**Solubility Curve Examples** Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solubility curves are used to give us an idea of how soluble a solute is in a certain solvent at varying temperatures. For this example, the x-axis gives the temperatures and the y-axis tells how many grams of solute will dissolve in 100 grams of water. The lines indicate the concentration of a saturated solution.



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| 1 | For most substances solubility increases with temperature increases. Are there any substances that this does not hold true for in the above solubility curve? |
| 2 | How much potassium chloride (KCl) will dissolve in 100 grams of water at 30oC? (red) |
| 3 | Which of the following substances is the most soluble at 15oC? KNO3 (green), NaCl (blue), or NH4Cl (yellow)? |
| 4 | What term (unsaturated, saturated, or supersaturated) best describes the following:  a. A solution with 70 grams of NaNO3 per 100 mL of water at 30oC (purple)  b. A solution with 60 grams of dissolved KCl per 100 mL of water at 80oC (orange) |