

AP Biology Summer Assignment 2018-2019
Welcome to AP Biology!

WELCOME! Advanced placement biology is the equivalent of a college-level freshmen biology course. This means that the course is rigorous and highly demanding and will require a great deal of your time both in and out of the classroom. You will begin by completing the following assignments prior to the first day of class in August. This will be collected on the first day of school and will count as your first grade! Please do not wait until the end of the summer to complete the assignment - pace yourself!

Class Communication

1. Send an email to introduce yourself. Provide a little background about why you decided to take the class and what you hope to gain from it for the year. Please let me know if you have taken AP Chemistry, AP Environmental and Anatomy and Physiology and if you are currently taking any other science courses during fall semester. This will help me better prepare you for the course.
2. You will need to set up an account with edmodo.com. **Please email me to get the class code.**
3. **Design your BILL for AP Bio!** BILL--The Biology Interactive Learning Log.

In our AP Biology course this year, you will keep an interactive student notebook (ISN) to document your learning and better interact with course content.

Our ISN is called a Biology Interactive Learning Log, and we will use it daily. To create your BILL, you will need a MEAD/FIVE star HEAVY DUTY (Plastic Cover) spiral 5 subject notebook. These notebooks are the most durable spiral notebooks –so please make sure you get a high quality one to ensure that your notebook does not fall apart (as will be the case with generic spiral notebooks). This is important because by the end of the semester, you will have a homemade study guide.

This summer: You will need to decorate the cover of your BILL with a collage of some sort that represents you. I recommend that you cover the front of your notebook with clear packing tape once you have completed the cover to add durability, but also to protect the collage you make.

We will go over how to set up the inside of the BILL on the first day of class so be sure you have your notebook with you in class so that you can get it set up. It is important that you keep up with your BILL on a daily basis, since this learning log is the physical representation of your processing of course concepts.

We will use this notebook in class on a daily basis to catalog all the learning that you do both inside and outside the classroom, so it is important that you have it with you each day.

****BILLs are the Brainchild of Lee Ferguson –Master AP biology teacher*

4. Purchase a lab notebook. The *Student Lab Notebook: 100 Carbonless Duplicate Sets* by Hayden McNeil is a good option. Please make sure your *carbon copies are white only* and you have a *minimum* of 100 pages. You do not need to purchase the exact title listed above, but your purchase needs to be of similar quality and should contain *white* carbon pages only. This is needed by the *end of the first week*. (NO exceptions.)

5. The Frameworks for AP Biology are centered on 4 Big Ideas:

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

Throughout this course you will be introduced to many of the concepts OUTSIDE of class. I will be implementing a flipped classroom instructional model to free up class time for us to dialogue and cover the AP labs and course content in greater depth.

The science practices are the skills and knowledge needed to increase your chances of success in this course. Your last portion of this assignment requires you to watch ten videos that focus on the science practices. After you have watched the videos, write a half-page of notes for EACH one. They must be written in your own words and should include a summary plus any additional information that conveys your understanding of the practice.

This assignment should be completed in your BILL starting on **page 10**. Each video summary will receive a maximum of 30 points and will be your first quiz grade for the course (**a total of 300 points**). The rubric below should guide your thinking and will help you reach my expectations for the quality of work that is expected from each of you.

0 - No credit	2-5 – Below Expectations	6-9 – Meets Expectations	10 – Exceeds Expectations
No notes OR cheating is observed	Numerous criteria are missing from entry	All criteria are met, but there's room for improvement within criteria OR one criterion is missing from entry.	All criteria listed below are met or have been exceeded for each entry

How does work that “exceeds expectations” look?

- The video summary begins on page 10 of the BILL.
- The video’s title is written as it appears in the video before the summary.
- The notes are legibly written.
- Highlighting or colors are used to emphasize key points, new vocabulary, and/or important concepts.
- Examples are documented in some way when given in the video.
- Pictures, charts, or graphs are used to display details provided in the video.
- Each summary is a minimum of ½ page.

Notes should be original work because these serve as a log of what *you* have learned from the video. You will receive zero credit for the ENTIRE assignment if you are found submitting work that too closely aligns with a classmate’s work.

#	Video Topic	Link
1	The Nature of Science	https://www.youtube.com/watch?v=77TFiYWPxoQ&feature=youtu.be
2	The Scientific Method	https://www.youtube.com/watch?v=j12BBcKSgEQ
3	CER (Claim-Evidence-Reasoning)	https://www.youtube.com/watch?v=5KKsLuRPsvU&feature=youtu.be
4	Science Practice 1 (Models and Representations)	https://www.youtube.com/watch?v=v5Nemz_cVew&feature=youtu.be
5	Science Practice 2 (Using Mathematics Appropriately)	https://www.youtube.com/watch?v=jggYISKoXak
6	Science Practice 3 (Formulate Questions)	https://www.youtube.com/watch?v=2zB272Ak63A
7	Science Practice 4 (Data Collection strategies)	https://www.youtube.com/watch?v=AzTXnne40wU
8	Science Practice 5 (Analyze Data and Evaluate Evidence)	https://www.youtube.com/watch?v=0JqkouOtZA
9	Science Practice 6 (Scientific Explanations and Theories)	https://www.youtube.com/watch?v=3gK1xWNM7kk
10	Science Practice 7 (Connecting Knowledge)	https://www.youtube.com/watch?v=7l4bcs49JP8

Adapted from http://yorkcountyschools.org/parents/studentInfo/docs/AP_Biology.pdf

- Purchase "A Short History of Nearly Everything" by Bill Bryson. We will use this book throughout the course of the semester.

I look forward to working with each of you in the fall. Have a safe and restful summer.

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