



## Advanced Biology

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**Conference Period:** 6<sup>th</sup> period

**Tutoring Opportunities:** I am available for tutorials mornings 8:30-9 am and during 5<sup>th</sup> lunch by appointment. **Class**

### Materials:

- HMH Biology 2014 edition
- <https://my.hrw.com> (username: ems and your student ID [example: ems12345] password: ems and your student ID)
- Interactive Student Notebook (composition notebook)
- Pencil
- Canvas (homework and resources will be found here)

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:

Biology is the study of structure, growth, and function of the life systems of organisms. The study will encompass a variety of topics that include: structures and functions of cells and viruses; growth and development of organisms; cells, tissues, and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; ecosystems; and plants and the environment. Student investigations emphasize accurate observations, collection of data, data analysis, and the safe manipulation of laboratory apparatus and materials in the field and in the laboratory. This course will have a greater emphasis on laboratory experiences, gathering and processing complex data and writing technical conclusions based on data. Biology students are required to pass the State of Texas Assessments of Academic Readiness (STAAR) end-of- course (EOC) Biology exam to meet part of the graduation requirements.

### 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 engage in scientific questioning to extend thinking or to guide investigations within the context of the Pre-AP course.
4. The student can plan and implement data collection strategies appropriate to a 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 can 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 60% Major 40% 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:**

Major grades will include a multiple-choice test, free response section and a laboratory investigation every six weeks. Students should be prepared to receive at least one homework assignment per week. Homework may be given on paper or online through Canvas.

## 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 teacherled 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.

A student will be responsible for obtaining and completing the makeup work in a satisfactory manner and within the time specified by the teacher. A student who does not make up assigned work within the time allotted by the teacher will receive a grade of zero for the assignment. Students shall have time equal to days absent from class plus one day to complete all missed assignments.

## Classroom Expectations:

- Attend class prepared to work.
- Follow all school policies.
- Participate in class discussions.
- Students will respect themselves, others, and school property.
- Students will be in their assigned seats and prepared for class when class is scheduled to begin.
- Students will be dismissed from class by the teacher, and only when work areas are clean.

## Preliminary Schedule of Topics, Readings, and Assignments

**Unit 1:** Characteristics of Life, Prokaryotic/Eukaryotic Cells, Biomolecules, Enzymes

**Unit 2:** Transport and Homeostasis, Viruses vs Cells, DNA, Protein Synthesis, Mutations

**Unit 3:** Cell Cycle, Meiosis, Cell Differentiation, Monohybrid/Dihybrid Crosses, Mendelian/Non-Mendelian Genetics, Pedigrees

**Unit 4:** Body Systems Interactions, Cell Respiration/ Photosynthesis, Plants- Transport, Transpiration and Plant Reproduction, Plant Adaptation and Response, Plant Identification and Classification

**Unit 5:** Common Ancestry, Natural Selection, Taxonomy, Kingdoms

**Unit 6:** Symbiosis, Food Web/Food Chains, Biogeochemical Cycles, Environmental Change/ Resources/Adaptation, Ecological Succession

**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.