

Plate Tectonics

Concept:

Earth Science: Evidence for Theory of Plate Tectonics & Exploration of Tectonic Plate Boundary Types

Description of Activity:

This activity begins with a great video describing the inside of the earth and the theories of Continental Drift and Plate Tectonics. The video also hits on points such as mountain formation by volcanoes, earthquakes, volcanoes, and landform creation caused by moving plates. The students should take notes during the video to be discussed afterwards. Following discussion, the students explore the different plate movements using a hard-boiled egg earth model.

Anticipatory Set:

Several days before this class, the students watched the clip from the movie 'Ice Age' that implies a squirrel caused the breakup of Pangea, just to get them thinking about the movement of the continents.

State Standards:

(arkedu.state.ar.us)

ESS.8.6.1

Identify and diagram the layers of the Earth:

- crust
- mantle
- inner and outer core

ESS.8.6.3

Model how convection currents in the mantle affect lithosphere movement

ESS.8.6.5

Diagram and explain how volcanoes work

ESS.8.6.11

Investigate and map patterns of earthquake and volcanic activity

ESS.8.6.12

Locate earthquake belts on Earth:

- Mediterranean-Trans-Asiatic
- Circum-Pacific (Ring of Fire)

ESS.8.6.14

Model the effect of major geological events on land and ocean features:

- mountain building
- ocean trenches
- island formation
- mid-ocean ridges

ESS.8.6.15

Investigate careers, scientists, and historical breakthroughs related to internal forces that change the earth

ESS.9.6.3

Analyze evidence that supports the theory of plate tectonics: