

# Unit 16: Chapter 19: Acids, Bases, and Salts

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

## Standards

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PS1-1

PS1-2

PS1-6

SCI.9-12.HS-PS1-1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.
SCI.9-12.HS-PS1-6	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.
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.

## Goals/Objectives

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Why are acids and bases so important?

How are acids and bases different?

## Content

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The hydronium and hydroxide ions

pH

Ionization

Neutralization

Indicators

## Skills

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Identify, name, and describe the properties of acids and bases

Compare strong v. weak acids and bases

Determine pH using various indicators

Equate concentration of hydronium to pH

Perform a neutralization reaction

## **Learning Activities/Instructional Strategies**

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- Chapter 19 Packet

## **Assessment of Learning**

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- Chapter test
- Discussion
- Homework
- Lab report

## **Differentiation**

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- 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

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### 21st Century Themes

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

### 21st Century Skills

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

### Interdisciplinary Connections

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- Computers
- Engineering
- Math
- Science

### Integration of Technology

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- 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.