



SCIENCE EXPERIMENT

Observing Diffusion with Food Coloring in Water

Name: _____

Date: _____

Scientist: _____

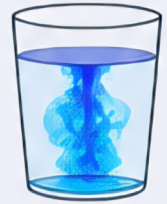


OBJECTIVE

To observe and describe how food coloring spreads out in water due to **diffusion**.

WHAT IS DIFFUSION?

Diffusion is the movement of particles from an area of high concentration to an area of low concentration until they are evenly spread out.



MATERIALS

- Clear glass or cup
- Water (room temperature)
- Food coloring
- Dropper or pipette
- Spoon (optional)
- Timer or clock
- Paper and pencil



PROCEDURE

- 1 Fill the clear glass or cup almost to the top with room temperature water.



- 2 Using the dropper, add 1–2 drops of food coloring to the center of the water's surface. Do not stir.



- 3 Watch the food coloring as it spreads through the water. Record your observations in the table below at each time interval.



Start



30 sec



2 min

- 4 Wait 5 minutes. Record your final observations. (Optional: Gently stir the water and observe what happens.)



OBSERVATIONS

Time	What I Observed (Describe the food coloring in the water)
Start (0 sec)	
30 seconds	
2 minutes	
5 minutes	



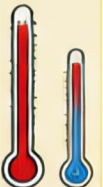
THINK & REFLECT

1. What happened to the food coloring over time? _____
2. Why do you think the food coloring spread out in the water? _____
3. Where in everyday life might diffusion be happening? _____

CHALLENGE!

Try this experiment with warm water and with cold water.

Which one spreads faster? Why do you think that is?



SAFETY TIP: Do not drink the water. Clean up spills right away. Wash your hands when you are done.