Brunswick School Department
Science
Grade 6: Chemistry 1

Unit Overview

In this unit, students are introduced to the structure of atoms and molecules. The emphasis is on understand the Periodic Table and how the elements are categorized within it. Students will be able to draw simple atomic structures and discuss the reactivity of those atoms, based on electron configuration. Students are introduced to molecules and compounds.

Essential Understandings

- Substances are made from different types of atoms, which combine with one another in various ways.
- Atoms form molecules that range in size from two to thousands of atoms.
- Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it.
- Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals.)
- Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it.
- Gases and liquids are made of molecules or inert atoms that are moving about relative to each other.
- In a liquid, the molecules are constantly in contact with others; in a gas, they are widely spaced except when they happen to collide. In a solid, atoms are closely spaced and may vibrate in position but do not change relative locations.
- The changes of state that occur with variations in temperature or pressure can be described and predicted using these models of matter.

Priority Standards and Performance Indicator

(as based on Next Generation Science Standard).

Demonstrate an understanding of energy and matter.
b. Develop models to describe the atomic composition of simple molecules and extended structures.

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Next Generations Science Standards Addressed in this Unit

MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

Examples of Formative / Summative Assessments

- Simple Atom and Molecule Models;
- Parts of an Atom
- Drawing an Atom
- Sugar Water Probe
- Salt Crystals Probe
- Water"Probe
- Labs
- Quizzes
- Exit tickets

Sample Texts and Materials/Resources

- ScienceSaurus resource or other print resources similar to it
- Internet articles
- Kids Discover: Atoms
- Interactive web sites for atoms, molecules, and matter