**University of Florida Chemistry Outreach Program**

# Snow Globe Lab

*Estimated Time:* 30 mins. + 15 mins. clean-up

***Topics:*** Solubility

***Introduction:*** In this lab, you will be making a snow glob using a jar you've brought form home, a small item of interest to you, and some common chemicals we have around the lab.

The chemicals you use in your snow globe to make the snow are entirely up to you. You may use any of the chemicals provided in any combination. Here are some guidelines:

-"Like dissolves like"
-Undissolved solutes falls to the bottom of a saturated solution
-Snow globes should be pretty!

***Objective:*** Understanding the solubility properties of particular solvents and solutes.

***Materials:***
-Water
-Mineral oil
-Vegetable oil
-Sodium chloride
-Epsom salt
- Hot glue gun
-Jar
-sucrose
-talcum powder
-sand
-sodium bicarbonate
-Vials and corks
-Alcohol

***Safety:*** - NO eating or drinking in the lab.

***Procedure:***

1. Using the solutes and solvents at your disposal, create a snow globe.

***Discussion:***

1. What is a saturated solution?
2. What does the phrase "Like dissolves like" mean?
3. What is the best solute/solvent combination?

1. *Saturation is the point at which a solution of a substance can dissolve no more of that substance and additional amounts of that substance will appear as a precipitate.*
2. *The phrase "like dissolves like" means substance with the same physical chemistry, such as polarity, dissolves in one another. An example of like dissolves like is water and oil. Water is polar and oil is nonpolar, therefore they do not mix.*
3. *The best solute/solvent combinations are any nonpolar solvent (such as mineral oil or vegetable oil) and polar solutes (such as Epsom salt or sodium chloride).*

***Source:*** Haugh, Thomas. 2001. Snow Globe Science. *The Science Teacher* 69(3): 36-39