

Name: \_\_\_\_\_

Class Period: \_\_\_\_\_

## Dynamic Earth Web Quest

Go to:

<http://www.learner.org/interactives/dynamiearth/index.html>

Click on "Start your exploration into Earth's Structure"

### ➤ Earth's Structure:

Mouse over the diagram to respond to the following questions

1. What is the thickness, in miles, of the following layers:

a) Crust: \_\_\_\_\_ under oceans & \_\_\_\_\_

thick under continents.

b) Mantle: \_\_\_\_\_

c) Outer Core: \_\_\_\_\_

d) Inner Core: \_\_\_\_\_

2. Label the diagram of Earth to the right

3. Describe the Lithosphere:

\_\_\_\_\_

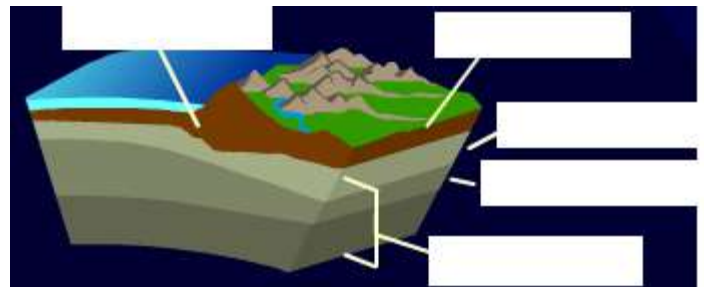
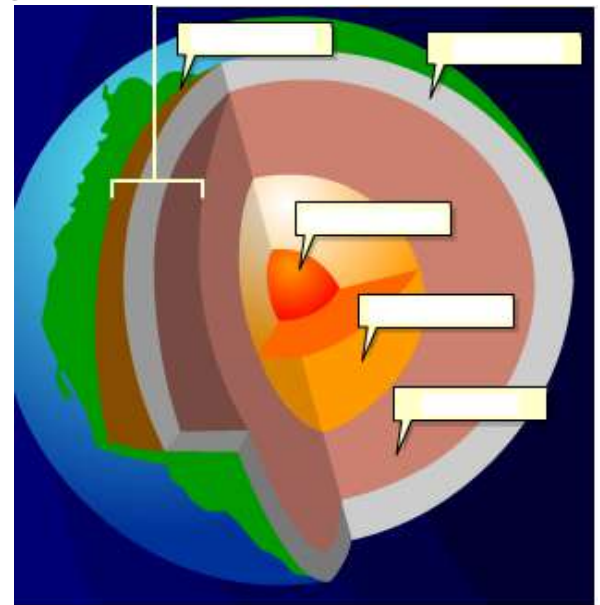
\_\_\_\_\_

4. Describe the Asthenosphere: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



### ➤ Plate Tectonics:

5. The Theory of Plate Tectonics is attributed to German scientist \_\_\_\_\_.

6. The original large land mass or "Supercontinent" is referred to as \_\_\_\_\_ which is Greek for "\_\_\_\_\_".

7. Complete the table:

200 million yrs ago	135 million yrs ago	65 million yrs ago	50 – 40 million yrs ago
- _____ begins to break up w/ _____ in the North & _____ in the South	- _____ splits - S. America/Africa separates from _____ / _____ - _____ breaks away from Antarctica/Australia	- Laurasia begins to separate with _____ & _____ breaking apart - S. America & Madagascar split from _____	- _____ separates from N. America - _____ separates from _____ & _____ moves North - Indian landmasses collide w/ _____

8. Plate Tectonics Theory has been widely accepted since the \_\_\_\_\_'s. It states that Earth's outer layer or \_\_\_\_\_ is broken up into \_\_\_\_\_. These plates hold \_\_\_\_\_ and \_\_\_\_\_. They are constantly \_\_\_\_\_.

9. **Continents over time** BONUS QUESTION: Since the plates are constantly in motion, scientists predict that 250 million years from now the continents will come together to form \_\_\_\_\_ called \_\_\_\_\_.

➤ **Plate Boundaries:**

10. Continental crust underlies \_\_\_\_\_ and is \_\_\_\_\_ miles thick, whereas \_\_\_\_\_ is found under the ocean and is only \_\_\_\_\_ miles thick.

11. Name the three types of plate boundaries below. Create a simple diagram of each including arrows to show the direction of their movement & list some examples of that type of boundary

_____ Boundary	_____ Boundary	_____ Boundary
Diagram:	Diagram:	Diagram:

12. Use colored pencil or marker to indicate the types of boundaries on the map to the right. Create a key below:

Convergent

Divergent

Transform

Label the following plates on the map:  
N. America Plate, Eurasian Plate, Pacific Plate, Antarctic Plate, African Plate



13. How many plates did you place correctly? \_\_\_\_\_ score

➤ **Slip, Slide & Collide**

14. At **convergent boundaries** tectonic plates \_\_\_\_\_

15. Roll over the diagram to define the following terms:

a) subduction zone: \_\_\_\_\_

b.) trench: \_\_\_\_\_

c.) volcanoes: \_\_\_\_\_

d.) tsunami: \_\_\_\_\_

16. Mountain range in Asia that was formed by colliding tectonic plates: \_\_\_\_\_.

This mountain range continues to grow by \_\_\_\_\_ inch(s) per year.

17. At **divergent boundaries** tectonic plates are \_\_\_\_\_.

18. What is Sea Floor Spreading? \_\_\_\_\_

19. Volcanoes form in both \_\_\_\_\_ and \_\_\_\_\_ boundaries.

20. At **transform boundaries** tectonic plates \_\_\_\_\_.

21. A crack or fracture in Earth's crust is a \_\_\_\_\_.

22. Explain what causes earthquakes. Provide a detailed answer & include the terms: tectonic plates & stress in your response. \_\_\_\_\_

23. What type of fault is the San Andreas Fault in California? \_\_\_\_\_

24. The San Andreas fault runs between the \_\_\_\_\_ & \_\_\_\_\_ plates and is approximately \_\_\_\_\_ miles long.

25. Interactive Quiz: Plate Interactions Challenge – What was your best Score? \_\_\_\_\_

TEST SKILLS: Complete this section and be prepared to print PAGE 1 ONLY of the Results page when you finish.

You answered \_\_\_\_\_ out of 30 questions correct. Your score was \_\_\_\_\_%