



Reaction Rates: Student Activity Sheet

Name: _____

Date: _____

Part 1: Reaction Rates

1. Fill a 3.5 oz. Cup with 50 ml of room temperature water.
2. Drop an effervescent tablet in the water and time how long the reaction takes from beginning to end.

Time: _____

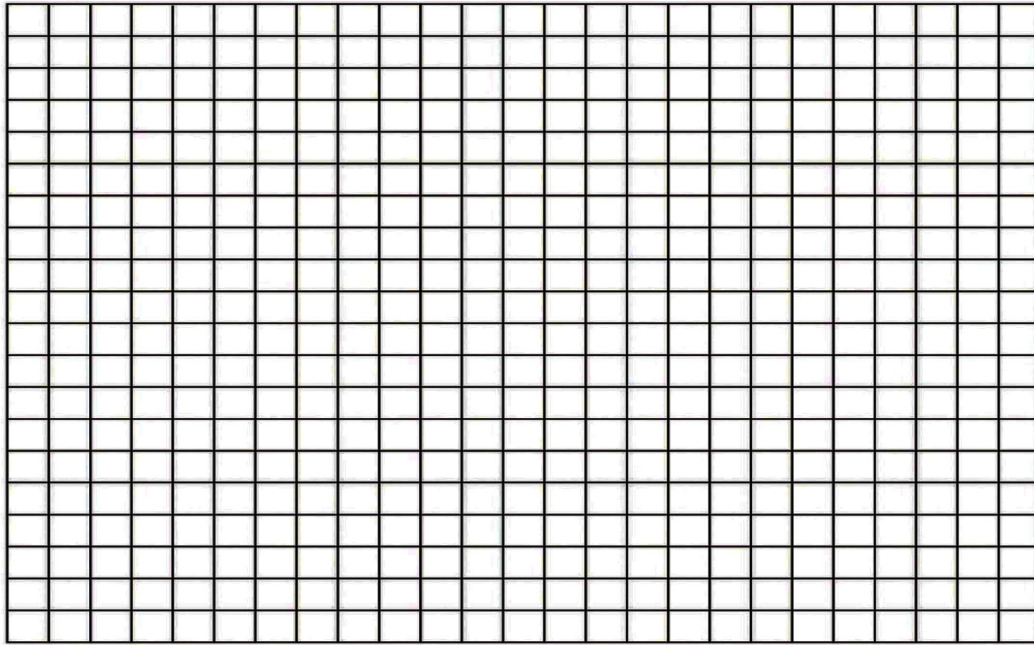
3. Describe the conditions in the cup at the moment you declared the reaction “stopped”

You will now investigate how temperature affects the speed of the chemical reaction by collecting time data at four different temperatures.

1. Select four different temperatures and place them in the table below. **Temperatures should be different by at least 5°C.**
2. Carefully mix hot and cold water in a 9 oz. cup and use the thermometer to get the correct temperature.
3. Measure 50ml of this water with the graduated cylinder and pour it into a 3.5 oz reaction cup. Check the temperature of the water one final time.
4. Place an effervescent tablet into the cup and time the reaction from start to finish. Record your data in the table below. Record any special observations.

Temperature (°C)	Time (seconds)	Observations

5. Graph your data. A graph is located on the other side of this sheet.



Exploring Data

1. Your teacher has water with the temperature of _____.
2. Using the graph above predict how long it will take for the tablet to dissolve. _____

3. Do the test. Compare the results with your prediction. _____

4. Set up a cup with a known water temperature and record. Trade your water with another person.
Run the reaction and time the reaction from start to finish.
Time: _____
5. Use your graph to determine what the starting temperature must have been.
Temperature: _____