

BIOLOGY (LAB SCIENCE)

Grade Level: 9, 10, 11, 12

Credit: 0.5 or 1.0

Prerequisite: None

Biology is the study of life – the basic characteristics and functions of living organisms and their place in our environment. Laboratory and field investigations are the primary means for developing problem-solving skills and for developing knowledge and understanding of biological concepts. Topics include the history of biology; the cell and cell processes; genetics and heredity; cycles in nature; photosynthesis and respiration; ecology; plants, animals, and microorganisms; continuity of life; and the interaction of science, technology, and society.

BIOLOGY 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 - Autumn

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 - Heredity

Project 3 – Genes and Diseases

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 – Tricky Fox

Project 4 - Viruses

Unit 5: Humans and the Environment

Lesson 21: Ecology

Lesson 22: Biogeochemical Cycles

Lesson 23: Alaskan Fishing

Lesson 24: Global Disruption

Lesson 25: Sustainability



Lab 5 – Ecosystems Disruption

Project 5 – Alaskan Fishing

