

BIOLOGY 1 CURRICULUM SUMMARY

The purpose of the curriculum summary is to present an overview of the curriculum. Parents, community, and teachers of other disciplines are the intended audience of the curriculum summary.

Basic Biological Principles	The Chemical Basis of Life
<ul style="list-style-type: none"> • Problem solving skills • Quantitative and qualitative skills based on observations • Scientific process skills • Theories • Inferences and predictions using scientific information • Characteristics of Living things • Patterns of biological classification/Taxonomy 	<ul style="list-style-type: none"> • Importance of Water • Importance of Carbon • Structure and function of organic molecules
Bioenergetics	Homeostasis and Transport
<ul style="list-style-type: none"> • Photosynthesis • Cellular Respiration 	<ul style="list-style-type: none"> • Role of energy in living things • Role of enzymes as biological catalysts • Transport of molecules across the cell membrane
Cells	Cell Growth and Reproduction
<ul style="list-style-type: none"> • Cell theory • Cell organelles and their functions • Levels of organization 	<ul style="list-style-type: none"> • Mitosis • Meiosis

Genetics	Theory of Evolution
<ul style="list-style-type: none">• Mendelian genetics• Molecular basics of genetics• DNA Replication• Inheritance of traits• Sex determination• Basic human genetics• Biotechnology	<ul style="list-style-type: none">• Evidence of evolution• Mechanisms of the theory of evolution• Role of mutations• Genetic Engineering• Contemporary issues/topics
Ecology	Pathogens
<ul style="list-style-type: none">• Biological diversity as an indicator of a healthy environment• Interrelationships of organisms and their environment• Major biomes• Cycles in an ecosystem• Changes in an ecosystem	<ul style="list-style-type: none">• Virus structure and reproductive cycles• Emerging viruses• Are viruses alive?• Retrovirus• Bacteria• Harmful vs. Helpful<ul style="list-style-type: none">• disease causing vs. bioremediation• Antibiotic resistance• Prions