FLHS

AP Biology Summer 2015 Assignment

Given the speed with which scientific discoveries and research continuously expand scientific knowledge, many educators are faced with the challenge of balancing breadth of content coverage with depth of understanding. The revised AP® Biology course addresses this challenge by shifting from a traditional "content coverage" model of instruction to one that focuses on enduring, conceptual understandings and the content that supports them.

This approach will enable students to spend less time on factual recall and more time on inquiry-based learning of essential concepts, and will help them develop the reasoning skills necessary to engage in the science practices used throughout their study of AP Biology.

Students who take an AP Biology course designed using this curriculum framework as its foundation will develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses — a goal of every AP course.

The revised AP Biology course is equivalent to a two-semester college introductory biology course and has been endorsed enthusiastically by higher education officials.

The Emphasis on Concepts and Science Practices

The key concepts and related content that define the revised AP Biology course and exam are organized around a few underlying principles called the big ideas, which encompass the core scientific principles, theories and processes governing living organisms and biological systems.

A practice is a way to coordinate knowledge and skills in order to accomplish a goal or task. The science practices enable students to establish lines of evidence and use them to develop and refine testable explanations and predictions of natural phenomena.

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.

Science Practice 1: The student can use representations and models to communicate scientific phenomena and solve scientific problems.
Science Practice 2: The student can use mathematics appropriately.
Science Practice 3: The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course.
Science Practice 4: The student can plan and implement data collection strategies appropriate to a particular scientific question.
Science Practice 5: The student can perform data analysis and evaluation of evidence.
Science Practice 6: The student can work with scientific explanations and theories.
Science Practice 7: The student is able to connect and relate knowledge across various scales, concepts and representations in and across domains.

For more information visit http://apcentral.collegeboard.com

FLHS

AP Biology Summer 2015 Assignment

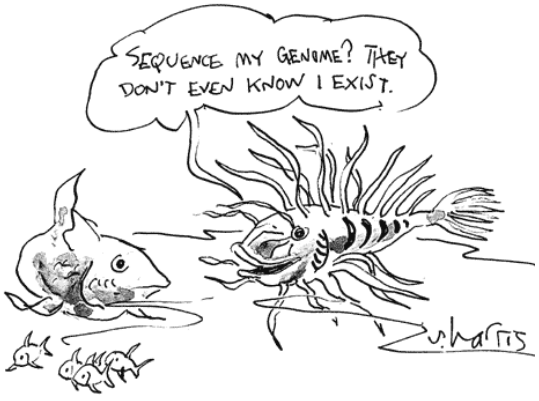
Course Expectations:
1. Excellent attendance. Since this will be a MUCH faster paced course than a normal high school course, missing class will put you at a huge disadvantage. Because of the nature of this course, any time you miss must be made up in an equivalent fashion. You are responsible for any missed material.
2. You will learn to use a college text as a tool for your own learning.
3. You will become proficient in common lab procedures, perform basic college level laboratories, and design and execute original experiments.
4. You will write numerous Free Response Questions as preparation for the AP Exam.

Recommendation

- Purchase an **AP Biology Study Guide** such as *Barron's, Cliff's* or *Kaplan*. Having an exam study guide will allow you to become familiar with the exam format and guidelines to answering questions. In addition, it will provide many practice problems and aid in your preparation for unit exams and the AP exam.

In summary, we are here to help you learn biology and science skills and to help you score as high as possible on the AP Exam. You will have to prepare before you get to class. Remember this is a college class; the pacing will be that of a college class. There will be a lot of problem solving, and the vocabulary can be overwhelming. We have been told the vocabulary in the text we use is equivalent to 4 years of a foreign language. We know you will be busy with many other activities and classes but you will have to make time to work on this class.

We look forward to working with you in the fall and having a great class!



FLHS

AP Biology Summer 2015 Assignment

Your AP Biology Summer Assignment:

- Read the book Survival of the Sickest by Dr. Sharon Moalem.
- Copies of the book are available from the school library in print or digital form. You can choose print or digital; not both, so we have enough copies for everyone. You can also purchase your own copy from a bookstore or online.
- Print copies of the book can be checked out from the upstairs bookroom at the same time you check out your textbook. The upstairs bookroom is open during final exams to check out AP books. The upstairs bookroom and LMC can also give you directions on how to access the digital form of the book.
- A 2-3 page written reflection of the book is due on TurnItIn on Wednesday 9/9/15. TurnItIn log-in and class ID information will be given out the first week of school.
- We will also have a book chat in class the week of 9/9/15.
- Your written reflection should not be a book report or summary of the book, but a reflection on what you have read. Some things you could discuss in your reflection might include:
  - What new things did you learn?
  - What surprised you?
  - What did you find most interesting?
  - Did you ever read a book like this before? How is this book similar or different from other books you have read?
  - How might this book help you in your study of AP Biology?
  - Etc.

Past AP Biology students have really enjoyed reading this interesting book and we think you will too! There are numerous topics we will cover next year and find ourselves referring to and using many examples from this book. Enjoy!