

Ch 18 Volcanoes

Section 2 Guided Reading

Scan Section 2 of your text. Write two questions that come to mind from reading the headings and figure captions.

1. _____
2. _____
3. _____

Use your text to define the following terms

4. basaltic _____

5. viscosity _____

6. tephra _____

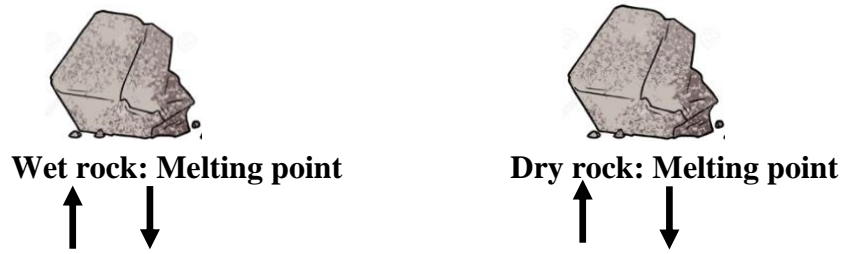
7. pyroclastic flow _____

Complete the following sentences to better understand hot spots. _____ are unusually hot regions of Earth's mantle. In these places, high-temperature plumes of mantle material _____ toward the surface. The heat of the plumes _____ rock into _____. This _____ melts through the _____ and forms _____.

Analyze Figure 10 to complete the table. Indicate in the table whether temperature, pressure, and melting point increase or decrease for each of the conditions.

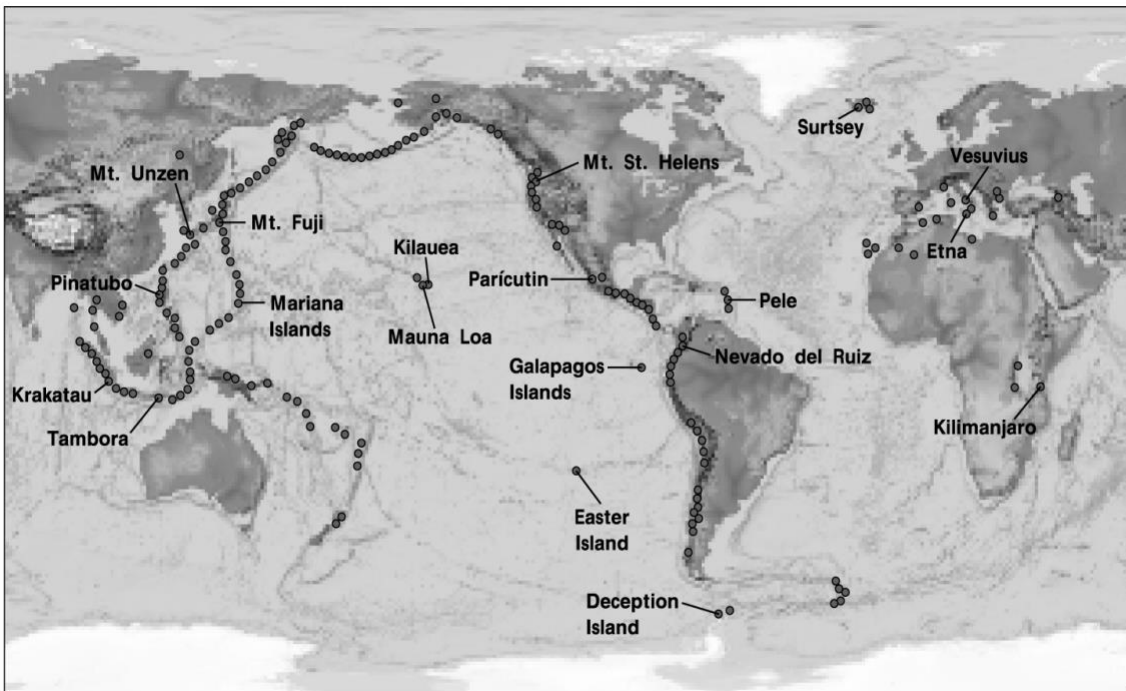
	Pressure	Temperature	Melting Point of Wet Albite
Increasing Depth Below Earth's Surface			
Decreasing Depth Below Earth's Surface			

Illustrate the relationship between the melting point of a wet rock and a dry piece of the same rock under the same amount of pressure by circling the correct arrow for the two rocks.



Organize information about types of magma by completing the table below.

		Andesitic Magma	
Gas content			high
Silica content	less than 50%		more than 60%
Viscosity		intermediate	
Explosives			



Identify types of volcanoes. Write *basaltic*, *andesitic*, or *rhyolitic* to the left of each description.

_____ In the figure above, find volcanoes along continental margins. In the figure above, circle two such volcanoes in red.

_____ In the figure above, find volcanoes in which rocks in the upper mantle melt. In the figure above, circle two such volcanoes in blue.

Compare the explosiveness, viscosity, and gas content of Surtsey to Tambora. Use the figure above.

	Explosiveness	Viscosity	Gas Content
Surtsey			
Tambora			

Explain why a volcano having magma with high silica content and high gas content is explosive.
