Quiz Solutions and Solubility

1. Explain the difference between a solvent and a solute. Give an example

2. What do the words saturated, unsaturated and supersaturated mean when referring to solutions?

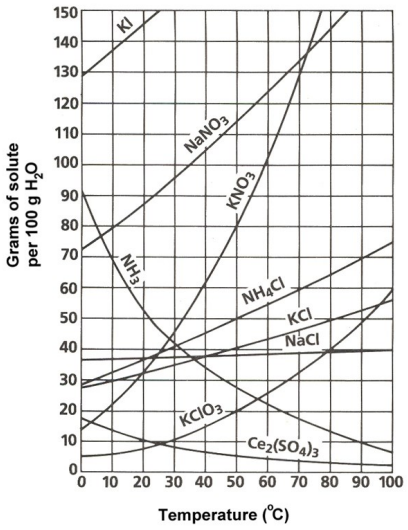
3. List the test **and the test results** the prove whether a solution is saturated, unsaturated or super saturated. ***Be sure to mention all 3***

Use the graph at the right to answer questions 4-7

4. Identify the temperature at which 80.0 grams of KNO_3 will form a saturated solution.

5. At 10^oC what mass of $NaNO_3$ would form a saturated solution in 500 grams of water? ***No work No Credit***

6. What do the lines on the graph tell you about a solution?



7. Use the graph to explain when a solution is saturated, unsaturated and super saturated . ***Explain each of the 3. use 1 specific solute to explain***

8. Explain the steps to make a super saturated solution. Find an everyday example

9. List the steps needed to make a 2.0 Liters of a 3.50 molar NaCl solution. **Show your work where required to answer the question.**

10. I need to make 2.50 liters of 3.00 molar HCl given a 12.0 molar solution**. Explain the steps and show your calculations as proof.**

11. A. List 3 ways to increase the rate at which a solid solute will dissolve in a given solvent. B. What is occurring between the solvent and solute that causes the rate of dissolving to increase?

12. Which factor will increase the **rate and the amount** of solute that will dissolve in a solution?