



AP Biology

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Reminders: text gbartonap to 81010

Conference Period: 6th period (1:40-2:30)

Tutoring Opportunities: Tutoring available everyday from 8:30-9 am and during 5th period lunch.

Class Materials:

Replace this text with any or all of the following:

- Campbell-Reese Biology (AP Edition) – 10th edition
- <https://www.pearsonmylabandmastering.com/northamerica/masteringbiology/>
- Login instructions were provided in class.
- Assignments will be found in Canvas (under modules).
- Materials: three ring binder, tab dividers, and highlighters.

Access to Canvas and Office365 tools is available to students through our [Single Sign-on Portal \(SSO\)](#). Students receive their SSO login during enrollment.

Course Description:

The AP Biology course shifts from a traditional “content coverage” model of instruction to one that focuses on enduring, conceptual understandings and the content that supports them. This enables students to spend less time on factual recall and more time on inquirybased learning of essential concepts, and helps them develop the reasoning skills necessary to engage in the science practices used throughout their study of AP Biology. Students 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 AP Biology course is equivalent to a two-semester college introductory biology course. Extra time is required on the part of AP students for class preparation, outside reading, and completion of assignments. AP courses provide students with a learning experience equivalent to that obtained in most college introductory courses. Students who take Biology AP are expected to take the Advanced Placement Exam in the spring.

Course Goals:

Students who complete this course successfully will be able to:

1. The student can use representations and models to communicate scientific phenomena and solve scientific problems.
2. The student can use mathematics appropriately.
3. The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course.
4. The student can plan and implement data collection strategies appropriate to a particular scientific question.
5. The student can perform data analysis and evaluation of evidence.
6. The student can work with scientific explanations and theories.
7. The student is able to connect and relate knowledge across various scales, concepts, and representations in and across domains.

Student Evaluation:

The grading system for this course is as follows:

- Grade averaged 70% Major 30% Minor
- Major grades – tests (including District Common Assessments, six weeks assessments, projects, final essays, research papers, presentations); minimum three per six weeks
- Minor grades – quizzes, daily assignments, journals; minimum four per six weeks
- Semester exams will count 1/7 of the semester grade
- A letter system (S, N, U) is used to report a student's conduct based on proper/responsive conduct and citizenship
- Per Board Policy EIA (LOCAL), "The District shall permit a student who meets the criteria detailed in the grading guidelines a reasonable opportunity to redo an assignment or retake a test for which the student received a **failing** grade. This policy applies only to initial identified major grades and does not apply to daily assignments, quizzes, six-week test, and semester final examinations. Upon reteach and retest, the new test, project, etc. recorded will be a high score of 70%.

Assignments, exams, expectations outside of the classroom:

Unit Tests (200 points):

Tests are given at the end of most units. In order to prepare students for the AP exam in May, tests will be formatted similar to the AP Biology Exam (# and type of questions based on time available). A typical test will consist of 25 multiple-choice, 1 long free-response, and 1 short free-response in one period. When possible, AP Scoring Guides are used to grade long free-response questions. These scoring guides have been used to grade previous AP Exams.

Quizzes

Quizzes are given to ensure that students are keeping up with their homework and reading assignments.

Laboratories

Lab protocols are taken from the AP Laboratory Manual or alternate sources. Labs are designed to allow the students to apply their knowledge of the biological concepts discussed in class. Students are expected to prepare for laboratories by reading the handouts prior to lab. An assessment will be assigned for the lab (due dates depend on the difficulty/length of the assignment). Lab behavior and technique are also sometimes factored into the laboratory grade.

Laboratory Quizzes

After some of the AP labs, a laboratory quiz will be assigned allowing students to practice for the lab-related questions on the AP Biology Exam.

Classwork

Both individual and group work will be assigned to apply what is learned in class.

Homework

In order to progress at an accelerated pace, students must prepare for each class prior to the next class meeting. Written work will not always be graded.

Extra Credit:

Extra Credit is not offered for this class. Please keep up with the regular assignments!

Attendance/Tardy Policy/Make-Up Work:

Regular school attendance is essential for a student to make the most of his or her education—to benefit from teacher-led and school activities, to build each day's learning on the previous day's, and to grow as an individual. Absences from class may result in serious disruption of a student's mastery of the instructional materials; therefore, the student and parent should make every effort to avoid unnecessary absences.

It is the student's responsibility to get makeup work from the instructor. Students have number of days absent plus one to turn in makeup work.

Classroom Expectations:

Laboratories

Laboratories are an essential component of the AP Biology Curriculum, and will occupy a great deal of time in this course (greater than 25% of the course). The AP Biology Lab Manual contains thirteen labs (see below), and two labs from each Big Idea are required. These inquiry labs enable students to identify the questions they want to answer, design experiments to test hypotheses, conduct investigations, analyze data, and communicate their results.

Most labs will have a pre-lab and post-lab. The goal of the pre-lab is to discuss the purpose of the lab, prepare the necessary materials, and to review the overall procedure so that students are prepared for the lab. During the post-lab, students will compare their results with the class data and begin to analyze the results of the lab. After each of the labs, a lab quiz will be assigned allowing students to practice for the lab-related questions on the AP Biology Exam. Students will present their findings to the class in a variety of methods: lab report, poster, PowerPoint presentation, one-page website, infographic, etc.

The Four Big Ideas of AP Biology

Each unit will consist of material from several big ideas. The four big ideas are broken down into enduring understandings that are then broken down into specific essential knowledge that the student must master. The process of evolution drives the diversity and unity of life. Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis.

1. Living systems store, retrieve, transmit and respond to information essential to life processes.
2. Biological systems interact, and these systems and their interactions possess complex properties. **Preliminary**

Schedule of Topics, Readings, and Assignments

AP Biology Year at a Glance 19-20

- Unit 1 - Chemistry of Life (13 days) – Chapters 3, 4, & 5
- Unit 2 - Cell Structure and Function (13 days) – Chapters 6, 7, & 27
- Unit 3 - Cellular Energetics (21 days) – Chapters 8, 9, & 10
- Unit 4 - Cell Communication and Cell Cycle (13 days) – Chapters 11 & 12
- Unit 5 - Heredity (13 days) – Chapters 13, 14, & 15
- Unit 6 - Gene Expression and Regulation (23 days) – Chapters 16, 17, 18, 19, & 20
- Unit 7 - Natural Selection (24 days) – Chapters 22, 23, 24, 25, & 26
- Unit 8 - Ecology (23 days) – Chapters 51, 52, 53, 54, 55, & 56

Academic Integrity:

Academic integrity values the work of individuals regardless if it is another student's work, a researcher, or author. The pursuit of learning requires each student to be responsible for his or her academic work. Academic dishonesty is not tolerated in our schools. Academic dishonesty, includes cheating, copying the work of another student, plagiarism, and unauthorized communication between students during an examination. The determination that a student has engaged in academic dishonesty shall be based on the judgment of the classroom teacher or other supervising professional

employee and considers written materials, observation, or information from students. Students found to have engaged in academic dishonesty shall be subject to disciplinary and/or academic penalties. The teacher and campus administrator shall jointly determine such action.