

## Worksheet: Intro to Volcanism

name:

### **\*Use sentences.**

1. \*What is the point of the two photos on page 259? (Use sentences to answer questions marked with an asterisk.)
2. How many people died as a result of the eruption of St. Helens. List all the ways they died. (258)
3. \*Look at the two figures on page 261. Why would the volcano in Figure 9.3 erupt more explosively than the volcano in Figure. 9.4 (2 reasons).
4. Figure 9.13: What kind of volcano is the big island of Hawaii, and \*why isn't it very steep? (Hint: There is something about the lava. See page 267.)
5. \*Explain how the material that makes up the layers of a shield cone (Hawaii) are different from the material that make up the layers of a composite cone (Rainier).
6. \*What two aspects of the 3 kinds of cones are compared in figure 9.14?
7. What are cinder cones (Fig. 9.16) made of?
8. Find the person in the photo on page 273. What is the point of the arrows?
9. Look at the photo and diagrams on page 274. Where is this? \*What caused it to collapse?
10. \*Figure 9.23: Where is this place? Explain what a "fissure eruption" is. Do NOT use the word "fissure" in your answer!
11. \*How did the Columbia Plateau (Fig. 9.24) form?
12. \*Fig. 9.25: What kind of feature is Shiprock, NM? What happened to the original cone that surrounded it?

13. \*Look at p. 277. Explain what “intrusions” (a.k.a. plutons) are. Do NOT use any form of the words “pluton” or “emplaced”!
14. Look at p. 277. What two processes cause these intrusions to appear at the surface, even though they formed deep beneath the surface?
15. \*Fig. 9.29: What are the red areas called, and how did they form? (p. 279) Do not use any form of the words “plutons”, “emplaced”, or “intrusions”!
16. \*Fig. 9.35: Explain what “The Ring of Fire” is. (include what and where)
17. \*Fig. 9.35: Which two areas of the USA have the most active volcanoes? Explain why.
18. \*Read page 280. Explain what “decompression melting” is. Tell what decompression is, tell how it happens, and explain why it makes it easier for mantle material to melt. Do NOT use the word “confining”!
19. Read “Addition of Volatiles” on p. 281. List the 4 factors that determine whether rock is molten or solid.
20. \*Explain how water that is subducted with sediment at a “convergent plate boundary” helps generate magma.
21. \*What is unusual about the location of “intraplate volcanism”? (C and D on p. 284-285; explained on p. 286-287)