

HONORS BIOLOGY (LAB SCIENCE)

Grade Level: 9, 10, 11, 12

Credit: 0.5 or 1.0

Prerequisite: None

Biology Honors begins with the smallest components of life, the biochemical functions, and progresses through increasingly larger components: cell parts, cell functions, genetics and inheritance, evolution, taxonomy, and ecology. This is a lab course that includes labs and projects focused on critical thinking, creativity, and understanding scientific process. Labs are rigorous, yet designed to be done at home with minimal specialized equipment.

Biology Honors Lessons

Teacher Message

Unit 1: Molecules

Lesson 1: Introduction

Lesson 2: Atoms and Bonding

Lesson 3: Water

Lesson 4: Bio-Molecules

Lesson 5: Enzymes

Lab 1 – Curdled Milk

Project 1 – Food Diary

Unit 2: The Cell



Lesson 6: Cell Theory

Lesson 7: Inside Cells

Lesson 8: Cell Transport

Lesson 9: Photosynthesis

Lesson 10: Cell Respiration

Lab 2 – Plant Pigments

Project 2 – Cell Size

Unit 3: Genetics

Lesson 11: DNA and RNA

Lesson 12: Cell Cycle

Lesson 13: Meiosis

Lesson 14: Basic Genetics

Lesson 15: DNA Technology

Lab 3 – Extracting DNA

Project 3 - Heredity

Unit 4: Evolution

Lesson 16: Concepts of Evolution

Lesson 17: Morphology

Lesson 18: Taxonomy



Lesson 19: Fossils and Time

Lesson 20: Human Evolution

Lab 4 – Natural Selection Simulation

Project 4 - Viruses

Unit 5: Humans and the Environment

Lesson 21: Ecology

Lesson 22: Biogeochemical Cycles

Lesson 23: Artificial Selection

Lesson 24: Global Disruption

Lesson 25: Sustainability

Lab 5 – Ecosystem Disruption

Project 5 – Green Roof Design

