

## Junior AP Biology Summer Assignment

Welcome to AP Biology! Since you have taken a year break from Biology, you will review your macromolecules using the guidelines below. You will be expected to take a quiz at the beginning of the school year.

**Part 1** Instructions: Create a graphic organizer to build your notes for the four macromolecules – carbohydrates, lipids, proteins, nucleic acids. You will need to include in your graphic organizer the following information:

- 1) Name of the macromolecule
- 2) Elements that make of the macromolecule
- 3) Name of the monomer
- 4) Sketch of the monomer
- 5) Show the reaction that creates the polymer; circle what is created from the chemical reaction
- 6) List the functions of each macromolecule
- 7) List examples of each macromolecule

In addition, you need to create a graphic organizer with the following information about water:

- 1) A sketch of a water molecule depicting the relative distribution of the electrons
- 2) Label what kind of molecule water is
- 3) List, define, and give an example of the various properties of water (adhesion, cohesion, surface tension, capillary action, heat capacity)
- 4) Define and give examples of hydrophobic and hydrophilic interactions

**Part 2** Instructions:

Purchase the following books:

The 5 Steps to a 5: AP Biology (ISBN-13: 978-1260122817)

Barron's AP Biology Test Prep Book (ISBN-13: 978-1438008684)

**Bonus:** Did you have a connection with Biology this summer? Maybe you snorkeled and observed diversity at a coral reef, helped in a beach clean-up, etc. Send me a pic of you interacting with biological components along with an explanation. If I get enough pictures, I would like to create a collage of Nease's IB students interacting with biology outside of the classroom.

Lastly, enjoy your summer! I can't wait to meet you all.