**Diffusion Experiments**

Perform the following experiments and record your predictions and observations in the table.

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|  | **Prediction** | **Observation** | **Explanation** |
| **Experiment 1:** Fill one 250 mL beaker with cold water. Fill a second 250 mL beaker with hot water. Add 2 drops of food dye to each at the same time. | *(How will the cold water beaker be different to the hot water beaker?)* | *(Describe what happened)* | *(What is the relationship between temperature and diffusion?)* |
| **Experiment 2:** Half fill a petri dish with water. Place four Smarties in the water as shown in the diagram. | *(What will happen as the dye from the Smarties diffuses?)* | *(Describe what happened)* | *(What is the relationship between diffusion and concentration?)* |
| **Experiment 3:** Half fill a petri dish with water. Put a pea sized amount of copper sulphate on one side of the dish and a pea sized amount of sodium bicarbonate on the other. | *(What will happen as the chemicals diffuse?)* | *(Describe what happened)* | *(Explain what happened in the centre of your petri dish)* |