**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PERIOD: \_\_\_ DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**VOLCANIC INQUIRY QUESTIONS TEXTBOOK**

1. Why does magma rise towards the Earth’s surface? p. 500

2. Why do volcanoes form at convergent boundaries? p. 501

3. Describe the relationship between the type of volcanism and annual lava production. p. 501

4. Where are two-thirds of the world’s volcanoes located? Why? p. 502

5. Explain how the chain of Hawaiian Islands was formed. p. 503

6. Draw and provide a written description of each of the three types of volcanoes. pp. 506-507

|  |  |  |  |
| --- | --- | --- | --- |
|  | Description | Type of Eruption | Illustration |
| Shield Volcanoes |  |  |  |
| Cinder Cone |  |  |  |
| Composite Volcanoes |  |  |  |

7. What effect does dissolved gases have on magma? p. 509

8. How does temperature affect viscosity? p. 509

9. Compare and contrast high and low viscosity magma. p. 509

10. Fill in the chart below by identifying the characteristics of the three types of magma. p. 510

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Silica Content | Viscosity  | Gas Content | Explosiveness | Example |
| Basaltic |  |  |  |  |  |
| Andesitic |  |  |  |  |  |
| Rhyolitic |  |  |  |  |  |

11. What is tephra and how is it classified? p. 512

12. Why is pyroclastic flow more dangerous than lava flow? p. 513

13. Describe the terms below. pp. 515-516

a. batholiths:

b. laccoliths:

c. sills:

d. dikes:

14. Describe three ways scientist monitor potential eruptions of volcanoes. p. 518

1.)

 2.)

 3.)

15. Use the link below to research and describe volcanic hazards.

<https://volcanoes.usgs.gov/vhp/hazards.html>

a. tephra:

b. volcanic gases:

c. lava flows:

d. debris avalanches, landslides, and tsunamis:

c. pyroclastic flows:

d. lahars:

16. Research online to identify the parts of a volcano (e.g. magma chamber, lava flow, vent, ash plume, dike, sill, tephra, pyroclastic flow, etc.). Draw and label the parts of a volcano.

