

Biology On-Level Parent Guide

Students in Biology focus on patterns, processes, and relationships of living organisms through four main concepts: biological structures, functions, and processes; mechanisms of genetics; biological evolution; and interdependence within environmental systems. Students will ask questions, plan and conduct investigations, and explain phenomena using appropriate tools and models. They will also identify problems and design solutions using engineering design practices. Recurring themes and concepts will be explored to make connections between overarching concepts. Student investigations emphasize accurate observations, collection of data, data analysis, and the safe manipulation of laboratory apparatus & materials in the field and in the laboratory. Texas Essential Knowledge & Skills for Biology §112.42. Science, Biology, Adopted 2021

1st 6 Weeks:

Biological Structures, Functions and Processes: Prokaryotic and Eukaryotic Cell Structure, Viruses and Disease
Cell Growth & Differentiation – Mitosis and Cell Cycle, Specialization
Biomolecules and Cells
Animal Systems – Structure and Function

4th 6 Weeks:

Biological Evolution: Evidence of Evolution
Mechanisms of Evolution
Interdependence Within Environmental Systems: Ecological Relationships
The Biosphere Cycling Matter and Energy

2nd 6 Weeks:

Animal Systems – Structure and Function
Energy in Cells Photosynthesis and Cellular Respiration
Plant Structure and Function
Mechanisms of Genetics: DNA Structure and Replication
RNA and Gene Expression

5th 6 Weeks:

The Biosphere: Cycles of Matter Carbon and Nitrogen
Ecosystem Stability & Change: Environmental Change and Human Activity, Ecosystem Stability
Biodiversity and Env. Change
Ecological Succession; Population Growth
Humans and the Environment
Biology EOC Exam Review

3rd 6 Weeks:

RNA and Gene Expression
Human Genetics and Disorders
Inheritance and Variation – Mendelian Genetics, Meiosis, Non-Mendelian Genetics

6th 6 Weeks:

Biology EOC Exam Review
Biology EOC Exam
Homeostasis and Cell Transport
Fermentation
Biotechnology
Scenario Based Unit

Questions? Please contact your course science teacher.

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