



Watch Video

Tectonic Plates Activity for Kids

Convection Model DIY

 Duration: **15–30 min**

 Difficulty: **Easy**

 Cost: **\$0 to \$10**

Use shampoo and water to show how fluids can circulate by convection!

Material List

- 1** Cup of pearlized soap or shampoo
- 3** Cups of water
- 1** Bowl
- 1** Pan
- 1** Hot plate
- 1** Spoon
- 1** Food coloring

Instructions

- 1** Mix 3 cups of water, 1 cup of shampoo, and 20 drops of food coloring into a bowl.
- 2** Blow on the surface to confirm there are swirls caused by the mica.
- 3** Pour the mixture into a pan and begin heating using the hot plate. Do not boil.
- 4** Watch what happens.

Warning: Adult supervision is needed when heating.

How It Works

As the liquid is heated on the bottom, it becomes less dense and rises to the top. As it cools, it becomes more dense and sinks back down to the bottom. The mica crystals in the shampoo make the movement easy to see. This model is similar to the convection that occurs in Earth's mantle, which contributes to tectonic plate movements. The major difference is that the Earth's mantle is a solid that moves very slowly over years, not seconds like this model.