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| **Process Targets-Informal observations in lab** | | | | |
| **Problem Solving** | **Double Replacement** | **Titration Lab** | **R-Value** | **Molecular shapes** |
| I can recognize multiple ways to solve a problem. | **AP** |  |  |  |
| I can judge which problem solving method will be more effective. | **AP** |  |  |  |
| I can identify flaws in the scientific method. |  |  |  |  |
| **Experimental Design** |  |  |  |  |
| I can design an experiment that will provide data to solve a problem. | **AP** |  |  |  |
| I can isolate one variable in a complex system and manipulate that variable. |  |  |  |  |
| I can identify controls in a complex systems experiment. | **AP, Hon, Reg, Survey** |  |  |  |
| I can identify constants in an experiment. | **AP, Hon, Reg, Survey** |  |  |  |
| **Gathering Data** |  |  |  |  |
| I can organize a variety of data. | **AP, Hon, Reg, Survey** |  |  |  |
| I can choose the most concise and effective means of representing data. |  |  |  |  |
| I can balance trusting data with questioning data that does not make sense. | **AP, Hon, Reg, Survey** |  |  |  |
| I can adapt to using a wide variety of observation and measurement tools. | **AP, Hon, Reg, Survey** |  |  |  |
| I can identify and follow the necessary safety precautions to complete a lab | **AP, Hon, Reg, Survey** |  |  |  |
| I can set up and use a variety of Lab Pro probes to collect data. |  |  |  |  |
| **Interpretation of Data** |  |  |  |  |
| I can create and use a graph with multiple trend lines. |  |  |  |  |
| I can extrapolate future trends from my data. |  |  |  |  |
| I can isolate descriptions of data from inferences of that data. |  |  |  |  |
| **Communicate Results** |  |  |  |  |
| I can use quantitative and qualitative means to support conclusions drawn from data. | **AP, Hon, Reg, Survey** |  |  |  |
| I can share results of my experiment concisely through a variety of means to appropriate audiences. | **AP, Hon, Reg, Survey** |  |  |  |
| **Real World Applications** |  |  |  |  |
| I can connect distinct aspects of what I am learning to complex global scientific issues. |  |  |  |  |
| I can recognize the connection of scientific concepts to current events and trends in daily life. |  |  |  |  |

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| **Content Targets** | | | | |
| **Prime Chemistry Content Targets** | **Double Replacement** | **Titration Lab** | **R-Value** | **Molecular shapes** |
| I can express a chemical or nuclear reaction in words or by writing a balanced equation. | **AP: Calculations**  **Hon: Calculations**  **Reg : Calculations**  **Survey: Calculations** |  |  |  |
| I can visualize matter using pictures and **words**.  compounds, elements, mixtures, **solids,** **liquids**, gases | **AP: Calculations**  **Hon: Calculations**  **Reg : Calculations**  **Survey: Calculations** |  |  |  |
| I understand the differences between a chemical change and a physical change and I can recognize them. | **AP: Calculations**  **Hon: Calculations**  **Reg : Calculations**  **Survey: Calculations** |  |  |  |
| I can predict amounts used or made in a chemical reaction. |  |  |  |  |
| I can recognize the differences between elements in terms of atomic structure |  |  |  |  |
| I understand the concept of the mole and can apply its use in calculations. |  |  |  |  |
| I understand the structure of the Periodic table and can use it to find information. | **AP: Calculations**  **Hon: Calculations**  **Reg : Calculations**  **Survey: Calculations** |  |  |  |
| I can predict the products of chemical reactions. | **AP: Calculations & Questions**  **Hon: Calculations & Questions**  **Reg : Calculations & Questions**  **Survey: Calculations & Question #2** |  |  |  |
| I can describe the nature of a solution using words, pictures, and equations. | **AP: Calculations & Questions**  **Hon: Calculations & Questions** |  |  |  |
| I can describe the behavior of gases in words, pictures, and equations. |  |  |  |  |
| I can predict shape and chemical properties of a substance by drawing molecular structures. |  |  |  |  |
| **Chemistry Content Targets (In Addition to Above)** |  |  |  |  |
| I can qualitatively describe the factors that affect the reaction rate of a chemical reaction. |  |  |  |  |
| I can qualitatively describe a chemical reaction at equilibrium and how it is affected by outside factors. |  |  |  |  |
| **Honors Chemistry Content (In Addition to Above)** |  |  |  |  |
| I can describe the energy gained or released in a chemical reaction and use a variety of methods to calculate the energy changes involved in physical and chemical processes. |  |  |  |  |
| I can qualitatively and quantitatively describe the factors that affect the reaction rate of a chemical reaction. |  |  |  |  |
| I can qualitatively and quantitatively describe a chemical reaction at equilibrium and how it is affected by outside factors. |  |  |  |  |
| **AP Chemistry Content (In Addition to Above)** |  |  |  |  |
| I can describe the energy gained or released in a chemical reaction and use a variety of methods to calculate the energy changes involved in physical and chemical processes. |  |  |  |  |
| I can qualitatively and quantitatively describe the factors that affect the reaction rate of a chemical reaction. |  |  |  |  |
| I can qualitatively and quantitatively describe a chemical reaction at equilibrium and how it is affected by outside factors. |  |  |  |  |

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**R-Value Lab**

**Titration**

**Molecular Shapes**

**Double Replacement**