

Name: \_\_\_\_\_ Period: \_\_\_\_\_

Date: \_\_\_\_\_

**Summarizer:** Experiments

**Directions:** Read the following scenario and answer the questions that follow.

A student wants to grow a large crystal from a solution of salt. The student wonders if the temperature that the solution cools in has any influence on the size of the crystal. For each solution, the student used 100mL of water and 25g of salt. One solution was left at room temperature (20°C), one was cooled in a refrigerator to 5°C, and one was heated in an oven to 50°C. After two hours, the student used a thermometer to measure the temperature of the environment the solution was placed in. After the solution sat for two hours, the student used a ruler to determine the length, width, and height of the crystal and then calculated volume.

***What is the independent variable?***

***What is the dependent variable?***

***Name two controlled variables.***

***Write a research question for the scenario.***

***Write a hypothesis for the scenario.***

***What is the operational definition of the dependent variable?***

***Write a conclusion for your hypothesis assuming it was correct.***

***Write a conclusion for your hypothesis assuming it was incorrect.***