Biology II

Mrs. Reed

Calhoun High School

1 Credit

COURSE DESCRIPTION

In this college level biology course, students will be exposed to the various topics of biology. Topics will include cell biology, the molecular basis of life, the history and diversity of life, and ecology. Students will use critical thinking and problem solving skills to question, reason, and analyze the material in relation to laboratory problems and real world problems. This course will include laboratory investigation to reinforce the concepts covered. As this is a college level course, students will be expected to work at a level of rigor comparable to that of a college freshman.

Prerequisites: Successful completion of Biology I with a “C” or higher.

COURSE OBJECTIVES

* Explain how the structure of DNA determines the structure of proteins to carry out the essential functions of life through systems of specialized cells.
* Understand the organization for matter and energy flow in organisms
* Understand the cycles of matter and energy transfer in ecosystems
* Describe energy in chemical processes
* Describe adaptation
* Understand biodiversity and humans
* Describe the growth and development of organisms
* Understand how traits are inherited
* Describe the variation of traits
* Understand natural selection
* Understand the evidence of common ancestry and diversity
* Understand ecosystem dynamics, functioning, and resilience
* Understand interdependent relationships in ecosystems
* Describe social interactions and group behavior

METHODS OF INSTRUCTION

Lecture, problem based learning, laboratory investigations, group projects, discussion, tech-rich lessons, daily assignments, written assessments

GRADE CRITERIA

Daily 10%

Homework/Labs 20%

Quizzes 30%

Tests 40%

GRADING SCALE

A = 90-100 B = 80-89 C = 70-79 D = 60-69

MATERIALS

Students will need a three ring binder, preferably 1 ½” or larger. They will also need a notebook, writing utensils (no colored ink, only blue or black), and a scientific calculator.

TEXTBOOK

Biology Concepts and Investigations by Marielle Hoefnagels