**Lesson Plan Title: Candium Lab**

**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**

|  |  |  |
| --- | --- | --- |
| **Stage 1-Desired Results** | | |
| **Standard(s):**   * Click here to enter text. | | |
| **Aim/Essential Question:**   * How does percentage of each isotope affect molar mass | | |
| **Understanding(s):**  *Students will understand that . . .*   * Isotopes can look similar in many characteristics but differ significantly in mass | | |
| **Content Objectives:**  *Students will be able to . . .*   * Identify the atomic mass of Candium * Average atomic mass for each Candium isotope | | **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**   * Click here to enter text. | | |
| **Stage 2-Assessment Evidence** | | |
| **Performance Task or Key Evidence**   * Collect data on isotopes of Candium to determine atomic mass | | |
| **Key Criteria to measure Performance Task or Key Evidence**   * Calculate Candium atomic mass within +/- 10% percent error | | |
| **Stage 3- Learning Plan** | | |
| **Learning Activities:**  Do Now/Bell Ringer/Opener: Take out pre-lab and hand it into green bin  Learning Activity 1:  Go over key aspects of the lab and mention what safety precautions must be followed for lab safety  Learning Activity 2:  Candium Lab  Application  **Demonstrate isotopes can look similar in shape and color but can result in different atomic masses**  Summary/Closing  Click here to enter text.  **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**  None | **Modifications**  None | |
| **Homework/Extension Activities:**  Finish Candium Lab | | |
| **Materials and Equipment Needed:**   * Candy * Whiteboard * Electronic Scale * Markers, many colors | | |

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