

AP BIOLOGY SUMMER ASSIGNMENT

Hello and welcome to AP Biology for the 2010-2011 school year. Though the class and material is difficult at times, hard work on your part and active participation in the class and discussions will help you succeed in both the class and the AP test in May.

As this is a rigorous and challenging course, you are asked to complete the following assignment to prepare yourself for the start of class. This will be due on the first day of class. In addition, there will be a test covering this material on the second day of class.

1. Read Chapters 1-4. Chapter 1 is an overview of A.P. Biology. Chapters 2-4 should be a review of the material covered in chemistry that will be woven throughout the A.P. Biology curriculum. Note: Especially with science texts, the saying “a picture is worth a thousand words” is true. Spend time deciphering what each graphic is illustrating.

2. Answer the questions at the end of each unit/section. Please make sure that each question is written and answered. This may be handwritten or done on the computer. Make sure that you understand all of the vocabulary in each of the sections so that you can understand the topics and concepts introduced from the beginning of class.

3. Answer the following essays in paragraph form. Each essay is a free response that should be completed in about 25 minutes (more of a .quick write. in complete supported sentences) and does NOT have to be completed in the 5 paragraph essay (or any other) format.

1. Chemical bonds are essential to building the .molecules for life.. In 3 paragraphs, describe the following bond types and how they are significant to life on earth: ionic, covalent (polar and nonpolar), hydrogen, and Van der Waals (interactions).
2. The unique properties (characteristics) of water make life possible on Earth. In 3 paragraphs, 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 one example of how the property affects the functioning of living organisms.
3. Carbon is a very important element in living systems. Describe the various characteristics of the carbon atom that makes possible the building of a variety of biological molecules thus life as we know it.

4. Be ready to work on the first day of school!

Study and work hard now so you won't feel behind or have to cram to catch up!