Chemistry Curriculum Pacing Guide
Atoms and Periodicity
Crosscutting Concepts: Patterns, System and System Models, Structure and Function, Energy and Matter
Topics: Atomic structure, Models of the atom, Electronic configurations, Atomic emission spectra

4-week Instructional Segment

Anchoring Phenomenon	Standard	Instructional Segment	Disciplinary Core Ideas	Science and Engineering Practices	Instructional Notes
Fireworks	SC1.a, b, e, f, g	Atoms and Periodicity	Frameworks of K-12 Science Education: ***By the end of grade 12*** **PS1.A: Structure and Properties of Matter** **PS2.B: Types of Interactions** ● Explain the structure and properties of matter using attraction and repulsion between electric charges. ● Abundance of stable isotopes **PS3.B: Conservation of Energy and Energy Transfer** ● Conservation of energy **PS4.B: Electromagnetic Radiation** ● Atoms emit and absorb characteristic frequencies of light.	● Asking questions and defining problems ● Developing and using models ● Planning and carrying out investigations ● Analyzing and interpreting data ● Constructing explanations and designing solutions ● Engaging in argument from evidence ● Obtaining, evaluating and communicating information	Follow general lab safety rules for handling metal salts and using open flames. By the end of this unit, students are using the following language in their speaking and writing during EXPLAIN or ELABORATE. ● Dalton ● Thomson ● Plum Pudding Model ● Bohr Model ● DeBroglie Model ● Quantum-Mechanical Model ● Electron Configuration ● Noble Gas Configuration ● Valence Electrons ● Aufbau ● Hund's Rule ● Pauli Exclusion Principle

This instructional segment will connect to SC2a, SC3b, and SC4c where students will investigate a variety of chemical reactions to identify the indicators of a chemical reaction, explain the role of a catalyst and develop particle diagrams that represent how changes at the microscopic level affect macroscopic physical and chemical properties.