

# AP Biology Summer Assignment

Sign up for google classroom: [cxh11vj](#)

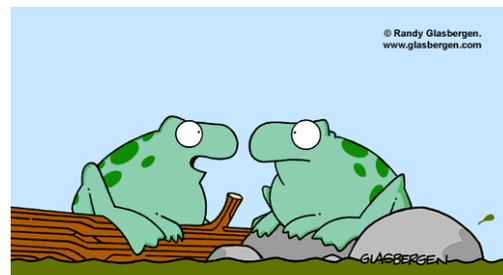
## Welcome to AP Biology!

The two main goals of AP Biology are to help you develop a conceptual framework for modern biology and to gain a deeper appreciation of science as a process (as opposed to an accumulation of facts). Because of the rapid pace of discovery in the life sciences our primary emphasis is on developing an understanding of unifying concepts that connect the major topics of biology. The AP Biology Curriculum centers around the four Big Ideas and you will need to not only know these but also understand how they all relate:

- **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.**

## What to do before the first day of school:

- **(Highly suggested but not mandatory) Purchase Pearson Education Test Prep Series for AP® BIOLOGY, 6e ©2018 Holtzclaw, Holtzclaw.** There are other test prep books you could use as well, though this is aligned with our book and is generally highly regarded. If you purchase a different test prep book, **It must be the NEWEST edition because the course was redesigned recently.**
- AP Biology was designed by a select group of college professors and high school science teachers to be equivalent to an introductory college biology course. Visit the below College Board site to explore what an AP Biology course is like:
  - <https://apstudent.collegeboard.org/apcourse/ap-biology>
- We will engage in a great deal of collaborative learning. It is **important** that you now, as a young adult getting ready to enter college, work on email communication. I expect that you might struggle throughout the year, and I hope that you will keep an open line of communication with me.
  - From your MCHS account, email me to introduce yourself. I'd like to know some of your immediate and long term goals as well as why you decided to take AP Biology. Include the following in your email:
    - Your full name (& nickname that you go by if you have one)
    - Who was your last science teacher? What class? What grade did you earn?
    - What other science classes have you taken?
    - Why are you taking AP Biology? What do you hope to accomplish/gain?
    - What do you like to do (hobbies, sports, music, interests)?
    - Tell me a little about your family (Mom, Dad, Guardian, Siblings, Pets, how long you've lived in the area.)
    - What are you most anxious about in AP Biology?
    - Anything else you think I should know or would like to share with me.
  - My email is [rswanson@mchs.net](mailto:rswanson@mchs.net) and I will be checking it all summer. If you encounter problems with your summer assignment, please contact me through that email as well.
  - You also need to sign up for my google classroom (Code: [cxh11vj](#))
- We have a small problem in AP Biology. Each year new advances in science are discovered but the length of the school year (and when the test occurs) stays the same. What does this mean? We are short on time. In order to cover ALL of the material, you are responsible for reviewing some sections on your own. Here is what you are to do:
  - Your 5 Step book is an amazing resource; if you get it, use it!!! It will definitely help you to review some of the chemistry that you will need!
  - Watch the following two YouTube videos:
    - [http://www.youtube.com/watch?v=HVT3Y3\\_gHGg&list=PL6C159EF1A62143A2&index=11](http://www.youtube.com/watch?v=HVT3Y3_gHGg&list=PL6C159EF1A62143A2&index=11)
    - [http://www.youtube.com/watch?v=QnQe0xW\\_JY4&list=PL6C159EF1A62143A2&index=8](http://www.youtube.com/watch?v=QnQe0xW_JY4&list=PL6C159EF1A62143A2&index=8)
  - Read, review, and study the Chemistry notes I provided.
  - **Print and complete the Chemistry Worksheet.** As an AP Biology student the expectation is that if you don't know it, find it out!!! Use all of your resources!!! Check the google classroom for provided notes and information.



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"Looks aren't everything. It's what's inside you that really matters. A biology teacher told me that."

- **Review Biological molecules and Cells**
  - Watch the following Bozeman Biology videos:
    - Biological Molecules:  
<https://www.youtube.com/watch?v=PYH63o10iTE&index=43&list=PLFCE4D99C4124A27A>
    - Cell Organelles:  
<https://www.youtube.com/watch?v=aczbMISMr8U&index=44&list=PLFCE4D99C4124A27A>
    - The Cell Membrane:  
<https://www.youtube.com/watch?v=y31DIJ6uGgE&index=15&list=PLFCE4D99C4124A27A>
    - Cell Transport:  
<https://www.youtube.com/watch?v=RPAZvs4hvGA&index=16&list=PLFCE4D99C4124A27A>
  - **Read, review, and study the notes on google classroom over Biological Molecules and Cells.**
  - **Review the corresponding sections in your Test Prep Book if you purchased one.**
- The Chemistry Worksheet will be **turned in on the first day of class for a grade.**
- We will have a **test** over basic chemistry, properties of water, biological molecules, and cells **third class** of school.
- Because vocabulary in this course can be a stumbling block, you need to take some time to review the scientific word roots that form many of our scientific terms. I have provided an extensive list.

#### **HIGHLIGHTS:**

- **Chemistry worksheet due FIRST day.**
- **Test over Chemistry, Water, Biological Molecules, and Cells, THIRD CLASS.** This will allow us to review some.

I truly am looking forward to working with you next year! Don't procrastinate on this assignment but don't let it keep you from having a wonderful summer!!!