Exploring Creation with General Science 3rd Edition

Video Instruction

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Module 1: The History Of Science - Search For The Truth

Introduction (3:02)

The Earliest Science: Ancient Times-600 BC (4:13)
Egypt
Other Cultures

True Science Begins to Emerge: 600 BC-AD 500 (14:36)
Three Greek Scientists
Two More Greek Scientists
Experiment 1.1: Density in Nature
Hypothesis
Even More Greek Scientists

Science Progress Stalls and Then Gets Moving Again: AD 500-1500 (15:57)
Alchemy
Experiment 1.2: A Chemical Reaction
Other Medieval Cultures
End of the Dark Ages

The Renaissance: The "Golden Age" of Science: AD 1500-1660 (5:41)

The Era of Newton AD 1660-1735 (3:02)

The "Enlightenment" and the Industrial Revolution: AD 1735-1820 (8:16)

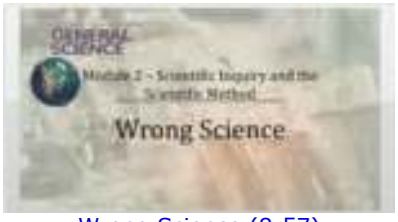
The Rest of the 19th Century: AD 1820-1900 (6:45)

Modern Science: AD 1900-Present (4:06)

Summing Up (1:57)

Module 2: Scientific Inquiry And The Scientific Method

Introduction (0:43)

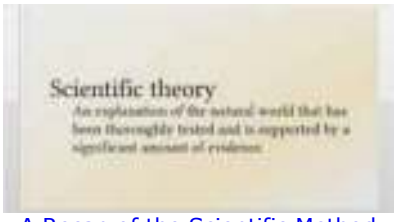


Wrong Science (8:57)
Experiment 2.1: How Weight Affects the Speed at Which Objects Fall
Experiment 2.2: More about How Weight Affects the Speed at Which Objects Fall

Systematic Experiments (2:21)

What Science Cannot Do (6:29)
Scientific Conclusions

The Scientific Method (12:53)
Experiment 2.3: Surface Tension of Water



A Recap of the Scientific Method (3:56)

Does the Scientific Method Always Prove True? (8:35)
The Story of Lowell

The Limitations and Misuses of Science (6:42)
Limitations of Science

Science and Christianity (6:26)
Gathering Information for Science
Analyzing Information for Science

What Other Scientists Thought
What New Information Revealed

Misuse of Science

Summing Up (1:05)

Module 3: Documenting And Interpreting Experimental Results

Introduction (0:43)

Experiments and Variables (14:10)
Experiment 3.1: Density and a Floating Egg
Experimental Variables

Recording Experimental Data (4:55)

Using a Series of Experiments (17:55)
Experiment 3.2: Exploring a Flame's Oxygen Use
Experiment 3.3: The Effect a Burning Candle Has on Air

Recognizing Experimental Variables When They Are Not Obvious (7:58)

Interpreting and Recording Results of Experiments (14:29)
More on Bar Graphs
Circle Graphs
Line Graphs
Creating a Line Graph
Infographics

Summing Up (0:41)

Module 4: Scientific Analysis And History


Introduction (1:00)


Pure Science, Applied Science, and Technology (4:35)

Archaeology (2:28)


Historical Records (4:48)

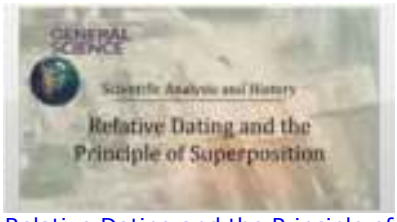
The Internal Test (5:55)
The Internal Test and the Bible


The External Test (5:51)
The External Test and the Bible


The Bibliographic Test (8:16)
The Bibliographic Test and the Bible


Age Testing and Dendrochronology (12:31)
Experiment 4.1: Dendrochronology

Age Testing and Radiometric Dating (2:02)



Relative Dating and the Principle of Superposition (4:13)


Summing Up (0:43)

Module 5: Earth Science-Astronomy

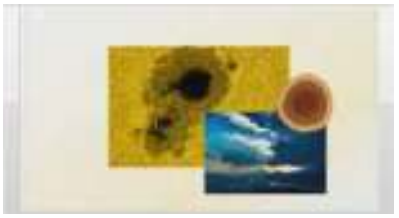

Introduction (1:27)


What Is Astronomy (3:25)

Tools to Study the Heavens (8:11)
Experiment 5.1: Make a Sundial
Telescopes

Wavelengths of Light (2:09)

The Sun (4:23)

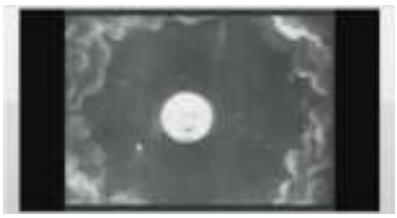


The Sun's Surface (4:14)

The Sun's Interior and Exterior (2:20)

Solar Eclipses (4:13)
Power of the Sun

Planets (8:30)



The Moon (10:25)
The Moon's Atmosphere
The Moon's Features
The Moon's Phases

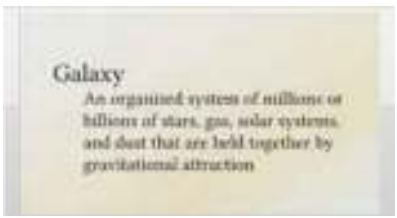
More about the Moon (3:10)
Tides
Lunar Eclipses
Moon Exploration

Non-Planetary Bodies (5:40)
Minor Planets
Kuiper Belt and Oort Cloud

Comets (3:01)

Meteors (7:32)
Experiment 5.2: Friction

Stars (9:57)



Galaxies (1:50)

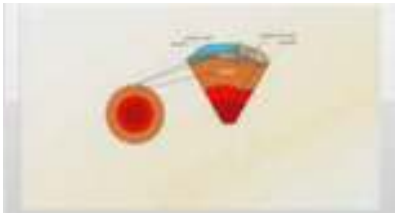
Extrasolar Planets (2:18)

Exploration of Space (1:48)

Summing Up (1:10)

Module 6: Earth Science - Geology And Paleontology

Introduction (0:34)



The Earth's Structure (12:11)
Earth's Crust
Earth's Mantle
Earth's Core

The Lithosphere (6:27)
The Hydroplate Theory

Soil, Rocks, and Minerals (12:59)
Experiment 6.1: "Growing" Crystals

The Earth's Surface (4:47)

Types of Weathering (10:26)
Erosion

Sedimentary Rock Strata (6:35)
Experiment 6.2: Separation of Sedimentation

The Basic Structure of the Grand Canyon (8:36)

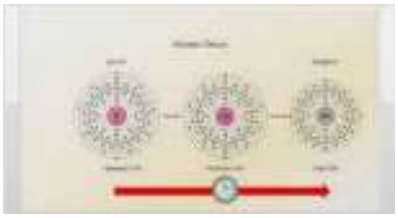
The Fossil Record and Its Features (9:28)
Fossil Formation

General Fossil Record Features (5:56)

Geology and Paleontology Perspectives (11:00)
The Uniformitarian Perspective
The Catastrophist Perspective

The Geological Record and Uniformitarianism (7:20)


The Geological Record and Catastrophism (7:00)


One More Age Issue (2:29)


Summing Up (1:08)

Module 7: Earth Science - Meteorology And Oceanography


Introduction (0:48)

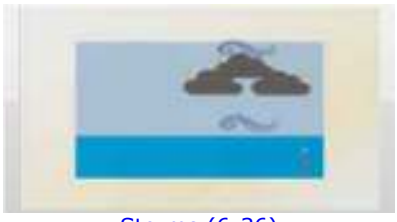

Meteorology (2:11)

Earth's Atmosphere (9:36)


What Causes Weather? (6:52)


Atmospheric Water (9:55)
Clouds
Experiment 7.1: Make Some Clouds


Fronts (2:49)


Storms (6:36)
Lightning
Tornadoes
Hurricanes


Weather Prediction (9:56)
Temperature
Pressure
Experiment 7.2: Build Your Own Barometer
Humidity
Wind Direction and Speed


Climate (9:29)
ENSO
Global Warming

Oceanography (2:01)
What Is Ocean Water?


Ocean Motion (3:39)
Currents
Waves and Tides


Ocean Geography (2:35)

Ocean Exploration and Study (3:07)

Summing Up (0:49)

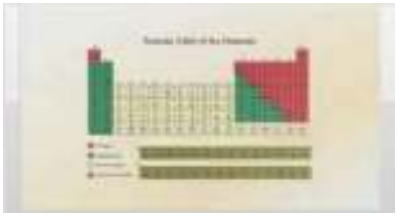
Module 8: General Chemistry

Introduction (1:05)

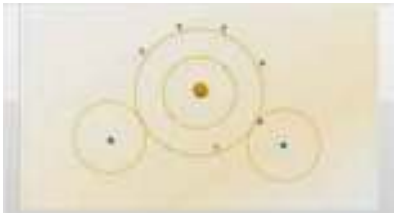
Matter (9:03)
States of Matter

Atoms (9:15)
Atomic Structure

Elements (7:51)
Experiment 8.1: Exposing Elements to Fire



The Periodic Table of the Elements (8:08)



Bonds (9:40)

Chemical Reactions (10:41)
Experiment 8.2: Separating a Mixture of Sand and Salt

Chemical Versus Physical Changes (9:12)
Chemical Changes

Types of Molecules (17:11)
Crystals
Polymers and Plastics
Acids and Bases

Summing Up (0:49)

Module 9: General Physics

Introduction (0:50)

Motion (9:45)
Speed, Velocity, and Acceleration

Newton's 3 Laws of Motion (15:16)
Newton's First Law
Experiment 9.1: Exploring Friction
Newton's Second Law
Newton's Third Law

More about Forces (1:24)
Gravitational Force
Electromagnetic Force
Experiment 9.2: Building an Electric Circuit
Magnetism

Simple Machines (9:46)
The Lever
The Wheel and Axle
The Pulley
The Inclined Plane
The Wedge
The Screw

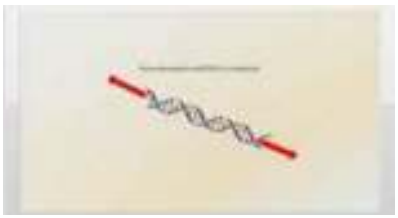
Waves and Sound (12:57)
Speed of Sound
Explaining Wave Anatomy
Experiment 9.3: Wavelength, Frequency, and Sound

Light (8:03)
How We Perceive Color
Reflection and Refraction

Summing Up (0:40)

Module 10: Life Science

Introduction (0:48)



DNA and Life (5:04)

The Structure of DNA (18:17)
Experiment 10.1: Building a Candy Model of DNA


Reproduction and Life (4:45)

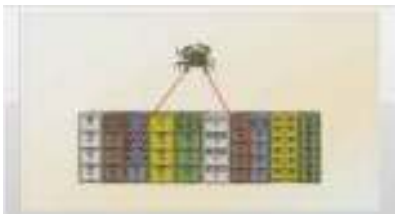
Energy and Life (10:34)
Experiment 10.2: Finding Food in Plants

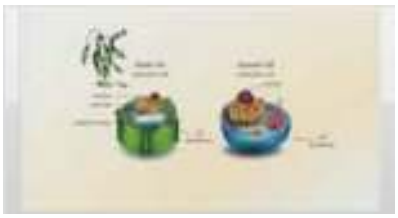

Sensing and Responding to Change (3:22)


The Cell (3:49)


Regulation and Life (1:00)


Growth and Life (0:49)


Biological Classification (11:41)
Classification


The 3 Domains in Creation (15:51)
Domain Archaea
Domain Bacteria
Domain Eukarya

Taxonomy (3:22)


Summing Up (1:20)

Module 11: General Biology


Introduction (1:06)

Molecular Biology and Biochemistry (5:18)
The Chemicals of Life


Cell Biology (9:43)
Cell Structures
Cell Anatomy

Microbiology (16:24)
Experiment 11.1: Growing a Yeast Culture
Parasitology

Immunology (2:49)

Mycology (3:52)

Botany and Plant Physiology (0:20)
Plant Structures
Experiment 11.2: Leaf Collection and Identification
Leaf Color
Roots and Stems
Plant Classification

Anatomy and Physiology (10:50)

Zoology (3:16)

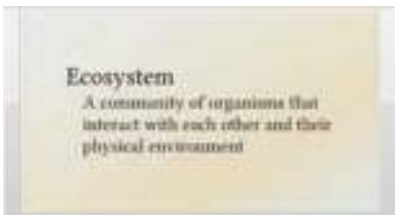
Genetics (7:18)

Evolutionary Biology (1:31)

Other Branches of Biology (1:33)

Summing Up (0:42)

Module 12: Marine Science



Introduction (1:28)

The Oceans of the Earth (10:48)
Experiment 12.1: An Edible Ocean Layer

Tiny Ocean Organisms (1:31)

Model

Marine Algae (3:23)
The Plankton

Marine Plants (0:54)

Ocean Invertebrates (12:14)
Sponges
Jellyfish
Anemones
Corals

Armored Ocean Invertebrates (8:20)
Mollusks
Arthropods
Echinoderms

Non-Bony Fishes (6:42)
Sharks
Rays

Bony Fishes (6:50)
Experiment 12.2: Shark and Fish Buoyancy

Other Marine Vertebrates (13:48)
Reptiles and Birds
Marine Mammals

Marine Environments (10:57)

Ocean Conservation (0:34)

Summing Up (0:35)

Module 13: Environmental Science

Introduction (0:37)

Ecosystem Influences (4:39)

Food Relationships (23:02)
Experiment 13.1: Composting
Food Chains and Food Webs

Symbiosis (2:07)

Ecological Cycles (2:32)

Organization in Ecology (10:18)
Tundra
Tropical Rainforest
Temperate Grassland

Ecological Succession (4:32)

Man and the Environment (23:54)
Experiment 13.2: Estimating Population Size
Your Worldview

Summing Up (0:53)

Module 14: Science And Creation

Introduction (2:31)

Rube Goldberg Machine Experiment Setup 1 (2:54)
Modules 1-4: The History of Science-Search for the Truth; Scientific Inquiry and the Scientific Method; Documenting and Interpreting Experimental Results; and Scientific Analysis and History
Module 5: Earth Science-Astronomy

Rube Goldberg Machine Experiment Setup 2 (2:32)
Module 6: Earth Science-Geology and Paleontology
Module 7: Earth Science-Meteorology and Oceanography

Rube Goldberg Machine Experiment Setup 3 (2:08)
Module 8: General Chemistry
Module 9: General Physics

Rube Goldberg Machine Experiment Setup 4 (2:55)
Module 10: Life Science
Module 11: General Biology

Rube Goldberg Machine Experiment Setup 5 (2:05)
Module 12: Marine Science
Module 13: Environmental Science

Rube Goldberg Machine Experiment Finale (12:00)

Summing Up (0:43)