



Directions: Read the informational text. Then answer the questions. **If you need more space attach a piece of paper.**

## **SATURATION**

A solvent can only hold so much solute. The amount of solute dissolved in a solvent describes saturation. Saturation depends on the solubility of the solute, properties of the solvent and environmental conditions.

There are three types of saturation:

1. When a solvent can dissolve more solute, we say the solution is unsaturated. If you add more solute to an unsaturated solution, the solute will dissolve in the solvent until the solution becomes saturated.
2. When a solvent dissolves the maximum amount of solute, we say the solution is saturated. If you add more solute to a saturated solution, the solute will not dissolve. The solute will settle at the bottom of the container.
3. A supersaturated solution is a solution in which the solvent holds more solute than under normal conditions. Supersaturated solutions are usually made by increasing temperature or pressure. Soda is a supersaturated solution. It is made by dissolving carbon dioxide in water under high pressure. The pressure is maintained by filling soda in sealed containers.

Questions:

1. What is saturation?

2. Compare and contrast a saturated and unsaturated solution.

3. A student makes the following statement: *“An unsaturated solution cannot become a saturated solution but a saturated solution can become an unsaturated solution by adding more solute.”* Evaluate the student’s statement. Identify correct and/or faulty ideas in the student’s statement.