

INTEGRATED SCIENCE UNIT 1

Unit 1 Overview Pacing: 4 Instructional Weeks Report Period 1: Weeks 1-4
Matter, Atomic Structure, and the Periodic Table

Key Concepts/Overarching Questions	
KEY CONCEPT	OVERARCHING QUESTIONS
Key 1: Explain the relationship between matter, atoms, and an element.	1. How are matter, atoms, and elements related to one other? 2. How can scientists determine the elements from which a compound is formed? 3. Categorize materials as pure substances or mixtures. 4. What are the characteristics of matter that form the basis of the physical world?
Key 2: Describe the history of atomic theory from Dalton through the modern model of the atom.	1. What reasons do scientists have for using a model to represent some reality? 2. What are the similarities and differences between the Bohr model of the atom and the modern model?
Key 3: Relate the chemical properties of an element to the electron arrangement of its atoms.	1. How do the atomic structures of atoms differ? 2. How are elements classified on the periodic table? 3. What is the significance of electron arrangement in an atom?
Key 4: Differentiate between ionic, covalent, and metallic bonds.	1. How does the structure of a molecule affect its properties? 2. What holds atoms in a compound or molecule together? 3. How are ionic and covalent bonds alike? 4. What are the features of a metallic bond?