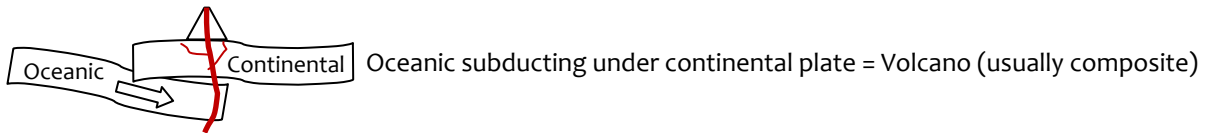


This is a study guide to help you to organize your notes based on the Objectives for this Module. This is not graded and is provided only as a study aid. To use it, fill in the table. Box 1 will ask you to redefine the terms or explain the concept. Box 2 will ask you to provide information about where you can find this information. Provide enough information in this box for you to be able to use this box as a reference to finding the information again. Box 3 will ask you to give an example or try to apply the concept to a new situation.



Understand the relationship between volcanoes and plate tectonics: know which tectonic settings volcanoes occur (e.g., convergence and subduction, divergence and mid-ocean ridges, and hot spot settings).

What are the two major plate types? List the major plate boundaries. Note which ones create volcanoes.	Where is this information located?
1	2

Use this space to draw the different plate boundaries. (Example drawn.)



Locate where volcanoes occur in the U.S. and worldwide; know the “ring of fire” and why it exists.

What type of plate boundary caused the creation of Mt. St. Helens and Mt. Rainier. What is the “Ring of Fire”? (See Figure 7.4) What major plate boundaries create this feature?	Where is this information located?
	

Explain how a volcano forms, functions (erupts), and goes extinct/dormant.

In the space below, draw three diagrams: (1) a tectonic setting that creates a volcano; (2) an active volcano (How do they become so large?); and (3) an extinct volcano.

Recognize the role of volcanoes in the rock cycle.

List the three types of rocks from the Rock Cycle.	Where is this information located?	How does volcanism aid in forming these rocks?
1	2	3

State the types of material (e.g., silica content, tephra, and pyroclastic debris) a volcano erupts and know why this determines volcano shape and explosiveness (e.g., shield volcano, composite volcano, volcanic dome, cinder cone, and calderas).

Tectonic Setting	Volcano Type	Lava Rock Type	Silica Content	Type of eruption	Where is this information located?
		1			2

Know what types of volcanoes are in the continental US and why they have the potential to be explosive (e.g., Composite Volcanoes such as Mt. Rainier and Mt. St. Helens. and Calderas such as Long Valley and Yellowstone).

Volcano	Tectonic Setting	Lava Rock Type	Type of eruption	Where is this information located?
	1			2

Explain the impact of an eruption on other earth processes.

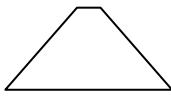
Define Environmental Unity.	How can a volcanic eruption affect other Earth Systems and Processes? For example, how does an eruption affect air quality and possibly water quality?
1	3

Identify styles of volcanic activity.

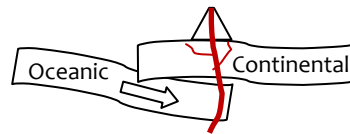
List each type of volcano. Give an example of each type.	Where is this information located?	Relate this back to the tables you created on page 3.
1	2	3

Identify a volcanic style based on a case study or picture.

In the space below, draw a picture of each type (five) of volcano. Give a real world example. Explain the tectonic setting.



Composite Volcano, e.g, Mt. St. Helens



Tectonic Setting: Oceanic to Continental Subduction Zone

Know the volcanic hazards and interpret the relative risks of volcanoes on human society.

List the volcanic hazards.	Where is this information located?	How do these affect human populations? Where is the risk of each the greatest?
1	2	3

Explain the influence of volcanic activity on the composition of Earth's atmosphere.

Starting with ash, list the different gases that volcanoes emit.	Where is this information located?	How do these affect the atmosphere and possibly human health?
1	2	3