# Saturated and Unsaturated Solutions Lab

**Problem**: How long will it take for a solution of salt and water to become saturated if we add solute to 60 ml of solvent at 2g intervals?

**Hypothesis:** If we continue to add solute to the solvent then the solution will eventually become
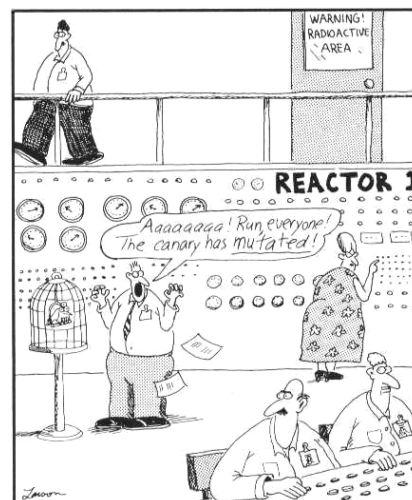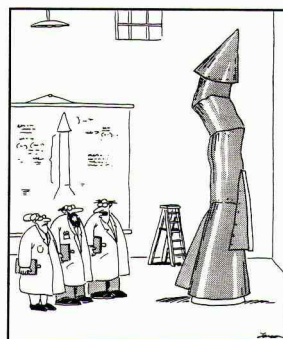
_____.

**Materials:**     1 beaker, 2g measuring spoon, Stir stick, Salt, Water

## Procedure:

1. WITH DRY BEAKER – Zero scale.  Place beaker on scale.  Record mass on observations sheet

2. Add ONE scoop of salt to beaker and record the new mass on the observations sheet

3. Calculate the mass of the salt (subtract step 1 from step 2) on observations sheet

4. Rinse Salt out of beaker, ensure it is clean

5. Fill beaker with 60mL of water.  Ensure that you are measuring from the bottom of the meniscus to the top of the line.

6. **Add however many scoops you need in each trial to achieve close to 2 grams per scoop.** Record your observations and calculate the concentration of the saltwater solution for each trial. **Use a degree of accuracy of one decimal place.**

7. Continue with trial until saturation point is reached.



"It's time we face reality, my friends. ... We're not exactly rocket scientists."



WARNING! RADIOACTIVE AREA

REACTOR 1

Aaaaaaaa! Run everyone! The canary has mutated!

# Observations

Measuring Spoon Salt Mass:

Initial Beaker Mass =   _____g

Beaker Mass with Scoops of salt   =  _____g

Subtract initial beaker mass from the beaker mass with salt = _____g of salt per trial

| Substance | Mass added (g) | Volume of water (ml) | Concentration (g/ml) | Visual observations |
|-----------|----------------|----------------------|----------------------|---------------------|
| Salt      |                | 60                   |                      |                     |
| Salt      |                | 60                   |                      |                     |
| Salt      |                | 60                   |                      |                     |
| Salt      |                | 60                   |                      |                     |

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**Analyzing and Interpreting:** *answer the following questions*

1. Define the terms:

    a. Saturated:_____

    b. Unsaturated:_____

2. How did you know when the solution was saturated?

_____

**Conclusion:** We made a saturated solution by adding 2g of Juice crystals at a time to 50 ml of water.  The solution became saturated after we added _____ grams of Juice crystals.  We knew that our solution was saturated because _____.