

## **AP Biology – Dede Moore**

### **Attendance and Participation**

This is a lab and discussion intensive class. Daily attendance and participation is critical. You need to bring your three ring binder to class each day.

Computers are welcome if they are used to enhance learning. **Cell phones are not !!!** Phones will be confiscated and returned to students the first time. After that, **confiscated phones will go to the office and must be picked up by a parent.**

A notebook dedicated only for this class is recommended because we will accumulate handouts, articles, and labs, which you will use throughout the course. **You are required to keep all of your written work until the term is over.**

**Only water !! No other food or drinks are permitted in class.** Students may only leave class with a pass, or by signing out by the door for the restroom. Use of the sign-out is a privilege and can be revoked if misused.

### **Course Description**

This is a college level survey course in biology. The course begins with a review of chemistry fundamentals required for understanding molecular biology. We will study the structure and function of DNA, protein synthesis, and techniques for identifying and manipulating DNA.

We will explore genetics and genetic engineering, examining the pros and cons of manipulating nature. Cell structure, function, and division will be next, followed by the cell membrane and transport of materials into and out of living organisms.

Respiration and photosynthesis provide the energy needed to support life. We will examine the role of these processes at the cellular level, and the role of symbiosis in the development of life on earth.

Evolution of life from single celled bacteria to multicellular life is the unifying concept in modern biology. Understanding evolutionary pressures on living organisms illuminates the necessity for the complexity of life we find all around us.

Ecology is last, but not least. You are now ready to appreciate how delicate and complex the web of life is that supports all living organisms.

### **General Instructional Methods**

A variety of techniques will be used in class, including lectures, small group discussions, homework assignments, in-class problem solving and laboratory experiences. Typically, each topic will be introduced and placed in perspective in class, and explored further in laboratory. Students will prepare presentations of literature research and lab work.

You will be collecting data on the riparian area adjacent to the Sandy River in Oxbow Park. This data is critical to documentation of a restoration project on Happy Creek. Last year Happy Creek was restored to its historic condition. Our class documented conditions in the Sandy River and adjacent riparian area before and after restoration. This year we will continue to document the recovery of the creek and riparian zone.

**CRL Outcomes:** **Teamwork:** Students will develop skills related to team work through group lab and research work

**Communication:** Students will develop personal and group communication skills by presenting the results of labs and research projects to classroom groups.

### **Student Learning Outcomes**

1. Discuss and apply key concepts of biology. Define, differentiate and use correctly, discipline specific vocabulary.
2. Apply the scientific method to answer chemical questions. Demonstrate a basic ability to conduct scientific research.
3. Demonstrate and apply techniques used by biologists to solve complex problems using a variety of lab tools and basic algebra representing data with variables.
4. Find & use relevant scientific literature. Differentiate scholarly from popular sources. Organize, interpret & present scientific data to scientists & laypersons.

**Trimester 1:** Basic Chemistry, Macromolecules, Enzymes, DNA, Protein Synthesis

**Trimester 2:** Cells, Membrane, Cell Cycle, Cancer, Respiration, Photosynthesis, Basic Genetics

**Trimester 3:** Population Genetics, Nervous System, Immune System, Evolution, Classification

### **Practices That Support Success**

1. Follow your calendar both for classwork and homework. Use it to plan ahead for pre-arranged absences. The agenda on the board is the most accurate representation of what we have done in class. Some students like to capture it on their cell phone ☐
2. Find a study buddy / lab partner. Support one another in the classroom, and at home during absences, projects, test preparation. Share captured images from the board.
3. Ask a question everyday. Share what you have learned outside the classroom. We all expand our understanding when we share perceptions and misperceptions ☐
4. Let me know when you need help !!! During class, after class, or by email from home, I will respond to your inquiries as fast as I can.

### **Credit For Work**

Work must be neat and legible or it will be returned ungraded. **NOT TOO SMALL ! Trimester 3 students MUST take the AP Biology Exam to earn course credit.**

Work completed on time will be stamped prior to in-class grading. This information may be helpful during parent conferences to identify areas where students can improve in their study habits. Late work will be accepted without a grade penalty. **IT MUST BE SUBMITTED BEFORE THE END OF THE TRIMESTER .**

All work missed must be made up without exception. I will assist you in scheduling makeup work, but it is the **student's responsibility to make arrangements**. Work for prearranged absences must be done in advance whenever possible. Many lab materials are perishable and making up labs as soon as possible is in your best interest.

Extra credit may be earned by summarizing an **article of substance**, visiting a science lab or museum, or producing a visual aide for use in the classroom. One extra credit assignment can be submitted each week for a maximum total of 5% of the final grade.

Assignments are 20% of your grade. **Keep up with daily work**. Labs are 30% of your grade. Missing a lab can have a big effect on your grade. Tests can be retaken **ONCE** within one week of the first test (**Not at the end of the term**).

**Grading**

Assignments 20 %      Labs 30 %      Tests 40%      Participation 10%

**Please feel free to email** me at any time. This is the best and fastest way to reach me. [dmoore@corbett.k12.or.us](mailto:dmoore@corbett.k12.or.us) You can also reach me at **(503) 261-4223**.

Student grades and missing worked can be viewed online at any time. Grades are updated once a week, and after exams. **Please** ask for help with make-up work when we have enough time to work together (not in the first 5 min. of class) ☐

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**Student**

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**Parent**

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