



RANDOM ACTS OF SCIENCENESS

Lesson: Salt Crystals

CURRICULUM REFERENCE: Pure Substances and Mixtures

LESSON OBJECTIVE

Watch how the natural process of crystallization works.

THE SCIENCE BEHIND

Hot water has more energy in it, which allows it to absorb more of the salt you mix in. This means that if the water is hot, it will be able to hold all the salt. When the water cools, it makes conditions for the salt very unstable and the previously dissolved salt will clump together with any impurities in the water or with other salt crystals, forming your cool salt formations.

VIDEO: <https://youtu.be/ILUTYvPNie8>

FOLLOW-UP QUESTIONS

1. How does changing the amount of solute or solvent affect the solution?
2. What variables can we change for different results?



LEARNING OUTCOMES

- Investigate processes (e.g., filtration, distillation, settling, magnetism) used for separating different mixtures.
- Use scientific inquiry/experimentation skills to investigate the properties of mixtures and solutions.



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MATERIALS (PER PERSON)

- Table salt / Epsom salt
- Glass cup
- Pencil
- Water
- String
- Metal nut

INSTRUCTIONS

1. In 2 cups of boiling water, keep mixing in salt at a slow pace and to make sure it dissolves. Continue adding salt until it will no longer dissolve. This can take up to 5 cups of salt.
2. Take a pencil and tie a string the length of the jar around the middle. Tie the other end of the string around the metal nut.
3. Now that the salt is dissolved in the water, add it into the glass cup.
4. Watch it as the crystals grow (NOTE: this takes a day or two to see visible results).



VIDEO: <https://youtu.be/GMWazEvODj4>