

SCIENCE 8
BLOCK: (AM or PM)
CHEMISTRY

Your FIRST and LAST name: _____
Your Partner's FIRST and LAST name: _____
Date of Lab Activity: _____

Can you Lift the Can?

PURPOSE: To use our understanding of changes of state to try to lift a can "with Science."

MATERIALS:

Crushed ice
100 ml Beaker
Empty Can
Water
Salt
Teaspoon

PROCEDURE:

1. Clear your desk of all materials (the space is about to get wet!) Put on Safety Goggles. Collect the materials WHEN directed by your Teacher.
2. Place an empty (soup) can upside down on your desk. If necessary, clean off any visible RUST with sandpaper. BE CAREFUL! There is a danger of getting rust flakes in your eye! Wash your hands to ensure there is no rust on your fingers.
3. Fill the Beaker about one third full with ice.
4. Put 5 ml (1 tsp) of water on the flat bottom of the soup can (make a neat circular puddle in the middle).
5. Put the beaker on top of the can. Make sure the beaker sits flat against the puddle on the soup can, without splashing the puddle around.
6. Add two heaping teaspoonfuls of salt to the beaker. Stir the ice-salt mixture **gently**. Make sure you do not move the beaker while stirring!!!!!!
7. OBSERVE the sides of the beaker carefully while stirring. (Write the OBSERVATIONS below)
8. Stop stirring after 3 minutes. Gently grab the top of the beaker and lift.
9. Read through the analysis questions to ensure that you have observed enough to explain what you have observed.
10. Follow the Teacher's directions for how to clean and put away the equipment properly.



OBSERVATIONS of the beaker while stirring: (point form is OK!)

ANALYSIS. Answers MUST be in full sentences!

1. How did the sides of the beaker change during stirring? Give CLEAR EVIDENCE of what you witnessed. Be descriptive!

2. How did you think the temperature of the ice-water mixture change as salt was added?

Why do you think this? What is your evidence that backs up your opinion?

3a. Were you successful at lifting the can? **YES** or **NO**

3b. **IF YES**, explain **WHY** you think it worked.

3c. **IF NO**, explain what prevented you from seeing success. (Good scientists can explain the reasoning behind a failed experiment and this **EXPLANATION** makes it a **SUCCESSFUL** Scientific Inquiry!)

FIRST and LAST NAME _____

DRAW (on the next page) a **DIAGRAM, LABELING** every piece of **EQUIPMENT** in the experiment!
ALSO Include the words Solid, Liquid, Condensation, Melting and Solidification **in your labels.**

RUBRIC:

QUESTIONING AND PREDICTING

- Identify a question to answer or a problem to solve through scientific inquiry
- Make predictions about the findings of their inquiry

Beginning	Developing	Applying (Meeting)	Extending
		Handed in the lab report on time, on the due date	
		Filled in all sections of the lab report	
		Completed the observations list	Very thorough, descriptive observations
		Drew the diagram of the experimental setup, with labels	Very thorough, descriptive diagram labels
		Answered the questions with elaborate explanations of the behaviour and changes in molecules using FULL SENTENCE ANSWERS.	Provides deeper Connections and elaborations between concepts, to give thorough explanations