

AP Biology Summer Assignment 2022 Welcome to AP Biology!

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The main goals of AP Biology are to help you develop a conceptual framework for modern biology and to gain a deeper appreciation of science as a process (as opposed to an accumulation of facts). Because of the rapid pace of discovery in the life sciences our primary emphasis is on developing an understanding of unifying concepts that connect the major topics of biology. The AP Biology Curriculum centers around the four Big Ideas and you will need to not only know these but also understand how they all relate to each other.

Primary emphasis will be on developing an understanding of concepts rather than on memorizing terms and technical details. Essential to this conceptual understanding are the following:

- A grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry
- Recognition of unifying themes that integrate the major topics of biology
- Application of biological knowledge and critical thinking to environmental and social concerns.

Be prepared to work very hard and diligently in this course. AP Biology is very demanding and requires you focus, study, and actively participate in every class. This is the key to scoring well on the AP Biology Exam.

AP Biology is organized around four “Big Ideas”: Know these well!

- Big Idea 1: Evolution
The process of evolution drives the diversity and unity of life.
- Big Idea 2: Cellular Processes: Energy and Communication
Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis.
- Big Idea 3: Genetics and Information Transfer
Living systems store, retrieve, transmit, and respond to information essential to life processes.
- Big Idea 4: Interactions
Biological systems interact, and these systems and their interactions possess complex properties.

While the units that we will cover are each primarily linked to one of these units, we will always seek connections with the other Big Ideas to emphasize the complexity of life, and Evolution is the anchor for everything else. Evolution is truly the driving force for life as we know it, and so your summer assignment will refresh your understanding of the concepts necessary to examine life through the lens of evolution.

We are using a new textbook for AP Biology this year. This is the first one to be totally dedicated and aligned with the present AP Exam format, as such it is very useful and relevant. We will not just be using the book; however, it is an integral part of the course.

TEXT PURCHASE:

On JC eCampus site.

Biology for the AP Course, Morris et al. BFW Publishers (2022)

Needed for the summer work, so get it soon!

Email me all work using MS Word files. Email is aketchum@johnncarroll.org

Assignment One: Due July 20th.

Unit 1, Module 0.

Read pp. 1-13

Answer each Concept Check question and put in your document. Purple boxes in text. Page 5 and 11. Use full sentences.

Answer Review Questions, multiple choice, p. 15.

Page 16-17, AP multiple choice and FR. Write in full sentences for FR.

Read through Statistical Functions section p. 20-21.

Assignment Two: Due August 15th

Unit 1 Module 1

Read pp. 26-39.

Answer each Concept Check question and put in your document. Purple boxes in text. Page 27, 32, 36, 39. Use full sentences.

Answer Review Questions, multiple choice, p. 40.

Page 41-42, AP multiple choice and FR. Write in full sentences for FR.

Assignment Three: Due August 30th

Unit 1 Module 2

Read pp. 43-52.

Answer each Concept Check question and put in your document. Purple boxes in text. Page 46, 50, 51. Use full sentences.

Answer Review Questions, multiple choice, p. 52-53.

Page 53, AP multiple choice and FR. Write in full sentences for FR.