

Dynamic Earth

Interactive Lesson - Part 1

Student
Name:

8th Grade Science Standards Covered:

ESS2.5 Construct a scientific explanation using data that explains the gradual processes of plate tectonics accounting for A) the distribution of fossils on different continents, B) the occurrence of earthquakes, and C) continental and ocean floor features (including mountains, volcanoes, faults, and trenches).

ESS2.4 Gather and evaluate evidence that energy from the earth's interior drives convection cycles within the asthenosphere which create change in the lithosphere including plate movements, plate boundaries, and sea-floor spreading.

Student Directions:

Begin by accessing the Dynamic Earth Interactive site at <https://www.learner.org/series/interactive-dynamic-earth/>

“Intro” Page:

- Read the information on this page, then click the link to “start your exploration with earth’s structure”

“Earth’s Structure” Page:

- Click on all of the layers of earth to learn more about them and answer the following questions:

1. Describe the crust using a maximum of 6 words: _____

2. Describe the mantle using a maximum of 6 words: _____

3. Describe the outer core using a maximum of 6 words: _____

4. Describe the inner core using a maximum of 6 words: _____

5. What parts of other layers make up the “lithosphere”? _____
6. Part of what other layer makes up the “asthenosphere”? _____

- Click on the link to go to the “Plate Tectonics” page.

“Plate Tectonics” Page:

- Follow the on-screen instructions to get to the page to read about plate tectonics and continents on the move.
- After reading, click the link to do the “Continents Over Time” activity.
- Play the activity as many times as needed until you have them in the correct order.
- Answer the Bonus Question:
 - Explain what scientists think the world might look like 250 million years in the future, and WHY.

STOP here for now. You'll pick up where you left off in Part 2 of this interactive lesson.