



CONVECTION DETECTION

Observe convection in action.

Materials

- Cup of pearlized shampoo (must contain mica)
- 3 Cups of water
- Bowl
- Pan
- Stove top
- Red food coloring
- Spoon

Procedure

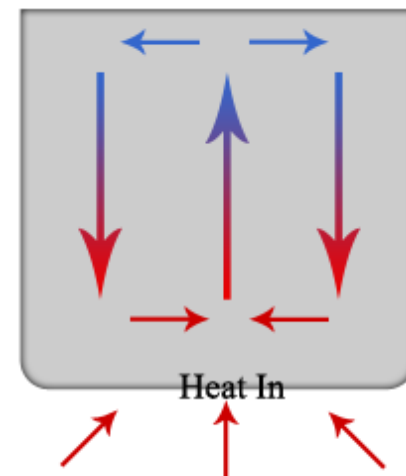
- Mix 3 Cups of water, 1 cup shampoo, and 20 drops of food coloring in the bowl.
- Ask an adult to pour the mixture in a saucepan and heat without boiling.
- Observe the heated pan.
- Remove pan from heat when finished observing.

Results

You observed convection.

Why?

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



This activity was adapted from Generation Genius' "Convection" Activity. You can find more activities on their website, generationgenius.com