

**LHS Course Title:** Advanced Biology

**Instructor:** T. Taylor

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**Textbook:** Materials will be supplied by teacher.

**Course Objective:** This course will have a different focus for each term. We will start off with a tour of Oregon's Ecology during term one. For the second term we will take a look at the world of Marine Biology. During term three students will learn about microbiology. Lastly, term four will give students an opportunity to pick a project that interests them to focus on for their individual projects.

*After completion of course student will be able to:*

**Term 1: Ecology of Oregon**

- Understand basic principles of ecology
- Explain how humans impact the ecological world around us
- Describe how abiotic and biotic factors affect distribution and density of populations
- Explain the role of evolution in the production of the ecological diversity around us
- Describe possible ways to lessen the human impact on the environment
- Explain principles such as habitat destruction, sustainability, disease, invasive species and global climate change

**Term 2: Marine Biology**

- Describe the importance of marine environments and ecosystems
- Differentiate between common marine organisms
- Describe how abiotic factors (salinity, nutrients, water temperature, pH, currents, etc.) affect biotic factors (predation, symbiosis, competition, etc.)
- Explain how humans impact marine environments in positive and negative ways
- Describe specific topics such as primary and secondary production, subtidal communities, coral reefs, intertidal zones and deep sea communities

**Term 3: Microbiology**

- Describe microbiology and the basics of microorganism structure and function
- Develop laboratory skills
- Explain human uses for microorganisms
- Describe the general principles of microbial growth, control, cultivation, isolation, classification and identification of the major groups of bacteria
- Describe the different common microorganisms
- Explain the nature of infections and immunity

**Term 4: Independent Projects**

- Create and design an project based on a scientific principle learned throughout the year
- Research and experiment to answer the question posed
- Collect and analyze data
- Organize information and data
- Present findings to peers

Emphasis will be on development of critical thinking skills, organization, and application of information in real life situations. Students will get a real life view of science with hands on activities and demonstrations.

**Assignments/ Activities:** I am committed to presenting the material in this course in an exciting and varied manner and to finding ways to make it relevant to students. In order to accommodate the learning styles and preferences of all of you, we will be completing a variety of assignments and activities throughout the year. Types of assignments and activities will include, but not be limited to: lecture, laboratory investigations, projects, cooperative learning activities (i.e. group work), short reports, article reviews, individual assignments/practices, problem solving, research reports, web-quests, and short presentations. Assignments, notes, reminders and other useful information can be found on the class webpage.

**Notebook:** You will be responsible for maintaining a spiral notebook and a 3-ring binder of your work throughout this course. To help you stay organized, you will be given specific directions on how your spiral notebook and 3-ring binder should be organized. Both of these **MUST** be brought into class with you every day. Most of your assignments (class and homework) will be completed in these notebooks. At the end of each unit, as well as at random check points, your notebook will be graded. I will be looking at many factors such as organization and content of your notebook.

**Other materials:** In addition to your spiral notebook and 3-ring binder please bring the following to class daily: planner (can be school provided or your own), pen (blue or black), pencil (sharpened), loose leaf notebook paper, colored pencils, glue stick, a positive attitude and an open mind.

### **Assessment & Grading:**

Grades are performance based, encompassing both the quantity and quality of your work. Grades are based on the following percentages:

Projects/Labs	40 %	Exams/Quizzes	30 %
Daily Work/Homework	20 %	Personal Management	10 %

You can follow your progress while taking this class by checking in with me on a regular basis or visiting our class webpage. The Lowell School District has a website that contains links to the Home Access Center where grade reports can be viewed. Make sure to check your grade frequently, so any discrepancies can be corrected. Note that I reserve the right to modify the weights of grading categories at any time.

**Attendance:** This course will include several labs. Demonstrations, group activities, and laboratory experiments are scheduled and designed to illustrate the concepts taught. Some activities **cannot** be completed outside of class; therefore, *regular and punctual attendance* is critical to your success. If you miss an activity that cannot be made up, you will be given an alternative assignment to complete in its place. NOTE: when you are absent, it is your responsibility to see me about make-up work.

**Late Work:** Late work is defined as any assignment not turned in at the beginning of the period on the due date. Late work must be placed in the Late Basket to receive credit. For homework, projects, or other written assignments, late work will be accepted with an automatic reduction of 10% of the possible credit for the assignment each day. Once a chapter is finished, i.e. assessment is complete; **NO** late work will be accepted for credit. Computer problems are not an acceptable excuse for late work. Learn to avoid late work issues by completing your assignments *before* the due date.

**Tardy Policy:** A tardy is defined as not being in the classroom when class begins. You may miss quizzes if you are tardy. These quizzes cannot be made up. Excessive tardiness, 3 or more, will result in a conference with parent and other school administrator, if needed. If a student is more than 10 minutes late to class, he or she will be counted as absent.

**Excused Absences:** Assignments that were not turned in due to an *excused* absence must be turned in **at the beginning of class during the second class period following the absence**, without penalty. After that time, the work will be considered late and the late work policy will apply. Missed tests and quizzes also need to be made up within the next two class periods. For example, if you were gone on Monday, the work due on Monday is now due on Wednesday. A test missed on Monday must be taken by Wednesday at lunch or after school. It is the student's responsibility to get the work assigned during an excused absence. All assignments will be posted on our class webpage.

**Unexcused Absences:** If your absence from class is unexcused, you will be given the opportunity to make up work that was missed. The work will be considered late and a reduction of 10% of the possible credit for the assignment for each day that it is late will apply. Students will have until the end of the chapter to complete this work. However, keep in mind that you are losing 10% of the possible points each day! After the end of the chapter, **NO** work will be accepted and a zero will remain as the score for that assignment.

**Credit Denial:** Credit denial will be given once the student has reached **10 unexcused** absences. A notification will be sent to the parents upon the 4<sup>th</sup> unexcused absence.

**Lab Safety/Behavior:** I will emphasize safety procedures frequently. Appropriate behavior is expected at ALL times. Students who violate safety rules will be asked to sit out the lab and take a zero for the assignment. Laboratory safety concerns require that students report to class with *appropriate* clothing. Chemical spills, burns, and fire are ever-present hazards. Open-toed shoes and bare midriffs are common examples for inappropriate clothing in the chemistry lab. Please take active responsibility for your own safety and dress appropriately.

#### **Class Expectations:**

- ❖ BE RESPECTFUL! This is the number one rule in my class. Respectfulness refers to you, students, staff, visitors, and property.
- ❖ BE SAFE AT ALL TIMES and especially during laboratory experiments.
- ❖ BE ON TIME & COME PREPARED. Bring your materials every day.
- ❖ COOPERATE. This includes working well with ALL classmates (not just your friends) during class.
- ❖ STAY ON TASK & PRODUCE HIGH QUALITY WORK. Be prepared to work to the best of your ability. Class time is valuable, use it well.
- ❖ LISTEN & stay seated when someone is speaking.
- ❖ BE RESPONSIBLE FOR YOUR OWN LEARNING. That means asking questions when you don't quite understand and coming to see me for extra help when needed.
- ❖ ACT APPROPRIATELY or you will be removed from the class for the rest of the period. Obscene language will **not** be tolerated.
- ❖ The following items will **not** be permitted in my classroom:
  - Drinks (only those in a closable container are allowed – NO large cups)
  - Headphones, Ipods, CD players
  - Cell phones (place them in the cell phone basket at the back of the room before class starts)
- ❖ HAVE FUN. Science is exciting and I want you to enjoy this class.

**Honor Code:** The Lowell school district is a community of scholars. Academic honesty is critical for maintaining integrity within this community. I expect students in my class to abide by an honor code. Please recognize that plagiarism, cheating, fabrication, or aiding the academic dishonesty of another student are all serious violations of the spirit of our school community. Plagiarism is defined as copying **ANYBODY'S** work. This applies to taking something from the Internet or a book and using the material as your own, and also applies to copying assignments, homework, or test answers from another student. Incidents of academic dishonesty are subject to disciplinary action for everyone involved. If plagiarism or cheating is discovered, your work will have earned a zero. If you knowingly allow a student to plagiarize your work, you will also earn a zero. Be aware that on *this* issue, I have a very good memory. For more information on the school's plagiarism policy see the student handbook.

**Reminders:**

If you need help after school, I am available most days. Just check to make sure I do not have a scheduled meeting on the day you are coming in. Please do not wait until you are completely confused before asking for help. Taking 5 minutes to stay and ask a question might save you a lot of frustration in the end!

Make-up exams/quizzes are completed during AFTER-SCHOOL tutoring.

**Science After-School Tutoring: Wednesday afternoons from 3:15-4:15**

Success is possible if we all work together. Please stop and talk to me or contact me with questions/concerns frequently. I am very approachable but you have to let me know when something is bothering you. I promise I cannot read minds!

**How to contact Ms. Taylor**

E-mail: [ttaylor@lowell.k12.or](mailto:ttaylor@lowell.k12.or).

Webpage: [www.lowell.k12.or.us](http://www.lowell.k12.or.us) (visit Class Pages)