

# AP Biology Summer Homework 2018-2019

## Purpose of summer homework

- Introduce the four Big Ideas in AP Biology and how they connect with one another.
- These books are stories of biology. Biology is amazing, and we only get to cover a tiny slice of that awesomeness in class. Your book should increase your depth of knowledge in an area we won't have time to appreciate in class.

## Directions

1. Find the book list! To find the list of books, go to the Cascade High School web page, then click through the following cascade:
  - Library
  - Destiny (left side)
  - Catalog (as opposed to Home, upper left hand corner)
  - Resource Lists (left side)
  - Public lists (as opposed to My Lists, upper right hand corner)
  - AP Biology
2. Pick a book! Click on the different titles for short descriptions of each book. Pimenta and McKay personally chose all of them, and they are all awesome. They cover a wide range of topics related to biology – evolution, genetics, history, ecology, food, plants, diseases, athletic performance, the brain, etc. Some are short and some are long. There is something for everyone! We do only have 1-2 copies of each book, so make sure you have alternatives.
3. Check out the book! Visit the library before they close for the summer and check your book out. It will be due in the fall. If necessary, you may also purchase your book or check it out from another library.
4. Read your book!
5. Complete the TWO assignments below.

## Assignment 1: BIG IDEAS

AP biology is broken into four Big Ideas.

- 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

This is a very brief description of the Big Ideas! If you need more detail (which you probably do), search for AP Biology Learning Objectives. You will find them on the PDF put out by the College Board titled: AP Biology Course and Exam Description. The Concept Outline gives more detailed information on the four Big Ideas.

As you read your book, keep these four ideas in mind, and try to identify where they pop up.

- **Part 1:** Explain (1/2 page minimum, 2 page maximum) how your book relates to **Big Idea 1**. It may be an obvious connection, or you may need to dig for it. Include specific citations from the text supporting your claim of the connection to the big idea.
- **Part 2:** Explain (1/2 page minimum, 2 page maximum) how your book relates to **Big Idea 2**. It may be an obvious connection, or you may need to dig for it. Include specific citations from the text supporting your claim of the connection to the big idea.
- **Part 3:** Explain (1/2 page minimum, 2 page maximum) how your book relates to **Big Idea 3**. It may be an obvious connection, or you may need to dig for it. Include specific citations from the text supporting your claim of the connection to the big idea.
- **Part 4:** Explain (1/2 page minimum, 2 page maximum) how your book relates to **Big Idea 4**. It may be an obvious connection, or you may need to dig for it. Include specific citations from the text supporting your claim of the connection to the big idea.

## **Assignment 2: RESPOND TO THE BOOK**

Respond to your book using **ONE** of the choices below.

CHOICE 1: Create a short video about the book

- Use whatever video tools you are familiar with, or find one online
- The video could be trailer for the book, an important concept/scene, or an explanation or a theme from the book.
- Recruit your friends to serve as actors, use yourself, use legos, use toys, use clay – whatever tools work for what you are trying to accomplish

CHOICE 2: Create a mobile from items related to the story

- Select 10 items that represent important parts of the book. These should be 3 dimensional items that you create or find or purchase.
- Write a key that explains each object and why you choose it

CHOICE 3: Make a new book jacket for the book

- Front cover: draw and color a (different!) illustration for the book
- Inside front flap: Write your own summary of the book
- Inside back flap: Write your own review of the book. Include who should read it, and why.
- Back cover: Write 5-10 quotes from the book that are important to understanding it, and explain them briefly

CHOICE 4: Create a collage to represent the book

- Your collage should have at least 10 photos or illustrations. These could be illustrations/photos that you create/take or find.
- Write a key describing each item from the collage and why you included them

CHOICE 5: Write a comic book version of your book

- Could be of the whole book, or an important concept or chapter
- Comics can be drawn, or make using an online comic making tool.

CHOICE 6: Make 3 drawings of important concepts from the book

- Concepts could be big picture or something small, but they should be important from the book
- Write a description of what each scene is and why it is important

CHOICE 7: Create a picture story for your book

- Rewrite the book for a kindergarten or 1<sup>st</sup> grade audience. Use short sentences and age-appropriate words so that they can read it easily. Make sure to include major concepts
- Illustrate each page to go along with the description

CHOICE 8: ABCs of your book

- Create a book with 26 pages. You can fold pages to create smaller books. For each page, write a letter of the alphabet, in order.
- For each letter, include a fact or topic from your book (A is for \_\_\_\_\_).
- For each letter, also include an illustration. This could be one that you create, or one you find.

CHOICE 9: Podcast

- Many online tools are available to help you make a podcast about your book
- The podcast could be trailer for the book, an important concept/scene, an explanation or a theme from the book, or a book review
- Write a script before you get started. Include sound effects as appropriate.

CHOICE 10: White board animation video

- Plan what you will draw and say, then record the white board and your voice as you draw and explain
- The video could be about an important concept/scene, a summary of the book, or an explanation of a theme from the book

Choice 11: Something else

- Have a different idea of how you want to process your book? Great! Just email me first at [bmckay@everettsd.org](mailto:bmckay@everettsd.org) to double check before you get too invested. I check my email infrequently during July, but I'll respond pretty quickly in June and August.

**SUMMER HOMEWORK IS DUE THE FIRST DAY OF SCHOOL.**

You may email it to me at [bmckay@everettsd.org](mailto:bmckay@everettsd.org) or bring it with you in person.