Name _____

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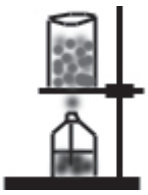

Exploring Heat from the *Basics of Physics Series*
The Motion of Particles

Purpose: To demonstrate the motion of particles.

Materials: 3 small beakers ice cube dark food coloring
2 medicine droppers hot water

Procedures:
1. Fill a small beaker about 2/3 full of water at or near room temperature.
2. Place one drop of dark food coloring on the surface of the water. DO NOT STIR. Make observations below (observations 1 and 2).
3. Fill a second beaker about 2/3 full of water. Add an ice cube to the water. Leave it in the water for two or three minutes and then remove it.
4. Fill a third beaker 2/3 full of hot water.
5. Place the beakers side by side.
6. Wait a minute for the water currents to stop. Then add one drop of food coloring to each beaker at the same time. Make observations.

Observations:
1. How does the food coloring behave in the beaker with room temperature water?

2. Write a hypothesis that tells what effect you think hot or cold water would have on the rate at which the coloring mixes.

3. In which beaker (hot or cold) are the water particles moving faster?

4. In which beaker did the mixing appear to take place faster?

Conclusion: In your own words, explain your observations.