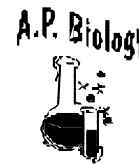


AP Biology: Summer Assignment



The information itself is not difficult there is just a great deal of it. The first four chapters of the book cover information that you should be familiar with from your previous experience in Biology and Chemistry. Remember the text is Biology 8/e AP* Edition by Campbell and Reece. Please email me at sfleming@olla.org if you have any questions.

- Ⓢ Read chapters 1-4
- Ⓢ Follow the instructions and answer the questions below pertaining to each of the four chapters.
- Ⓢ Be prepared to take a test on the first four chapters during our **second** block.

Chapter 1: Introduction: The Ten Themes in the Study of Life

1. What are the ten themes of Biology?
2. Give an example from biology that demonstrates each of the ten themes.
3. Differentiate between inductive and deductive reasoning
4. Define Hypothetico-Deductive Science
5. Explain Darwin's idea of descent with modification.

Chapter 2: The Chemical Context of Life

1. Describe the three subatomic particles?
2. Name the various types of chemical bonds and describe how they are formed.
3. What are the relative strengths of these bonds from strongest to weakest?
4. Complete the "Self-Quiz" at the end of the chapter.

Chapter 3: Water and the Fitness of the Environment

1. What is the importance of hydrogen bonding to the properties of water?
2. Why does water become less dense as it moves from 4⁰ C to 0⁰ C?
3. Describe four unique properties of water, and how each contributes to life on Earth.
4. Explain how to interpret the pH scale.
5. Explain the importance of buffers in biological systems.
6. Complete the "Self-Quiz" at the end of the chapter.

Chapter 4: Carbon and the Molecular Diversity of Life

1. What are the properties of carbon?
2. What makes carbon so important to life?
3. Define: Isomer
4. Define the different types of isomers i.e. structural isomer
5. What are the names of the different functional groups? What are their Chemical formulas?
6. Complete the "Self-Quiz" at the end of the chapter.

I am looking forward to seeing all of you in class in August. In the mean time enjoy your summer and start preparing for your Biology parties!!! ☺

I  **Biology!!**