



Advanced Biology - Course Syllabus

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INTRODUCTION

We are so honored to be the instructors of biology this school year! We are looking forward to working with you and your student. Below you will find relevant information about this school year. Additionally, we have provided our contact information above should you have any questions or need to schedule an appointment for an in-person visit.

SUPPLIES

The following materials will be utilized on a daily basis. Be sure to come to class with your supplies and be prepared to participate.

- Writing utensils (pens, pencils, etc...)
- Notebook paper
- One 2-inch, 3-ring binder
- Composition Notebook or 1 Subject Spiral

DAILY EXPECTATIONS:

In order to be a success in any classroom situation, students must take an active role in the educational process. We expect each student to do the following:

1. Come to class **PREPARED**. Be **on-time**, ready to **listen, learn**, and **participate**.
2. Be **PRODUCTIVE**. Stay on-task and maximize your learning. Be **focused** and make the best use of your time!
3. Show **RESPECT** for yourself, your peers, your teachers, and others around you.
4. Have a **POSITIVE ATTITUDE**. This will take you extremely far.
5. Be **PERSISTENT**: Don't give up. It's up to you to **do your best** in ALL things!

SCOPE & SEQUENCE OF THE COURSE:

Although the word biology was not used until the early nineteenth century, the scientific study of life as a history of thousands of years. We will be continuing this study of life as students will be introduced to the basic topics of Biology including, but not limited to: Ecology, Cellular Biology, DNA and Genetics. The content of this course will be covered through lecture, class practice, projects, and labs.

The aim of this course is to give students a better understanding of life science and to build a foundation for all other science disciplines. At the end of this course, students will be able to think scientifically and develop inquiry and reasoning skills based on observations, hypothesis, and testing.

HOMEWORK:

Homework assignments are designed to help students understand concepts covered in class and may consist of reading, writing, and production assignments. Students are generally given several days to complete assignments. While we do not assign homework assignments on a daily basis, your student is expected to spend time **each** night briefly reviewing daily notes and other materials covered in class. Reading over material presented in class, as well as previewing material to be covered the following day is highly recommended.

NOTEBOOKS:

All students are required to possess and maintain a notebook. This notebook will allow the student to improve their organizational skills while providing a useful study tool. Notebooks may be organized in a manner best suited to individual student needs.

GRADING PROCEDURE AND LATE ASSIGNMENTS:

All daily assignments, lab activities, and exams will be assigned a specific point value based upon the difficulty of the assignment, the time involved, and the importance of the objectives covered. **Grades are weighted as follows: Major grades (M) at 60%, and Daily/Lab (D/L) activities at 40%.**

It is the **student's responsibility** to check the online gradebook, Skyward, and maintain awareness of their grades. They are responsible for all missing assignments or to ask for clarification about assignments as needed. Assignments must be submitted **complete** and **on-time**. Any work not turned in on-time will be considered late, and is subject to a 10-point deduction per day, **within 5 school days** of the original due date of the assignment. Late assignments are only accepted during the 3-week grading period in which the assignment was due. Assignments not turned in by this deadline will receive a "zero," and the teacher will enter a "zero" in the gradebook until the assignment has been submitted for grading.

Assignments outside of the classroom will be required that may include: construction projects, independent or collaborative writing/research, and computer or internet projects throughout the academic year. Special considerations can be made, as needed and when considerations are requested *prior* to the assignment due date.

MAKE-UP WORK:

Exams and/or lab work missed because of an excused absence must be made up either on the **student's own time, before/after school** or during **advisory period**, and within the 3-week grading period or before the unit test, whichever occurs first. A "zero" placeholder will be entered into the gradebook until the assignment has been completed. Make up work that is not submitted on time, will fall under the "Late Assignment" policy (*see above*).

REQUEST TO REASSESS POLICY:

Students have the opportunity to reassess for **each** major exam (**excluding: major assignments/projects, curriculum based assessments, benchmarks, midterms, and final exams**) for up to a maximum score of 70%. Reassessment exams have a similar testing format to the original test and are only offered to students ***when the designated remedial steps have been completed and documented by the student***. The reassessment must occur during a student's own time, such as **before/after school** or during **advisory period**, and within the same 3-weeks grading period OR before the next unit test, whichever occurs first.

To be eligible for reassessment, students must:

1. Request a *Request to Reassess* form from their instructor.
2. Complete and document a customized study plan.
3. Schedule and attend a tutorial session to review mistakes made on the initial exam.

EXTRA CREDIT OPPORTUNITIES:

All students are provided the opportunity to earn extra credit points during each 3-week grading period throughout the school year. Students will be assigned work to complete within each 3-week grading period to earn **5 major-grade** incentive points. All work must be submitted: on-time (by the posted due date), complete, and be deemed high quality (as determined by the teacher). **Work that does not meet these requirements *will not* receive partial credit.** This opportunity provides students with the chance to earn up to 15 major-grade points each 9-weeks, as well as providing additional practice and reinforcement of concepts learned during the year. Student assignments are subject to teacher discretion and are based on student needs and progress throughout the school year. Students choosing to forfeit the opportunity to earn incentive points *will not* be penalized for non-participation; however we strongly encourage all students to complete these assignments.

PERSONAL DEVICES & CELL PHONE POLICY:

Students may use electronic devices during class ***only*** for instructional purposes and with explicit permission from the teacher. Personal devices should have the notifications set to SILENT or the device should be turned off during class. Additionally, unless otherwise instructed by the teacher, all personal devices should be OUT-OF-SIGHT and ***not*** in direct contact with students during class. Preferably, the device should be stored in a safe place in the student's possession (*i.e.*, backpack, etc...). **For safety purposes, students are not allowed to charge personal devices in the classroom.** Violation of this policy will result in the loss of electronic privileges, and the phone will be collected and turned in to the principal. There is a \$15 fine or 7-day withholding by administration to retrieve the phone per incident. For more information about the cell phone policy, refer to the student handbook.

GENERAL COURSE OUTLINE

Biology units are organized to understand the complexities of life from micro-macro. The following outlines are a guide and may change slightly throughout the year. Your student will be given a more comprehensive outline for each unit as it begins. That outline will include all assignments, dates due, and dates for tests, quizzes. If you should have any questions, please let me know.

Unit #	Topic	Brief Description
1	What is Science? Intro to Biology	<i>Lab safety, scientific method, lab equipment, graphing, data analysis, science terminology, scientific writing</i>
2	Biochemistry	<i>Chemistry of biology, properties of water, acids & bases, chemical bonds, biomolecules (macromolecules), enzymes</i>
3	Cells	<i>History of the cell & cell theory, types of cells (prokaryotic, eukaryotic, plant & animal), cell structure & function, cell membrane, homeostasis, cell transport, cell differentiation, cell signaling</i>
4	Cell Cycle & DNA	<i>Cell cycle (MITOSIS), plant & animal cell mitosis comparison, DNA structure & function, DNA replication, DNA compared to RNA, changes to DNA</i>
5	Protein Synthesis	<i>Central dogma of biology, types of RNA, transcription, translation, using a codon chart, mutations</i>
6	Obtaining Energy	<i>Photosynthesis & cellular respiration, energy formulas, carbon-oxygen cycles</i>
7	Genetics & Meiosis (Building an Organism)	<i>History of genetics, genetics vocabulary, Production of gametes (MEIOSIS), genetics practice problems (monohybrid & dihybrid crosses), Mendelian vs Non-Mendelian genetics, human genetic disorders, pedigree charts, karyotypes</i>
8	Evolution & Adaptations	<i>History of evolution, evolutionary theory, mechanisms of evolution, adaptations, viruses compared to cells</i>
9	Taxonomy (Eukaryotic Diversity)	<i>Taxonomy, classification of living things, binomial nomenclature, tools of taxonomy (evolutionary trees, dichotomous keys, etc.), kingdom comparisons (Protista & Fungi)</i>
10	Plants & Animals (Eukaryotic Diversity)	<i>Kingdom comparisons (Plantae & Animalia), human body systems</i>
11	Ecology & Environmental Succession	<i>Levels of organization, biogeochemical cycles (water, nitrogen & carbon), ecological succession, ecological change & diversity</i>