Welcome to AP Biology! This is a college level course; it will be rigorous and demand your time both in and out of the classroom. All students enrolled in the course are required to take the AP exam in May in order to receive the weighted grade. Your work for this course will begin during the summer to ensure that everyone starts the class with the same prerequisite knowledge. Do not wait until the end of the summer to start this assignment. Start early, enjoy your summer, and look forward to an exciting year in AP Biology. Most importantly, don't punk out on me. Yes, it is a lot of work but you can do it! You will be astonished with what you are really capable of.

General procedures for taking notes on the Campbell text throughout the year:
Keep notes in a binder or a notebook.
1. Read the Key Concepts at the beginning of each chapter. The list of Key Concepts introduces the big ideas covered in the chapter.
2. We will focus on specific sections in each chapter. You will be assigned to read and take notes on those. Focus on vocabulary. It is not a bad idea to make flashcards on all of the vocabulary terms. Biology is heavy in vocabulary. The better you understand the terms, the better you will do in this class. We do not keep a vocabulary journal like in AP Psych but there are vocabulary quizzes as we go.
3. Look carefully at illustrations and read their captions. The old adage of a picture being worth a thousand words holds true for the Campbell text. This is a great source for your notes.

Key terms for answering questions (& FRQs)
Analyze - show relationships between events; explain
Compare - discuss similarities and differences
Contrast - discuss points of difference or divergence between two or more things
Describe - give a detailed account
Design - create an experiment and convey its ideas
Explain - clarify; tell the meaning; use evidence/reasoning
Predict - tell what you expect to happen when conditions change
Justify - explain why a response is reasonable

AP BIOLOGY: Summer Assignment due on the first day of class.
- Read each of the stated sections thoroughly for understanding.
- Take notes according to the general procedures listed on the front page. It will help with the test and I will collect these on the first day! Look at the pictures.
- Answer the questions in the chapters as well as the questions that follow on this assignment sheet.
- Email or text me during the summer if you have any questions about the reading content.
- This assignment is due the first day of class and it needs to be done well.
- You will be graded on organization (titles and subheadings!), content, and completion.
- Be sure to read this yourself, push through the questions, and come to class prepared with questions the first week of school.

Chapter/Section Read and Take Notes	**Topic**
2 - *You do not need to take notes or answer the questions in the book. This chapter is a review of what we did in 10th grade and you all did wonderfully. Just make a note If you have any questions or need a refresher.*	The Chemical Context of Life
3	Water & Life
4 /**4.1 Only**	Carbon and the molecular diversity of life
5	The structure and function of large biological molecules

Answer these additional questions:

<u>Chapter 2</u>

1. Define electronegativity.
2. Which elements have the highest and second highest electronegativity?

<u>Chapter 3 Properties of water</u>

3. How does electronegativity affect interactions between water molecules?
4. What are the four emergent properties of water that contribute to Earth's suitability for life?
5. Describe how different types of solutes dissolve in water.

<u>Chapter 5 Structure and function of biomolecules</u>

6. What is the fundamental basis for the differences among carbohydrates, proteins, and nucleic acid?
7. Compare the composition, structure, and function of starch and cellulose.
8. What role do starch and cellulose play in the human body?
9. Why are lipids not considered to be polymers?
10. Proteins are the most structurally and functionally diverse class of biological molecules. Explain the basis for this diversity.
11. What role does complementary base pairing play in the functions of nucleic acids?

Looking forward to a great year with you!
Mrs. Hopper