



Earth Science: Teacher Tips & Helpful Hints

N.C.S.S: 6.E.2 Understand the structure of the earth and how interactions of constructive and destructive forces have resulted in changes in the surface of the Earth over time and the effects of the lithosphere on humans.

- The activity is broken up into three different parts:
 - **Activity 1: Structure of the Earth** (6.E.2.1)
 - **Activity 2: Plate Tectonics** (6.E.2.2)
 - **Activity 3: Formation of Soil** (6.E.2.3)

Activity: Structure of the Earth

- There are 10 Earth's Interior Event Cards.
- Resources that students may use to rearrange cards:
 - <http://www.bbc.com/future/ bespoke/story/20150306-journey-to-the-centre-of-earth/>
 - <https://www.nationalgeographic.com/news/2010/9/100923-science-early-earth-core-magma-liquid-molten-layer/>
- There is a *Structure of the Earth: Student Activity Sheet* available.
- There is a *Structure of the Earth* answer key.

Activity: Plate Tectonics

- This YouTube video shows what moves tectonic plates:
<https://www.youtube.com/watch?v=ryrXAGY1dmE>
- The puzzle pieces are blank on the front. This can allow for labeling individual plates and plate movement.
- In **Part 2**, you may demonstrate the effect of two plates pressing against each other by pushing on a piece of paper from both sides.
- There is a *Plate Tectonics: Student Activity Sheet* available.

Activity: Formation of Soil

- If the soil is not dry, students should allow for it to dry out.
- In **Part 2**, students will begin to see settling after the first minute. When the water is clear, the soil will be separated into different layers. The amount of layers will depend on the individual student's soil.
- In **Part 3**, you can have students touch the moistened soil to get a better understanding of how the soil feels.
- In **Part 4**, students may have to refill their pipette multiple times to get enough water to run through their individual soil.
- This YouTube video shows soil made by weathering:
<https://www.youtube.com/watch?v=kybPmB1zBUw>
- There is a *Formation of Soil: Student Activity Sheet* available.

N.C.S.S Clarifying Objectives

- 6.E.2.1 Summarize the structure of the earth, including the layers, the mantle and core based on the relative position, composition and density.
- 6.E.2.2 Explain how crustal plates and ocean basins are formed, move and interact using earthquakes, heat flow and volcanoes to reflect forces within the earth.
- 6.E.2.3 Explain how the formation of soil is related to the parent rock type and the environment in which it develops.