John Jay High School
AP Biology

Summer 2018

Dear Future AP Biology Students:

Welcome to AP Biology! It is hard to imagine that the school year is coming to a close and it is time to think about the 2017-18 school year. I am looking forward to a great year of AP Biology with a fantastic group of students. AP Biology is a challenging but very rewarding course and we will have a great year together.

To get off to a good start, you will need to complete a summer assignment. The assignment is posted on the school website, and also posted on the calendar and in the feed of the AP Biology home page on echalk. IF you registered for AP Biology after May 15th, please be sure to send an email so I can add you to the echalk AP Biology class.

Contact Ms. Lipisnky at alipinsky@klschools.org if you have questions or need assistance.

Please bring the completed summer assignment with you on the first day of school-even if there are shortened periods. The assignment is tightly connected to ecology, our first unit of study and it counts towards your first quarter grade (part of class participation grade), but we will discuss grading in detail when school starts.

Have a great summer!
Sincerely,

Ms. Lipinsky
AP Biology Teacher

ps
On the first day bring:
completed summer assignment/ annotated articles
loose leaf binder
composition note book for labwork (must be a bound composition notebook--no spirals)
pens/pencils

AP Biology
Summer Assignment

1. Read and annotate 3 articles –links below and on echalk
2. Go to **Protein Data Bank Molecule of the Month** and complete assignment (details below)
3. Build your Observation Skills by completing two of the listed activities.

**we are scheduled to get an new edition of the textbook this year-so no work for summer from textbook

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1. Read and annotate the following articles. You can access the articles by clicking on the link provided or by logging into echalk. This work is due on the first day of school, even if it is just a shortened day.

Here are the directions for annotating:

a) Gather your supplies. Annotation requires the use of highlighters as well as pens and pencils. Utilize a small pencil case to store all your annotating supplies. Sticky bookmarks and post it notes are also helpful to have on hand, although they are not necessary.

b) Read the first paragraph in the article or assignment and pick out the main idea. What sentence effectively sums up what the passage is saying? Underline or highlight it. Do this for the entire page.

c) Read over the highlighted main ideas and write a short summary of them in the margins. Use a pencil or a pen, and turn the book sideways to get more margin space for taking notes.

d) Pick out other important ideas in the passage such as recurring words, phrases or themes. Identify important scientific/biological terms and define them in the margins. Circle the main word or phrase the page in that article discusses. This will help you identify what the main concepts are when skimming the passage for review for a test or exam.

e) Continue with the remaining assignment pages. You have just learned how to annotate!

Tips:

- Use different pen colors or highlighters for specific purposes.
- Box an important passage or underline with a wavy line to make another one stand out.
- Study notes and underlined portions for test and exam preparation
- Do not overburden the page with so many notes that is becomes difficult to read or study from. Pick out only main ideas.

Articles: you can access through the library media center by logging in from home, or access pdfs from the AP Biology echalk home page.

Fountain, Henry. "Forests Protect the Climate. A Future With More Storms Would Mean Trouble." *The New York Times*, The New York Times, 7 Mar. 2018, www.nytimes.com/2018/03/07/climate/forests-storms-climate-change.html.

Martin, Ronald. "Tiny Plants That Once Ruled the Seas." *Scientific American*, www.scientificamerican.com/article/tiny-plants-that-once-ruled-the-sea/.

Zalasieweiz, Jan. "What Mark Will We Leave on the Planet?" *Scientific American*, Sept. 2016, pp. 31–37.

2. **PDB Molecule of the month archive**: http://www.rcsb.org/pdb/101/motm_archive.do go to this website and explore one of the molecules from this page. These molecules relate to our work in AP Biology, but you can choose any molecule you like: Think about choosing an ecologically important biological molecule, or go with a classic: DNA Polymerase, zinc fingers, catalase, pepsin, rubisco, ATP Synthtase, aquaporins, sodium-potassium pump, insulin, G proteins. Take notes on your molecule and print a picture of the molecule. Be sure to get even more detail from the "Exploring" your molecule section at the bottom of the page. Print a picture of your molecule to turn in with your notes.

3. **Building your Observation Skills-keep an observation journal**

Keep an Observation Journal and make 3 entries. You may use any of the following: backyard, park, lake or pond, river, beach, town, in city, zoo.... One entry must be on an animal-you have lots of flexibility-anywhere you are observing nature is a good choice. Observe in three different settings. Record observations of nature in both in writing and by creating drawings. Label and record everything you see. Make inferences, include conjectures, thoughts, and questions. Spend a minimum of 20 minutes for making each of the three observation entries. Follow these guidelines:

- one sheet of paper MINIMUM (you can do more) per entry
- you can record your observations on separate sheets of paper, or if inspired, get a small notebook with unlined pages.
- include the date, the location, the time of day, and the weather
- Include a sketch or several sketches, may support with photos that you take and print if you like
- include information about texture, color, shape, patterns,
- include counts of organism, estimated sizes, or measured sizes
- write descriptions of what you see
- make inferences, include conjectures, thoughts, and questions,
- Support inferences made with facts/observations/concrete evidence
- when observing an animal consider:
    - the size and shape of the animal's body
    - observations about the animal's body surface, including color, and how that might relate to its environment
    - what it eats
    - how it moves
    - how it relates to other animals
    - how it relates to anything else in its environment

Have a great summer! I am looking forward to working with each of you in September.