

# AP Biology 2018-19

## Mr. Fornaciari

---

Text: **Principles of Life**

\* **Please see Mr. Fornaciari to get a copy before the end of the year, or you may contact him at [dfornaciari@heights.edu](mailto:dfornaciari@heights.edu) to make arrangements.**

Examples for answering questions from summer and nightly reading:

### **Chapter 1:**

This chapter gives an excellent overview of the 5 major topics contained in the AP Bio Course. **Before** reading it, define the boldface words by section. Be sure to number this vocabulary. So define the boldface words for 1.1, then read the section, and take notes in an outline form. This should be done for each section in chapter 1; there are 5 sections.

-----

**All other chapters** will be done in the following manner. Define the boldface words by section, read the section, and then answer the questions for each section. The questions are called, "**Do You Understand Concepts?**" The questions will be done in a specific manner: answer the questions by restating the question; then box the answer or highlight it. Before the question is answered, give some background information that would help you answer the question. I call this background information, "notes." Chapters that need to be done for the summer are chapter 1 (outlined), and chapters 2, and 3.

You will need to buy a **spiral notebook** to do the **boldface vocabulary** and the **questions** and these assignments will be accepted **only** in the AP Bio spiral notebook. Skip the first page in the spiral notebook. In other words the first page of the notebook should **not** be written on. Write only on one side of the paper. The back side of the paper leave blank as this side is for something else; I will show you what in class.

### **Method for success:**

- \* define the boldface words
- \* review the boldface words defined before reading
- \* read the "do you understand concepts" questions
- \* read the captions and look at the pictures/diagrams
- \* now read the section
- \* answer the questions by restating the question and give some background information before the answer, the specific answer is underlined
- \* access the free on line resources - (may have to check with me) and use as necessary (note: does not work on safari; try firefox)
- \* **review/repetition** is the best way to make long term connections in the brain

**Turn Paper Over**

**Chapters 2 and 3 need to be completed as stated below.**

Example of answering questions:

Ch. 2.1

1.> atoms composed of smaller particles protons

>protons positive charge and a mass of about 1 Dalton,

>neutrons no charge and a mass of about 1 Dalton,

>electrons negative charge , very small insignificant mass.

> number of protons called atomic number.

>mass number sum of protons and neutrons.

>Atoms electrically neutral have same number of electrons as protons.

The arrangement of these particles is the protons and neutrons occupy the center of the atom called the nucleus and the electrons revolve around the nucleus in an orbit, called an electron shell. (**note:** the specific answer is boxed or highlighted)

> atom is mostly empty space.

>Shells may have 2 electrons to fill the first shell, or 8 electrons to fill all other shells.

>Atoms with full electron shells are stable and if the shell is not full the atom is reactive.

2. > octet rule says in atoms there is a tendency for atoms to want to have full outer shells.

> An outer shell may become full by sharing electrons or by gaining or losing electrons.

Na has 11 electrons so the outer shell has 1 electron and according to the octet rule the easiest way for Na to become stable would be by losing one electron. (**box** specific answer or highlight)

(Below would be a drawing of a Na atom.)

3.> Chemical reactivity of an atom depends on the number of electrons it has in its outer shell.

>As the octet rule says the atom would like to have a full outer shell and can share, give or receive extra electrons to become full.

If hydrogen had an extra neutron making it deuterium, it would have no affect on the electron shells. Therefore the addition of a neutron does not change the reactivity of the hydrogen isotope. (**box** or highlight specific answer)

You may copy these answers for chapter, 2.1 into your spiral and receive credit for the work.

Be sure to define the boldface words and read the section first.

Remember **questions should be answered in** the above manner.