Name: _____ Date: _____ Pd: _____

Unit 2 Formative Assessment – Plate Tectonics

Chapter 8: Earthquakes

1. When an earthquake occurs, energy radiates in all directions from its source, called the _____.

   A. Epicenter
   B. Focus
   C. Fault
   D. Seismic center

2. A fault is _____.

   A. A place on Earth where earthquakes cannot occur.
   B. A fracture in the Earth where movement has occurred.
   C. The place on Earth's surface where structures move during an earthquake.
   D. Another name for an earthquake.

3. Identify **AND** describe the ***three (3)*** types of seismic waves:

   A:

   B:

   C:

4. **Describe** how scientists find the epicenter of an earthquake?

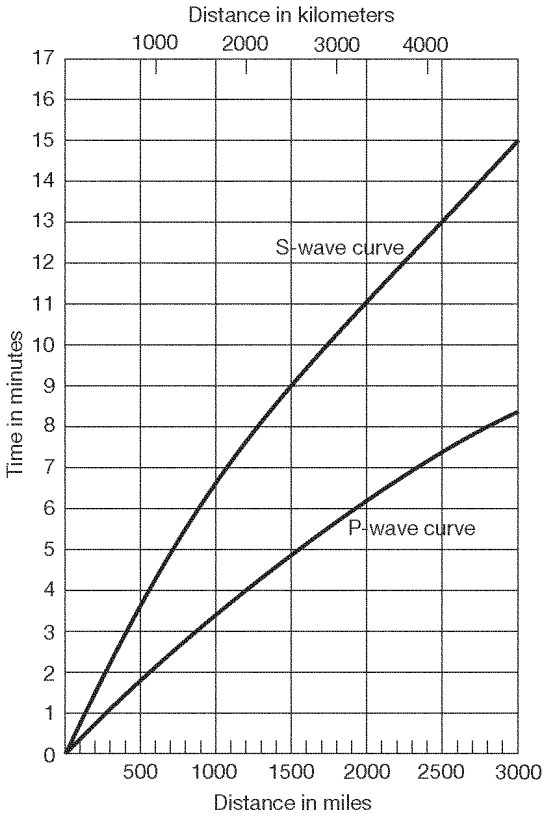

Figure 8-1

5. According to Figure 8-1, what is the distance between the seismic station and an earthquake epicenter, if the first S wave arrives 5.0 minutes after the first P wave?

In miles: _____

In Kilometers: _____

Chapter 9: Plate Tectonics

6. Who proposed the Continental Drift hypothesis **AND** what does it say?

7. List ***four (4)*** pieces of evidence to support this hypothesis:

   - A.
   - B.
   - C.
   - D.

8. What was the response of the scientific community to this hypothesis and why?

9. What is the weaker, hotter zone beneath the lithosphere that allows for motion of Earth's rigid outer shell?

   A. Crust C. Asthenosphere
   B. Outer Core D. Inner Core

10. Most of Earth's earthquakes, volcanoes, and mountain building occur _____.
    A. in the center of the continents.
    B. at plate boundaries.
    C. in the Himalayas.
    D. at volcanic island arcs.

11. Match the left column with the right column by drawing arrows:

Convergent Boundary	Grinding past each other
Divergent Boundary	Moving together
Transform-fault Boundary	Moving apart

12. Match the left column with the right column by drawing arrows:

Land Rift Valleys	Divergent Oceanic-Oceanic
Continental Volcanic Arcs	Convergent Oceanic-Oceanic
Mountains	Convergent Oceanic-Continental
Volcanic Island Arcs	Convergent Continental-Continental
Trenches	Divergent Continental-Continental
Ocean Ridges	Convergent Oceanic-Continental

13. Match the left column with the right column by drawing arrows:

Destructive Plate Margins	Divergent Boundaries
Constructive Plate Margins	Convergent Boundaries

14. Scientists agree that convection currents occurring in the _____ are the driving force for plate movement.
    A. crust
    B. outer core
    C. mantle
    D. inner core

15. The main source of heat in the Earth's interior is due to _____.
    A. the warm troposphere of our atmosphere
    B. the eruption of volcanoes
    C. the convection currents in the core
    D. the radioactive decay of elements

16. _____ causes oceanic lithosphere to slide down the sides of the oceanic ridge due to gravity.
    A. Mantle plume
    B. Convective flow
    C. Ridge-push
    D. Slab-pull

17. _____ is thought to be the primary downward arm of convective flow in the mantle.
    A. Mantle plume
    B. Convective flow
    C. Ridge-push
    D. Slab-pull

18. The _____ is a rigid outer layer of Earth that rests on top of a weak plastic layer of the mantle called the _____.
    A. asthenosphere, inner core
    B. asthenosphere, lithosphere
    C. lithosphere, asthenosphere
    D. lithosphere, inner core

Chapter 10: Volcanoes

19. Contrast lava and magma.

20. In what geographical region of the world are most volcanoes found? Why is this true?

21. Which of the following is NOT a type of pyroclastic material?
    A. Lahar
    B. Cinders
    C. Lapilli
    D. Volcanic bomb

22. **Describe** three (3) different types of pyroclastic material:

    A:

    B:

    C:

Human Impact of Earthquakes and Volcanoes

23. **Describe** the necessary safety precautions and action responses of people living in regions with:

    A: Earthquakes -

    B: Volcanoes -

Geologic History of North Carolina

24. **Describe** how the Appalachian Mountains were formed (include the name of tectonic plates involved and their motion)

25. What is the fall line in NC? Where is it found?