

Unit 07: Chapter 9: Chemical Names and Formulas

Content Area: **Science**
Course(s): **Chemistry Honors, Chemistry AH**
Time Period: **Semester 1**
Length: **2 weeks**
Status: **Published**

Standards

SCI.9-12.HS-PS1-2	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.
SCI.9-12.HS-PS1-7	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.
SCI.9-12.HS-PS1-3	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.

Goals/Objectives

How do so few elements make so many compounds? And why?

What is the role of electrons in the formation and properties of compounds?

Content

The octet rule

Covalent v. Ionic bonds

Molecular v. Ionic substances

Skills

Describe the transfer or sharing of electrons to form compounds.

Contrast the properties of molecular and ionic substances.

Interparticle and intraparticle forces

Learning Activities/Instructional Strategies

Assessment of Learning

- chapter test
- discussion
- homework
- lab report

Differentiation

- Alternative Assessments
- Choice of activities
- Choice of books
- Flexible grouping
- Guided reading
- Homework options (describe)
- Independent research and projects
- Leveled rubrics
- Modified materials
- Multiple texts
- Multi-sensory
- Personal agendas
- Pre-teach
- Re-teach
- Stations/Centers

21st Century

21st Century Themes

- Business, Financial, Economic Literacy
- Civic Literacy
- Global Perspectives
- Health Literacy

21st Century Skills

- Communication and Collaboration
- Creativity and Innovation
- Critical Thinking and Problem Solving
- Information Literacy
- Life and Career Skills
- Media Literacy

Interdisciplinary Connections

- Computers
- Engineering
- Math
- Science

Integration of Technology

- Calculators
- Computer Lab/Laptops
- Digital Scales & Meters
- Graphing Calculators
- Internet Resources
- iPads
- SMART Board

TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.12.C	Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
TECH.8.1.12.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.1.12.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
TECH.8.2.12.E	Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.