

AP Biology Summer Assignment

Go to Google Classroom and join the course webpage using this code: **cdkq2q**

Once logged on, go to the course information link on the left and follow the instructions there to sign up for **Remind** messages and for **EDpuzzle**. Logging into these is your first assignment for the course and will be a component of your grade. Logins **Due: Friday June 8th**.

Second, you will need to purchase the following books:

1. **Textbook: Principles of Life**
 - ISBN-10: 1-4292-9117-6 or ISBN -13: 978-1-4292-9117-0
*if you wish, you may purchase the eBook instead of the hard copy. Please keep in mind that if you buy the eBook, I expect you to have a tablet, laptop, or other device, that you can readily bring to class with which to read the text.
2. **Survival of the Sickest by Dr. Sharon Moalem**
 - ISBN-10: 0739487388 or ISBN-13: 978-0739487389
3. Any **AP Biology test prep book** published in the last two years. While this is **not required**, it is strongly recommended.

You will have two parts to your summer assignment. The goal of these two parts is to: 1) get you thinking about the world around you in a critical manner (especially when it comes to biology) and 2) to reintroduce you to the basic concepts involved in Biology.

These assignments are significant in terms of time required. You should start working on them as soon as possible. **DO NOT WAIT!** You will have numerous due dates throughout the summer. Order the books now. Here is a brief breakdown of the two parts.

1. Survival of the Sickest: critical reading and online discussion posts with responses
2. Principles of Life (POL) chapters 1 & 2 with Google Classroom review questions and EDpuzzle videos

Assignment Information

Part I: Survival of the Sickest (SotS)

It's really a fascinating book. I suggest taking your time while you read each chapter to allow yourself the opportunity to fully understand and comprehend the connections that Dr. Moalem makes. Take notes in the margins. Highlight scientific terms. Identify definitions from the text. Look up the words you don't know (I certainly had to look up a couple). Use post-its. GET INVOLVED IN YOUR READING OF THIS BOOK!

Instructions: While reading the book, you will be engaging in discussion prompts via Google Classroom. You will need to post your answer to the question *AS A CLASS COMMENT* so that your peers will be able to see and respond. You will need to respond to each question by the date indicated. Your response can be written or you can post a video of you answering the prompt (make a video, save to youtube, and post the link as a comment). There are two due dates for each question, the first is your answer, the second is your response to your classmates' posts (*you must respond to 2*).

Question #1: Before you read

Post a class comment to the question below By June 18th

Due June 18th: Question #1: Before you read the book, discuss your thoughts on the connection (if any) between evolution and disease. In other words, how can disease influence the evolution of organisms? Do any questions come to mind about this topic? What would you like to know more about?

Due June 21st: Peer responses should address the ideas and questions.

Question #2: Chapter 1-4

Post your answer to the question below as a class comment. You must respond to two (2) of your peers' comments by July 5th.

Due July 2nd: Question #2: Answer **one** of the following questions. *You have choice here.* So please choose one that was the most interesting to you. Your responses need to be thoughtful and comprehensive.

Chapter I: Ironing it out, p. 1

A. In the context of this chapter, explain the author's reference to Bruce Lee and to the barber pole.

Chapter II: A spoonful of sugar helps the temperature go down, p. 23

B. Describe the body's "arsenal of natural defenses" against cold.

C. Describe the connection between *Rana sylvatica* and diabetes.

Chapter III: The cholesterol also rises, p. 49

D. Why do we need Vitamin D? Cholesterol? Folic acid?

E. Briefly describe the connection between the two concepts: Hypertension & slave trade.

F. Explain the good and the bad of ApoE4.

Chapter IV: Hey, bud, can you do me a fava?, p. 71

G. Explain the role of G6PO.

H. Briefly describe the connection between the two concepts: European clover & Australian sheep breeding crisis of the 1940s OR: Fauvism & fava beans.

I. Explain the following statement found on page 87: "Life is such a compromise."

Due July 5th: Peer comments should pick up where the post leaves off. What's next? What questions do you still have?

Question #3: Chapter 5-8

Post your answer to the questions below as a class comment. You must respond to two (2) of your peers' comments by July 19th

Due July 16th: Question #2: Answer **one** of the following questions. *You have choice here.* So please choose one that was the most interesting to you. Your responses need to be thoughtful and comprehensive.

Chapter V: Of microbes and men, p. 95

A. Identify 3 ways in which microbes/parasites move from host to host.

B. What is our advantage in the survive-and -produce race?

Chapter VI: Jump into the gene pool, p. 125

B. Briefly discuss the following terms/scientists: antibodies, B-cells, "junk DNA", Lamarck.

C. Humans have about 25,000 genes and more than a million different antibodies. How is this possible?

D. What is a persisting virus?

Chapter VII: Methyl madness : road to the final phenotype, p. 155

E. Epigenetics may be partially responsible for the childhood epidemic of obesity. Explain.

F. “Good times mean more boys. Tough times mean more girls.” Explain.

Chapter VIII: That's life : why you and your iPod must die, p. 183

G. Make connections between the following terms: Hayflick limit & telomeres OR Cancer cells & stem cells OR risky child birth & big brains and bipedalism

H. Identify the 5 lines of cancer defense.

Due July 19th: Peer comments should pick up where the post leaves off. What’s next? What questions do you still have?

Part II: Principles of Life; Chapters 1 & 2

Due July 27: Watch the Chapter 2 videos on EDpuzzle

Due Aug 3: Read Chapters 1&2 from your Principles of Life text (henceforth known as POL).

Due Aug 3: Go to Google Classroom and answer the chapters 1 & 2 review questions on the Google Doc.

Due date breakdown:

Assignment	Where to find	Due date (by midnight)
Join Google Classroom	Google Classroom	June 8
SotS Question #1 (before you read) Your post	Google Classroom	June 18
Question #1: 2 responses	Google Classroom	June 21
SotS Question #2 (Ch 1-4) Your post	Google Classroom	July 2
Question #2: 2 responses	Google Classroom	July 5
SotS Question #3 (Ch 5-8) Your post	Google Classroom	July 16
Question #1: 2 responses	Google Classroom	July 19
Ch 2 videos on EDpuzzle	EDpuzzle	July 27
POL Ch 1 & 2 reading and review Qs	Google Classroom	Aug 3