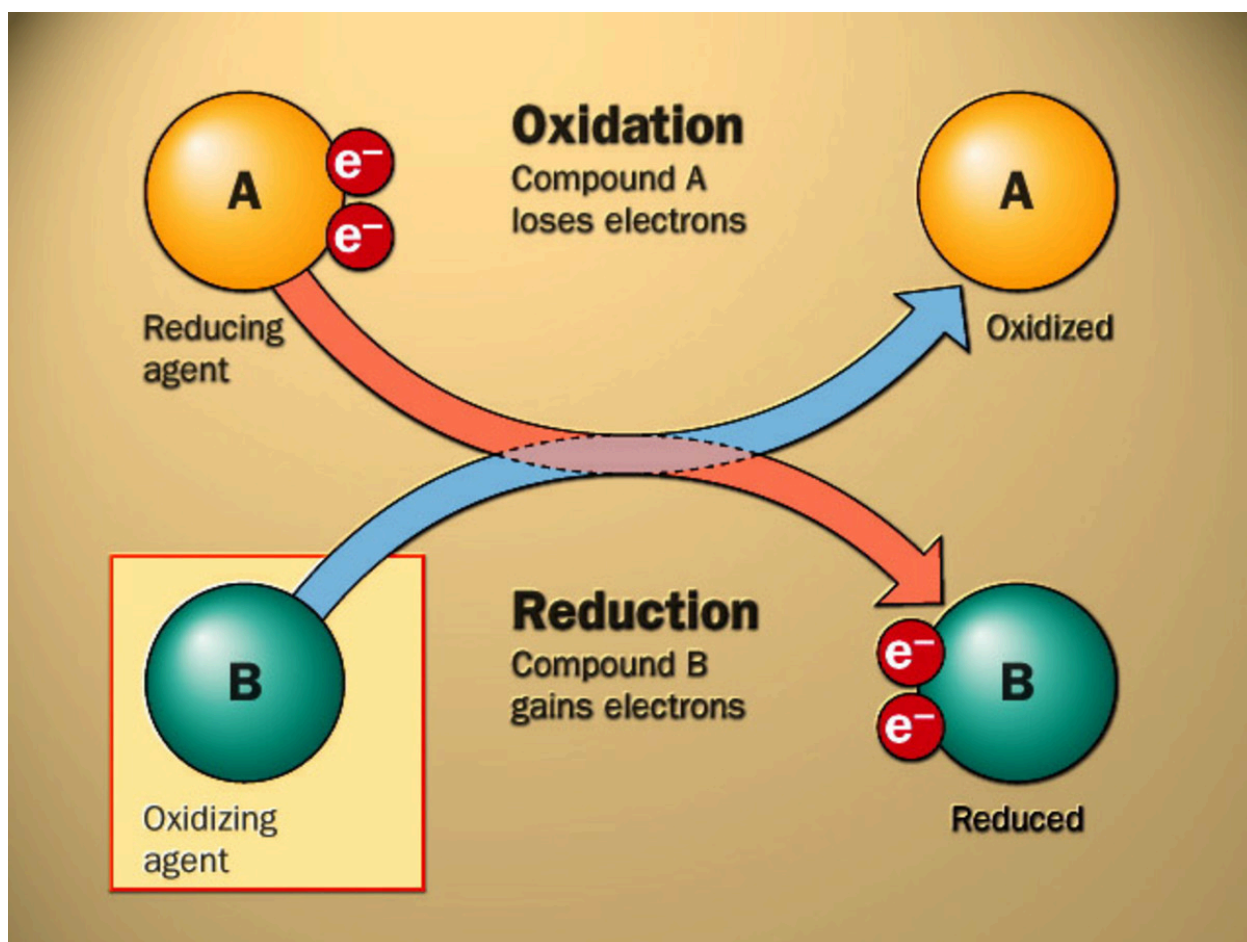


Redox Reactions



Unit Introduction

Redox (reduction-oxidation) reactions are fundamental to many processes in chemistry, biology, and industry, making their study essential. They are the basis for energy production in living organisms, the function of batteries, and various industrial chemical processes. Understanding redox reactions allows us to understand how these processes work and how to control them.

Unit Priority Standards

- **SS.SCI.CHEM.1.2** - Simple Chemical Reactions
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.

Essential Question
1. How does the transfer of electrons in chemical reactions cause changes from the reactants to the products?
Enduring Understandings
1. Understanding the mathematical relationships between pressure, volume, temperature, and moles of gases.
Essential Knowledge
1. Assigning oxidations. 2. Identifying and distinguishing between oxidation and reduction. 3. Identifying and distinguishing between oxidizing and reducing agents.
Essential Skills
1. Basic mathematical operations (multiplication, division, addition, subtraction)

Unit Outline

Week 1	<ul style="list-style-type: none"> • Oxidation states • Overview of the redox • Guided and individual practice • Formative assessment
Week 2	<ul style="list-style-type: none"> • Unit Review • Summative Assessment
Week 3	<ul style="list-style-type: none"> • Semester 2 Reassessments

Assessment Details

Evidence	
I will check students' understanding throughout the unit by...	
Summative <ul style="list-style-type: none"> • Unit 8 Test (Rubric) 	Formative <ul style="list-style-type: none"> • Check for understanding quizzes (not entered in PowerSchool) • Formative Assessment: Assigning oxidation states and identifying what is oxidized, what is reduced, what is the oxidizing agent, and what is the reducing agent (Rubric)