

CLASS INFORMATION:

Class: **Biology**

Meets: Weekly Aug 21- May 4

Monday: 1 pm EST

Wednesday: 9 am EST

Duration: 30 classes ; 90 min live weekly classes



Class Description

High School Biology

Class Description: Are you curious about eye color or the hair on your knuckles? We will learn about genetics! Are you curious about Anthrax or Ebola? We will discuss bacteria and viruses! Are you curious about life? We will understand cells – and what makes them tick! Are you curious about fall colors? We will explore photosynthesis! This course is intended for high school level students covering topics on life and biology including: Cells, taxonomy, scientific method, chemistry of biology, genetics, embryology, bacteria, viruses, creation vs. evolution, biosphere, photosynthesis, invertebrates, vertebrates, plants, ecology, etc. Students will learn and submit formal lab reports as assignments on labs chosen by the teacher. Labs will be graded. Students will perform labs at home with teacher direction as well as virtually – students will have required lab reports on these labs also. Importance will be placed on students' understanding of scientific inquiry, the scientific method, and the resulting science lab reports.

Teacher Information

Teacher: Heather Barrieau

Email: heather@myfunscience.com

Phone: (440) 708-8756 (Denver or MST)

Office Hour: TBD

Required Course Materials



Science Shepherd Biology

Dr. Scott Hardin

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Lab assignments will be distributed in class. A list of lab materials will be posted. Please purchase in advance of the course start date. We will be doing both virtual and physical labs (at home).

Technical Information

Students will need internet access to participate in the live online classes and to access the class pages online. A headset is preferred for this course, but students will need working audio at a minimum for classes. A working microphone is beneficial, but not necessary for class participation. Please make sure they have access to certain educational websites:

(Kahoot! (kahoot.it), PHET (<https://phet.colorado.edu/>), and HHMI (<http://www.hhmi.org/biointeractive>))

Your Online Class

This online course is delivered entirely online using Adobe Connect for our live class meetings and the Powerschool Learning Management System (LMS) for all other course interaction. This class contains synchronous (live) and asynchronous (anytime) components.

Synchronous: Classes will meet live for one weekly, 90-minute online session to include lecture, discussion, and assignments, and individual and collaborative activities in real time with the teacher and with classmates. While class attendance is not required, there will be assignments, activities, and quizzes held during class that failure to participate in could impact the final grade. It is not recommended (please communicate if you find conflicts) to attempt this class if you can only participate by watching the recordings unless you have a clear understanding of the limitations involved with that approach. Class participation and the opportunity to ask questions and interact with classmates is a significant part of ensuring that students get the most out of the virtual learning experience.

Asynchronous: From the LMS login created for each family upon enrollment, students may access all class resources. Class pages may be accessed anytime and will include summary information and recordings from live sessions for students who miss class or who would simply like to review a session. Students will also find announcements, links, assignments and grades, class calendar, enrichment content, ongoing conversation via discussion boards and collaborative spaces, study helps and self-assessments, and other tools and information on class pages to facilitate class interaction and ease of use.

Attendance Policy

Presence: Students are strongly encouraged to attend live classes but are not required to attend live classes. However, students who do miss a class, for whatever reason, will be responsible for viewing the class recording and completing assignments. Recordings of each class are usually available within 24 hours of the class meeting and may then be accessed 24/7 from the course class pages. Students may also review recorded classes at any time.

Participation: Active participation is essential for maintaining the best learning environment. It is also a fun part of learning. Students are not required to attend classes live, but students who do are expected to engage with the teacher and with each other. Outside of live sessions, students are expected to log on and visit the class pages to see and contribute to new content, activities, or assignments. There, students may review class material, keep up-to-date on announcements and assignments, and verify that there have not been any changes to the class calendar and/or agenda. Weekly assignments will be posted the Saturday before class for easy planning. The Internet may be used in the class to supplement course content and may be accessed by the teacher during live class lectures or by the student outside of live class meetings for general research or for additional information from such government, organizational, individual, or commercial sites that may be beneficial to learning, so parental supervision and participation in the learning process is strongly encouraged.

Class Conduct

Students should conduct themselves in a worthy and appropriate manner, which includes behaving respectfully and politely to each other and the teacher. In both live and asynchronous class activities, students should strive to stay on task and on topic, to use appropriate language, and to be gracious in speech and conduct toward others. Generally, the same guidelines for civil in-person behavior are appropriate for this online class. Students should strive for proper grammar and spelling in discussion boards and assignments, but the speedy and spontaneous nature of live class chat demands that these conventions may be loosened to facilitate more relaxed, informal communication. Students who are unable to adhere to this type of conduct may be separated from the class, removed from the session if it continues to occur during a live class session, and will eventually result in parent notification if the behavior is disrupting the class.

FALL SEMESTER

Week 1: Chapter 1 Intro to Biology/Levels of Biology/Characteristics of Life
Week 2: Chapter 1 Scientific Method, Lab Reports
Week 3: Chapter 2 The Composition and Chemistry of Life
Week 4: Chapter 3 Basic Biochemistry of the Molecules of Life
Week 5: Chapter 4 Introduction to the Cell and Cell Membrane
Week 6: Chapter 5 The Cell Interior and Function
Week 7: Chapter 6 Metabolism Overview and Enzymes
Week 8: Chapter 7 Photosynthesis
Week 9: Chapter 8 Cellular Respiration
Week 10: Chapter 9 DNA, RNA, and Proteins
Week 11: Chapter 9 DNA, RNA, and Proteins
Week 12: Chapter 10 Cell Reproduction: Mitosis
Week 13: Chapter 11 Organism Reproduction: Binary Fission, Budding, and Meiosis
Week 14: Chapter 12 Introduction to Genetics
Week 15: Chapter 12 Punnett Squares

SPRING SEMESTER

Week 16: Chapter 13 Pedigrees
Week 17: Chapter 13 Inheritance Patterns
Week 18: Chapters 14-15 Genetic Variations and Human Genetics
Week 19: Chapter 17 The Origin of Life and the Fossil Record
Week 20: Chapters 18-19 Evolution and Creation; Speciation and Adaptation
Week 21: Chapter 20 Biological Classification and Viruses
Week 22: Chapter 21 Kingdom Eubacteria and Archaeobacteria
Week 23: Chapter 22 Kingdom Protista
Week 24: Chapter 23 Kingdom Fungi
Week 25: Chapters 24-25 Kingdom Plantae
Week 26: Chapters 26 Kingdom Animalia
Week 27: Chapter 27 Kingdom Animalia
Week 28: Chapter 28 Kingdom Animalia
Week 29: Chapter 29 Kingdom Animalia
Week 30: Chapter 34 Ecology

GRADING:

All assignments are specified in the class pages and on the class calendar, and are to be submitted through the “**Drop Box**” on students’ class web pages **before midnight ET** on the date they are due. Assignments are returned with feedback and grades in the same drop box location (Hand in) within 7 days after the due date (unless work is submitted late). Format specifications may vary, but in general they should be submitted as .pdf or .doc (.docx).

Some assignments will be submitted and *then self graded* and recorded as completed. Formal lab write-ups (2 per semester) will be graded. There will **be 2 excused assignments each semester** (excluding formal labs and tests). There will not be a lowest grade dropped in each category, but extra credit will be offered throughout the year.

Grading Scale :

A+: 97-100, A: 94-96, A-: 90-93, B+: 87-89, B: 84-86, B-: 80-83, C+: 77-79, C: 74-76, C-: 70-73, D: 60-69, F: 59 and below

Make-up/Late Assignment Policy:

Assignments are late if they are submitted to the dropbox after the due date. ***Please take deadlines seriously.*** There will be **2 excused assignments** each semester. Late work will be deducted by **5 points a day**. **Communication is the key here. Email me before if you are traveling or have a conflict.**

Tips for Student Success

Students who are **fully present, work diligently, actively participate (either via live class attendance or watching recordings promptly and attentively), and consistently communicate** will be the most successful.

Communication: Students who are unable to find something, are unable to remember instructions, are having trouble understanding, or are otherwise having difficulty engaging in the class should take every opportunity to communicate with the teacher. Taking advantage of the weekly office hour is an excellent way to get additional help as well as gain extra support and enrichment activities. It is important to ask questions and keep an open line of communication about all class related activities for the best learning experience.

Academic Honor and Integrity

Colleges and universities, and indeed every professional and educational environment, take issues of academic honesty very seriously. Research shows that plagiarism, what most people automatically think of when hearing the phrase “academic honesty,” is most often committed when students are pressed for time, care very little about the assignment, or are unaware of what plagiarism is. These may be addressed by planning, attitude adjustment, and careful instruction, and these areas of concern may be visited as needed in this class. However, academic honesty is also much more. It is a matter of integrity. Being a student or professional of integrity includes submitting your own work, working in a timely manner, and demonstrating effort and diligence.

Philippians 4:8

Finally, brethren, whatever is true, whatever is honorable, whatever is right, whatever is pure, whatever is lovely, whatever is of good repute, if there is any excellence and if anything worthy of praise, dwell on these things.