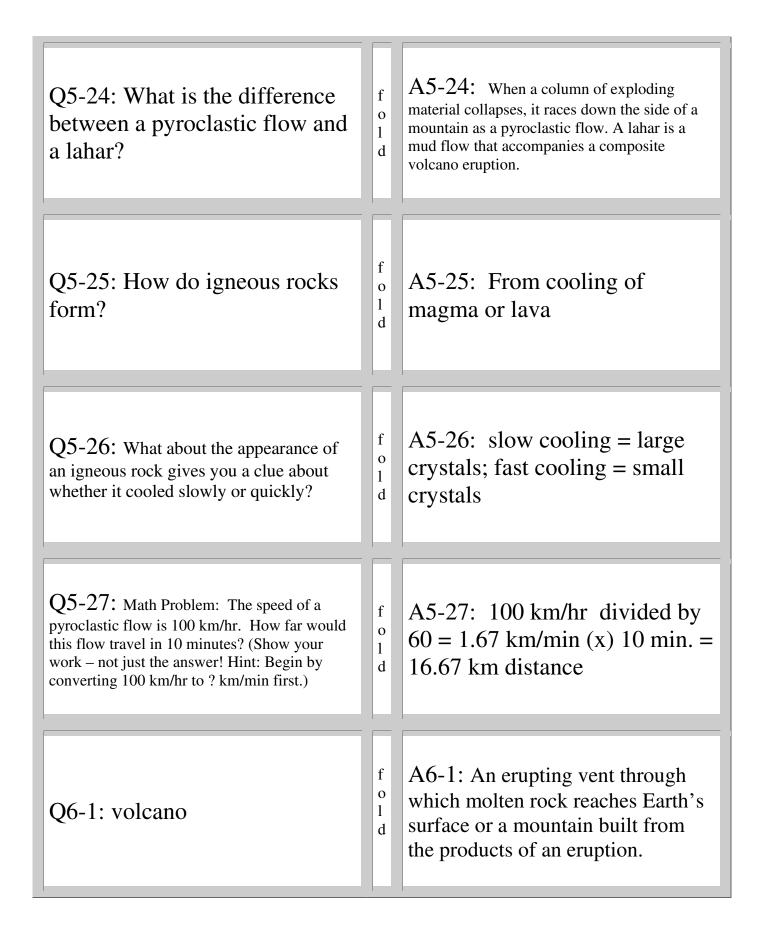
Q4-7: You want to take a vacation to a place where you could find igneous rocks. To which places would you go? Justify your answer. a. Niagara Falls; b. Las Vegas; c. The Hawaiian Islands; d. Your own backyard	f o l d	A4-7: Hawaiian Islands igneous rocks created from rising magma from hot spots
Q4-8: The Mid-Atlantic Ridge goes through the country of Iceland. Would you expect to find igneous rocks in Iceland? Explain your answer.	f o l d	A4-8: Yes, you would expect to find igneous rocks there. New material comes up from the mantle to cool and solidify into new rock.
Q5-1: volcano	f o l d	A5-1: Geologic feature that an eruption can produce
Q5-2: lava	f o l d	A5-2: Magma that has reached and cooled on Earth's surface
Q5-3: magma chamber	f o l d	A5-3: A place where magma cools underground

Q5-4: caldera	f o l d	A5-4: A bowl-shaped volcanic feature on Earth's surface
Q5-5: lava lake	f o l d	A5-5: A volcanic feature that occurs when water fills a caldera and lava oozes into the water
Q5-6: resurgent dome	f o l d	A5-6: A mound of magma that forms on the floor of a caldera
Q5-7: active volcano	f o l d	A5-7: Type of volcano that is erupting or has erupted recently
Q5-8: Ring of Fire	f o l d	A5-8: Region where about half of the active volcanoes on Earth occur

Q5-9: silica	f o l d	A5-9: Substance that makes magma thick and sticky
Q5-10: hot spot	f o l d	A5-10: Mantle area over which a volcanic island can form
Q5-11: cinder cone	f o l d	A5-11: Volcanic feature that can form on the sides of either a shield or composite volcano.
Q5-12: pyroclastic flow	f o l d	A5-12: A combination of hot gases and ash that can move like a liquid down the sides of a volcano during an eruption.  Can cause a great deal of destruction
Q5-13: water cycle	f o l d	A5-13: A natural cycle energized by the Sun that deals with water

Q5-14: obsidian	f o l d	A5-14: Igneous rock – formed by low gas & high silica magma
Q5-15: basalt	f o l d	A5-15: Igneous rock – formed by high gas & low silica magma
Q5-16: What is the difference between a conduit and a vent on a volcano?	f o l d	A5-16: Magma leaves the magma chamber, moves up the conduit, and leaves the conduit at the vent.
Q5-17: Describe the three (3) phases in the life of a volcano.	f o l d	A5-17: a. active – erupting or recently erupted; b. dormant – not active now, but may be in the future; c. extinct – no longer able to erupt.
Q5-18: Is the material that forms a volcanic neck considered to be solidified magma or lava? Explain.	f o l d	A5-18: The material is the solid remains of magma that filled the conduit of a volcano

Q5-19: How are pressure and heat involved in melting rock in the mantle?	f o l d	A5-19: At low temperature and low pressure, melting can begin. At high temperature and high pressure, melting can also begin.
Q5-20: How does plate tectonics cause volcanic islands to form in a chain?	f o l d	A5-20: The plate is moving over the top of a stationary mantle plume. As the plate moves, it carries the volcanic island away from the hot spot and another volcano begins to form.
Q5-21: Describe how the granite domes of Yosemite National Park were formed.	f o l d	A5-21: They were formed as silica-rich magma that rose through the edge of the overlying North American plate at a subduction zone that no longer exists. When the subduction stopped the magma cooled. The surrounding land eroded away, exposing the granite domes.
Q5-22: Describe the magma of fire fountain eruptions in terms of silica and gas content.	f o l d	A5-22: When low silica magma has high levels of dissolved gas, the gas bubbles out as it reaches the volcano vent.
Q5-23: Explain how a shield volcano differs from a composite volcano.	f o l d	A5-23: A shield volcano has low silica magma and is in the shape of a flattened mound. A composite volcano has high silica magma and is a tall, cone-shaped volcano made up of layers of ash and lava.



Q6-2: magma	f o l d	A6-2: Underground melted rock
Q6-3: magma chamber	f o l d	A6-3: A location where magma collects inside Earth
Q6-4: conduit	f o l d	A6-4: Central internal vertical shaft that carries magma up inside a volcano
Q6-5: vent	f o l d	A6-5: An opening to the surface where magma leaves the volcano conduit
Q6-6: dike	f o l d	A6-6: An upward-slanting sheet of magma within a volcano

Q6-7: sill	f o l d	A6-7: The sideways movement of magma underground inside a volcano
Q6-8: lava	f o l d	A6-8: Magma that has reached and colled on Earth's surface
Q6-9: caldera	f o l d	A6-9: A bowl-shaped vent of a volcano after it has erupted
Q6-10: resurgent dome	f o 1 d	A6-10: A mound in the vent of an erupted volcano
Q6-11: lava lake	f o 1 d	A6-11: A lake that contains lava that has formed in a caldera

Q6-12: active volcano	f o l d	A6-12: A volcano that is erupting or has erupted recently
Q6-13: dormant volcano	f o l d	A6-13: A volcano that is not erupting now, but that may erupt in the future
Q6-14: extinct volcano	f o l d	A6-14: A volcano that no longer erupts and is in the process of eroding
Q6-15: volcano neck	f o l d	A6-15: Solid remains of magma that filled the conduit of an extinct volcano. The neck is exposed as the volcano erodes.
Q6-16: Ring of Fire	f o l d	A6-16: A region of Earth's plate boundaries where oceanic crust is subducting under other plates

Q6-17: basalt	f o l d	A6-17: A dense, oceanic, dark-colored rock that is NOT silica rich
Q6-18: silica	f o l d	A6-18: Like the mineral quartz, it makes magma thick and sticky
Q6-19: pillow lava	f o l d	A6-19: Runny basaltic lava that oozes out at a mid-ocean ridge and cools quickly in water
Q6-20: volcanic island	f o l d	A6-20: A volcano that forms away from a plate boundary on an oceanic plate
Q6-21: hot spot	f o l d	A6-21: The top of an established mantle plume

Q6-22: volcanic island chain	f o l d	A6-22: A series of volcanoes formed by a hot spot as a lithospheric plate moves over the hot spot
Q6-23: mantle plumes	f o l d	A6-23: Narrow channels of magma that rise up through the mantle
Q6-24: Loihi	f o l d	A6-24: A new volcanic island forming underwater next to Kilauea in Hawaii
Q6-25: island arc	f o l d	A6-25: A string of volcanic islands that forms close to a plate boundary
Q6-26: subduction zone	f o l d	A6-26: An area where denser basaltic oceanic plates dive under less dense continental plates

Q6-27: shield volcano	f o l d	A6-27: Low silica magma producing a wide, flat volcano
Q6-28: cinder cone	f o l d	A6-28: A pile of rock bits that forms on the sides or in the caldera of a volcano
Q6-29: fire fountain	f o l d	A6-29: A high gas magma eruption
Q6-30: composite volcano	f o l d	A6-30: A tall, explosive, coneshaped volcano formed by layers of silica-rich lava and ash
Q6-31: pyroclastic flow	f o l d	A6-31: A destructive cloud of volcanic material that moves quickly down the side of a volcano after an explosive eruption

Q6-32: lava bombs	f o l d	A6-32: Blobs of glowing lava thrown from an explosive eruption
Q6-33: lahar	f o l d	A6-33: A mudflow that results from a volcanic eruption
Q6-34: water cycle	f o l d	A6-34: A set of processes energized by the Sun that keeps water moving from place to place on Earth
Q6-35: geologic cycle	f o l d	A6-35: A set of processes that keeps rocky material moving from place to place on Earth
Q6-36: geysers	f o l d	A6-36: An explosive eruption of water from volcanic-heated underground chambers

Q6-37: hot springs	f o l d	A6-37: Volcanic-heated water that rises to the surface in pools
Q6-38: igneous rocks	f o l d	A6-38: Rocks that are formed from magma or lava
Q6-39: granite	f o l d	A6-39: Light-colored igneous rock with large, visible quartz and feldspar crystals made from silica-rich magma
Q6-40: gabbro	f o l d	A6-40: A type of rock made from silica-poor magma (has large crystals)
Q6-41: obsidian	f o l d	A6-41: Volcanic glass – cools quickly & has no crystals

Q6-42: welded tuff	f o l d	A6-42: Orange-tan in color; left over from a pyroclastic flow
Q6-43: weathering	f o l d	A6-43: The process of breaking down rocks