

AP Biology

Summer Work

Congratulations on enrolling in AP Biology next school year! Throughout the year, we will be exploring 8 *fascinating* units including the Chemistry of Life, Cell Structure and Function, Cellular Energetics, Cell Communication and Cell Cycle, Heredity, Gene Expression and Regulation, Natural Selection and Ecology. In addition, we will weave these topics into 4 big ideas of biology, including Evolution, Energetics, Information Storage and Transmission, and Systems Interactions. This course is the equivalent of two, semester-long, college-level lab courses. To make sure you are prepared and ready to jump into this material when we return to Garrison in the fall, please complete the following assignments.

- 1) Complete [Unit 1 and Unit 2 of Khan Academy](#). These units review the Chemistry of Life and Cell Structure and Function, and we will be jumping into both units quickly at the start of the semester. There will be a quiz during the first week!
- 2) Review and complete the [Student Lab Safety Contract](#). We will be completing our first lab on the properties of water during week 1, so please bring this completed lab safety contract with you to class on the first day of AP Biology.
- 3) Complete the [Plagiarism Tutorial](#) and test through the University of North Carolina Chapel Hill. In any college-level course, academic dishonesty is taken very seriously. Many cases of academic dishonesty are due to inadvertent or unintentional plagiarism. Learn more about plagiarism in this tutorial and take the quiz. To take the quiz, you will enter your name and email address. It's okay to use your GFS or personal email address. Complete the quiz with an 8/8 score and take a screenshot of the emailed results. You will submit this screenshot in Schoology the first week of school!
- 4) **OPTIONAL!!** Looking for some fun and educational summer reading or documentaries to watch? The following are all somehow related to the 8 units of study or 4 big ideas we will be learning about next year, and I hope this gets you excited for all we will learn in this class! If you have another book or documentary in mind, please email me (alisonshao@gfs.org) and I can add it to the list!
 - a) *What is Life?* by Paul Nurse (a quick read!)
 - b) *Code Breaker: Jennifer Doudna, Gene Editing, and the Future of the Human Race* by Walter Isaacson (read about the discovery of CRISPR!)
 - c) *The Serengeti Rules* by Sean B. Carroll
 - d) *Silent Spring* by Rachel Carson
 - e) *The Immortal Life of Henrietta Lacks* by Rebecca Skloot
 - f) *Wicked Plants: The Weed That Killed Lincoln's Mother and Other Botanical Atrocities* by Amy Stewart
 - g) *Spying on Whales* by Nick Pyenson
 - h) *Your Inner Fish* by Neil Shubin (also a [documentary available on PBS](#))
 - i) *Survival of the Sickest* by Dr. Sharon Moalem
 - j) *Human Nature* (documentary available on Netflix, PBS and at your local library!)
 - k) *Beyond the Elements: Life* ([NOVA](#))
 - l) *What Darwin Never Knew* (NOVA-[watch here](#)— we watched the beginning of this in 9th grade biology)