

#17: Intro to Volcanism (pages 471-485)

name: _____

1. What is magma and how does it form?
 2. According to page 472, does pressure make it easier, or more difficult to melt rock?
 3. Does the presence of water in the rock make it easier, or more difficult to melt rock?
 4. What do the red spots on the map on page 473 represent?
 5. Compare this map (p. 473) to the one on page 455. According to the map on page 455, what do we call those areas that have the most volcanoes?
 6. Most volcanoes are located where . . . (circle one)
a. plates are moving apart b. plates are moving together c. plates are sliding past one another
 7. A "pluton" is a rock formation formed as magma cools beneath the surface. Read pages 476 and 477 and look at the diagram atop page 477. What is the largest type of pluton?
 8. Which type of pluton is shaped like a mushroom? _____
 9. What is the difference between a dike and a sill? _____
- What type of pluton is shown in each of the following photos?
10. 18-6 on page 478: _____
 11. 18-7 on page 478: _____
 12. 18-8 on page 478: _____
 13. Look at the photos and diagram on page 481. Which (USA) state is this caldera in?
 14. Why did the volcano above the magma chamber collapse to form the caldera shown in the photos and diagram on page 481?
 15. According to pages 482-483, how do shield cones form?

16. Where can you find a shield cone?
17. How do cinder cones form?
18. What are the two different types of layers that make up a composite cone?
19. Compare the diagrams on pages 482-483. Which is the smallest type of volcano?
20. Which type of volcano is the most dangerous?
20. Look at the photo on page 484. How did this 1902 eruption wipe out this city?
21. What are the components of a pyroclastic flow? (What's in it?)
22. Explain the basic cause of "convergent volcanism".
23. Do the same for divergent volcanism.
24. Do the same for "hot spot" volcanism.
25. Read page 490. Explain how this eruption caused 1816 to be "The Year Without a Summer".