name:

Worksheet: Intro to Volcanism *Use sentences.

1. *What is the point of the two photos on page 286?

- 2. *Explain what "viscosity" is.
- 3. Which has a higher viscosity, corn oil or honey?
- 4. What two factors affect the viscosity of magma?

5. Besides the viscosity (depends on silica content) of its magma, what else might be present in the magma that could cause a volcano to erupt more explosively?

6. *Look at the diagram on p. 289. This is a "composite cone". How is the material that makes up the layers of a composite cone different from the material that makes up the layers of a shield cone (shown on atop p. 290)?

7. *Explain how a cinder cone forms (290).

- 8. *What is the point of figure 11 on p. 291?
- 9. Read page 292 and look at the series of diagrams (and photo). Where (which state in the USA) is this caldera located, and *why did the volcano collapse after it erupted?
- 10. *Look at figure 14 and read the section titled, "Volcanic Neck". What happened to the cone that once surrounded this neck?
- 11. *Explain how a lava plateau forms.
- 12.*Read p. 294. Explain what a "lahar" is.

13.*What are plutons?

- 14. What kind of pluton is shown in the photo on p. 295?
- 15.*Look at figure 17 and read the caption. Explain the difference between a dike and a sill?
- 16.*Compare A and B in figure 17 with figure 14 on p. 293. Explain how Shiprock, New Mexico (figure 14) formed.
- 17.*Explain the difference between a dike and a laccolith.
- 18.*The mountains between Helena and Butte are a batholith (called "The Boulder Batholith"). How does a batholith form?
- 19. Compare the photo of Devil's Tower on page 298 with figure 17. What kind of pluton is Devil's Tower?
- 20. *What is the point of the satellite image shown on top of page 299?
- 21.*Read the section titled, "A String of Islands" on page 299. Kauai, Oahu, and Maui are volcanoes, but they are no longer active (extinct). Explain why.