



MAJESTIC VIEW
NATURE CENTER

Geology Parfaits

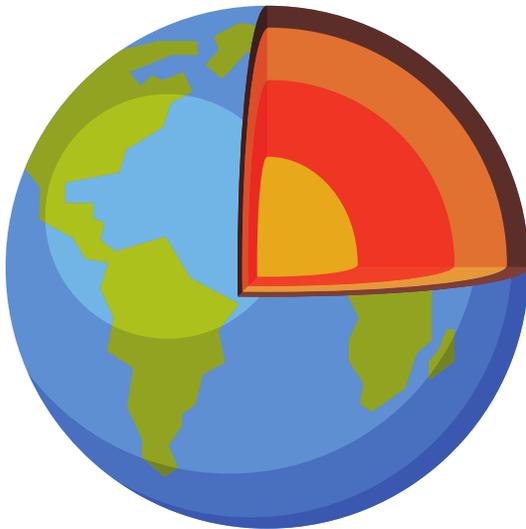
Did you know the layers of the Earth could be so tasty?

Here's what you'll need:

- a tall glass or cup
- brownie bites or moist chocolate cake
- chocolate pudding
- berry yogurt
- raspberries or strawberries
- graham crackers
- whip cream (optional)



Please note these food items are chosen for texture and flavor, but are not required to complete this activity. You may substitute any ingredient for a similar food item that meets your dietary needs or preferences.



Earth's Layers

- Inner Core
- Outer Core
- Mantle
- Asthenosphere (upper most solid portion of mantle)
- Crust

Helpful videos:

[Colo. Mountains and Plates Video](#)

[Intro to Layers of the Earth](#)

- 1 Start with the Inner Core (Brownie or Cake). You are going to roll into a dense ball and place in the bottom of a cup. *Clear glass works best to see layers, but any container will do.*

The Inner core of the Earth is a dense ball of iron and nickel that is incredibly hot. It is about 11,000 degrees Fahrenheit! It is not liquid because it is squeezed and compressed by the rest of the Earth. Its 4,000 feet down from the surface.

- 2 Then add about a 1/2 inch layer of chocolate pudding over the Inner Core; this will be the outer core.

The Outer Core is very slow moving liquid (nickel and iron) that creates the Earth's magnetic field. Because it moves, the poles also move over centuries. (Approx. 780,000 years ago the "North" was at the bottom of the Earth. It's only 2,700 feet down from the surface and is 9,000 degrees F. Try stirring the pudding to see how it moves better than the Inner Core.

- 3 Then add at least an inch thick layer of yogurt. This will be the thickest layer, the Mantle.

The Mantle is mostly liquid-it moves and shifts. The further the mantle is from the core, the cooler it gets-which then sinks down further into the mantle to heat up and rise to the surface. So some of the mantle may be only partially melted rock that sinks slowly back towards the core. But the mantle is still pretty hot on average-about 7,500 degrees F. The mantle can sometimes be seen from the surface at Volcanoes, but is usually several miles below the surface.

- 4 Finally add the graham cracker crusts. Break the crackers into smaller "tectonic plates" and cover the mantle. In areas with really thick layers of crust/graham crackers, there might be whip cream snow you can add. Crumbled crackers can be loose soil.

The Crust is the outer most layer of the Earth and is very thin compared to the other layers. It's temperature varies a great deal, but it is the temperature of the ground we live, stand and swim on. If the Earth was a peach, the crust would be about as big as thick as the peach skin. There's two types of crusts-the continental and the oceanic (under the oceans)

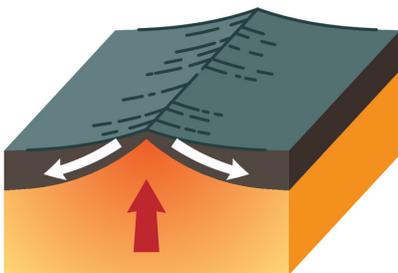
Explore Tectonic Plates

Place a pile of extra yogurt on a plate. Then take larger pieces of graham cracker crusts and try to move them around on the surface of the mantle. As the plates glide, they sometimes run into each other.

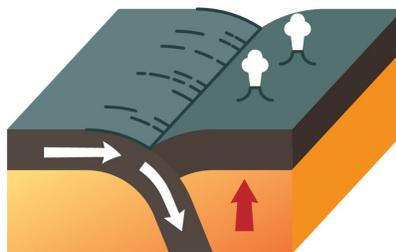
Even though tectonic plates are hard, they can bend and shape each other as they run into one another. Try to move the plates in different directions and see how they move. Try the different ways the tectonic plates touch try to simulate an Earthquake, create a trench, or attempt a volcano mountain.

PLATE BOUNDARIES

**DIVERGENT
PLATE BOUNDARY**



**CONVERGENT
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