AP Biology Student Syllabus

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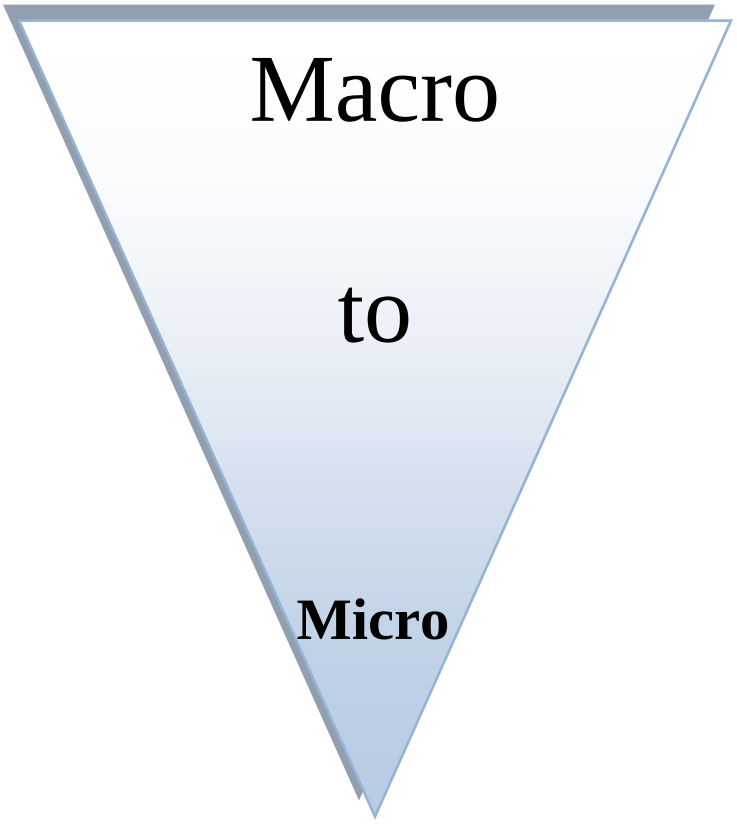
Text: *Biology (9th Ed)* by Campbell and Reece

The Course: AP Biology

The AP Biology course is designed to enable you to develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses—a goal of every AP course.

This AP Biology course is equivalent to a two-semester college introductory biology course and has been endorsed enthusiastically by higher education officials.

Course Unit Order:



First Semester
Ecology
Evolution and Phylogeny
Biochemistry and Metabolism
Cellular and Systemic Communication
Second Semester
Cellular Anatomy and Reproduction
Cellular Energetics
Molecular Genetics
Heredity

The Concept Outline

Big Idea 1:	The process of evolution drives the diversity and unity of life.
Big Idea 2:	Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis.
Big Idea 3:	Living systems store, retrieve, transmit, and respond to information essential to life processes.
Big Idea 4:	Biological systems interact, and these systems and their interactions possess complex properties.

Prerequisites:

Pre-AP Biology or Biology with prior approval
Passing Biology EOC Score

Course Requirements:

Each student will maintain a science digital notebook. Students are responsible for missed work including tests, labs, online assignments and lab reports/presentations. If a student misses the day of a lecture test, the makeup test will be taken on the day of return. *It is the student's responsibility, not the teacher's, to find out and take care of missed work.*

Daily Required Materials: (*These are not optional*)

Laptop
Notebook Files
Stylus
Pens and/or Pencils

AP Weighted Grading Scale:

Grading Scale		Grading Points
90 – 100	**A**	**A = 5**
80 – 89	**B**	**B = 4**
70 – 79	**C**	**C = 3**
60 – 69	**D**	**D = 2**
0 – 59	**F**	**F = 0**

FORMAL LAB REPORT FORMAT

The following is a guide for all formal lab reports in this course. You need not limit yourself to this outline. If additional information is warranted then please add it. Refer to the report rubric for grading details.

Title

- The title should indicate what the lab is all about. Centered at the top of the page.

Introduction & Background

- Include what is already known – with citations
- Indicate what you hope to learn (purpose of the lab)
- List of components of experimental design: Independent variable, dependent variable, control factors, constants.
- Clearly identify your hypothesis
- **Caveat:** This introduction section will take some research. Do not "wing it" by making up information from your head!!

Materials

- List the materials used in the lab

Procedure

- A brief description of the procedure to show how the lab was conducted
- Describe methods for controlling variables
- Describe methods for collecting data
- Note any departure from the instructions given

Results (present the data)

- Construct all data tables and charts to present the data collected
- Must include titles and labels for all tables and charts

Analysis (process the data)

- Construct all graphs needed to show results
    - Correct type (bar, line, pie)
    - Title
    - Appropriate Units
    - Labeled Axis
    - Legend
- Labeled diagrams or photos

Conclusion & Discussion

- State a valid conclusion and explain **WHY** you think the results turned out the way they did.
- Explain any unexpected results and why those results may have been obtained.
- Evaluate the data to determine if it supports your hypothesis using specific reference to the data.

Sources (each under an individual section)

- References – Works cited within your lab report in the introduction or conclusion/discussion.
- Appendix – Put any formulas used for calculating data presented or references in the lab report.