

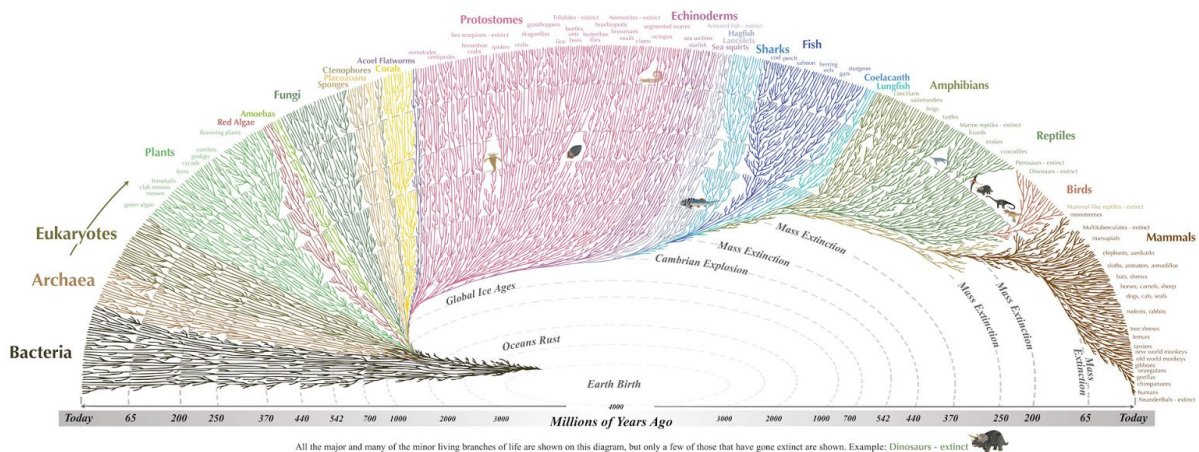
Honors Biology:

- Developmental Biology
- Bacteria, Archaea, Viruses
- Evolution & History of Life on Earth
- Ecology & Biodiversity
- Behavioral Biology
- Principles of Physiology
- Human Biology



Essential Understanding:

- Introduction to biotechnology: how it is used in research & biomedical application
- Learn how multicellular organisms develop different cell types, tissues, and organs. Prokaryotic structure, metabolism, & ecology
- Are viruses living or nonliving?
- Diversity of life on earth, evolution, natural selection and tree of life
- Animal behavior and human biology



“Biology will relate every human gene to the genes of other animals and bacteria, to this great chain of being.” -Walter Gilbert

Overview

This unit is designed to help students become familiar with



Guiding question :

- How do processes that happen at a cellular level influence the structure, functions, and behaviors at level of tissues, organs, organ system or entire organisms?
- How does energy flow through an ecosystem, population, and organisms?
- How and why do different structure found in very different organisms perform similar functions?

Individual work

_____ Read Study Guide (03/30)

_____ Participate in the lessons:

_____ Developmental Biology (03/30)

_____ Bacteria, Archaea, Viruses (04/03)

_____ Evolution & History of Life on Earth (04/06)

_____ Ecology & Biodiversity (04/25)

_____ Behavioral Biology (05/08)

_____ Principles of Physiology (05/11)

_____ Human Biology (05/18)

_____ Reflect on the answer to Guiding Question 1

_____ Make vocabulary cards for the vocabulary in your Vocabulary List (as needed vocabulary cards will be allowed on quizzes or tests)

_____ **Weekly:** Research paper

For each paper we read and discuss, please address the following:

- Paper title and authors (citation)
- What is the central question(s) or hypothesis(es) the paper addresses?

- Briefly (1-2 sentences), what methods were used to address the above questions/hypotheses.
- What are the main results and conclusions?
- Generate 3-5 questions about the paper that relate to the content, methods, results, conclusions or broader impacts of the paper.



Group work/ Lab Work

Labs will be done in groups of 4 or 5.

Lab Handouts: There will be a pre-lab for students to complete before the lab experiment, during the lab the students will gather the necessary data to complete the lab and answer the questions associated with the topic. After the necessary data is collected students will work on completing their lab notebook.

Lab Notebook: Every student is required to keep a lab notebook. The lab notebook will be each student's personal "copy". **You will receive specific instructions on the lab notebook requirements.**

This notebook will be graded on proper usage and completeness. *The lab notebook will be checked once a unit on the day of the assessment.*

Formal Laboratory Report: Each quarter students will put together a formally written laboratory report. This laboratory report is done individually (plagiarisms is not allowed). The report must be typed and include; Title, Purpose, Procedure, Materials, Observations, Data, Results, Conclusion and Citations.

How do I put it altogether?

_____ Review for your self-assessment (06/08)

_____ Group project on **Human Physiology & Anatomy** (06/12)

- Presented on tri-fold

Assessment

1. Testing your Knowledge & Take the vocabulary test you must show mastery to be complete. Students may use previously assigned vocabulary card assignment. (06/12)

Unit final covering all topics from Quarter 4



NOTE: Work will not be graded if you do not have a notebook