



The High School Biology Pathway is designed to introduce students to fundamental biological concepts through engaging, hands-on, differentiated instruction. Learners experience an introduction to biology, explore ecology, gain an understanding of cells and organs, and investigate photosynthesis and cellular respiration. They then gain exposure to cell division and genetics, evolution and classification systems. Through this Pathway, students explore living organisms and their interactions with the environment.

Unit: Introduction to Biology		
Instructional Weeks	Topics	Concepts
Weeks 1-2	Studying Life	What Is Science? The Scientific Method Lab Safety Characteristics of Life
	Chemistry of Life	Vital Chemistry in Life Science
Unit: Ecology		
Instructional Weeks	Topics	Concepts
Weeks 3-9	Energy Flow	Why Do We Eat? Producers vs. Consumers Food Chains and Food Webs Ecosystems
	Biomes and Natural Cycles	Climate Types of Biomes
	Human and Natural Impacts on the Biosphere	Populations, Cycles and Ecosystems Mass Extinctions and Large Weather Events Ecological Succession
Unit: Structure of Life		
Instructional Weeks	Topics	Concepts
Weeks 10-14	Cells	What Is a Cell? Model of Plant and Animal Cells Cell Structures and Functions Other Types of Cells Levels of Organization
	Organ Systems	Circulatory System Respiratory System Muscular System Skeletal System Digestive System Nervous System Immune System



Unit: Photosynthesis and Cellular Respiration		
Instructional Weeks	Topics	Concepts
Weeks 15-16	Photosynthesis	How Plants Make Food Reactions of Photosynthesis
	Cellular Respiration	Calories and Energy Cellular Respiration
Unit: Cell Division and Genetics		
Instructional Weeks	Topics	Concepts
Weeks 17-21	Cell Division	Characteristics of Cells Cell Division Process
	Genetics	Genes Predicting Traits Inheritance
	DNA and RNA	DNA Models
Unit: Evolution		
Instructional Weeks	Topics	Concepts
Weeks 22-25	Adaptation and Selection	Forms of Adaptations Natural Selection Survival of the Fittest Effects of Adaptations
	Evidence of Evolution	Fossils Dating Extinction
Unit: Introduction to Classification		
Instructional Weeks	Topics	Concepts
Weeks 26-27	Taxonomy	Domain, Genus, Species Sorting and Classifying
	Kingdoms and Domains	Grouping Organisms



Unit: The Six Kingdoms		
Instructional Weeks	Topics	Concepts
Weeks 28-32	Bacteria vs. Virus	Virus and Host Spreading of Viruses Vaccines and Antibiotics
	Kingdoms Plantae and Animalia	The Linnaean System Vertebrates and Invertebrates Life Cycles
	Kingdoms Protista and Fungi	Protists Fungi Roles in Ecosystems