

Name: _____ Period: _____

AP Bio Winter Reading Assignment

In this assignment, you'll read a recent popular book with ties to our curriculum.

You'll prepare a presentation for your colleagues and a letter to the author.

- 1) **Select a biology-themed book and tell me which one you're picking so I can approve it (see Canvas).** It must be a non-fiction chapter book marketed to adults. See below for a list of suggestions that vary in terms of reading difficulty, writing style, complexity/technicality, etc.
 - For this assignment, **the author must still be living. Check online to make sure!**
 - This should be your individual selection. It's okay to read the same book as your besties, but you should be fired up enough that you'll be motivated to read it yourself.
- 2) Get your hands on it and **read it**, either in text or as an audiobook. I ordered many of these books to our school library, and nearly all of them are available electronically or in print from mcpl.info.
 - Yes, you could use Wikipedia or beg a friend to summarize a text for you, but when else in school are you going to get to pick a book on a topic that interests you (sigh)?
 - Plus, you'll be writing the author; please do not embarrass yourself :)
- 3) On the due date in January, please submit the following individual assignments to the appropriate places on Canvas. **You do not need to bring a copy of the book.**
 - You'll be giving a presentation in January (video? In person? Stay tuned!). For now, create a **Google slideshow**, with sharing set to "anyone with the link can view," or **Powerpoint file**. You'll be using these slides to share a **five-minute oral presentation about the book with a colleague**, and the slides should be formatted as follows.
 - SLIDE 1: Create a **Title slide** with an image of the cover of the book (you can get this from Amazon or another internet site.), the Title and author's name and of course—your name as reviewer.
 - SLIDE 2-7: Choose **5-6 images** that will guide you in summarizing your book or reflecting on your book. Put only one image on each slide. NOTE: these slides should NOT contain words—only pictures or images or diagrams.
 - SLIDE 8-9: Choose **2 quotes** from the book that resonate with you—they should each be put on their own slide.
 - Keep the image slides and quote slides in order for evaluation purposes.
 - SLIDE 10-11: The AP Biology curriculum is based on the four Big Ideas on the next page. **CHOOSE 2** (of the four) that are presented in some way in your book. Put each one on its own slide and be prepared to describe how your book connects to each.
 - SLIDE 12(-14): Create 1-3 slides to reflect on your book. Did you like it? Did you learn anything new and interesting? Did it change your perspective on a topic that you care about? Explain and justify your points of view! You have complete flexibility here—use an image, a quote, a diagram, your own words ...whatever you wish to tell what you thought of this book. Ultimately, this will be where you recommend or don't recommend this book to your classmates.

- **A letter to the author, at least 200 words, in .docx format.** Your letter must include a substantial question or comment about a topic in the book that is past the first fifty pages.
 - Part of science, and adulthood, is learning to be in conversation with people whose work you read. This begins to model the nested skills of comprehension and communication required.
 - **I will select a subset of your letters at random and send them to the author with your name as the author.**

Pick something you think you'll like! Start a reading group with your sibling! Have fun!

THE FOUR BIG IDEAS IN BIOLOGY

Big Idea 1: The process of evolution drives the diversity and unity of life.

Big Idea 2: Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis.

Big Idea 3: Living systems store, retrieve, transmit, and respond to information essential to life processes.

Big Idea 4: Biological systems interact, and these systems and their interactions possess complex properties.

Here are some books I think you'd like:

- ***Lab Girl*:** Hope Jahren sure can write. This book is many things; the exploration of one scientist's career; a love letter to her longtime collaborator, Bill, and trees; and a meditation on families and mental health and how they shape our experiences.
- ***Woolly*:** Ben Mezrich made the real-life story of remaking woolly mammoths into this book that reads like *Jurassic Park*.
- ***The Emperor of All Maladies*:** The definitive biography of cancer by Siddhartha Mukherjee. A long read, but it'll leave you stunned. His other book *The Gene* is also interesting.
- ***Soul of an Octopus*:** Sy Montgomery explores the emotional worlds of the octopus and the human. If you're interested in animal intelligence, you might also check out ***Mama's Last Hug*** by Frans de Waal or ***What a Fish Knows*** by Jonathan Balcombe.
- ***Immune*:** Catherine Carver learns how your body protects and defends you.
- ***Mothers and Others: The Evolutionary Origins of Mutual Understanding*:** Sarah Blaffer Hrdy on the roots of human community, child care, and the ways we take care of each other.
- ***Being a Beast*:** Charles Foster gets down and dirty, then writes hilariously and movingly about it, in this lyrical, easy-to-read book. Highlights include trying to live in a manmade badger hole with his middle schooler for a few weeks.
- ***The Great Influenza*:** Terrifying WWI nightmare about a virus we take for granted by John M. Barry. A very historically-minded read.
- ***The Serengeti Rules*:** Sean B. Carroll (anything by him is great) tells parallel tales about regulation of information in medicine ... and in ecology. Includes some fascinating tales from tidepools and, yes, the Serengeti.
- ***The Songs of Trees*:** David G. Haskell writes haunting narratives, grounded in sonic landscapes near specific trees, of the interconnectivity of the living world and our place in it.

- ***I Contain Multitudes:*** Ed Yong kills it in a romp through microbial life in us and other animals. His perspective redefines ideas in medicine, ecology, and philosophy.
- ***The Human Advantage:*** Suzana Herculano-Houzel asks, from an evolutionary perspective: why us?
- ***Human Errors:*** Nathan H. Lents's accounting of the physical imperfections, from pointless bones to broken genes, that make us human.

More suggestions follow in the digital version of this assignment!

You'll need to format your letter appropriately. See below for a checklist.

HOW TO EMAIL A TEACHER

1 SUBJECT LINE
2-5 word summary of the email

- Missing Grade
- Homework Question
- Late Work

4 CLOSING

- Thank you
- Have a nice day!

2 BEGIN WITH A GREETING

- Good Morning
- Hello
- Good Afternoon

This is in the body of the email

5 SIGN YOUR NAME!

General Tips:

- Be sure to use proper capitalization & punctuation.
- Always use proper grammar.
- Plz spell out ur words.
 - Please spell out your words.

See also the formatting below the email envelope on this graphic for formatting details:

HOW TO EMAIL A TEACHER

1

Subject Line

Your subject line should be a short summary of your email (2-6 words).

Examples:

"Missing Assignments"
"Technical Difficulties"
"Late Work"

2

Say Hello

Just like you would in person, say "Hello" first.

Examples:

"Hi [Name]."
"Good morning, Mrs. Gracey."
"Greetings!"

To: myteacher@myschool.org
Subject: Missing Assignment

Good Morning,

I am emailing you because I have already turned in my book report. However, it still shows that I am missing the assignment in the grade book. Can you tell me if you have received it?

Thank you for checking on this.

Tommy Smith

go.tcea.org/email

3

Why Are You Emailing?

Tell the teacher why you are emailing them. Include any relevant details.

Examples:

"I am emailing because..."
"I can't find..."
"Can you please help me with..."

4

End Your Email

Close your email with a simple goodbye.

Examples:

"Thank you for your help."
"Have a nice day."
"See you in class."

5

Include Your Name

Names are important, including yours! Let's use it.

After ending your email, do not forget to sign your name.

What brings you joy?

Food?

- Try *The Omnivore's Dilemma: A Study of Four Meals* by Michael Pollan.
- He has also written another one, *The Botany of Desire*.

Natural history (that's bio nerdiness to you)?

- Try *Your Inner Fish* by Neil Shubin (subtitled: A Journey into the 3.5 Billion-year History of the Human Body) -- or his *The Universe Within*
- *Evolution* by Carl Zimmer
- *The Beak of the Finch* by Jonathan Weiner
- *Into the Jungle* by Sean B. Carroll
- *Why Evolution is True* by Jerry A. Coyne.
- *Are We Smart Enough to Know How Smart Animals Are?* by Frans de Waal.
- Maybe you want a fine book about the tiny things that live around us all the creepy time? That's *Never Home Alone* by Rob Dunn.
- *She Has Her Mother's Laugh: The Power, Perversions, and Potential of Heredity* by Carl Zimmer.
- You might particularly like Richard O. Prum's *The Evolution of Beauty* (Frank and I give you permission to skim pages 17-88), but you should know ahead of time that Prum spends a chapter discussing sexual violence in ducks and drawing parallels to humans, which might be distressing to some readers.

Medicine?

- *Stiff: The Curious Lives of Human Cadavers* by Mary Roach.
- *Survival of the Sickest* by Sharon Moalem.
- An easier-English read than many on this list is *DNA Is You! The Marvelous Science Behind Your One-of-a-Kindness*.
- *The Body* by Bill Bryson.
- *Behave: The Biology of Humans at our Best and Worst* by Robert Sapolsky.

The environment?

- *Hurricane Lizards and Plastic Squid* by Thor Hanson.
- *The Sixth Extinction* by Elizabeth Kolbert.
- *The Age of Sustainable Development* by Jeffrey Sachs.

- *What If We Get It Right? Visions of Climate Futures* by Ayana Elizabeth Johnson

People interacting with nature?

- Try *H is for Hawk*, a literary memoir by Helen Macdonald about training a goshawk in the year after her father's death.
- Or the chatty travelogue-like story of a mom learning about jellyfish in *Spineless* by Juli Berwald.

AP BIO TEACHERS: no time to assign a book? You might like this idea:

<https://docs.google.com/document/d/1qElpHC1YRHtBeNEyl4SIXB0ZwFuPgJlkcwrnOSRqp3s/edit>