

Grade 7 Science
Unit 3: Mixtures and Solutions
CORE LAB 2



Name: _____

Partners:

Problem: How does temperature affect the solubility of a solid in a liquid solvent?

Materials:

balance graduated cylinder thermometer
beaker stirring rod measuring spoon
salt stopwatch

Hypothesis: _____

Procedure:

Part 1:

1. Draw the axes for a graph. Label the y-axis Solubility (g/L). Label the x-axis Temperature (°C). Mark the scale for the x-axis to go from 0 to 100.
2. Plot the data in the table below. Use a different colour for each solute. Include a legend to show the solute that each colour represents. Record in Observations

Temperature versus Solubility for Three Solutes

Temperature (°C)	Solubility in Water (g/L)*		
	Sugar (Sucrose)	Potassium Chlorate	Ammonium Chloride
10	1910	50	320
20	2040	70	370
30	2200	110	410
40	2390	150	460
50	2610	210	500
60	2870	270	550
70	3200	340	600

3. Connect the points for each solute by drawing a line of best fit.
4. Use dashes to extend (extrapolate) the line for each solute so that it crosses 100°C.
5. Give your graph a title.
6. Answer Analyze questions 1, 2, and 3, and answer Conclude and Apply question 1.

Analyze

Observations:

Title: _____

Questions:

1. Describe the shape of the lines on your graph.

2. What happens to the lines as the temperature increases?

3. Predict the solubility of each solute at 90 degrees Celsius?

Sucrose: _____

Potassium Chlorate: _____

Ammonium Chloride: _____

Conclusion:
