

June 21, 2021

Dear AP Biology class 2021-22,

Welcome to Advanced Placement Biology. This course is a wonderful opportunity to receive college credit while still attending high school. Please understand that this course is a survey class of college biology and will require at LEAST one hour minimum prep time each night.

The summer assignment must be handwritten and ready to turn in on the 1st day of School, Wednesday, September 1st.

Summer Assignment:

Read Chapter 1: Evolution, the Themes of Biology, and Scientific Inquiry

Please answer the **Testing Your Understanding** questions: #1-8

#13: Please answer the **Synthesize Your Knowledge** question on the gecko.

Read Chapter 2: The Chemical Context of Life

Please answer the **Testing Your Understanding** questions: #1-8.

#11: Please answer the **Scientific Inquiry** question on luna moths.

Read Chapter 3: Water and Life

Please answer the **Testing Your Understanding Questions: #1-5**

#9: Please answer this **Scientific Inquiry** question. Please design a controlled experiment to test the hypothesis that water acidification caused by acid rain would inhibit the growth of *Elodea*, a freshwater plant.

Read Chapter 4: Carbon and the Molecular Diversity of Life

Please answer the **Testing Your Understanding Questions: #1-7.**

#10: Please answer the **Scientific Inquiry** question on enantiomer.

#12: Please answer the **Synthesize Your Knowledge** question.

Read Chapter 5: The Structure and Function of Large Biological Molecules

Please answer the **Testing Your Understanding Questions: #1-8.**

#9: Please **Draw it.**

#12: Please answer the **Connect to Big Idea 4** question.

AP Biology curriculum is based on the four big ideas:

BIG IDEA #1: The process of evolution drives the diversity of life.

BIG IDEA #2: Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic equilibrium.

BIG IDEA #3: Living systems store, retrieve transmit, and respond to information essential to live process.

BIG IDEA #4: Biological systems interact and these system and their interaction possess complex properties.

To better understand these BIG IDEAS, I have given you four articles to read.

NOTE: YOU NEED A LIBRARY CARD TO COMPLETE THIS PART OF SUMMER ASSIGNMENT!!

For each article, please write a one or two paragraph summary of the article. Include two (2) terms and definitions that you learned from the article.

Underline your words and your definitions.

BIG IDEA #1 Scientific American The Real Dilophosaurus January 2021

BIG IDEA #2: Scientific American The Immune Havoc of COVID-19 January 2021

BIG IDEA #3 Scientific American Finally Making Sense March 2020

BIG IDEA #4: Scientific American Coral Cocktails May 2021

All work is due on Wednesday, September 1st.

Questions? Send an email to TVella@millerplace.k12.ny.us

Looking forward to a great year!

Love,

Mrs. Vella

Here is a link to share with AP Bio students that contains directions on how to access SA articles from public library and links to public library site.

<https://wke.lt/w/s/4hehjj>