Name:

Date: Per.

Online Investigation of Earth’s Crust

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

**Start with Earth’s structure:**

1. Draw a diagram (on a separate sheet of paper) to show the layers of the earth or label the one above.
2. As you roll your mouse over the layers, write down a brief description for each. Note weather each is solid, liquid or some in between, composition and any unique features.
   1. Crust:
   2. Lithosphere:
   3. Asthenosphere:
   4. Mantle:
   5. Outer Core:
   6. Inner Core:

II. **Plate Tectonics**

1. When you are done, go to the next chapter (**plate tectonics**), follow the prompts and answer the questions below.
   1. How has the crust of the Earth changed over time?
   2. Click the “**How do we know this**?” button.
      1. Who was Alfred Wegener and what observations did he make that led to the theory of Continental Drift:
   3. What did he call the original land mass?
   4. Summarize the basics of the “**Plate Tectonic Theory**”:
   5. Click “**Continents Over Time**” and see if you can trace how the earth’s continents have shifted over time.

III. **Plate Boundaries**

1. Draw a diagram, describe and give 1 example of each of the boundaries below:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Convergent | Divergent | Transform |
| Diagram |  |  |  |
| Description |  |  |  |
| Example |  |  |  |

1. Scroll down to the plate boundary map and use the key to find the different types of boundaries.
2. Which plate do we live on?
3. If we travelled to Europe, which plate would we be on?
4. If we travelled to Hawaii, which plate would we be on?

IV. Click on the tab “**Slip, Slide, & Collide**” from across the top. After you read about what happens at plate boundaries, scroll to the bottom and click on “**See what happens at different plate boundaries”**

1. **Convergent Boundaries – colliding plates**
2. Ocean crust tends to be and than continental crust.
3. A **subduction zone** occurs when:
4. A **trench** forms when:
5. Observe and summarize how the volcano is formed:
6. Describe how an **island arc** is formed:
7. What is a tsunami and why are they common at subduction zones?
8. What happens when two continental plates converge?
9. Give an example of a mountain range formed in this way.
10. Which two plates were involved in the formation of this mountain range?
11. **Divergent Boundaries – Spreading Plates**
12. At a divergent boundary plates are moving
13. Summarize the steps involved in **Seafloor Spreading**:
14. What is a **mid ocean ridge** and how is it formed?
15. What is a rift and how is it different from a mid ocean ridge?
16. **Transform Boundaries – Grinding Plates**
17. Fault:
18. Why are earthquakes common along faults or at transform boundaries?
19. A transform boundary and its fault are often called a fault.
20. **Plate Interactions Challenge**:
21. Complete the interactive challenge with 4 case studies and a word jumble. Score:
22. **Test Skills**
23. Complete the Test Skills section when you have finished the assignment.

Score: