

Earth Science Activity Bag

Structure of the Earth: Student Activity Guide

Have you ever wondered about the Earth and what's happening below our feet? This activity will challenge you to consider what things are happening below our feet, and where they are happening. This activity is an exploration. You are not expected to know these things as you begin. The goal is for you to think about the things that happen below our feet and discover some of the interesting things along the way.

These directions will get you started. Your teacher will be in contact to guide you and provide information.

Materials from the bag

- 1 Earth's Interior Diagram
- 1 Set of Earth's Interior Event Cards (10 cards in total)

Part 1: What's Happening Below our Feet? *What do you think?*

1. This part of the lesson is to see what you know without looking anything up. It's ok to be wrong; this is only the first part.
2. Get your Earth's Interior Diagram from the bag. This shows the Earth as if a wedge were removed. Depth is marked in miles on one side and kilometers on the other.
3. Cut out the Event Cards on the right side of this page.
4. Each Event Card is an event or condition occurring inside the Earth. Your challenge is to place the cards to the diagram at the depth where you think that event or condition occurs.
5. For each Event Card, write your reasons for placing the Card where you did.
6. Once all the cards are in place, if possible, take a photo to record your results.

Part 2: What's Happening Below our Feet? *Rearrange your cards.*

1. Your teacher will provide you some information, or sources of information, about things that occur in the Earth. You can also do your own research to learn more about the structure of the Earth.
2. Using this information, move the Event Cards to their correct location.
3. Record the changes you made and what information led to those changes.
4. After all changes have been made, take a photo to capture it, or tape the cards in place.

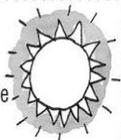
Brief Science Background:

If we moved down from the surface of the Earth toward its center, we would go through a series of layers with different properties. First, we would go through a solid, brittle, rocky outer crust. Under that would be molten rock ranging in consistency from syrup to something that barely flows. Below that, we would come to an outer core that is much more fluid. At the center would be a solid inner core. The interior of the Earth is in constant motion because of convection currents. Go to this website for more information: <https://www.youtube.com/watch?v=MmMX83diw10>

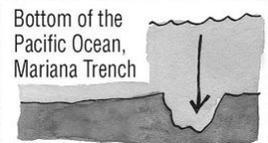
Liquid iron is found, creates Earth's magnetic field



Temperatures reach 9,800 degrees F (as hot as the surface of the Sun!)



Bottom of the Pacific Ocean, Mariana Trench



Where diamonds form



Deepest mine in the world



Maximum depth of earthquakes



Maximum depth of magma



1.35 million atmospheres of pressure or 17,800 elephants balancing on your head



3.6 million atmospheres of pressure or 47,700 elephants balancing on your head



Place where rocks form

