



Pre-Built Course: Conceptual Physical Science, Full Textbook

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 Physical Science, 6e

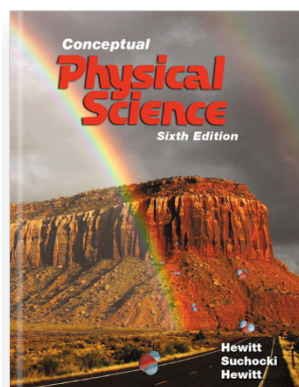
Syllabus: Full Textbook
5 Units; 28 Lessons
389 Videos

Unit : A: Physics I
Unit : B: Physics II
Unit : C: Chemistry
Unit : D: Earth Science
Unit : E: Astronomy

Unit : A: Physics I

Lesson 1 (your date)

- FYI page
- 1.1 Aristotle on Motion
- 1.2 Galileo's Concept of Inertia
- 1.3 Mass--A Measure of Inertia
- 1.4 Net Force
- 1.5 The Equilibrium Rule
- 1.6 Support Force
- 1.7 The Force of Friction
- 1.8 Speed and Velocity
- 1.9 Acceleration
- Lesson Reading Quiz
- Homework Practice Session



Lesson 2 (your date)

FYI page

- 2.1 Newton's First Law of Motion
 - 2.2 Newton's Second Law of Motion
 - 2.3 Forces and Interactions
 - 2.4 Newton's Third Law of Motion
 - 2.5 Summary of Newton's Three Laws
- Lesson Reading Quiz
Homework Practice Session

Lesson 3 (your date)

FYI page

- 3.1 Momentum and Impulse
 - 3.2 Impulse Changes Momentum
 - 3.3 Conservation of Momentum
 - 3.4 Energy and Work
 - 3.5 Work-Energy Theorem
 - 3.6 Conservation of Energy
 - 3.7 Power
 - 3.8 Machines
 - 3.9 Efficiency
 - 3.10 Sources of Energy
- Lesson Reading Quiz
Homework Practice Session

Lesson 4 (your date)

FYI page

- 4.1 The Universal Law of Gravity
 - 4.2 Gravity and Distance: The Inverse-Square Law
 - 4.3 Weight and Weightlessness
 - 4.4 Universal Gravitation
 - 4.5 Projectile Motion
 - 4.6 Fast-Moving Projectiles—Satellites
 - 4.7 Circular Satellite Orbits
 - 4.8 Elliptical Orbits
 - 4.9 Escape Speed
- Lesson Reading Quiz
Homework Practice Session

Lesson 5 (your date)

FYI page

- 5.1 Density
- 5.2 Pressure
- 5.3 Buoyancy in a Liquid
- 5.4 Archimedes' Principle
- 5.5 Pressure in a Gas
- 5.6 Atmospheric Pressure
- 5.7 Pascal's Principle



5.8 Buoyancy in a Gas
5.9 Bernoulli's Principle
Lesson Reading Quiz
Homework Practice Session

Unit : B: Physics II

Lesson 1 (your date)

FYI page
6.1 Temperature
6.2 Absolute Zero
6.3 Heat
6.4 Quantity of Heat
6.5 The Laws of Thermodynamics
6.6 Entropy
6.7 Specific Heat Capacity
6.8 Thermal Expansion
6.9 Expansion of Water
Lesson Reading Quiz
Homework Practice Session

Lesson 2 (your date)

FYI page
7.1 Conduction
7.2 Convection
7.3 Radiation
7.4 Newton's Law of Cooling
7.5 Climate Change and the Greenhouse Effect
7.6 Heat Transfer and Change of Phase
7.7 Boiling
7.8 Melting and Freezing
7.9 Energy and Change of Phase
Lesson Reading Quiz
Homework Practice Session

Lesson 3 (your date)

FYI page
8.1 Electric Force and Charge
8.2 Coulomb's Law
8.3 Electric Field
8.4 Electric Potential
8.5 Voltage Sources
8.6 Electric Current
8.7 Electric Resistance
8.8 Ohm's Law
8.9 Electric Circuits
8.10 Electric Power
Lesson Reading Quiz
Homework Practice Session

Lesson 4 (your date)



FYI page
9.1 Magnetic Poles
9.2 Magnetic Fields
9.3 Magnetic Domains
9.4 Electric Currents and Magnetic Fields
9.5 Magnetic Forces on Moving Charges
9.6 Electromagnetic Induction
9.7 Generators and Alternating Current
9.8 Power Production
9.9 The Transformer—Boosting or Lowering Voltage
9.10 Field Induction
Lesson Reading Quiz
Homework Practice Session

Lesson 5 (your date)

FYI page
10.1 Vibrations and Waves
10.2 Wave Motion
10.3 Transverse and Longitudinal Waves
10.4 Sound Waves
10.5 Reflection and Refraction of Sound
10.6 Forced Vibrations and Resonance
10.7 Interference
10.8 Doppler Effect
10.9 Bow Waves and the Sonic Boom
10.10 Musical Sounds
Lesson Reading Quiz
Homework Practice Session

Lesson 6 (your date)

FYI page
11.1 Electromagnetic Spectrum
11.2 Transparent and Opaque Materials
11.3 Reflection
11.4 Refraction
11.5 Color
11.6 Dispersion
11.7 Polarization
Lesson Reading Quiz
Homework Practice Session

Unit : C: Chemistry

Lesson 1 (your date)

FYI page
12.1 Atoms Are Ancient and Empty
12.2 The Elements
12.3 Protons and Neutrons
12.4 The Periodic Table
12.5 Physical and Conceptual Models



12.6 Identifying Atoms Using the Spectroscope
12.7 The Quantum Hypothesis
12.8 Electron Waves
12.9 The Shell Model
Lesson Reading Quiz
Homework Practice Session

Lesson 2 (your date)

FYI page
13.1 Radioactivity
13.2 The Strong Nuclear Force
13.3 Half-Life and Transmutation
13.4 Radiometric Dating
13.5 Nuclear Fission
13.6 Mass-Energy Equivalence
13.7 Nuclear Fusion
Lesson Reading Quiz
Homework Practice Session

Lesson 3 (your date)

FYI page
14.1 Chemistry: The Central Science
14.2 The Submicroscopic World
14.3 Physical and Chemical Properties
14.4 Determining Physical and Chemical Changes
14.5 Elements to Compounds
14.6 Naming Compounds
14.7 The Advent of Nanotechnology
Lesson Reading Quiz
Homework Practice Session

Lesson 4 (your date)

FYI page
15.1 Electron-Dot Structures
15.2 The Formation of Ions
15.3 Ionic Bonds
15.4 Metallic Bonds
15.5 Covalent Bonds
15.6 Polar Covalent Bonds
15.7 Molecular Polarity
15.8 Molecular Attractions
Lesson Reading Quiz
Homework Practice Session

Lesson 5 (your date)

FYI page
16.1 Most Materials Are Mixtures
16.2 The Chemist's Classification of Matter
16.3 Solutions



16.4 Solubility
16.5 Soaps, Detergents, and Hard Water
16.6 Purifying the Water We Drink
16.7 Wastewater Treatment
Lesson Reading Quiz
Homework Practice Session

Lesson 6 (your date)

FYI page
17.1 Chemical Equations
17.2 Counting Atoms and Molecules by Mass
17.3 Reaction Rates
17.4 Catalysts
17.5 Energy and Chemical Reactions
17.6 Chemical Reactions Are Driven by Entropy
Lesson Reading Quiz
Homework Practice Session

Lesson 7 (your date)

FYI page
18.1 Acids Donate Protons; Bases Accept Them
18.2 Relative Strengths of Acids and Bases
18.3 Acidic, Basic, and Neutral Solutions
18.4 Acidic Rain and Basic Oceans
18.5 Losing and Gaining Electrons
18.6 Harnessing the Energy of Flowing Electrons
18.7 Electrolysis
18.8 Corrosion and Combustion
Lesson Reading Quiz
Homework Practice Session

Lesson 8 (your date)

FYI page
19.1 Hydrocarbons
19.2 Unsaturated Hydrocarbons
19.3 Functional Groups
19.4 Alcohols, Phenols, and Ethers
19.5 Amines and Alkaloids
19.6 Carbonyl Compounds
19.7 Polymers
Lesson Reading Quiz
Homework Practice Session

Unit : D: Earth Science

Lesson 1 (your date)

FYI page
20.1 The Geosphere is Made Up of Rocks and Minerals
20.2 Minerals
20.3 Mineral Properties



20.4 Classification of Rock-Forming Minerals
20.5 The Formation of Minerals
20.6 Rock Types
20.7 Igneous Rocks
20.8 Sedimentary Rocks
20.9 Metamorphic Rocks
20.10 The Rock Cycle
Lesson Reading Quiz
Homework Practice Session

Lesson 2 (your date)

FYI page
21.1 Seismic Waves
21.2 Earth's Internal Layers
21.3 Continental Drift—An Idea Before its Time
21.4 Acceptance of Continental Drift
21.5 The Theory of Plate Tectonics
21.6 Continental Evidence for Plate Tectonics
21.7 The Theory That Explains the Geosphere
Lesson Reading Quiz
Homework Practice Session

Lesson 3 (your date)

FYI page
22.1 The Hydrologic Cycle
22.2 Groundwater
22.3 The Work of Groundwater
22.4 Surface Water and Drainage Systems
22.5 The Work of Surface Water
22.6 Glaciers and Glaciation
22.7 The Work of Glaciers
22.8 The Work of Air
Lesson Reading Quiz
Homework Practice Session

Lesson 4 (your date)

FYI page
23.1 The Rock Record—Relative Dating
23.2 Radiometric Dating
23.3 Geologic Time
23.4 Precambrian Time (4500 to 543 Million Years Ago)
23.5 The Paleozoic Era (543 to 248 Million Years Ago)
23.6 The Mesozoic Era (248 to 65 Million Years Ago)
23.7 The Cenozoic Era (65 Million Years to the Present)
23.8 Earth History in a Capsule
Lesson Reading Quiz
Homework Practice Session

Lesson 5 (your date)



FYI page
24.1 Earth's Atmosphere and Oceans
24.2 Components of Earth's Oceans
24.3 Ocean Waves, Tides, and Shorelines
24.4 Components of Earth's Atmosphere
24.5 Solar Energy
24.6 Driving Forces of Air Motion
24.7 Global Circulation Patterns
Lesson Reading Quiz
Homework Practice Session

Lesson 6 (your date)

FYI page
25.1 Atmospheric Moisture
25.2 Weather Variables
25.3 Cloud Development
25.4 Air Masses, Fronts, and Storms
25.5 Violent Weather
Lesson Reading Quiz
Homework Practice Session

Unit : E: Astronomy

Lesson 1 (your date)

FYI page
26.1 The Solar System and its Formation
26.2 The Sun
26.3 The Inner Planets
26.4 The Outer Planets
26.5 Earth's Moon
26.6 Failed Planet Formation
Lesson Reading Quiz
Homework Practice Session

Lesson 2 (your date)

FYI page
27.1 Observing the Night Sky
27.2 The Brightness and Color of Stars
27.3 The Hertzsprung-Russell Diagram
27.4 The Life Cycles of Stars
27.5 Black Holes
27.6 Galaxies
Lesson Reading Quiz
Homework Practice Session

Lesson 3 (your date)

FYI page
28.1 Looking Back in Time
28.2 Cosmic Inflation
28.3 and 28.4 Relativity



28.5 Dark Matter
28.6 Dark Energy
28.7 The Fate of the Universe
Lesson Reading Quiz
Homework Practice Session

