

# Essential Chemistry

## ONLINE

**ESSENTIAL CHEMISTRY ONLINE**

Additional Databases

**Acids and Bases**  
A World of Acids and Bases • What Are Acids and Bases? • Determining Acids and Bases • Acids and Bases in Chemistry • Acids and Bases in Industry • Acids and Bases in the Human Body • Acids and Bases in Nature  
**SUPPORT MATERIALS** Glossary • Periodic Table of the Elements • Electron Configurations • Table of Atomic Masses • Image Gallery • Video Gallery

**Atoms, Molecules, and Compounds**  
Meet the Atom • The Quantum Model • The Nucleus • The Electrons • The Elements • Chemical Reactions: Making Molecules • Chemical Bonds • Common Compounds, Uncommon Results  
**SUPPORT MATERIALS** Glossary • Periodic Table of the Elements • Electron Configurations • Table of Atomic Masses • Image Gallery • Video Gallery

**Biochemistry**  
What Is Biochemistry? • Amino Acids • Proteins and Nucleic Acids • Enzymes • Lipids and Biological Membranes • Carbohydrates: Energy for Living Organisms • Metabolic Pathways: The Roads to Energy • Photosynthesis: The Basis of Life on Earth • The Human Genome Project  
**SUPPORT MATERIALS** Glossary • Periodic Table of the Elements • Electron Configurations • Table of Atomic Masses • Image Gallery • Video Gallery

**Carbon Chemistry**  
Introduction to Carbon Chemistry • A Brief Review of Atoms and Elements • Carbon Compound Chemistry • Biomolecules • The Carbon Cycle • The Atmosphere and Climate • Global Warming • Carbon and Energy

**Support Materials**

**Teacher Resources**  
Discussion Questions, Activities and Projects, Assessment Questions, Handouts and more

**Special Feature**  
**Alaska's Record-Breaking Fires**  
Forest fires are a major problem in Alaska. In the summer of 2004, nearly 6 million acres of Alaska's forest—an area about the size of the entire state of Vermont—was destroyed by fire. That was a record-breaker, but the problem continues, more.

## Targeted, Focused CHEMISTRY Content

Printable Materials

**The water cycle**

**1 Evaporation**  
Water evaporates from the surface of the ocean, being replaced by water that falls as rain or snow on land and water.

**2 Transportation**  
Water is carried up on convection currents by the wind, the atmosphere, clouds, and eventually the water vapor condenses, forming precipitation, which falls as rain or snow.

**3 Deposition**  
The fresh water then runs down through the ground, which allows it to be stored in aquifers.

**High-quality Videos**

Excerpt from: *Chemistry and Life* (Zweites Deutsches Fernsehen)  
Carbon is the basic atom in organic chemistry, a component of many compounds, and is referred to as the element of life. Carbon cycles between the oceans, the atmosphere, and living organisms.

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With original videos and clear narrative, the accessible *Essential Chemistry Online* expands the coverage of fundamental aspects of chemistry through concrete, real-life examples that fully illustrate the practical importance of the featured topics. Learning Units in this eLearning Module cover everything from atoms and molecules to chemical reactions to the states of matter, and more. Compelling and informative, this online resource is perfect for students studying this important subject.

### Learning Unit Chapters

Each eLearning Module is divided into Learning Units, displayed in chapters, with high-quality images, sidebars, in-text links, and dynamic citations. Support materials for each chapter are also conveniently located, allowing for seamless in-class integration. Learning Units in *Essential Chemistry Online* include:

- |                                 |   |
|---------------------------------|---|
| Acids and Bases                 | Earth Chemistry                               |
| Atoms, Molecules, and Compounds | Metals  |
| Biochemistry                    | Periodic Table                                |
| Carbon Chemistry                | States of Matter: Gases, Liquids, and Solids. |
| Chemical Bonds                  |   |
| Chemical Reactions              |   |

### Features:

- Correlations to Common Core, state, and national educational standards
- Proprietary content
- High-quality Flash® videos
- Activities and projects
- Assessment questions with answer keys
- Discussion questions
- Learning objectives
- Printable materials
- Support materials
- Media galleries
- Read Aloud audio tool
- Google Translate on every page, with 53 languages to choose from
- Dynamic full citations
- Search results with hit highlighting and Search Assist technology
- Print and email capabilities and text-resize tool
- Persistent record links
- Usage statistics.

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# eLearning Modules

## eLearning Modules titles include:

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Energy and the Environment Online  
Essential Chemistry Online  
Genes and Disease Online  
Genetics and Evolution Online  
Global Warming Online  
Green Technology Online  
The Human Body: How It Works Online  
Physics in Action Online  
The Plant World Online

### U.S. HISTORY

America at War Online  
Life in America Online  
Your Government: How It Works Online

### WORLD HISTORY

Global Exploration Online  
Great Empires of the Past Online

### COMING SOON!

Character Education Online  
Healthy Eating Online  
Understanding Drugs Online

## Enriched Online Resources Engage Students on Core-curriculum Topics

### Reference Solutions Made Easy

Our new eLearning Modules provide focused, targeted coverage of core-curriculum topics. Designed for libraries and classrooms, eLearning Modules are a unique combination of our multivolume print series with rich media, including high-quality educational videos, images, instructor resources, and support materials that were created specifically to align with the content for a seamless learning experience.

### Bring Learning to Life

Students will find these online resources engaging and simple to use. Instructors, curriculum coordinators, and principals will appreciate the easy integration into classroom learning and the wide assortment of invaluable support materials and instructor resources, including activities, discussion and assessment questions, and printable materials. Librarians will be able to offer their students and patrons quick access to homework and research help.

### Engaging Online Resources for Today's Students

eLearning Modules are also excellent for distance learning, study abroad, and tutoring programs. These dynamic and compelling online resources pick up where textbooks leave off, bringing the subject matter to life. eLearning Modules are the perfect solution to every educator's goal: helping students achieve their best.

### ALSO OF INTEREST:

#### Streaming Video

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#### Online Databases

Award-winning, exclusive reference content in a variety of subject areas, perfect for any institution.

#### eBooks & Print

Core-curriculum and high-interest K-12 and reference eBook and print offerings that will become a lasting part of your library's holdings.

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