

AP BIOLOGY SUMMER ASSIGNMENT

As you know, AP Biology is a college-level biology class. We will have a lot of material to cover, and you will be expected to know the basic fundamentals of biology. If you feel like you need to brush up on freshman biology, I encourage you to check out the OCHS biology webpage located at <http://ochsbiology.weebly.com> and review the vocabulary and notes presentations, particularly if you haven't thought about biology in the past couple of years (ahem, *seniors*...).

In order to make sure everyone is prepared for the rigor of an AP science class, you will be asked to complete a summer assignment consisting of three parts. Each component, and its due date, is given below. It is critical that you budget your time wisely and complete the required work during the summer so that we start out the semester on the right foot!

PART 1:

DUE DATE: SATURDAY, JUNE 22

The first part of your summer assignment is simple. I am asking you to send me an introductory e-mail so that I may get to know you, your background, and your learning style. In the e-mail:

- a. Use clearly written, **full sentences**. Do not abbreviate words like you are texting a friend. Use **spell check!** This is a professional communication like you would have with a college professor, so let's practice for your rapidly nearing future!
- b. Address it to me at: bransom@oglethorpe.k12.ga.us
- c. Make the **Subject**: AP Bio: Introduction to <Insert Your Name Here>
- d. Begin the e-mail with a **formal salutation**, like "Ms. Ransom," or "Dear Ms. Ransom,"
- e. Now introduce yourself (the name you prefer to be called) and tell me a little bit about yourself, like:
 - What do you like to do (hobbies, sports, music, interests, etc.)?
 - Do you have a job? What/where?
 - Tell me a little bit about your family (Mom? Dad? Guardian? Siblings? Pets?)
 - What do your parents do for a living?
 - What do you want to do after high school? Career goal?
 - What did you like about your freshman biology class?
 - What science classes have you already taken? What science classes (other than AP Biology) are you taking this year?
 - What are you looking forward to the most in AP Biology?
 - What are you most anxious about in AP Biology?
 - What is your reason for taking AP Biology/What do you hope to get out of the class?
 - What other AP classes are you taking in 2013-2014?
 - Take a free online quiz to determine your learning style and tell me what it is (suggested sites: <http://www.howtolearn.com/learning-styles-quiz>, <http://www.educationplanner.org/students/self-assessments/learning-styles.shtml>, <http://www.vark-learn.com/english/page.asp?p=questionnaire>, or google others)
- f. End the e-mail with a **formal closing**: "Cordially", "Sincerely", "Warm regards", etc. and add your name as if you signed a letter.

PART 2:

DUE DATE: THURSDAY, AUGUST 8 (FIRST DAY OF SCHOOL)

An important part of the AP Biology exam is the "free response" section. In this section you will be given a question with multiple parts and be asked to write your answer in an essay format. We will practice this throughout the year and there will be free response questions included on each of your tests. In order to practice with this question format as well as review basic biochemistry, I am asking you to gather **information** on two typical AP Bio topics. You may go to internet, books, and

previous class notes for information about these two topics. Bring your **ideas and HANDWRITTEN notes** to class for a simulated AP essay question. You will be asked to look over your notes one last time, and then write a sample essay answer in class. **This will take place on the first day of class!** I will give you 20 minutes for writing your essay. **This is not a research paper.** Your essay will be used as a sample so you can grade yourself and others with an AP Biology style rubric. You will staple your notes or outline information to the essay when done. You will not get to use your information during the actual writing of the essay. I ask that your notes be handwritten for several reasons: (1) I want you to read information and *summarize* in your own words, not just copy and paste, (2) I want to make sure everyone does his/her own work, and (3) writing down information helps you remember it.

These are the two essay topics:

1. Describe the following five major groups of compounds that compose the human body. Include their functions in your notes, but focus on how their chemical structure promotes a human cell and a human body to function.

- a. carbohydrates b. lipids c. proteins d. nucleotides e. steroids/hormones

2. The unique properties (characteristics) of water make life possible on Earth. Select three properties of water and:

- a. for each property, identify and define the property and explain it in terms of the physical/chemical nature of water.
- b. for each property, describe at least one example of how the property affects the functions of living organisms (both plants and animals) in regards to their metabolism and maintaining homeostasis.

PART 3:

DUE DATE: MONDAY, AUGUST 12

Obtain and read a copy of *Your Inner Fish* by Neil Shubin (ISBN: 0307277453). You may check it out from the library, but I recommend purchasing your own copy (paperback or digital) so that you may make notes on it, bring it to class, and refer back to it later in the year. This book is packed with information that fits in nicely with the four “big ideas” of AP Biology: (1) Evolution, (2) Energy and Growth, (3) Information Storage and Transmission, (4) Biological Interactions.

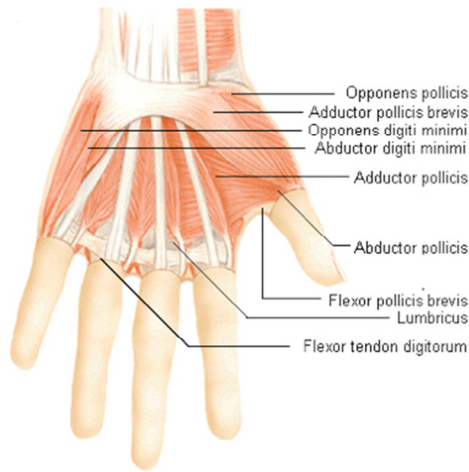
On the following page is a series of images, one for each chapter, that I will ask you to consider as you read. When you finish reading a chapter, write a **one paragraph** (6-8 sentences) explanation of how the image relates to the material in the given chapter. You may type your paragraphs into a single document or *neatly* hand-write them on lined notebook paper. Be sure you give each paragraph a clear heading that states the chapter number and title. This work should be entirely your own and an honest reflection of what you read in the book. **Do not try to cut corners by summarizing a review of the book that someone has posted online!**

DO NOT WAIT UNTIL THE LAST MINUTE TO COMPLETE YOUR SUMMER ASSIGNMENT! AP Biology will require a great deal of discipline and motivation, but will be an extremely rewarding experience, and I look forward to seeing you in the fall! Please e-mail me with any questions (bransom@oglethorpe.k12.ga.us). ☺

Chapter 1 Finding Your Inner Fish

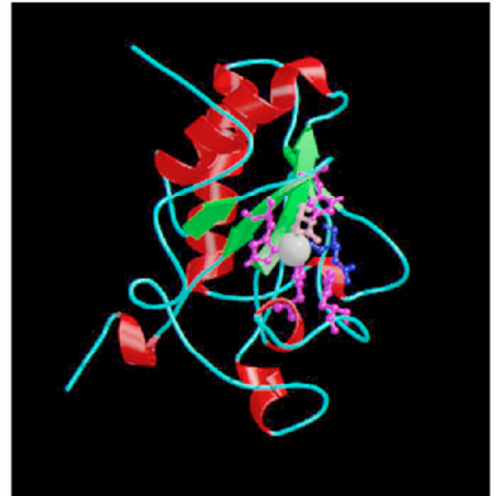


Chapter 2 Getting a Grip



Chapter 3 Handy Genes

SONIC HEDGEHOG GENE



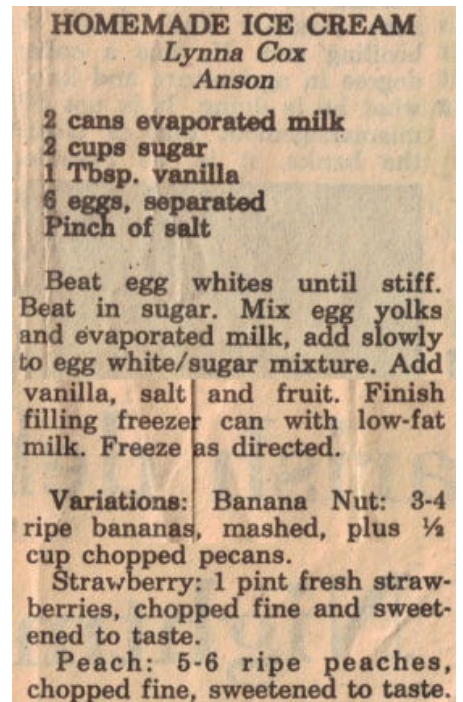
Chapter 4 Teeth Everywhere



Chapter 5 Getting Ahead



Chapter 6 The Best-Laid (Body) Plans



Chapter 7 Adventures in Bodybuilding



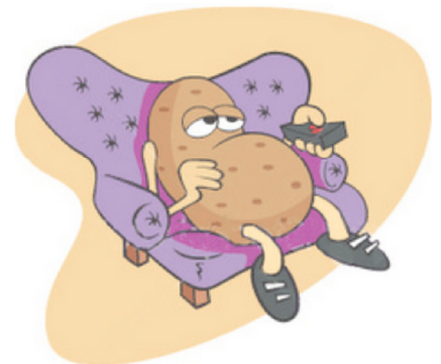
Chapter 9 Vision



Chapter 10 Ears



Chapter 11: The Meaning of it All



Chapter 8 Making Scents

