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| **\_\_\_\_\_1. I can define: solute, solvent, solution, and solubility.** | **Definitions:**  solute  solvent  solution  solubility |
| **\_\_\_\_\_2. I can describe the trend in solubility for solids as the temperature changes.** | As the temperature increases, the solubility of a solid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Solutions + Acid Base Unit 11 I Can Statements

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| **\_\_\_\_\_3. I can describe the trend in solubility for gases as the temperature changes.** | As the temperature increases, the solubility of a gas \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| **\_\_\_\_\_4. I can define: dilute, concentrated, concentration, and electrolyte.** | **Definitions:**  dilute  concentration  electrolyte |
| **\_\_\_\_\_5. I can interpret Table G to determine which solution is the most concentrated or the most dilute.** | Which solution is most concentrated?  A) 125.0 g of KI dissolved in 100.0 g of water at 10oC  B) 70.0 g of NH4Cl dissolved in 100.0 g of water at 70oC  C) 120.0 g of KNO3 dissolved in 100.0 g of water at 70oC  D) 30.0 g of SO2 dissolved in 100.0 g of water at 90oC |
| **\_\_\_\_\_6. I can use Reference Table F to determine if a substance will be soluble in water.** | Write “S” for **soluble** and “NS” for **not soluble**. Use Reference Table F to determine the solubility of the following compounds:  \_\_\_\_\_potassium chlorate \_\_\_\_\_silver bromide  \_\_\_\_\_lithium carbonate \_\_\_\_\_calcium carbonate |
| **\_\_\_\_\_7. I can use Table G to determine how much solute to add at a given temperature to make a saturated solution.** | How many grams of KClO3 must be dissolved in 100 grams of water at 20oC to make a saturated solution? |
| **\_\_\_\_\_8. I can use Table G to determine if a solution is saturated, unsaturated, or supersaturated.** | If 20.0 g of NaNO3 are dissolved in 100.0 g of water at 25.0oC, will the resulting solution be saturated, unsaturated, or supersaturated? |
| **\_\_\_\_\_9. I can use Reference Table T to calculate the concentration of a solution in ppm.** | What is the concentration, in ppm, of a 2600 g of solution containing 0.015 g of CO2? |
| **\_\_\_\_\_10. I can use Reference Table T to calculate the concentration of a solution in molarity.** | What is the molarity of 3.5 moles of NaBr dissolved in 500 mL of water? |
| **\_\_\_\_\_11. I can use two different systems to define acids and bases.** | |  |  |  | | --- | --- | --- | |  | **Arrhenius** | **“Alternate Method” (AKA Bronsted-Lowry)** | | **acid** |  |  | | **base** |  |  | |
| **\_\_\_\_\_12. I can define pH, [ ], hydronium ion, hydroxide ion, and electrolyte.** | **Definitions:**  pH  [ ]  hydronium ion  hydroxide ion  electrolyte |
| **\_\_\_\_\_13. I can give examples of chemical formulas of common acids and bases.** | List the chemical formulas of three common acids and three common bases.   |  |  | | --- | --- | | **Acids** | **Bases** | |  |  | |  |  | |  |  | |
| **\_\_\_\_\_14. I can define neutralization.** | **Definition:**  neutralization |
| **\_\_\_\_\_15. I can identify a neutralization reaction from a list of reactions.** | Which of the following equations is a neutralization reaction?  A) 6Na + B2O3 -----> 3Na2O + 2 B  B) Mg(OH)2 + 2HBr -----> MgBr2 + 2HOH  C) 2H2 + O2 -----> 2H2O  D) 2KClO3 -----> 2KCl + 3O2 |
| **\_\_\_\_\_16. I can state the name of the laboratory equipment that is used to carry out a titration.** | Which piece of laboratory equipment is used to carry out a titration? |
| **\_\_\_\_\_17. I can state the purpose of titration.** | Why do scientists do titrations? |
| **\_\_\_\_\_18. I can solve for any variable in the titration equation from Reference Table T.** | If it requires 56.95 mL of 0.0043 M HNO3 to neutralize 34.56 mL of LiOH, what is the concentration of the LiOH? |
| **\_\_\_\_\_19. I can state the three types of substances that are electrolytes.** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are three classes of compounds that are electrolytes. |