HOMESCHOOL SCIENCE EXPERIMENT

Name: _____

Date: _____

Observing the Food Coloring Movement in Heated versus Cooled Water

QUESTION

How does the temperature of water (heated vs. cooled) affect the movement of food coloring?

HYPOTHESIS

If the water is heated, then the food coloring will spread _____ because _____.

MATERIALS

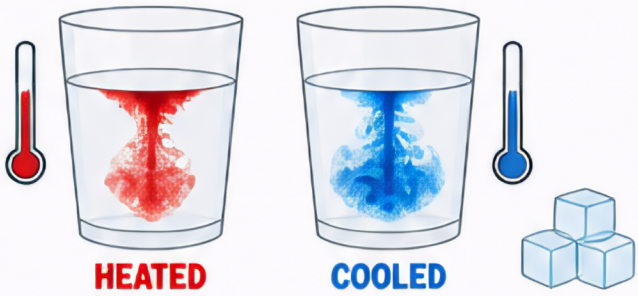
- 2 clear glasses or jars
- Water
- Food coloring (any color)
- Hot water (about 120–140°F / 49–60°C)
- Ice or cold water (about 35–50°F / 2–10°C)
- Dropper or pipette (or spoon)
- Timer or clock

SAFETY FIRST

- Ask an adult for help with hot water.
- Do not touch hot water.
- Handle glass containers carefuly.
- Clean up any spills right away.

PROCEDURE

1. Label one glass "HEATED" and the other "COOLED".
2. Fill the HEATED glass with hot water.
3. Fill the COOLED glass with cold water.
4. Using a dropper, place 1 drop of food coloring in the center of the hot water.
5. Using a dropper, place 1 drop of food coloring in the center of the cold water.
6. Start the timer and observe both glasses for 60 seconds.
7. Record your observations in the table below.



OBSERVATIONS

Time (seconds)	HEATED WATER What do you see?	COOLED WATER What do you see?	Which spread faster? (Heated or Cooled)
0			
15			
30			
45			
60			

ANALYSIS

1. Which water (heated or cooled) did the food coloring spread faster in? _____
2. Why do you think the food coloring moved faster in that water? _____
   _____
3. What does this experiment show about how temperature affects the movement of particles in water?
   _____
4. Can you give an example from everyday life where this might happen? _____
   _____

TAKEAWAY

What is the main thing you learned from this experiment? _____
_____