



Pre-Built Course: Environmental Chemistry

We offer pre-built courses for all of our titles. A pre-built course works well when using Conceptual Academy much like the video version of a traditional textbook. Your students will have access to all the content listed within this pre-built course (see below). This provides flexibility from one semester to the next. For each semester you might direct students to be responsible for only select lessons or chapter sections.

Once a pre-built course is uploaded to your instructor's account, you can modify it as you see fit to "make it your own". This includes updating the FYI pages and setting dates for each lesson so that students know what to study by when. You can also remove select chapter sections you are not wanting students to see.

For a Conceptual Academy course aligned more precisely to a particular class schedule, we recommend you contact us to request a customized course. To learn more about customizing your course, please look to the help documents within your instructor profile page.

Conceptual Chemistry, 5e

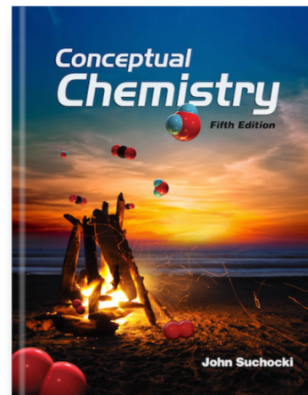
Syllabus: Environmental Chemistry
4 Units; 26 Lessons
196 Videos

Unit : A : Chemistry in the Environment
Unit : B : Energy Resources
Unit : C : The Chemistry of Water
Unit : D : The Chemistry of Life

Unit : A : Chemistry in the Environment
Lesson 1 (your date)

FYI page

- 1.1 Science Is a Way of Understanding the Natural World
 - 1.2 The Discovery of the Buckyball
 - 1.3 Technology Is Applied Science
 - 1.4 We Are Still Learning About the Natural World
 - 1.5 Chemistry Is Integral to Our Lives
 - 1.6 Scientists Measure Physical Quantities
- Lesson Reading Quiz
Homework Practice Session



Lesson 2 (your date)

FYI page

2.1 The Submicroscopic World Is Super-Small

2.2 Discovering the Atom

2.3 Mass Is How Much and Volume Is How Spacious

2.4 Density Is the Ratio of Mass to Volume

2.5 Energy Is the Mover of Matter

2.6 Temperature Is a Measure of How Hot--Heat It Is Not

2.7 The Phase of a Material Depends on the Motion of Its Particles

2.8 Gas Laws Describe the Behavior of Gases

Lesson Reading Quiz

Homework Practice Session

Lesson 3 (your date)

FYI page

3.1 Matter Has Physical and Chemical Properties

3.2 Elements Are Made of Atoms

3.3 The Periodic Table Helps Us to Understand the Elements

3.4 Elements Can Combine to Form Compounds

3.5 There Is A System for Naming Compounds

4.4 The Atomic Nucleus Is Made of Protons and Neutrons

Lesson Reading Quiz

Homework Practice Session

Lesson 4 (your date)

FYI page

3.6 Most Materials Are Mixtures

3.7 Matter Can Be Classified as Pure or Impure

9.1 Chemical Reactions Are Represented by Chemical Equations

Lesson Reading Quiz

Homework Practice Session

Lesson 5 (your date)

FYI page

16.5 The Earth's Atmosphere Is a Mixture of Gases

16.6 Human Activities Have Increased Air Pollution

Lesson Reading Quiz

Homework Practice Session

Lesson 6 (your date)

FYI page

16.7 Carbon Dioxide Helps Keep the Earth Warm

Lesson Reading Quiz

Homework Practice Session



Unit : B : Energy Resources

Lesson 1 (your date)

FYI page

6.1 Electron-Dot Structures

6.2 Atoms Can Lose or Gain Electrons to Become Ions

6.3 Ionic Bonds Result from a Transfer of Electrons

6.5 Covalent Bonds Result from a Sharing of Electrons

6.6 Valence Electrons Determine Molecular Shape

Lesson Reading Quiz

Homework Practice Session

Lesson 2 (your date)

FYI page

9.4 Chemical Reactions Can Be Exothermic or Endothermic

9.5 Chemical Reactions Are Driven By Entropy

12.1 Hydrocarbons Contain Only Carbon and Hydrogen

12.2 Unsaturated Hydrocarbons Have Multiple Bonds

12.3 Functional Groups Give Organic Compounds Character

Lesson Reading Quiz

Homework Practice Session

Lesson 3 (your date)

FYI page

5.1 Radioactivity--the Disintegration of the Atomic Nucleus

5.2 Radioactivity Is a Natural Phenomenon

5.3 Radioactivity Results from an Imbalance of Forces

5.4 Radioactive Elements Transmute to Different Elements

5.5 The Shorter the Half-Life, the Greater the Radioactivity

5.6 Isotopic Dating Measures the Ages of Materials

17.1 Electricity Is a Convenient Form of Energy

17.2 Fossil Fuels Are a Widely Used but Limited Energy Source

17.6 Biomass Is Chemical Energy

Lesson Reading Quiz

Homework Practice Session

Lesson 4 (your date)

FYI page

5.7 Nuclear Fission--The Splitting of Atomic Nuclei

5.8 The Mass-Energy Relationship: $E = mc^2$

5.9 Nuclear Fusion--The Combining of Atomic Nuclei

17.3 Issues of the Nuclear Industry

Lesson Reading Quiz

Homework Practice Session

Lesson 5 (your date)

FYI page

11.1 Losing and Gaining Electrons

11.2 Harnessing the Energy of Flowing Electrons



11.3 Batteries Consume Chemicals to Generate Electricity
11.4 Fuel Cells Consume Fuel to Generate Electricity
11.5 Photovoltaics Transform Light Into Electricity
11.8 Oxygen Is Responsible for Corrosion and Combustion
Lesson Reading Quiz
Homework Practice Session

Lesson 6 (your date)

FYI page
17.4 What Are Sustainable Energy Sources?
17.5 Water Can Be Used to Generate Electricity
17.7 Energy Can Be Harnessed from Sunlight
17.8 Solar Energy Can Be Stored as Hydrogen
Lesson Reading Quiz
Homework Practice Session

Unit : C : The Chemistry of Water

Lesson 1 (your date)

FYI page
6.7 Polar Covalent Bonds--Uneven Sharing of Electrons
6.8 Molecular Polarity--Uneven Distribution of Electrons
Lesson Reading Quiz
Homework Practice Session

Lesson 2 (your date)

FYI page
7.1 Four Different Types of Dipole Attractions
7.2 A Solution Is a Single-Phase Homogeneous Mixture
Lesson Reading Quiz
Homework Practice Session

Lesson 3 (your date)

FYI page
7.3 Concentration Is Given As Moles Per Liter
7.4 Solubility Is How Well a Solute Dissolves
7.5 Soap Works by Being Both Polar and Nonpolar
7.6 Softening Hard Water
7.7 Purifying the Water We Drink
16.1 Water on the Move
16.2 Collectively, We Consume Huge Amounts of Water
16.3 Human Activities Can Pollute Water
16.4 Wastewater Treatment
Lesson Reading Quiz
Homework Practice Session

Lesson 4 (your date)

FYI page
8.1 Water Molecules Form an Open Crystalline Structure in Ice



8.2 Freezing and Melting Go On at the Same Time
8.3 Liquid Water's Behavior Results from the Stickiness of Its Molecules
8.4 Water Molecules Move Freely Between the Liquid and Gaseous Phases
8.5 It Takes a Lot of Energy to Change the Temperature of Liquid Water
8.6 A Phase Change Requires the Input or Output of Energy
Lesson Reading Quiz
Homework Practice Session

Lesson 5 (your date)

FYI page
10.1 Acids Donate Protons and Bases Accept Them
10.2 Some Acids and Bases Are Stronger Than Others
10.3 Solutions Can Be Acidic, Basic, or Neutral
Lesson Reading Quiz
Homework Practice Session

Lesson 6 (your date)

FYI page
10.4 Buffer Solutions Resist Changes in pH
10.5 Rainwater Is Acidic
Lesson Reading Quiz
Homework Practice Session

Lesson 7 (your date)

FYI page
10.6 Carbon Dioxide Acidifies the Oceans
Lesson Reading Quiz
Homework Practice Session

Unit : D : The Chemistry of Life

Lesson 1 (your date)

FYI page
12.4 Alcohols, Phenols, and Ethers Contain Oxygen
12.5 Amines and Alkaloids Contain Nitrogen
12.6 Carbonyl Containing Compounds
12.7 An Example of Organic Synthesis
12.8 Organic Molecules Can Link to Form Polymers
Lesson Reading Quiz
Homework Practice Session

Lesson 2 (your date)

FYI page
13.1 Biomolecules Are Produced and Utilized by Organisms
13.2 Carbohydrates Give Structure and Energy
13.3 Lipids Are Insoluble in Water
Lesson Reading Quiz
Homework Practice Session



Lesson 3 (your date)

FYI page

13.4 Proteins Are Polymers of Amino Acids

13.5 Nucleic Acids Code for Proteins

Lesson Reading Quiz

Homework Practice Session

Lesson 4 (your date)

FYI page

13.6 Vitamins Are Organic, Minerals Are Inorganic

13.7 Metabolism Is the Cycling of Biomolecules Through the Body

13.8 The Food Pyramid Summarizes a Healthful Diet

15.1 Humans Eat at All Trophic Levels

Lesson Reading Quiz

Homework Practice Session

Lesson 5 (your date)

FYI page

15.2 Plants Require Nutrients

15.3 Soil Fertility Is Determined by Soil Structure and Nutrient Retention

15.4 Natural and Synthetic Fertilizers Help Restore Soil Fertility

15.5 Pesticides Kill Insects, Weeds, and Fungi

15.6 There Is Much to Learn from Past Agricultural Practices

15.7 High Agricultural Yields Can Be Sustained with Proper Practices

Lesson Reading Quiz

Homework Practice Session

Lesson 6 (your date)

FYI page

14.1 Medicines Are Drugs That Benefit the Body

14.2 The Lock-and-Key Model Guides the Synthesis New Medicines

14.3 Chemotherapy Cures the Host by Killing the Disease

Lesson Reading Quiz

Homework Practice Session

Lesson 7 (your date)

FYI page

14.4 The Nervous System Is a Network of Neurons

14.5 Psychoactive Drugs Alter the Mind or Behavior

14.6 Pain Relievers Inhibit the Transmission or Perception of Pain

14.7 Medicines for the Heart

Lesson Reading Quiz

Homework Practice Session

