

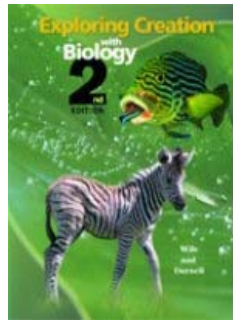


PRESENTS

## Exploring Creation with Biology 2<sup>nd</sup> Edition

Video Instruction DVD

Modules 1 - 4



### Legend





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### Introduction to DVD



Course Introduction (1:40)  



Safety Message (0:36)  



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### Module 1

Introduction (0:56)  



What is Life? (1:28)  



DNA and Life (1:42)  

Energy Conversion and Life (13:42)  



Sensing and Responding (0:49)  



All Life Forms Reproduce (3:11)  



Life's Secret Ingredient (3:06)  

The Scientific Method (3:31)  



Limitations of the Scientific Method (3:59)  









Spontaneous Generation: The Faithful Still Cling to It! (2:41)  

Biological Classification (3:47)  

































Characteristics Used to Separate Organisms into Kingdoms (5:21)  

The Definition of Species (2:57)  

































Biological Keys (3:52)  









- Experiment 1.1 Using a Biological Key (11:43)  
- Naming Organisms Based on Classification (2:18)  
- Alternate Forms of Taxonomy (4:41)  
- The Microscope/Experiment 1.2 Introduction to the Microscope (10:20)  
- 

## Module 2







































- Introduction (0:41)  
- Bacteria (8:09)  
- The Eating Habits of Bacteria (5:36)  
- Asexual Reproduction in Bacteria (4:53)  
- Genetic Recombination in Bacteria (2:50)  
- Transformation and Transduction (1:26)  
- Endospore Formation (1:24)  
- Bacterial Colonies (3:34)  
- Experiment 2.1 Pond Life, Part A (4:13)  
- Classification in Kingdom Monera (3:05)  
- Classes in Kingdom Monera (4:13)  
- A Few Words on Other Classification Systems (1:29)  
- Specific Bacteria (5:19)  
- Conditions for Bacterial Growth (2:09)  
- Preventing Bacterial Infections (2:47)  
- Experiment 2.2 Pond Life, Part B (4:17)  
- 

## Module 3

- Introduction (1:07)  
- Experiment 3.1 Pond Life, Part C (3:43)  
- Classification in Kingdom Protista (2:58)  
- Subkingdom Protozoa (1:34)  
- Phylum Sarcodina (4:16)  
- Other Sarcodines (1:14)  
- Phylum Mastigophora (2:42)  
- Other Mastigophorites (5:03)  
- Phylum Ciliophora (3:27)  
- Other Members of Phylum Ciliophora (1:04)  
- Phylum Sporozoa (4:29)  
- Experiment 3.2 Subkingdom Protozoa (6:23)  
- Subkingdom Algae (4:03)  
- Phylum Chlorophyta (2:22)  
- Phylum Chrysophyta (3:02)  
- Phylum Pyrrophyta (2:09)  

- Phylum Phaeophyta (2:20)  
- Phylum Rhodophyta (0:49)  
- Experiment 3.3 Subkingdom Algae (2:26)  
- Summing Up Kingdom Protista (1:52)  
- 

## Module 4

- Introduction (1:19)  
- General Characteristics of Fungi (7:30)  
- Reproduction in Kingdom Fungi (2:02)  
- Classification in Kingdom Fungi (2:47)  
- Phylum Basidiomycota (5:09)  
- Other Members of Phylum Basidiomycota (3:43)  
- Experiment 4.1 Phylum Basidiomycota (3:42)  
- Phylum Ascomycota (0:34)  
- Yeasts (3:46)  
- Experiment 4.2 Yeast and the Fermentation Process (7:19)  
- Other Members of Phylum Ascomycota (2:05)  
- Phylum Zygomycota (1:47)  
- Experiment 4.3 Molds (5:17)  
- Phylum Chytridiomycota (1:05)  
- Phylum Deuteromycota: The Imperfect Fungi (3:37)  
- Optional Experiment 4.4 Imperfect Fungi (2:37)  
- Phylum Myxomycota (2:27)  
- Symbiosis in Kingdom Fungi (2:35)  
- Summing Up Kingdom Fungi (1:08)  

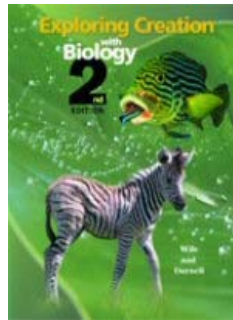


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













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### Module 5

- Introduction (0:34)  
- Atoms: The Basic Building Blocks of Matter (5:58)  
- Elements (4:35)  
- Molecules (5:10)  
- Changes in Matter (3:32)  
- Physical Change, Part 1 (2:38)  
- Experiment 5.1 Diffusion (1:47)  
- Physical Change, Part 2 (2:31)  
- Experiment 5.2 Osmosis (2:57)  
- Physical Change, Part 3 (4:05)  
- Chemical Change (4:33)  
- Photosynthesis (4:10)  
- Organic Chemistry (2:04)  
- Carbohydrates (9:17)  
- Organic Acids and Bases (2:33)  
- Lipids (3:57)  
- Proteins and Enzymes (5:02)  
- Experiment 5.3 The Fragility of an Enzyme (4:54)  



## Module 6



























- Introduction (1:05)  
  - Cellular Functions (8:26)  
  - Cell Structure (1:47)  
  - The Cell Wall (2:09)  
  - The Plasma Membrane (1:40)  
  - The Cytoplasm (2:17)  
  - The Mitochondrion (0:41)  
  - The Lysosome (1:57)  
  - Ribosomes (0:47)  
  - The Endoplasmic Reticulum (1:42)  
  - The Plastids (1:30)  
  - Vacuoles and Vesicles (3:25)  
  - Golgi Bodies (1:42)  
  - Centrioles (1:16)  
  - The Nucleus (2:37)  
  - The Cytoskeleton (2:39)  
  - As If This Isn't Already Complicated Enough! (0:52)  
  - Experiment 6.1 Cell Structure I (5:26)  
  - How Substances Travel In and Out of Cells (10:37)  
  - Experiment 6.2 Cell Structure II (5:31)  
  - How Cells Get Their Energy (13:03)  
  - ATP and ADP (10:18)  
- 

## Module 7























- Introduction (2:03)  
  - Genes, Chromosomes, and DNA (5:33)  
  - Experiment 7.1 DNA Extraction (5:27)  
  - Protein Synthesis – Part 1: Transcription (5:36)  
  - Protein Synthesis – Part 2: Translation (7:33)  
  - Mitosis: Eukaryotic Asexual Reproduction (10:28)  
  - Experiment 7.2 Mitosis (2:33)  
  - Diploid and Haploid Cells (4:53)  
  - Meiosis: The Cellular Basis of Sexual Reproduction (12:32)  
  - Viruses (7:09)  
- 

## Module 8

- Introduction (0:29)  

- Gregor Mendel (2:55)  
- Mendel's Experiments (10:27)  
- Updating the Terminology (8:46)  
- Punnett Squares (8:23)  
- Pedigrees (9:10)  
- Experiment 8.1 Making Your Own Earlobe Pedigree (5:38)  
- More Complex Crosses (15:22)  
- Experiment 8.2 A Dihybrid Cross (11:27)  
- Sex and Sex-linked Genetic Traits (7:47)  
- Experiment 8.3 Sex-linked Genetic Traits (6:10)  
- A More Complete Understanding of Genetics (8:49)  
- Genetic Disorders and Diseases (5:40)  
- Experiment 8.4 Environmental Factors and their Effect on Radish Leaf Color (6:09)  
- 

## Module 9

- Introduction (1:27)  
- Charles Darwin (4:19)  
- Darwin's Theory (6:33)  
- Microevolution and Macroevolution (8:32)  
- Inconclusive Evidence: The Geological Column (9:07)  
- The Details of the Fossil Record: Evidence Against Macroevolution (13:10)  
- The Cambrian Explosion (4:49)  
- Structural Homology: Formerly Evidence for Macroevolution, Now Evidence Against It (4:09)  
- Molecular Biology: The Nail in Macroevolution's Coffin (6:12)  
- Macroevolution Today (10:12)  
- Why Do So Many Scientists Believe in Macroevolution? (2:59)  

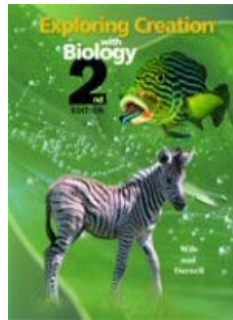


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### Module 10

- Introduction (5:13)  
- Energy and Ecosystems (7:18)  
- Mutualism (4:40)  
- The Physical Environment (2:02)  
- The Water Cycle (4:30)  
- The Oxygen Cycle (3:07)  
- The Carbon Cycle (2:53)  
- Experiment 10.1 Carbon Dioxide and the Greenhouse Effect (11:58)  
- The Nitrogen Cycle (3:35)  
- Summing Up (1:01)  













































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### Module 11



- Introduction (1:42)  
- Symmetry (1:54)  
- Phylum Porifera: The Sponges (5:37)  
- Experiment 11.1 Observation of the Spicules of a Sponge (3:48)  
- Phylum Cnidaria (3:27)  
- Specific Members of Phylum Cnidaria (2:31)  

- Experiment 11.2 Observation of a Hydra (6:09)  
- Phylum Annelida (2:14)  
- Feeding Habits of the Earthworm (2:37)  
- The Respiratory and Circulatory Systems in an Earthworm (3:27)  
- The Earthworm's Reproductive System (1:33)  
- Other Segmented Worms (1:37)  
- Experiment 11.13 Earthworm Dissection (12:45)  
- Phylum Platyhelminthes: The Planarian (2:09)  
- Experiment 11.4 Observation of a Planarian (2:02)  
- Other Members of Phylum Platyhelminthes (0:41)  
- Phylum Nematoda (3:41)  
- Phylum Mollusca (3:12)  
- Summing Up the Invertebrates (0:49)  
- 

































## Module 12

- Introduction (1:25)  
- General Characteristics of Arthropods (7:38)  
- Class Crustacea: The Crayfish (2:24)  
- The Crayfish's Respiratory System (3:17)  
- The Crayfish's Circulatory System (4:16)  
- The Crayfish's Digestive System (1:06)  
- The Crayfish's Nervous System (2:32)  
- The Crayfish's Reproductive System (1:37)  
- Other Crustaceans (1:15)  
- An Important Note (0:36)  
- Experiment 12.1 Crayfish Dissection (15:31)  
- Class Arachnida (1:54)  
- The Spider (4:07)  
- The Major Points of Interest in Spider Anatomy (1:16)  
- Class Chilopoda and Diplopoda (1:32)  
- Class Insecta (2:23)  
- The Basic Anatomy of an Insect (0:21)  
- Respiration and Circulation in Insects (2:05)  
- The Feeding Habits of Insects (1:17)  
- Reproduction and Development in Insects (3:03)  
- A Few Orders in Class Insecta (10:32)  
- Experiment 12.2 Insect Classification (3:48)  
- 

## Module 13

- Introduction (2:44)  



- Subphylum Urochordata (1:43)  
- Subphylum Cephalochordata (1:11)  
- Subphylum Vertebrata (0:44)  
- The Endoskeleton (5:37)  
- The Circulatory System (3:02)  
- The Nervous System (5:09)  
- Reproduction (2:13)  
- Class Agnatha (2:57)  
- Class Chondrichthyes (7:57)  
- Class Osteichthyes (11:53)  
- The Diversity of Class Osteichthyes (4:42)  
- Experiment 13.1 Perch Dissection (15:37)  
- Class Amphibia (5:01)  
- Specific Creatures in Class Amphibia (1:06)  
- Experiment 13.2 Frog Dissection (6:39)  
- Alternate Experiment for Module #13 Field Study II (1:36)  



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### Module 14

- Introduction (1:14)  
- Basic Plant Anatomy (4:49)  
- The Macroscopic Structure of a Leaf (4:51)  
- Experiment 4.1 Leaf Collection and Identification (6:22)  
- The Microscopic Structure of a Leaf (5:00)  
- Leaf Color (1:59)  
- Experiment 14.2 How Anthocyanins and pH Help Determine Leaf Color (12:25)  
- Roots (5:30)  
- Stems (7:32)  
- Experiment 14.3 Cross Section of Roots, Stems and a Leaf (7:16)  
- Classification of Plants (0:50)  
- The Bryophytes (5:30)  
- Seedless Vascular Plants (2:37)  
- Seed-Making Plants (4:45)  



































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### Module 15

- Introduction (0:55)  
- How a Plant Depends on Water (4:54)  

- Water Absorption in Plants (2:30)  
- Water Transport in Plants (5:30)  
- Plant Growth (6:36)  
- Insectivorous Plants (2:03)  
- Reproduction in Plants (0:38)  
- Vegetative Reproduction (3:51)  
- Sexual Reproduction in Phylum Anthophyta (4:16)  
- Experiment 15.1 Flower Anatomy (11:06)  
- The Reproductive Process in Anthophytes, Part 1: Forming Pollen and Embryo Sacs (3:19)  
- The Reproductive Process in Anthophytes, Part 2: Pollination (2:46)  
- The Reproductive Process in Anthophytes, Part 3: Fertilization (2:41)  
- Seeds and Fruits (6:02)  
- Experiment 15.2 Fruit Classification (10:43)  
- Germination and Early Growth (2:34)  
- 

## Module 16

- Introduction (1:01)  
- Class Reptilia (6:11)  
- Classification of Reptiles (0:33)  
- Order Rhyncocephalia (1:49)  
- Order Squamata (0:47)  
- Lizards (3:51)  
- Snakes (6:12)  
- Order Testudines (1:28)  
- Order Crocodilia (1:37)  
- Dinosaurs (6:18)  
- Class Aves (2:55)  
- Experiment 16.1 Bird Embryology (5:46)  
- A Bird's Ability to Fly (8:00)  
- Classification in Class Aves (4:00)  
- Experiment 16.2 Bird Identification (1:35)  
- Class Mammalia (4:56)  
- Classification in Class Mammalia (10:37)  
- Summing It All Up (0:59) 