

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.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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?