

AP Biology Summer Homework 2024

***Hi All! I'm so excited to welcome you to AP Biology! Feel free to email me [rcool@marisths.org](mailto:rcool@marisths.org) if you have any questions or just want to say hi.***

In the fall we will begin using Mastering Biology as the homework program, along with the Campbell Biology in Focus (You will access both at the start of the year).

For now, I would suggest that you might want to take a look at the [OpenStax AP Biology book](#) (it's free!)

You will have the opportunity to read a “popular science” book this year as well - Genome or The Red Queen by Matt Ridley, Spillover by David Quammen, Your Inner Fish by Neil Shubin are just a few examples of what you might choose. Feel free to look at some “popular” biology books this summer & see if one piques your interest!

We are going to be starting the year with Chemistry, so familiarizing yourself with Chapters 1 & 2 would be great --much of it should be review, but if it's not, make note of the items that you need to study further! I would like to really be able to start with Chapter 3 (Macromolecules) when we return in the fall after we do some Statistics Review. Bozeman Science and Crash Course are both great resources for AP Biology!

## **Homework**

Just like our study of biology was focused around 4 Themes of Biology: (Evolution, Interdependence, Structure and Function, and Unity in Diversity)

AP Biology will have similar **BIG IDEAS** that will help organize our understanding of biological topics.

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

*To illustrate the connections between organisms and to show how different organisms accomplish essential tasks, I'd like you to pick a body system (ie. circulatory system, respiratory, digestive, reproductive, nervous system, senses) and pick a few different organisms (3-5) (mammal, insect, vascular plant, microorganism) and compare and contrast how they accomplish the tasks associated with that system. The OpenStax book is a great resource for this! Feel free to make a diagram, illustration, slides, whatever you prefer! **Due Sept 10th.***

The beautiful thing about biology is that it is all around us all the time! I want you to try to start engaging with thinking about the big ideas and how they can help us understand the world around us!

Have a wonderful, relaxing summer! ~~ Mrs. Cool