June, 2024

Dear AP Biology Student,

I am pleased to know that you are taking AP Biology next year. It will be a fast-paced and challenging year but with some early preparation, you will be successful in the course. The course syllabus and curriculum includes several laboratory activities and fifty-six chapters in the textbook. The assigned text is **Biology**, Twelfth Edition by Campbell and Reece, which will be handed to you before we break for the summer.

In order to help ease the course load during the academic year, six chapters are being assigned to you as summer study / reading. You will be tested on your knowledge when you return to school. This test will count toward your first marking period grade.

Biology is a very dynamic subject. Textbooks become obsolete almost as soon as they are published, because science is progressing in leaps and bounds. For that reason, I recommend that you use the textbook to plan and structure study time, rather than as the sole source of knowledge. I encourage you to read science articles from the New York Times (Science Times), Nature, Science, Scientific American and other journals to keep abreast of advances in the biological sciences. This will allow you the opportunity to witness real science that changes, evolves and solves problems, instead of reading staid information in a static text.

You are therefore also being given a reading assignment. You should read one book from each of the two attached lists (Fiction and Non-fiction) and be prepared to present and discuss the books in class with your classmates in September. This will be counted as a MP1 quiz grade. The assigned books will enrich your learning experience by offering different perspectives on the topics we will cover over the course of the year.

To succeed in this course, you should practice good study habits including reading the chapter being covered, being attentive in class and exercising good note-taking skills. Watching science news, reading science-related articles and books will give you an added advantage and make our classroom discussions interesting. I look forward to working with you in September.

Sincerely,

Mrs. A. Thadani

Bergenfield High School

AP BIOLOGY SUMMER READING ASSIGNMENT

1. Study **chapters 51-56** in the Campbell Textbook (12th edition). I recommend the following sequence for the best results:

a. Read the chapter
b. Use the Lecture notes on the AP Biology website for extra help
c. You can also access the Chapter slides and many other resources by registering to my Google Classroom
d. Review the summary section at the end of each chapter
e. Take quiz at the end of each chapter in textbook

You will be given a test on chapters 51 – 56, during the first week of school.
This test will count toward your first marking period grade.

2. You must also read ***at least one book*** from the two lists provided (So one fiction and one non-fiction):

FICTION

Andromeda Strain, Michael Crichton. 1969. New York: Knopf, Random House.
A returning space capsule releases an alien virus on the earth.

Contact, Carl Sagan. 1985. Contact deals with the theme of contact between humanity and a more technologically advanced, extraterrestrial life form. It ranked No. 7 on the 1985 bestseller list.

Chromosome 6, Robin Cook. 1992. Chromosome 6 is a prophetic thriller that challenges the medical ethics of genetic manipulation and cloning in the jungles of equatorial Africa, where one mistake could bridge the gap between man and ape--and forever change the genetic map of our existence.

Clan of the Cave Bear, The, Jean Auel. 1980. New York: Crown.
Human evolution at the level of the Cro-Magnon / Neanderthal junction.

Boys from Brazil, The, Ira Levin. 1976. New York: Random House.
Dr. Mengele attempts to produce cloned copies of Adolf Hitler, but in order to do so he must reproduce the environmental factors which made Hitler the evil genius that he was; deals intelligently with the fashionable subject of cloning.

Jurassic Park, Michael Crichton. 1990. New York: Alfred A. Knopf.
This fictional account of a theme park featuring dinosaurs cloned from DNA in mosquitoes fossilized in amber lends itself to many interesting discussions of genetic engineering, ethical issues, and chaos.

NON-FICTION

Fabric of the Cosmos, Brian Green
This book chases the elusive unifying theory by exploring the properties of nature's most fundamental particle – a miniscule, vibrating, string of energy. It also explains quantum physics, the theory of relativity and the space-time continuum.

The Immortal Life of Henrietta Lacks, Rebecca Skloot, Henrietta Lacks, as HeLa, is known to present-day scientists for her cells from cervical cancer. She was a poor Southern tobacco farmer who worked the same land as her slave ancestors, yet her cells were taken without her knowledge and still live decades after her death. Cells descended from her may weigh more than 50M metric tons.

The Third Chimpanzee: The Evolution & Future of the Human Animal, Jared Diamond. We human beings share 98 percent of our genes with chimpanzees. Yet humans are the dominant species on the planet -- having founded civilizations and religions, developed intricate and diverse forms of communication, learned science, built cities, and created breathtaking works of art -- while chimps remain animals concerned primarily with the basic necessities of survival. What is it about that two percent difference in DNA that has created such a divergence between evolutionary cousins? In this fascinating, provocative, passionate, funny, endlessly entertaining work, renowned Pulitzer prize-winning author and scientist Jared Diamond explores how the extraordinary human animal, in a remarkably short time, developed the capacity to rule the world . . . and the means to irrevocably destroy it.

The Emperor of All Maladies, Siddhartha Mukherjee. The Emperor of All Maladies is a magnificent, profoundly humane "biography" of cancer—from its first documented appearances thousands of years ago through the epic battles in the twentieth century to cure, control, and conquer it to a radical new understanding of its essence.

The Hot Zone, Richard Preston. This work of nonfiction is more terrifying than any sci-fi nightmare. A highly infectious, deadly virus from the central African rain forest suddenly appears in the suburbs of Washington, DC. There is no cure. In a few days, 90 percent of its victims are dead. A secret military SWAT team of soldiers and scientists is mobilized to stop the outbreak of this exotic "hot" virus. The Hot Zone tells this dramatic story, giving a hair-raising account of the appearance of rare and lethal viruses and their "crashes" into the human race. Shocking, frightening, and impossible to ignore, The Hot Zone proves that truth really is scarier than fiction.

Genome: the Autobiography of a Species in 23 Chapters, Matt Ridley. The human genome, the complete set of genes housed in twenty-three pairs of chromosomes, is nothing less than an autobiography of our species.

The Singularity is Near: When Humans Transcend Biology, Ray Kurzweil
A thrilling foray into the future, he envisions an event—the "singularity"—in which technological change becomes so rapid and so profound that our bodies and brains will merge with our machines.

Prepare to do a presentation of the books you read for your classmates