



AP Biology Grand Haven High School



Course Number: D48A / D48B

Grade Level: 12th or 11th Grade

Credits : 1 credit

Prerequisite Courses : Chemistry (may be concurrent) and Biology

Course Description

AP Biology is a challenging elective course, equivalent to two semesters of college Biology. It is the right choice for students who will pursue a science-based degree, or those who wish to gain college credit for an elective science class. Topics include ecology, cellular biology, biochemistry, energy transformations, heredity, molecular genetics & biotechnology, evolution, taxonomy and physiology. Laboratory work involves advanced techniques and equipment, while stressing thorough observation, record keeping and analysis. College credit can be earned by students who attain a satisfactory score on the College Board's AP Biology exam offered each May. Topics will be explored through the use of laboratory and hands-on activities, discussions, field trips, audio-visual presentations, projects and other means.

Course Objectives

The course will provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. Focus is placed on an understanding of science as a process rather than an accumulation of facts, recognition of evolution as the foundation of the modern biology model, the integration of the general topics of biology through the eight major themes from the AP Biology Curriculum Requirements, and application of biological knowledge and critical thinking to environmental and social concerns. The course laboratory components will constitute a minimum of 25% of instructional time. Students are encouraged to keep copies of their laboratory work for use in determining college credit or placement.

Student Expectations

Students will devote a minimum of one hour daily (read, review, homework) to AP Bio. Students are required to maintain, and carry daily, a carefully-organized course binder, which may be periodically evaluated.

Assignments submitted late are subject to at least a 50% score reduction.

Make-up opportunities (tests, quizzes, labs) must be scheduled with the teacher.

A course homework waiver is available to students, with parental approval.

Students are to do nothing that hinders learning or teaching in the classroom.

Building Behavioral Expectations

TEAM GH ... One Team, One Family, One Grand Haven. Be Kind. Always.

It is our expectation that ALL GHHS students, staff and parents will ... always give their best **EFFORT** in everything that they do, work hard to be **INCLUSIVE** of each other, show **RESPONSIBILITY** in class, the hallways, cafeteria and at events, and **WORK TOGETHER** at all times!

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Communication

Regular progress can be monitored using parent internet viewer (PIV). Teacher will be available through email contact and phone.

Grading Policy

60% of grade = Assessments (tests, quizzes, etc.)

25% of grade = Laboratory (formal & informal work)

15% of grade = Daily Work (including non-lab projects)

Scope and Sequence

1st Semester

I. Animal Behavior

II. Ecological Studies

III. Chemistry Review, Water, Carbon Chemistry, Major Biological Molecules

IV. Cell Structures and Functions, Movement across Membranes

V. Enzymes and Metabolism

VI. Cellular Respiration, Photosynthesis

VII. Cell Communication

VIII. Cell Cycle, Mitosis, Meiosis, Life Cycles

2nd Semester

IX. Mendelian Genetics, Non-Mendelian & Human Genetics

X. DNA & RNA, Protein Synthesis, Biotechnology

XI. Viral & Bacterial Genomes, Gene Expression, Development

XII. Evolution, Population Genetics, Taxonomy

XIII. History of Life on Earth: Evolution from Prokaryotes to Humans

XIV. Animal Structure & Function, Homeostasis in the Body

XV. Animal Systems: Nervous, Endocrine, Immune, Reproductive

XVI. Original Laboratory Investigation Project [student-selected]

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