

MS. STEINBERG
MR. MEENAN
MS. YOO

AP BIOLOGY

Independent Summer Reading Assignment- 2021

Survival of the Sickest

by *Dr. Sharon Moalem*

Welcome to AP Biology, a comprehensive walk through the science of life!

This is not an easy course; the curriculum is demanding and the pace is swift. To help improve your scientific reading comprehension abilities you will be expected to complete a significant amount of independent work including reading the textbook, scientific articles and book excerpts. Before the course begins, you will read the book Survival of the Sickest by Dr. Sharon Moalem. (*New and used copies can be found at the library or on [Amazon](#) for under \$10*). The ideas presented will be revisited myriad times throughout the year; it is imperative that you read the book in its entirety and complete this project *independently*.

Reflection Project

Part 1—*Slideshow* (60 pts)

Many of us regard disease as entirely destructive, but we are now learning that reality is more nuanced. According to Dr. Moalem: “*Life is such a compromise.*” For each of the four diseases listed, you will be creating one slideshow to illustrate and present the following *in detail*:

- * **Hemochromatosis**—*Chapter 1*
- * **Diabetes** (*Type 1*)—*Chapter 2*
- * **High cholesterol**—*Chapter 3*
- * **G6PD deficiency/favism**—*Chapter 4*
 - a description of the disease
 - causes- genetic and/or environmental
 - specific symptoms and physiological effects
 - treatment options
 - the historical perspective of the disease- *includes prevalence and geographic distribution*
 - the evolutionary advantage of the disease (*depending on time and place*)

Rubric

- You have presented sufficient, detailed information on each of the four diseases
- Your slides are well organized and aesthetically pleasing (*large images, colorful, etc.*)
 - ◈ Create your slideshow as if you would be presenting to an audience who has never heard of the disease

Part 2—Written Response- approximately 2 pages (30 pts)

As long as there have been organisms on Earth, there have been symbioses, close relationships between species. Whereas there are many mutualisms that we will explore throughout the year, *Chapter 5* focuses on parasitic relationships.

- ◆ Using at least *two* examples from the book, explain the concept of **host manipulation** by describing the intricate relationship between the success of the parasite's life cycle and the behavior of its host.
 - Research and describe one parasite-host relationship that you find interesting which is not included in this book.

Rubric

- * Adhering to the specified format: *1.5 spacing, 12-point font, 1" margins.*
- * Composing fully developed answers that you wrote independently.
 - You will be submitting through *turnitin* so the expectation is that the work is your own.
- * Writing with proper spelling, grammar, punctuation, etc.
 - Proofread before submitting your final version.
 - **Hint:** when writing a scientific name, you should *italicize*; capitalize the first word, the genus, but not the second, the species.
Ex. *Homo sapiens* or *Canis lupus*
- * Inclusion of appropriate outside scientific resources (*articles from scientific journals, newspapers or magazines; websites that end in .gov., .edu*).
 - Include a Works Cited page and incorporate internal citations according to APA format.

Part 3—In Class Discussion- Be prepared to answer the following with your peers in the second week of school (10 pts)

- ◆ What were a few things in this book that you personally found interesting and/or that changed your mind about something you thought you knew already?
- ◆ Based on your reading and reflection, what are some things you still wonder about? Create a list of questions that the book elicited that you are hoping we address in the course.

Due: *September 15, 2021*

Your teacher will specify whether you should hand in a hard copy or submit via Canvas or Google Classroom.