



Earth Science: Teacher Tips & Helpful Hints

N.C.S.S: ESS.6.2 Understand the lithosphere and how interactions of constructive and destructive forces have resulted in changes in the surface of the earth over time.

- The activity is broken up into three different parts:
 - **Activity 1: Structure of the Earth** (ESS.6.2.1)
 - **Activity 2: Plate Tectonics** (ESS.6.2.2)
 - **Activity 3: Formation of Soil** (ESS.6.2.3)

Activity: Structure of the Earth

- There are 10 Earth's Interior Event Cards.
- Resources that students may use to rearrange cards:
 - <https://www.nationalgeographic.com/news/2010/9/100923-science-early-earth-core-magma-liquid-molten-layer/>
- There is a *Structure of the Earth: Google Slide Deck* available.
- 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: Google Slide Deck* available.
- There is a *Plate Tectonics: Student Activity Sheet* available.

Activity: Formation of Soil

- If the soil is not dry, students should allow 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: Google Slide Deck* available.
- There is a *Formation of Soil: Student Activity Sheet* available.

N.C.S.S Clarifying Objectives

- ESS.6.2.1 Use models to summarize the structure of the earth, including the layers, the mantle, and core based on the relative position, composition, and density.
- ESS.6.2.2 Construct an explanation to illustrate how the movement of lithospheric plates can create geologic landforms and cause major geologic events such as earthquakes and volcanic eruptions.
- ESS.6.2.3 Use models to explain the rock cycle and its relationship to the formation of soil (including how different types of soil come from different types of rocks).