



OBSERVING THE GROWTH OF CRYSTALS FROM DIFFERENT MINERAL SOLUTIONS

A HOMESCHOOL SCIENCE EXPERIMENT

Name: _____

Date Started: _____

Date Completed: _____



BACKGROUND

Crystals form when minerals in a solution come together in a repeating pattern as the water evaporates. Different minerals can make different shaped and colored crystals. In this experiment, you will grow crystals from different mineral solutions and observe how they grow over time.



SUPPLIES

- 3 clear jars or cups
- Hot water
- Epsom salt (magnesium sulfate)
- Table salt (sodium chloride)
- Baking soda (sodium bicarbonate)
- Spoons for stirring
- String
- Pencil
- Paper towels
- Ruler (mm/cm)
- Notebook or lab sheet



PROCEDURE

1. Label your jars: Epsom Salt, Table Salt, and Baking Soda.
2. Add 1 cup of hot water to each jar.
3. Add mineral to each jar, one spoonful at a time, stirring until no more will dissolve. This makes a saturated solution.
4. Tie a piece of string to the pencil. Make sure the string is long enough to reach almost to the bottom of the jar.
5. Hang the string in the center of each jar so it does not touch the sides. The string should not touch the bottom.
6. Place the jars in a safe place where they will not be bumped.
7. Observe your crystals each day and record your observations.
8. Continue observing for 7–14 days.



OBSERVATION TABLE

Measure the length of your crystal(s) on the string.

Day	Epsom Salt (mm)	Table Salt (mm)	Baking Soda (mm)
1			
2			
3			
4			
5			
6			
7			
10			
14			

Use mm for small crystals. If larger, you may use cm.



DRAW YOUR CRYSTALS

Draw your crystals at the beginning and at the end of your experiment.

	Epsom Salt	Table Salt	Baking Soda
Day 1 (Start)			
Day 14 (End)			



REFLECTION

1. Which mineral solution grew the largest crystals? _____
2. Which minerals made the most crystals (number of crystals)? _____
3. How did the shape or color of the crystals compare? _____

4. What do you think caused the differences in crystal growth? _____

5. What would you like to try next time? _____



SCIENCE TIP!

Crystals grow as the water evaporates and the minerals come out of the solution. _____
Patience and careful observations help you see the changes over time!

