



Plate Tectonics!

Earth's Structure

What's inside the earth?

In the early part of the 20th century, geologists studied the seismic waves generated by earthquakes to learn more about the structure of the earth's interior.

What are the three distinct layers of the Earth? (There are two types of "core" please describe under the same layer)

- 1.) _____ (Description) _____

- 2.) _____ (Description) _____

- 3.) _____ (Description) _____

Go to "Next chapter: Plate Tectonics"

- 1.) Choose which map looks most like the Earth today.
- 2.) Click "How do we know this?"

Plate Tectonics

- 1.) What was Alfred Wegener's evidence for Pangaea (*when all the continents were joined together*)?
- 2.) When did Pangaea break up? When did Pangaea form?
- 3.) When did the Indian landmass collide with Asia?
- 4.) The Earth's outer layer or _____ is broken into several large slabs called _____.
- 5.) Plates hold what?

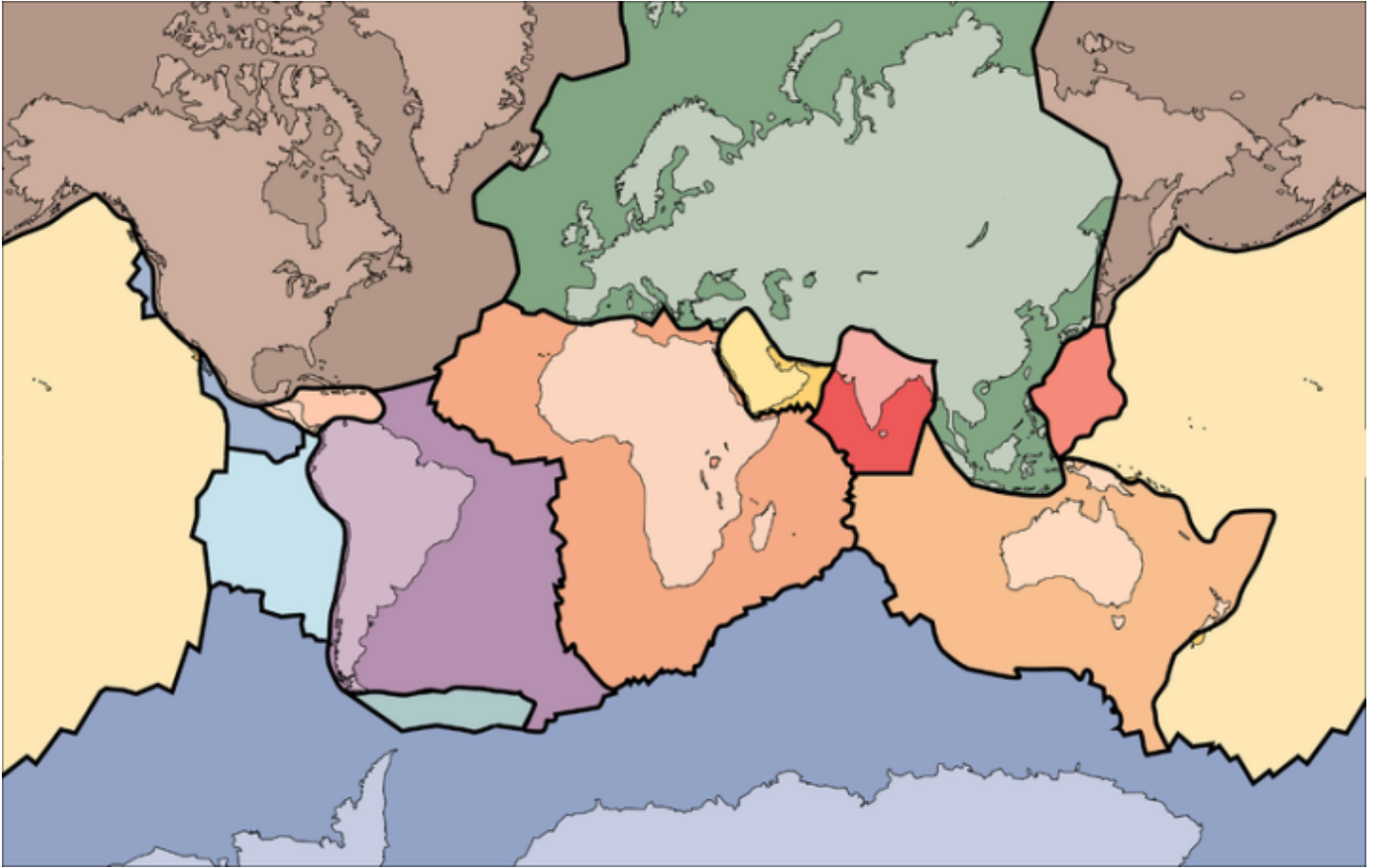
Can you trace how the Earth's continents shifted over time?

Click the "Continents over Time" at the bottom of the page and see how you do!

Go to the next link “[Plates and Boundaries](#)”

Plates & Boundaries

Write in the tectonic plates in the correct place:



* Continental Crust is _____ thick.

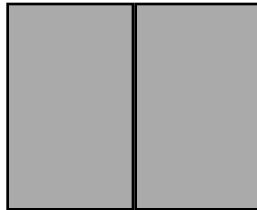
* Oceanic Crust is _____ thick.

Draw the arrows to show the correct plate movement

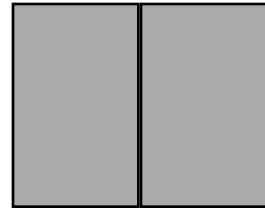
Convergent:



Divergent:



Transform:



Use the map to see where the three different types of plate boundaries are found throughout the world.

See how many of the tectonic plates and boundaries you can identify!!

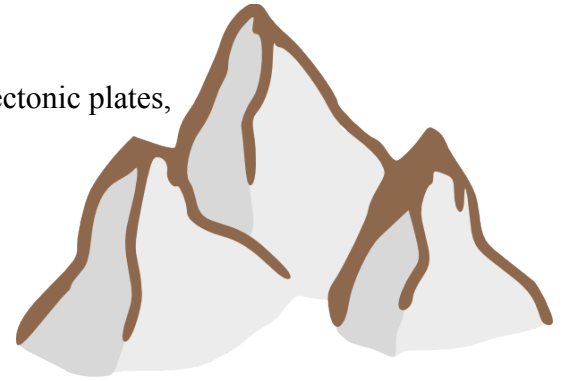
Click the “[Plates & Boundaries Challenge](#)” at the bottom of the page.

Go to the next chapter "Slip, Slide, & Collide"

Slip, Slide, & Collide

Most major geologic events occur at the boundaries between tectonic plates, where huge, massive pieces of the earth's crust interact.

1.) What is likely to occur at these tectonic plates?



Click [See what happens at different plate boundaries.](#)

Convergent Boundaries - Colliding Plates

Continental-Oceanic:

1.) Why does an oceanic plate subduct underneath a continental plate? What is this zone called?

2.) What happens at the edge of the continent?

3.) What is the hot, semi-liquid zone on which tectonic plates float? (Use the diagram to find this)

Oceanic-Oceanic:

4.) When two oceanic plates collide, what determines which plate will subduct?

5.) What is formed when two oceanic plates collide? Give one example.

6.) The collision and subduction of plates is not _____. Therefore large and powerful _____ are a result. What other interaction occurs due to this and what is it?

Continental-Continental:

7.) What happens when two continental plates collide and what is the result of this interaction?

8.) Where is this happening today?

Click [Next](#)

Divergent Boundaries - Spreading Plates

Seafloor Spreading

- 1.) Divergent boundaries in the middle of the ocean contribute to _____.
- 2.) Describe what happens when two oceanic plates move apart and what it forms:

Rifts

- 1.) What happens when two continental plates diverge? (Click “Start” on the diagram)

Transform Boundaries - Grinding Plates

- 1.) What results from a transform boundary?
- 2.) Why does a transform fault produce many earthquakes?

See if you can figure out the plate movements and geologic events occurring at real-world locations.

Click “[Plate Interactions Challenge](#)”

Click [Test Skills](#) and go through the questions.

- 1.) When you are done click “See your results”
- 2.) Please [see me](#) so that I can record your results.