Fun Facts

Meet the future of snow! Create snow at any time in any climate, just add a tablespoon of Super Snow to a quart of water and stir. The more it's stirred, the more it shines and sparkles. Super Snow expands to more than 100 times its size!

Super Snow Formulas

The ideal proportion is ⅛ teaspoon of Super Snow powder for every 2 ounces of water. Use ¼ teaspoon with 4 ounces of water, ½ teaspoon with 8 ounces of water, and 1 tablespoon with 32 ounces of water.

Add Super Snow to water and stir rapidly with a spoon. It will first form a clear gel and then fluff up into snow. Stirring is the most important step in the process. The snow will form more quickly if you use warm water.

Individual and Group Experiments

Either every student can do every experiment, or students can break into groups of three and observe the other groups lessons.

1. Put ⅛ teaspoon of Super Snow in 2 ounces of water. Stir continuously for 20 to 30 seconds. What happens? How long does it take Super Snow to dry out?

2. Put ¼ teaspoon of Super Snow in a cup. Mix a food-coloring tablet with 4 ounces of water in a separate cup and stir. Slowly pour the colored water in the bowl with the Super Snow. What happens? What is osmosis?

3. Does osmosis occur at a quicker rate with hot or with cold water? Repeat the above experiment using both hot and cold water. Which water does Super Snow absorb the quickest? Why?

4. How much water can Super Snow hold? Put ¼ teaspoon of Super Snow in a cup. Measure 8 ounces of water into another cup. Slowly add water while stirring. Pause occasionally to make sure that all of the water is absorbed before continuing. How much water can be added before the snow can't hold any more?

5. Weigh an empty cup. Put ⅛ teaspoon of Super Snow in the cup and weigh again. Subtract the weight of the empty cup from the weight of the cup with Super Snow; this is the weight of Super Snow. Repeat the process for a cup that has 8 ounces of water. Mix the Super Snow with water and weigh. Does the weight of the water mixed with the Super Snow equal the sum of the initial mass of Super Snow and water? What did you learn about the Conservation of Mass?

6. Water absorbed in Super Snow evaporates like water anywhere else on the planet. Measure the rate of evaporation (how quickly water leaves Super Snow) under various circumstances. Try it in an open cup, in a cup with a lid on top, and in a cup exposed to heat. What happens in the different environments?

7. Try freezing and melting Super Snow. (Do this after adding water and creating a fluffy snow.) Put a cup of snow in a freezer overnight. Put a second cup of Super Snow in very hot water and leave it overnight. Does Super Snow freeze? Does it melt? Why?

8. What effect does oil have on Super Snow? Put ⅛ teaspoon of Super Snow in a cup and add 2 ounces of oil. Stir for 20 to 30 seconds. Put ⅛ teaspoon of Super Snow in another cup and add 2 ounces of water. Stir for 20 to 30 seconds. Compare the effects of oil versus water with Super Snow. What happens? Why? What is the difference between a polar and non-polar molecule?

9. What effect does temperature have on Super Snow? Put ¼ teaspoon of Super Snow in a cup and add 4 ounces of water. Stir for 20 to 30 seconds. Place cup in a dry, safe location at room temperature. Put ¼ teaspoon of Super Snow in a second cup, and add 4 ounces of water. Stir for 20 to 30 seconds. Place this cup directly under a hot light bulb. (The light must be on all night, but take measures to avoid a fire.) The cups must remain in the current conditions for at least a day. Observe the snow in both cups after a day. What happened? Has evaporation occurred in either cup?

10. Put ¼ teaspoon of Super Snow in a cup. Mix a food-coloring tablet with 4 ounces of water in a separate cup, and stir. Slowly pour the colored water into the bowl with the Super

Snow. Observe over the next week or so. Does the color change as the water evaporates? Why does evaporation occur?

11. Put ¼ teaspoon of Super Snow in a cup. Add 4 ounces of water. Do not stir! Put ¼ teaspoon of Super Snow in a second cup. Add 4 ounces of water and stir continuously for 20 to 30 seconds. Which cup makes snow faster? Does stirring the snow into the water have an effect on it? Why?

Discussion Questions

How does Super Snow work? What is a polymer?

What causes a molecule to be polar or non-polar? What is an example of a polar molecule? A non-polar molecule?

What special uses could Super Snow have? How could it be helpful to humans and our environment?

What differences are there between real snow and Super Snow? How long does Super Snow last?

How does Super Snow demonstrate the Conservation of Mass? Why is the Conservation of Mass so important?

Notes

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