

Life Science Essentials I		Scope and Sequence
Unit	Lesson	Objectives
Classification of Living Things		
Characteristics of Life		
		Identify the characteristics that are common to all living things.
		Identify what all living things need to survive.
Building Blocks of Life		
		Differentiate between atoms, elements, molecules, and compounds.
		Identify the six common elements found in living organisms.
		Distinguish organic compounds from inorganic compounds.
		Examine characteristics of carbohydrates, lipids, proteins, and nucleic acids.
Introduction to Classification		
		Analyze how and why organisms are classified.
		Examine how methods of classification have changed over time.
		Describe the modern system of classification.
Dichotomous Keys		
		Identify objects based on their characteristics.
		Examine and compare the physical characteristics of organisms.
		Use a dichotomous key to identify organisms.
Birds and Mammals		
		Identify the characteristic structures of birds and mammals.
		Examine the basic functions performed by birds and mammals.
		Distinguish the three main groups of mammals.
Unit Test		

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Cell Biology and Organisms		
	Cell Theory	
		Analyze the contributions of different scientists to the development of the cell theory.
		Identify the three components of the cell theory.
	Cellular Interactions with the Environment	
		Examine the process of diffusion.
		Analyze the effects of osmosis on cells.
		Compare and contrast active and passive transport.
	Seedless Plants	
		Compare and contrast the characteristics of nonvascular plants and seedless vascular plants.
		Identify examples of nonvascular plants and seedless vascular plants based on their characteristics.
		Examine the importance of seedless plants.
	Seed Plants	
		Identify the characteristics common to all seed plants.
		Analyze the structures and functions of roots, stems, and leaves.
		Examine how new plants form from seeds.
	Amphibians and Reptiles	
		Identify the characteristic structures of amphibians and reptiles.
		Examine the basic functions performed by amphibians and reptiles.
		Distinguish the two main groups of amphibians.
		Differentiate between the three main groups of reptiles.
	Unit Test	

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Genetics and Evolution		
Asexual and Sexual Reproduction		
		Examine the different types of asexual reproduction.
		Analyze the process of sexual reproduction.
		Compare and contrast asexual and sexual reproduction.
		Identify the advantages and disadvantages of both asexual and sexual reproduction.
DNA Mutations		
		Distinguish common types of DNA mutations.
		Analyze the effects of DNA mutations on the traits of an organism.
Inheritance Patterns		
		Differentiate between codominance and incomplete dominance.
		Examine multiple alleles and polygenic inheritance, and give examples of each.
Human Inheritance		
		Analyze the patterns of human inheritance.
		Examine how sex-linked traits are passed from parent to offspring.
		Use a pedigree to analyze the inheritance of traits.
		Identify causes of common genetic disorders.
The Theory of Evolution		
		Analyze the historical development of the theory of evolution.
		Examine the evidence Darwin used to support his theory of evolution.
		Summarize Darwin's theory of evolution.
Unit Test		

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Ecology		
	Cycles of Matter	
		Examine how carbon cycles through an ecosystem.
		Analyze the importance of the nitrogen cycle.
		Identify the processes involved in the water cycle.
	Aquatic Ecosystems	
		Characterize Earth's major aquatic ecosystems.
		Identify adaptations that enable organisms to survive in aquatic ecosystems.
	Succession	
		Compare primary and secondary succession.
		Contrast pioneer species and climax community.
	Natural Environmental Change	
		Identify examples of natural short-term environmental changes.
		Identify examples of natural long-term environmental changes.
		Assess the impact of natural environmental changes on organisms, populations, and species.
	Biodiversity	
		Identify how biodiversity contributes to the sustainability of an ecosystem.
		Identify the factors that affect biodiversity.
		Identify some factors that can threaten biodiversity.
		Examine ways to protect biodiversity.
	Unit Test	
Human Biology		

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	The Immune System	<p>Identify the major structures and functions of the immune system.</p> <p>Examine how the immune system protects the body from disease.</p> <p>Distinguish between passive and active immunity.</p>
	Diseases	<p>Distinguish between infectious and noninfectious diseases.</p> <p>Compare and contrast types of infectious agents.</p> <p>Analyze the effects of different diseases on major organs and body systems.</p> <p>Differentiate between an epidemic and a pandemic.</p>
	The Reproductive System	<p>Identify the structures and functions of the male reproductive system.</p> <p>Examine the structures and functions of the female reproductive system.</p>
	Reproduction and Development	<p>Explain how fertilization occurs.</p> <p>Analyze the sequence of events that occur from fertilization to birth.</p> <p>Examine the growth and development of humans from infancy to old age.</p>
	Human Health	<p>Assess how heredity can affect an individual's health.</p> <p>Analyze how environmental factors can affect an individual's health.</p> <p>Examine how life choices can affect an individual's health.</p>
	Unit Test	
Cumulative exam		

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	Cumulative Exam Review	
	Cumulative Exam	