

Plate Tectonics WebQuest

Go to <http://www.learner.org/interactives/dynamicearth/structure.html> and click on each layer of Earth to learn about the properties of these layers.

1. What are the four main layers of Earth? List them in order from the outermost layer to the innermost layer. (4 pts.)

1)

2)

3)

4)

2. Roll your mouse over the crust. Identify the following: (1 pt. each)

A. Thickness of the crust under the oceans = _____

B. Thickness of the crust under the continents = _____

3. Roll your mouse over the mantle. What are the two layers of the mantle? (1 pt. each)

A. Upper Region = _____

B. Lower Region = _____

4. Identify three facts about each layer. (1 pt. for each box)

Crust	Mantle	Outer Core	Inner Core

Go to <http://www.exploratorium.edu/origins/antarctica/ideas/gondwana2.html> to learn about Pangea and Continental Drift.

5. What are the two halves of Pangea called? (1 pt. each)

A. Northern half = _____

B. Southern half = _____

6. When did Pangea split into two landmasses? (2 pts.)

7. What is a tillite? (2 pts.)

8. What did the fossils found in Antarctica reveal about its past climate? (3 pts.)

9. What is the name of the German scientist who proposed the theory of Continental Drift? (2 pts.)

10. What was the first "clue" that this person (the one you named in question #9 above) had that made him think that the continents drifted? (2 pts.)

11. Explain the theory of continental drift. (3 pts.)

12. What were the names of the two fossils that helped scientists conclude that continental drift actually happens? (2 pts.)

A. Plant Fossil = _____

B. Reptile Fossil = _____

Go to <http://www.learner.org/interactives/dynamicearth/drift.html> and click on the answer to the question that is on the screen and then click on how do we know. Scroll to the bottom and click on the red words that say Continents Over Time. Read the instructions and complete the puzzle. Answer the bonus question.

13. What did the bonus question say would happen? (2 pts.)

Go to <http://www.learner.org/interactives/dynamicearth/plate.html> to answer the following questions.

14. What is the border between two plates called (2 pts.)

15. A(n) _____ boundary occurs when two plates are pushing towards each other. (1 pt.)

16. What occurs at a **divergent boundary**? (2 pts.)

17. What occurs at a **transform boundary**? (2 pts.)

18. Scroll down to the bottom and take the Plates and Boundaries Challenge. What was your score? _____

19. What is the name of the plate that we live upon here in South Dakota? (2 pts.)

Go to <http://www.learner.org/interactives/dynamicearth/slip.html> and scroll to the bottom and click on the "See What Happens at Different Plate Boundaries" link. Move your mouse over the words on the diagram to learn more about the different types of boundaries.

20. The first picture shows an ocean crust colliding with a continental crust. What type of landform will form if this happens as seen in the picture? (2 pts.)

21. A(n) _____ is a deep sided depression in the ocean floor. (1 pt.)

22. A(n) _____ is a hot, semi-liquid zone on which tectonic plates float. (1 pt.)

23. A(n) _____ is the rigid outer layer of the earth that is broken up into the tectonic plates. (1 pt.)

Scroll down to the second picture (the bigger picture at the bottom, not the little picture on the right side). This picture is showing two continental crusts colliding with each other.

24. What type of landform will form if two continental crusts collide as shown in the picture? (2 pts.)
25. What famous mountain range was formed this way? (2 pts.)

Go to <http://www.learner.org/interactives/dynamicearth/slip3.html> and click on the start button to view the animation.

26. Describe seafloor spreading. (3 pts.)
27. Explain how a mid-ocean ridge forms. (3 pts.)
28. Faults and earthquakes are most often associated with _____ boundaries. (1 pt.)
29. What causes earthquakes? (3 pts.)
30. What famous strike-slip fault is located in California? (2 pts.)

Go to <http://www.learner.org/interactives/dynamicearth/slip4.html> and take the Plate Interactions Challenge.

31. What was your score on the challenge activity? _____

Go to <http://www.learner.org/interactives/dynamicearth/testskills.html> and take the test. Fill in your first and last name in the box provided and then begin the test. When you have answered all 30 questions, click "See Your Results". Print this test paper and staple it to the back of this assignment.

This entire Continental Drift WebQuest will be due at the beginning of class on Tuesday March 22, 2016