**AP Biology Syllabus**

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I hear and I forget.

I see and I remember.

I do and I understand.

In this class, you will not only hear, but also see and do science in order to gain knowledge and understanding.

## **The One and Only Class Principle**

I have but one class principle. It is an all-encompassing principle that, when upheld and respected, lends itself very nicely to a safe, caring environment in which all students can learn and succeed. My one principle is simply this: **Feel free to do anything that does not cause a problem for anyone else.** That’s it! The principle is uncomplicated, yet profound. It’s flexible, yet not limitless. This principle allows for structure (something I want) and freedom (something you want).

##  Most students have no trouble accepting or understanding the first part of the principle, “Feel free to anything.” The second part seems to be purposely forgotten or misunderstood. Not causing a problem for anyone else includes many behaviors (too many to name here)—and includes many people—other students, the teacher, the people who clean the room at night, your parents, etc. While you are free to choose from a wide range of behaviors to display in the classroom during school, there are behaviors which conflict with this principle and, therefore, must be saved for another place or time. Please use your brain and think your choices through carefully.

## **Attitude**

Mutual respect, cooperation and personal responsibility are expected.

MUTUAL RESPECT: I will treat you with respect so that you will know how to treat me. Reciprocity is not a luxury–it’s a necessity (fighting words or thinking words?)!

COOPERATION: You will be working in groups often and need to know how to interact with other students to produce quality work.

RESPONSIBILITY: I am the facilitator in this class. I decide what is taught and how it is taught. You decide whether or not to do the assignments, etc. and how well to do them. Once I give an assignment it is your responsibility to complete it and complete it accurately and thoroughly.

## **School Rules & Policies**

All school rules and policies will be enforced because, let’s face it, each school rule was created with the “One and Only Class Principle” in mind, even though the rule-creators didn’t know it.\*An example, the dress code was created for those of us who do not desire to see hamhocks hanging out of a way-too-short skirt or saggin’ and baggin’ pants showing off star-studded boxers!

**Again, all school rules and policies will be enforced.**

**Tardy Policy**

I expect you to be on time—in the room when the bell rings. Remember the “One and Only Class Principle?” Well, being tardy causes a problem for me AND the school does have a strict tardy policy. I view tardiness as robbing time from important people for important things. We will follow school policy on being tardy.

**Cheating**

No teacher’s classroom regulations would be considered complete without a lecture on cheating, right? Well, you know the lecture and here are some examples of what I consider to be cheating:

* copying another student’s work, even a minor worksheet or assignment (except class notes)
* direct downloads from the internet without modifications or giving credit to the original author
* telling others information on and/or answers to quizzes and tests

These are the three major forms of cheating and will result in a zero on the assignment, project or test in question. Keep in mind that cheating is defined as presenting ideas that are NOT your own AS your own to the teacher for a grade whether in spoken or written form. Be certain that you do nothing during a test or quiz that would bring your integrity into question

**Required Materials**

1: ONE 1½ INCH HARD COVER BINDER

2: LOOSELEAF PAPER

3: RUBBER GLOVES FOR LABS

4: GRAPHING PAPER

5: PENS/PENCILS/HIGHLIGHTERS

6: LAB NOTEBOOK (regular notebook with several subjects would be fine)

7: TEXTBOOK

8: Barron’s or Cliff’s AP Biology Study Aid (can be purchased at any book store)

\* OPTIONAL- BINDER DIVIDERS

THERE IS ALSO A $10.00 MANDATORY LAB FEE

(If this is a problem, please discuss with me.)

**Grading**

TESTS AND QUIZZES – 40%

LAB WRITE-UPS/JUSTIFICATIONS – 40%

HOMEWORK – 20%

**Classwork**

In general, late work is not acceptable.

* If absence is planned, the assignment/project is due the day BEFORE the absence(s).
* If the absence is NOT planned (illness, for example), the project will be due the next day by 3 pm with an excused absence.
* Other situations will be handled on an individual basis.

Students do NOT need to earn an A on every exam to do well in the course or on the AP Exam. Many highly capable and high-achieving students, accustomed to making all A’s, will make B’s or C’s on tests and start to doubt themselves, their teacher, and/or their decision to take the course because they forget that they are taking a college level course with standards that are much higher than usual. Students do not have to make A’s on every test to do very well on the AP Exam.

If a student fails a major unit exam, he/she will be given an opportunity to take a retest over the same material. The final exam grade will be the average of the two tests, with the highest grade possible being 75% or C. It cannot be stressed enough how important it is for each student to master the material as it is presented. Retests give the students an excellent opportunity to improve an area of weakness. Retests are scheduled on an individual basis.

#### **Reading & Lecture Guides**

• I have prepared both a reading guide and lecture guide for each chapter and section we cover in the Campbell Biology textbook.

• The reading guide features a series of questions and activities that assist students in focusing on and mastering the key concepts for each chapter.

• The lecture guides allows us to move through class lectures and discussions more quickly since students don’t have to write everything down. However, I will expect students to add additional notes from class lectures and activities to their lecture guidelines.

#### **Supplemental Readings**

Throughout the year students will be given supplemental readings from classic scientific papers, current scientific publications, and both national and local main stream media. These articles are intended to:

• supplement the information provided in lecture and the student’s textbook to provide the most current information;

• apply what we are learning to both environmental and social issues associated with biology; and

• expose students to scientific publications and give them practice on how to critique scientific articles.

Articles will come from a variety of sources including, but not limited to, *Science, Nature, Scientific American, New York Times, Detroit Free Press,* and the *Detroit News.*

##### **Unit Exams**

After the completion of each unit, an exam will be administered, which are part multiple choice (including

many questions from old AP Exams) and part free response (also taken from old AP Exams).

##### **Practice AP Exams**

Students will be given portions of previously released AP Biology exams. They will take each exam and I will grade them using the AP scoring guidelines. Students will be asked to look at the questions they missed and analyze why they missed them.

**Saturday Study Sessions**

There will be four Saturday study sessions available for students to attend in preparation for the AP exam. The must attend three out of the four sessions. Transportation will be provided to and from the study session if not at Moore. There will be more information and dates to follow.

**Make-Up Work**

If you know you are going to be absent on a test or quiz day or when an assignment is due, please make arrangements with me to take the test or turn in the assignment *before you leave*. This would apply to all athletic events, school activities, doctor/dentist appointment, etc.

Assignments must be made up within ONE day following the absence and are due the next day in class.

\*For example, if the absence takes place on Monday, you have Tuesday to complete the assignment and it is due Wednesday at the beginning of class.

Quizzes & Tests must be made up as soon as you return to school following the absence. You will have to set up a time with me after school to make up a missed test or quiz.

**The AP Biology Exam is Monday May 12th @ 8:00am.**

**1. Molecules and Cells** **25%**

*A. Chemistry of Life* ...............................................................................7%

Water

Organic molecules in organisms

Free energy changes

Enzymes

*B. Cells*...................................................................................................10%

Prokaryotic and eukaryotic cells

Membranes

Subcellular organization

Cell cycle and its regulation

*C. Cellular Energetics* .............................................................................8%

Coupled reactions

Fermentation and cellular respiration

Photosynthesis

**2. Heredity and Evolution** **25%**

*A. Heredity*...............................................................................................8%

Meiosis and gametogenesis

Eukaryotic chromosomes

Inheritance patterns

*B. Molecular Genetics* .............................................................................9%

RNA and DNA structure and function

Gene regulation

Mutation

Viral structure and replication

Nucleic acid technology and application

*C. Evolutionary Biology*............................................................................8%

Early evolution of life

Evidence of evolution

Mechanisms of evolution

**3. Organisms and Populations** **50%**

*A. Diversity of Organisms*.........................................................................8%

Evolutionary patterns

Survey of the diversity of life

Phylogenetic classification

Evolutionary relationships

*B. Structure and Function of Plants and Animals..*..................................32%

Reproduction, growth, and development

Structural, physiological, and behavioral adaptations

Response to the environment

*C. Ecology* ..............................................................................................10%

Population dynamics

Communities and ecosystems

Global issues