

Biology 1

Course Description: Lecture and Lab course required for graduation that introduces Biology with an emphasis on cells, their functions and DNA. The purpose is to gain an understanding and appreciation of life science, as well as to gain skills in performing experiments and investigations in the biological sciences. Students of Biology will investigate, inquire, and synthesize phenomena through asking questions, defining problems, analyzing, predicting, constructing explanations, etc. They will study diverse concepts and make application to real world ideas with the intent to prepare you for higher education and/or the future job market.

Attendance: Students are required to be in school every day. Students are responsible for communicating with their teachers to make up missed learning.

Course Learning Outcomes:

CLO #1: Learners can explain the course expectations, lab safety and the scientific method.

CLO #2: Learners can name and identify the 4 main macromolecules and explain or show how the elements and sugar make macromolecules.

CLO #3: Learners can find the pH of a given substance. Learners can explain or show how the human body maintains homeostasis and give an example.

CLO #4: Learners can identify plant and animal cells and identify the organelles for both types of cells.

CLO #5: Learners can explain or show how somatic cells divide including the cell cycle.

CLO #6: Learners can model how cells use photosynthesis to transform light energy into chemical energy.

CLO #7: Learners can model the major inputs and outputs of cellular respiration and the chemical process that results in a net energy transfer.

CLO #8: Learners can explain or show how a DNA sequence determines the structure of proteins used in the body.

CLO #9: Learners can clarify the role of DNA and chromosomes in coding for traits passed from parents to offspring.

Course Expectations: Although not everything is graded, everything is important. In order to demonstrate growth and learning, students will need to:

1. Participate in class activities (take notes, work in a group, complete in-class tasks, ask questions) without distractions (cell phones, ear buds, games, etc.)
2. Use morning time and teacher to seek help outside of class when needed.
3. Complete all assessments within teacher timelines.

Grading

Learning (Practice) includes instructional activities in and outside of class and are not used in grade determination.

Skyward Assessment (Grades) may include quizzes, labs, learning checks, tests, speeches, performances, and projects.

Calculations:

Course Grade	
Semester Grade	95%
Culminating Activity/Project/Exam	5%

Final Grade	
A	100% - 90%
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	0% - 59%

Rapid City Alternative Academy Courses:

- Will determine grades based on student learning and growth.
- Will not include practice and behavior in grade determination.
- Will give all students regardless of absence an opportunity to demonstrate learning.
- Will not include extra credit.

Instructional Resources:

Textbook: Biology by Miller and Levine

Web Sources: hhmi, Amoeba Sisters, Crash Course: Biology, Bozeman, Kahoot!, Blooket, Canvas, Google Classroom