

Date: \_\_\_\_\_

Name: \_\_\_\_\_

## What's Inside the Earth

This activity was created by Katy.

Have you ever thought about what the earth looks like on the inside? The earth is divided into four main layers, as explained below.

### The Crust:

The outermost layer is the crust, on which we live! The crust ranges from 5-75 kilometers, with an average thickness of 35 kilometers. Mountains, forests, valleys, and the ocean are all on the crust, as well as plants, animals, and human beings! The crust is composed of mineral and rock, including igneous, metamorphic, and sedimentary rock.

### The Mantle:

Under the crust is the mantle. This layer is approximately 2900 kilometers thick, and is composed of mostly solid rock. In some places the rock is molten, or melted, and it moves as a viscous fluid. The mantle layer is responsible for volcanic and seismic activity. We see volcanoes and earthquakes on the earth's surface as a result of this activity within the mantle.

### The Outer Core:

The outer core is approximately 2200 km thick, and is the outer layer of the earth's core, located under the mantle. The outer core is composed mainly of iron, nickel, and sulfur, and is extremely dense.

### The Inner Core:

The spherical inner core of the earth is the most dense part of the planet, and is composed primarily of iron. Although the inner core of the earth is the hottest, the iron is solid, because of the intense pressure from the mass of the rest of the planet. The inner core of the earth is estimated to be 6000 degrees celsius!

## SUPPLIES

- Coloured paper (brown, yellow, orange, red, blue and green). If you don't have coloured paper, use white paper and colour them!
- Science notebook or blank piece of white paper
- Scissors
- Glue
- Circular objects to trace
- a black marker

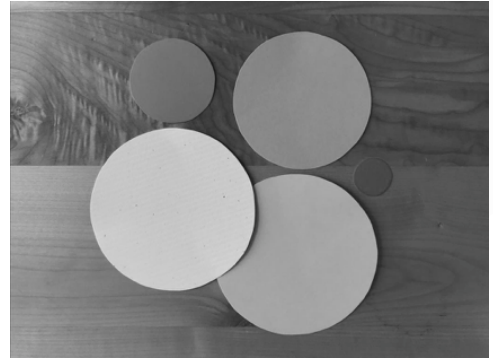


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**STEP 1**

Trace and cut out 4 circles with the following colours and approximate diameters:  
Brown = 12 cm, Yellow = 10 cm, Orange = 6 cm, Red = 3 cm



**STEP 2**

Glue the circles together to mimic the layers of the earth. Start by gluing the yellow circle on top of the center of the brown circle, then the orange on top of the yellow, and the red on top of the orange. Your bottom circle should be brown, and your top circle should be red, so all colours and circles are partially visible.



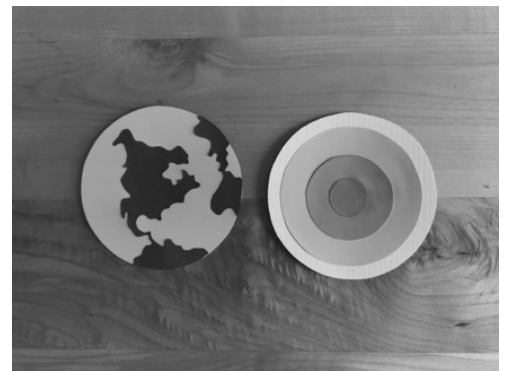
**STEP 3**

Label the layers of the earth on the edge of each layer. Starting with the brown circle, include the following titles: (crust, mantle, outer core, inner core)



**STEP 4**

Trace and cut out a circle with the following colour and approximate diameter:  
Blue = 12 cm  
This blue circle will represent the water on the earth's crust. You can cut out pieces of green paper and glue them onto the water to represent the land, or use a marker to draw landforms.



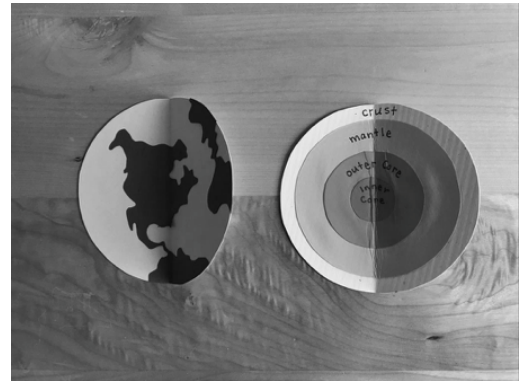
Turn the page to continue this activity!

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### STEP 5

Fold your circle with earth's layers in half, and repeat with your blue and green circle, so both circles have a fold line down the center.



### STEP 6

Glue half of each circle together, so you have the glued sides in the center, and you can fold the earth to show either the blue and green circle, or the layers of the earth diagram. To finish, glue your 3D diagram onto a white piece of paper or into a science notebook, and label your diagram 'Earth's Layers.'



Your final product will look something like this!

