

Convection Current

Age Range: 11+

Skills/Subjects:

- Meteorology
- Earth science

Materials:

- Large glass jar or beaker
- Small cup or beaker (needs to fit inside the jar)
- Food coloring
- Knife
- Plastic wrap
- Rubber band
- Very hot (almost boiling) water
- Cold tap water
- Tongs



Directions

1. Fill the small cup or beaker with the very hot water and add several drops of food coloring.
2. Stretch the plastic wrap smoothly over the cup and seal it with the rubber band. The plastic wrap will puff up – this is because the hot air above the water is expanding.
3. Fill the large jar almost full with cold water from the tap.
4. Use a pair of tongs to set the cup of hot water in the bottom of the large jar.
5. Slice open (one long gash should do it) the plastic wrap with a knife and watch what happens.

Questions to Think About

- We can't see convection in the air; do you think water might act the same way?
- What happens as the colored water gets to the top? Does it stay there? Why or why not?