

**Welcome to AP Biology!**  
Course Syllabus 2018/2019

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### **Teaching Philosophy**

All students should experience science as a process and not just learn biology as a collection of unrelated facts. Science classes should emphasize how scientists use their observations and readings to ask questions that can lead to new experiments. These experiments build on the work of others and eventually lead to additional evidence on different topics. This investigation process will be used throughout this AP Biology course. It is important for students to become excited with discovery as they ask and answer their own questions about natural and biological phenomena that they see, read about, or experience in the laboratory and field. In addition, it is critical that students connect new concepts to what they already know. With each connection they help themselves build a solid framework of biological knowledge and scientific thinking. This framework will prepare students for rigorous college coursework as well as any STEM career.

### **Course Description**

AP Biology provides willing and academically prepared students with the opportunity to earn college credit for a two semester biology class while still in high school. The AP Biology course focuses on constructing enduring, conceptual understandings of biological concepts. This knowledge is obtained through laboratory experiences that enable the student to develop advanced inquiry and reasoning skills.

### **Course Objectives**

This course is structured around the four big ideas and the enduring understandings identified in the AP Biology Curriculum Framework. All essential knowledge will be taught and all learning objectives will be addressed through this curriculum. The course will focus on inquiry-based laboratory work and the use of the seven science practices in both lab and non-lab activities.

- Big Idea 1 – The process of evolution drives the diversity and unity of life.
- Big Idea 2 – Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis.
- Big Idea 3 – Living systems store, retrieve, transmit, and respond to information essential to life processes.
- Big Idea 4 – Biological systems interact, and these systems and their interactions possess complex properties.

## Our Textbook

Students will be issued a copy of Sylvia S. Mader's *Biology* to be used as the primary textbook.

Students are responsible for returning the same copy of the text in the same condition in which it was issued. Students who lose or damage the textbook will be responsible for paying a replacement or damage fee. Leaving your book in my classroom is not acceptable.

## Supplies and Fees

- 2 inch binder (any color)
- 12 tab dividers or adhesive tabs for binder
- notebook paper
- graph paper
- unlined paper for drawings
- 1 composition notebook
- 1 4"X6" pad (45) post-it notes (any color)
- 1 3"X3" pad (100) post-it notes (any color)
- 2 file folders (any color)
- black ink pens
- blue ink pens
- red ink pens
- green ink pens
- colored pencils
- hand held pencil sharpener
- 100 ruled index cards (white)
- four function calculator
- \$15.00 lab fee

## Grading

You will receive points for a wide variety of assignments and assessments. These will include classwork, quizzes, labs, projects, and tests. The approximate breakdown of points per trimester in the class is as follows:

Tests/Quizzes – 60%    Lab work – 30%    Classwork and Homework - 10%

## Evidence of Learning

Students will maintain a laboratory notebook and a portfolio throughout the course. In addition to the laboratory notebook, students will communicate to others in formats such as group presentations, Google Slide presentations, poster sessions, and written reports. Communication tools are not only for the laboratory experiences, but represent examples of the collaboration, reflection, and articulation seen in the course as a whole. Students will use this collection of their work over time and reflect on the changes they can see in the quality or substance of their work through the year as they prepare to move into college courses and research experiences in the future. A key feature in the portfolio will be the requirement for student self-reflection in terms of the science practice skills that they have developed throughout the year.

## Laboratory Work

The students will be engaged in investigative laboratory work for a minimum of 25% of instructional time. These labs will be inquiry based, student-directed investigations. There will be at least two laboratory experiences per big idea selected from the AP Biology Investigative Lab Manual: An inquiry-based approach (2012). These labs will be spread throughout the school year and will be conducted during at least one out of every four class meetings during the year. There is an annual lab fee of \$20.00. All students must complete and have

parents/guardians sign the Flinn Lab Safety Contract and pass the lab safety test before completing labs.

### **Academic Integrity**

A zero and a disciplinary referral will be given to anyone who cheats or plagiarizes in my classroom. All of the following are considered cheating during a test or quiz – copying or looking at another person’s paper, talking to another person, using gestures to indicate answers, using Morse code or similar audible signals to indicate answers, creating and/or using a “cheat sheet” on any object including your body or clothing, and usage of electronic devices.

### **Retake Policy – Reflect/Reteach/Retake**

If a student is dissatisfied with his/her grade, the student will have the opportunity to retake a test over the same concepts within five (5) school days of the day the test was handed back to the student. In order to retake the test, the student must reflect upon his/her learning by completing all test corrections and engaging in a reteaching session with me before or after school. The student will then take a different test covering the same concepts. The final grade will be calculated by averaging the original grade with the retake grade.

### **Late Work**

Completing and turning in work on time is expected in a college-level course like AP Biology. However, I understand that we are all human and sometimes make mistakes. I will accept late work, but will deduct ten (10) points per day late. After ten school days, late work cannot be turned in for any credit.

### **Make up Work**

If you are absent on the day an assignment is due, work should be turned in on the first day you return to class. Makeup work will be handled as described in the Student Handbook (within five days following the absence). Any handouts given in your absence will be found in your classroom bin. You are responsible for discovering what you missed from a member of your group. If you missed a test or quiz, please see me to make an appointment to take the test. You will not be allowed to make up a test without an appointment. You may take the test before or after school. You WILL NOT be allowed to take a test in my classroom while I am teaching. It would be a distraction to you and my class.

### **Biology AP Exam**

Each AP class concludes with a rigorous, college-level assessment in which students will demonstrate their mastery of college level course work. The exam is consists of two sections: multiple choice and free response. Each section is 90 minutes long, with a 10 minute reading period for the free response. The Biology AP Exam will be given on Monday, **May 13**, 2019 at 8:00am, and the cost will be approximately \$100.00.

## Mrs. Lee's Six "Be's"

1. **Be courteous.** This includes the teacher, fellow students and yourself. I will not tolerate interrupting, disrespectful or disruptive behavior, derogatory speech, profanity or negative attitudes.
2. **Be prepared.** This includes your book, Chromebook, binder, journal, paper and pencil. More importantly, come prepared to learn.
3. **Be respectful of boundaries.** Be aware of the materials and areas in the classroom that *are* provided for student use and those that *are not*. Respect the belongings of your classmates and teacher and leave them alone unless you have received permission.
4. **Be punctual.** All students should be in their seats, quietly working on their chime time BEFORE the bell rings. If the bell has begun to ring before you are seated, you will be considered tardy. You must also be timely in turning in all assignments and completing makeup work.
5. **Be engaged in learning – not eating.** Food and drinks **ARE NOT** allowed in the classroom. You may have plain, unflavored water only. If you are found with food or drink in the classroom, it will be disposed of immediately by the teacher.
6. **Be mindful of school rules.** All rules and policies listed in your student handbook apply in this classroom.

## Course Content Outline

- Unit 1 – Introduction to Statistics and Scientific Inquiry 08/02/2018 – 08/15/2018
- Unit 2 – Large Scale Interactions 08/16/2018 – 10/16/2018
  - Ecology
  - Evolution
- Unit 3 – Cellular Processes: Cell Structure 10/17/2018 – 11/16/2018
  - Biochemistry
  - Cell Structure
- Unit 4 – Cell Processes: "Making" Energy 11/26/2018 – 1/31/2019
  - Respiration
  - Animal Systems that Support Respiration
  - Photosynthesis
  - Plant Systems in Support of Photosynthesis
- Unit 5 – Making Cells & Making New Organisms 02/01/2019 – 03/05/2019
  - Mitosis
  - Meiosis
  - Mendelian Genetics
- Unit 6 – Making Proteins 03/06/2019 – 04/12/2019
  - Protein Synthesis
  - Gene Regulation
  - Biotechnology
- Unit 7 – Review for AP Exam 04/15/2018 – 05/05/2019

### **The Successful Student in AP Biology will:**

- Be in class every day.
- Take pride in his/her work.
- Have a good working relationship with others in the class.
- Be open with the teacher about difficulties he/she is having learning the material or things in the classroom which are impeding his/her learning.
- Be consistent in his/her daily work.
- Prepare carefully for exams.
- Look for things in Biology that interest him/her or connect to life.
- Be honest. You can be a person of integrity every day.

### **My responsibility as your teacher is to:**

- Know my subject. This does not mean that I know everything. Each year I learn interesting new things because of student questions.
- Value every student. Your GPA, race, religion, or economic conditions do not determine your value as a person or your status in my class.
- Be prepared. I will spend the time and do the work that is necessary to teach you effectively.
- Help you succeed. If you encounter some difficulties along the way you are not alone. Talk with me before things get desperate, and we will work together to find solutions.
- Partner with your parents/guardians to help you succeed.

### **Notes to Parents and Guardians**

- **Success is our goal** - I know that you want your child to succeed, and I want to give you the information you need to maximize their success. The two most important things you can do to help your child succeed are 1) to make sure they are in class every day and 2) to stay aware of and involved in what we are currently studying along with deadlines for projects, lab work, quizzes, and tests.
- **Contact me** - I welcome email contacts concerning the progress of your student. I am able to respond to nearly all email messages within 24 hours. If you do not currently have easy access to email, please let me know and I will find other ways of getting you any needed information. Meetings are welcome and may be set up by calling me at school.