

Honors Biology Course Expectations 2022/23

Faculty and Office Hours:

Bettina Gregg, greggb@oes.edu, available during blocks B, C, and G, and by appointment

Course Description:

Biology is the study of living things. You will be introduced to a variety of topics and will come away with the following key concepts:



- Structure is related to function.
- Biological entities utilize and convert energy.
- Organisms are shaped by genetics and environment.
- The cell is the fundamental unit of life.
- Homeostasis is critical for complex cell and body functions.
- Evolution explains the diversity and structure of organisms.
- Biological phenomena obey the laws of physics and chemistry.

Course Goals:



Our goal for you is to continue your journey towards scientific literacy.

With this goal in mind, we will focus on the following learning outcomes:

- Ask questions and define problems
- Obtain, evaluate, and effectively communicate information using a variety of methods
- Develop and use models
- Plan and carry out investigations
- Analyze, evaluate, and interpret data and other information
- Use mathematics and computational thinking
- Construct explanations and design solutions from existing models, theories, and understandings
- Engage in appropriate argument from evidence
- Identify a need in the community
- Adapt existing knowledge to design specific solutions

Each of our units will be planned around these outcomes. We will share detailed information about where you will have the opportunity to do this learning and how you can demonstrate what you have accomplished.

Scientific Inquiry:

You will participate in the scientific inquiry cycle by completing an independent research project.



In order to complete a carefully executed and thought-provoking independent research project, allow these questions to guide you:

- ⦿ What different ways might help me approach a particular scientific problem?
- ⦿ Can I design a process for solving a scientific problem in the most expedient way?
- ⦿ When things go wrong, are there ways to circumvent them?
- ⦿ What visual, numerical, and descriptive ways allow me to present my data and findings?
- ⦿ Are my uses of the natural world ethical?
- ⦿ How can I make my work more meaningful with the help and advice from experts in my field?
- ⦿ Can the solution of one problem be the start of another?

How can I be successful in this course?

Successful students will

- Explore by asking questions about the subject matter
- Explore by working safely and collaboratively in the lab
- Make meaningful connections between class content and the world around us
- Connect with others in class discussions
- Create insightful and creative written assignments and share thoughtfully researched and effectively communicated projects
- Commit to full engagement in all class activities
- Allow time for reflection and revision in order to deepen understanding

Assessment:

Your grade in this class will reflect your understanding, skills, effort, and productive interactions in the classroom.

- You will receive specific learning indicators for each unit, and we will discuss your progress for each. This includes a variety of assignments, assessments, and your independent research project.
- To understand what it means to earn a particular grade, please consult these

[Grade Descriptors](#).

THE HONOR CODE:

As a member of the Oregon Episcopal School community, I commit to honesty, safety, accountability, and respect for others in my academic, extracurricular, and social pursuits.