**JMS Lesson Plan**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Teacher:** | Anne Harwell | | **Subject:** | | Science | |
| **Date:** | **Beginning:** 10/9/2017**Ending:**  10/13/2017 | | **Grades:** | | 8th | |
| **Learning**  **Targets:** | I can describe atomic structure and how the structure determines an element’s identity.  I can recognize where atoms of some common elements are found and how they are named.  I can classify elements as metals, nonmetals, and metalloids.  I can identify groups of elements. | | **Connects with:** | | **Math – Pie charts/Circle graphs**  **Math – Scientific Notation** | |
| **Standard(s):** | S8P1.e – Develop models by analyzing patterns within the periodic table that illustrate the structure, composition, and characteristics of atoms and simple molecules.  S8P1 – f. Recognize that there are more than 100 elements and some have similar properties as shown on the Periodic Table of Elements.  S8P1 - g. Identify and demonstrate the Law of Conservation of Matter. | | | | | |
| **DOK Level** | **Activities / Assignments / Questions** | | | **Assessment** | | |
| **­­**  **Remediation** | The word ***element*** is related to elementary which means “basic.” | | | ☒ Formative | | ☐Selected Response -  ☐Constructed Response -  ☒Verbal  ☐Rubric  ☒Other – diagram/model  ☐Other – |
| **2** | ISN notes  Worksheet – Atomic Structure  Foldable – Subatomic Particles | | | ☒ Formative  ☐ Summative | | ☐Selected Response -  ☐Constructed Response –  ☒Verbal  ☐Rubric  ☒Other – research  ☐Other – |
| **3** | Analyze: When determining the mass of an atom, the electrons are not considered. Why can scientist disregard the electrons? Cite your evidence.  Why do you think the noble gases were among the last of the naturally occurring elements to be discovered? Cite your evidence.  Activity – Button activity (sort, classify and form a table to show how they are arranged) | | | ☒ Formative  ☒ Summative | | ☒Selected Response  ☒Constructed Response  ☒Verbal  ☐Rubric  ☐Other –  ☐Other – |
| **4** | | Investigation- Modeling Atomic Masses  This investigation will give you some sense of how scientists determined the mass of all atoms: You will compare the masses of different film can “atoms.” You will predict the number of washers in each film can “atom.” Infer – hydrogen has only a single proton in its nucleus, apply your results to determine the next four elements. Extend: find the masses of the next two elements (how many washers are needed for each model?) | | ☒ Formative  ☐ Summative | | ☐Selected Response  ☐Constructed Response -  ☐Verbal  ☐Rubric  ☐Other –  ☐Other – |
| **Resources:** | Textbook – Physical Science McDougal Littell  <https://www.youtube.com/watch?v=EMDrb2LqL7E> (Video -Introduction to atomic structure)  <https://www.youtube.com/watch?v=N-FfVLOBccI> (Video – How big is an atom?) | | | | | |

**Monday** – **ISN Notes:** Introduction to Atomic Structure

**Activity:** Atomic Diagram

**Anchor Activity -** Key Concepts & Critical Thinking p.151 (1-5)

**Tuesday-** Elements make up the periodic table (Button Activity – Explore similarities and differences of objects). ISN notes on reading the periodic table

**Video** – Introduction to atomic structure

**Wednesday** – The periodic table is a map of the elements (misconception-appearance of single atoms do not have the same properties of the same atom in bulk)’

**ISN notes** – periodic table worksheet

**Thursday** – **Scientific Notation** pg. 161 (Numbers with Many Zeros) / Graphing slope on the x and y axis

**Video** - How big is an atom?

**Friday** – **CLOZE Reading** (Atomic Structure and The Periodic Table of Elements) and Study Guide