Salt and Vinegar Crystals

Overview: We're going to take two everyday materials, salt and vinegar, and use them to grow crystals by creating a solution and allowing the liquids to evaporate. These crystals can be dyed with food coloring, so you can grow yourself a rainbow of small crystals overnight.

What to Learn: You will be able to make more crystals and observe their formation as liquid evaporates from a solution mixed during lab. You will understand better how a crystal can grow out of a soupy mixture, and ultimately what all this has to do with rocks and minerals.

Materials

- 1 cup of warm water
- 1/4 cup salt (non-iodized works better)
- 2 teaspoons to 2 tablespoons of vinegar (you decide how much you want to use)
- a shallow dish (like a pie plate)
- a porous material to grow your crystals on (like a sponge)

Lab Time

1. Mix together the salt and warm water in a cup. You can alternatively boil the water on the stove and stir in as much salt as will dissolve.
2. Add the vinegar, and turn off the heat.
3. Submerge the sponge in the solution, and place your sponge in the shallow dish. Pour some of the solution over the sponge. You can continue adding solution as the water evaporates to increase the size of the crystals.
4. Record your observations on the worksheet as the water evaporates and crystals begin forming.
5. Add food coloring to your sponge as the crystals grow, if you wish to grow some colorful crystals!

Salt and Vinegar Crystals Data Table

Time	Est. Number of Crystals	Drawing
3 hours		
1 day		
2 days		

Exercises

1. Which mineral is being used to grow crystals today?
    a. Sugar
    b. Vinegar
    c. Salt
2. Which material is the solute in today' experiment?
    a. Salt
    b. Water
    c. Vinegar
3. Which material is the solvent?
    a. Salt
    b. Water
    c. Vinegar
    d. Both B and C

Answers to Exercises: Salt and Vinegar Crystals

1. Which mineral is being used to grow crystals today? (salt, sodium chloride)
2. Which material is the solute in today' experiment? (salt)
3. Which material is the solvent (water and vinegar)