

Student Name: _____

Date: _____

Purpose

What factors affect the rate at which sugar dissolves in water?

Materials

- * Sugar cubes
- * Warm water
- * Cold water
- * Stirring rods
- * Stopwatch
- * Beakers
- * Thermometer

Procedure

1. Identify the independent variable you will test (temperature, stirring, or crushing).
2. Write a hypothesis using the If/Then/Because format.
3. Design a controlled experiment: list constants and controls.
4. Conduct 3 trials for each condition; record time for sugar to dissolve.
5. Calculate the average time for each condition.
6. Create a data table and graph your results.

Data / Observations Table

Condition	Trial 1 (sec)	Trial 2 (sec)	Trial 3 (sec)	Average (sec)

Analysis Questions

1. Did results support your hypothesis? Cite specific data values.

2. What was the control group and why is it necessary?

3. Identify one source of systematic error. How would you reduce it?

4. Calculate the percent difference between your fastest and slowest conditions.

Conclusion

In my own words, what did I learn from this lab?
