**Lesson Plan Title:** Click here to enter text.

**Teacher’s Name: Mr.Gomez Subject/Course: Chemistry**

**Unit:** Click here to enter text. **Grade Level: College Prep**

**Overview of and Motivation for Lesson:**

**Isotopes are used to determine atomic mass for elements**

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| **Stage 1-Desired Results** | | |
| **Standard(s):**   * Click here to enter text. | | |
| **Aim/Essential Question:**   * How can atomic mass be determined with atomic mass of isotopes? | | |
| **Understanding(s):**  *Students will understand that . . .*   * How atomic mass is calculated from different types of isotopes * Isotopes might be similar but are different * Different isotopes have different abundance in nature | | |
| **Content Objectives:**  *Students will be able to . . .*   * Convert percentages to decimals * Calculate atomic mass for an element | | **Language Objectives:**  ELD Level Choose an item. *Students will be able to . . . in English*   * Click here to enter text.   ELD Level Choose an item. *Students will be able to . . . in English*   * Click here to enter text. |
| **Key Vocabulary**   * Average Atomic Mass | | |
| **Stage 2-Assessment Evidence** | | |
| **Performance Task or Key Evidence**   * Solve average atomic mass problems and obtain values near actual atomic mass of an element | | |
| **Key Criteria to measure Performance Task or Key Evidence**   * Solve problems 2 and 3 correctly in the least number of steps | | |
| **Stage 3- Learning Plan** | | |
| **Learning Activities:**  Do Now/Bell Ringer/Opener: Take out notes from Friday & periodic table and review example about copper  Learning Activity 1:  Average Mass practice with one more problem done as a class. After example students will attempt problems 1 and 2 by themselves  Learning Activity 2:  Candium Pre-Lab  Application  **Isotopes help determine atomic mass for elements**  Summary/Closing  **Understand isotopes might be similar in characteristics but have different atomic masses and abundance which make up atomic mass for element**  **Multiple Intelligences Addressed:**   |  |  |  |  | | --- | --- | --- | --- | | Linguistic | Logical-Mathematical | Musical | Bodily-kinesthetic | | Spatial | Interpersonal | Intrapersonal | Naturalistic |   **Student Grouping**  Whole Class  Small Group  Pairs  Individual  **Instructional Delivery Methods**  Teacher Modeling/Demonstration  Lecture  Discussion  Cooperative Learning  Centers  Problem Solving  Independent Projects | | |
| **Accommodations**  Click here to enter text. | **Modifications**  Click here to enter text. | |
| **Homework/Extension Activities:**  Finish Pre-Lab for HW  Attempt problems 3 & 5 on the Worksheet | | |
| **Materials and Equipment Needed:**   * Whiteboard * Markers | | |

**Adapted from Grant Wiggins and Jay McTighe-*Understanding by Design***