**Physical Science Lesson Plans**
4th Period, 10:55 – 11:45 AM
Quarter 1, Week 6
September 23 - 27, 2019

**Monday**
**September 23, 2019**

| | |
|---|---|
| Performance Standard | HS1-PS1-1, HS1-PS1-2 |
| Topic | The Development of Atomic Theory |
| Specific Objectives | 1. Who first came up with the first theory of atom?<br>2. What did Dalton add to the atomic theory?<br>3. How did Thomson discover the electron?<br>4. What is the Rutherford 's atomic model? |

Bellringer:
How making a model allows you to identify an unknown object?

Procedure:

- Why it matters: nanotechnology
- Introduction: The beginnings of atomic theory
- Quicklab: evidence of atoms
- Research: Dalton's atom, Rutherford's model of the atom
- Formative assessment: quiz
- Assignment: section 1 review on page 118

Assessment:
Quiz, assignment

**Tuesday**
**September 24, 2019**

| | |
|---|---|
| Performance Standard | HS1-PS1-1, HS1-PS1-2 |
| Topic | The Structure of Atoms |
| Specific Objectives | 1. What is the difference between protons, neutrons and electrons?<br>2. What do atoms of an element have in common with other atoms of the same element? |

Bellringer:
How Dalton's model similar and different to Rutherford's?

Procedure:

- Demonstrate: Counting Large numbers by mass
- Introduction: What is an atom?
- Discussion: structure of atom
- Finding atomic umber and mass number
- Close: formative assessment

Assessment:
assignment

**Wednesday**
**September 25, 2019**

| | |
|---|---|
| Performance Standard | HS1-PS1-1, HS1-PS1-2 |
| Topic | Isotopes and Atomic Masses |
| Specific | 1. Why do isotopes of the same element have different atomic masses? |

| | |
|---|---|
| Objectives | 2. What unit is used to express atomic mass? |

Bellringer:

Find the number of electrons and number of protons of a stable Iron atom.

Procedure:

- Quicklab: Modeling isotopes
- Simulation: creating an atom
- Discussion: atomic mass
- Math Practice: converting moles to grams
- Close: quiz
- Assignment: section 2 review on page 127

Assessment:

Quiz, Assignment

**Thursday**
**September 26, 2019**

| | |
|---|---|
| Performance Standard | HS1-PS1-1, HS1-PS1-2 |
| Topic | Modern Atomic Theory |
| Specific Objectives | 1. What is the modern model of an atom?<br>2. How are the energy levels of an atom filled?<br>3. What makes an electron jump to a new energy level? |

Bellringer:

Describe isotope and give examples.

Procedure:

- Demonstrate: gaining and losing energy
- Modern models of the atom
- Electron Energy Levels
- QuickLab: electron levels
- Close: making analogies
- Assignment: section review on page 132

Assessment:

Close, assignment

**Friday**
**September 27, 2019**

| | |
|---|---|
| Performance Standard | HS1-PS1-1, HS1-PS1-2 |
| Topic | Lab: Building Isotopes |
| Specific Objectives | 1. build models of nuclei of certain isotopes<br>2. use the periodic table to determine the composition of atomic nuclei |

Bellringer:

Using periodic table, determine the atomic number and mass number of silicon, iron and beryllium.

Procedure:

- PreLab: objectives, procedure, rubric, safety
- Lab proper
- Postlab: completion of lab report, presentation

Assessment:

rubric