

## COURSE SYLLABUS, POLICIES, AND PROCEDURES

Teacher: Mrs. Whittaker  
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Teacher's email [kristiwhittaker@cusd.com](mailto:kristiwhittaker@cusd.com)  
Class Website (assignments) [www.cloviseastapbiology.weebly.com](http://www.cloviseastapbiology.weebly.com)  
Office Hours: Tuesdays at lunch and by appointment

Recommended Materials: Textbook, Notebook (3 ring binder including 2 sections), lined paper, pen and pencil, **access to internet**, laptop (we need at least 1 for every 3 students), text book. Student must have these materials each day in class to be successful. Text books must be brought to class every period. Laptops will be a part of our lab exercises, and you will be asked to bring them on specific days. If a student cannot afford to purchase the recommended materials, the student should contact the teacher and materials will be provided. College Board approved syllabus is published on the class documents website. This syllabus mirrors the approved syllabus and is provided to you in the Clovis East format for easy access and grading specifics.

Your binder needs 2 sections... 1)Course Work 2)Labs--to be saved with teacher signature for possible University verification.

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Favor de llamar a la oficina para asistencia in espanol.  
Thov tiv tauj peb lub hoob kas yog xav tau kev pad nrog lus Hmoob.*

### What is AP Biology?

AP Biology is **College Biology** that is taught and learned in the high school environment. The emphasis in AP Biology is on learning, understanding processes and mechanisms, and passing the AP Biology Exam each May.

The AP curriculum is mandated by the College Board. The AP Biology curriculum is designed around the AP Biology syllabus. The AP Biology curriculum is presented at a level of rigor that reflects the AP Examination, and it taught as a college level course. The pace of the course is very demanding, and it is necessary to complete the curriculum by April to allow time for prior to the AP Exam in May. It is the expectation of your teacher and our school that all students take the AP Biology Exam who are enrolled in this course.

### Requirements of students in AP Biology:

1. READ the text book...read the text...do the reading assignments! Former students say this is the #1 thing you should do to survive the course.
2. Complete required summer work assignment; prepare for testing upon return in August.
3. Complete **daily** reading, labs, and assignments.
4. Actively participate in **all** class activities; bring text book to class every class period.
5. Expect to be in at lunch for overflow laboratory work; make up labs are NOT available for absences. Be ready to participate in "inquiry-based" labs.
6. Complete and hand-in assignments **ON TIME**.
7. Late assignments are **NOT** accepted. Work will not be accepted if your absence is unexcused. **IMPORTANT** If you are absent, your work is due the **DAY** you return. Our calendar is **ALWAYS** posted.
8. Register for, attend, and actively complete the AP Biology Exam scheduled for May 2017



## Words of Wisdom:

The AP curriculum is detailed and extensive. The vast amount of subject matter that must be mastered requires that a chapter must be completed each week. There will be chapters assigned during Thanksgiving, Winter break and Spring break. There will also be “take-home tests” during these vacations. Regular reading/study time of 60-80 minutes each day will be necessary to be successful in AP Biology. The student must make attendance a priority. Work and exams missed due to absence must be made up by the next class period. No late work is accepted. You will be expected to attend review sessions in the months of April and May.

## Grading:

Grading is on a percentage basis. At least 80% of the possible points will come from tests and quizzes. Grades will not be curved or rounded on assignments, progress report grades or final semester grades. The course grades are structured to align with the AP Examination scores and special attention is made to stay away from grade inflation. Due to this nature of this college course you may earn a grade of B or lower that you are not accustomed to in your non AP courses. Grades are not based on effort; grades are based on the demonstration of knowledge and mastery of skills required by the AP Biology Exam. The grade earned in AP Biology and predicted AP examination score are summarized below:

Grade earned in AP Biology		Expected College Board Exam Score
A	100%-90.0%	3-5
B	89.9%-80.0%	2-4
C	79.9%-70.0%	1-2
D	69.9%-60.0%	1-2
F	59.9%-below	1

## Grading policies:

1. All material must be hand written. No typed assignments will be accepted.
2. No late work will be accepted as suggested by the College Board.
3. Study guides and lab assignments are evaluated for completion and quality of work.
4. The student must consistently be well-prepared for unit tests. The tests are extremely rigorous and demanding. Each test will consist of both multiple choice and essay questions. They will be timed to mirror the time allotted per question on the AP Biology Exam.
5. Any student can retake a multi choice unit exam. Up to 4 unit exams can be retaken per semester for most non-summer work material. It is the student's choice on which exams to retake during a 1-week re-take window. Scores from the first and second attempt will be averaged together. **Remember...only 4 retakes per semester.**
6. Semester finals are comprehensive and will be structured close to the AP Exam format.

## Independent Study:

Extra time at home above and beyond homework and course work can help a students to increase their chances of passing the AP Biology Exam with a score of 3 or better. It is HIGHLY recommended that students set out a plan for independent study on topics covered on the AP Biology Exam in addition to the normal work assigned in class. Below you will find a list of suggested independent study resources in order of recommendation. Used and new versions of these resources can be purchased on-line at Amazon.com or any other text book sales site. Students will also be provided access to free online review materials and practice exams.

### **Note to parents:**

You can do many things to make sure your student is successful in class. This will be one of the top most challenging courses your student enrolls in during their high school career. There will be homework/reading for this course daily. As mentioned above, students who also engage in independent study on our topics at home above and beyond coursework will find that their chances for passing the AP test will increase. We will hold reviews for the AP Exam outside of class time, and it is important that you help your student attend these reviews. Your student should study for exams; they will cover a broad range of topics, and students will not be given open book or open note exams. Encourage your student to take advantage of the retake opportunities for Unit Exams. Contact the teacher anytime to check on your student's progress. Last but not least, join **Zangle Parent Connect** by visiting the CEHS Main Office. You can access your student's grades and attendance in real time using the internet 24 hours a day. Encourage your student to contact his or her Mrs. Whittaker with questions or concerns directly. When the teacher is contacted by a parent, the teacher will conference with the student first, face to face, prior to making return communication contact with their parent.

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### **COURSE OUTLINE AP BIOLOGY**

**\*\*Note:** Work will be given during Thanksgiving, Winter Break, and Spring Break, subject to flow of curriculum. Direct instruction of new concepts will end 3-4 weeks prior to the AP Biology Exam in May 2017.

**College Board BIG IDEAS:** All of our learning objectives (areas of study) will fall into these 4 BIG IDEAS.

1. **Evolution** drives the diversity and unity of life.
2. Living systems in living things use free **energy** and molecular building blocks to grow, reproduce and maintain homeostasis.
3. Living systems store, retrieve, transmit and respond to **information** important to life processes.
4. Living systems **interact**, and these interactions possess complex properties.

**Ecology** (review of summer work...very little direct instruction) *Using Campbell Text*

\*Summer work Exam is not available for retake.

1. Ch 40 Animal Behavior
2. Ch 50 Intro to Ecology and the Biosphere
3. Ch 51 Behavioral Ecology
  - i. Animal Behavior Lab
4. Ch 52 Population Ecology
5. Ch 53 Community Ecology
6. Ch 54/55 Ecosystems and Threats of Biodiversity (55.1 only)

### **Chemistry of Life**

1. Chemistry of Life
2. Importance of Water
3. Carbon and the Molecular Diversity of Life
4. Structure and Function of Macromolecules
  - i. Identification of Organic Molecules
  - ii. Biomolecule practice puzzle

## The Cell

1. Tour of the Cell
  - i. Diversity of Cells Lab
  - ii. Surface Area to Volume Ratio Modeling and Calculations
  - iii. Cell Size Group Modeling POGIL
2. Membrane Structure/Function/Transport
  - i. Osmosis Warm Up
  - ii. Diffusion and Osmosis Lab
  - iii. Zucchini Core Graphing Warm Up
  - iv. Homeostasis of Cells Discussion Cards L.O.2.9
  - v. Alveoli, Villi, Nephrons and adaptations for transport
3. Introduction to Metabolism and Enzymes
  - i. Enzyme Lab
4. Cellular Respiration & Fermentation
  - i. Glycolysis Modeling Activity
  - ii. Mitochondria and Processes Diagram
  - iii. Cellular Respiration Lab
5. Photosynthesis
  - i. Chloroplast and Processes Diagram
  - ii. Photosynthesis Lab
  - iii. Comparing Cellular Respiration & Photosynthesis
6. Cell Communication
7. The Cell Cycle and Loss of Cell Cycle Control in Cancer
  - i. Cell Cycle Lab
  - ii. Cell Cycle Puzzle

## Heredity and Evolution

1. Meiosis (exclude “The Variety of Sexual Life Cycles”)
  - i. Meiosis Sequencing Activity
  - ii. Cell Cycle Lab
2. Mendel and the Gene Idea (exclude Epistasis and Pleiotropy)
  - i. Punnett Squares & Pedigree Charts
  - ii. X<sup>2</sup> Lab-Corn and M&Ms
3. Eukaryotic chromosomes
4. DNA The Molecular Basis of Inheritance
  - i. DNA Warm Up Model
5. RNA From Gene to Protein
  - i. Replication, Transcription & Translation Model
6. The Genetics of Viruses and Bacteria
  - i. Operon Model Puzzle
  - ii. Operon Modeling Self Assessment
7. Eukaryotic Genomes
  - i. Control of Gene Expression “The Big Picture”
8. DNA Technology & Genomics
  - i. Bacterial Transformation Lab
  - ii. Restriction Enzyme Analysis of DNA
9. The Genetic Basis of Development

## Evolutionary Biology

1. Mechanisms of Evolution
  - i. Modeling the Impact of Natural Selection Lab
2. The Evolution of Populations
  - i. Mathematical Modeling: Hardy-Weinberg Lab
3. The Origin of Species
4. Phylogeny and Systematics
5. The Tree of Life
  - i. Evolution and Selection POGIL review
  - ii. Comparison of DNA Sequences using BLAST

## Plant Form & Function

1. Transport In Vascular Plants
  - i. Transpiration Lab
2. Angiosperm Reproduction and Biotechnology
3. Plant Response

## Animal Form & Function

1. The Immune System
2. Hormones and the Endocrine System
3. Nervous Systems
4. Sensory and Motor Mechanisms

I have read and understand the work I am undertaking as a student in AP Biology.

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Student signature

\_\_\_\_\_  
Date

I have read and understand the work my student is undertaking as a part of the AP Biology course.

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Parent signature

\_\_\_\_\_  
Date