



LINCOLN-WOODSTOCK COOPERATIVE SCHOOL DISTRICT COURSE SYLLABUS

Course Name: Biology
Length: Full Year
Teacher: Dave Webster

Course Description: This course is designed to provide a general background for the understanding of the science of Biology. This course develops an appreciation of the beauty of life from its simplest composition at the molecular level to the global spectrum of complex ecological issues. It discusses Genetics, Cytology, Photosynthesis, Cellular Respiration, Populations, Ecology, and Evolution. Issues, concerns, and problems with life are also included. It also deals with the basic principles and processes in the study of biology. It covers life processes and interactions at the cellular, organism, population, and ecosystem levels. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course.

NGSS Standards Assessed:

HS-LS1: From Molecules to Organisms: Structures and Processes

Focuses on understanding how the structure and function of living organisms are related, including cellular processes and systems.

HS-LS2: Ecosystems: Interactions, Energy, and Dynamics

Covers the interactions within ecosystems, including energy flow and matter cycling, and how these affect ecosystem dynamics.

HS-LS3: Heredity: Inheritance and Variation of Traits

Explores the principles of genetics, including how traits are inherited and how genetic variation occurs.

HS-LS4: Biological Evolution: Unity and Diversity

Examines the evidence for evolution, the mechanisms of natural selection, and the diversity of life.

HS-LS5: Engineering, Technology, and Applications of Science

Although not a separate standard, this integrates engineering and technology concepts into life sciences, focusing on real-world applications.



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Anchor Texts or Major Curriculum:

CK-12 Biology - <https://www.ck12.org/class/2397501/#home>
NGSS and NH Science Standards
Teacher Created Labs

Course Outline (major units of study):

Unit Title	Essential Question or Overarching Understanding
Chemistry of Life	How do chemical processes and compounds support life?
Cell Structure and Function	How do the structures of cells contribute to their functions?
Genetics and Heredity	How do organisms inherit traits from their parents?
Evolution and Natural Selection	How does evolution explain the diversity of life on Earth?
Ecology and Ecosystems	How do living organisms interact with their environment and each other?
Human Body Systems	How do the systems of the human body work together to maintain homeostasis?
Recent/Local events	How do human activities influence the natural environment, and what are the implications for future sustainability?

Portrait of a Learner

Independent Learner

I make thoughtful plans and do my best to reach personal goals using feedback to work through challenges.



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Responsible Collaborator

I work with others to achieve shared goals by listening actively, contributing ideas, and managing conflict.

Critical Thinker

I analyze information, ask thoughtful questions, and apply reasoning skills to solve problems and make decisions.

Effective Communicator

I express ideas clearly, adapting strategies based on the audience, setting, and/or purpose.

Global Citizen

I show that I care and take responsibility by helping in my community and the world around me.

Additional Classroom Expectations:

- Prerequisite: 8th-grade teacher placement.
- Laboratory work is essential in a biology course because it allows students to apply theoretical knowledge in a practical setting, enhancing their understanding of biological concepts. It fosters critical thinking, problem-solving, and hands-on skills, which are vital for scientific inquiry. Through lab work, students can observe biological processes in real-time, conduct experiments, and analyze data, which deepens their comprehension and retention of the material.
- In a biology classroom, lab safety is a top priority to ensure a safe and productive learning environment. Students are expected to follow all safety guidelines, including wearing appropriate protective gear such as goggles and gloves. They must listen carefully to instructions before beginning any experiment and handle all equipment and materials responsibly. It's crucial to report any spills, accidents, or broken equipment to the teacher immediately. Students should also know the location of safety equipment, like fire extinguishers and first aid kits. By adhering to these expectations, students help maintain a safe space for everyone to explore and learn.

Late Work Policy: Adherence to the established course schedule is mandatory. Due to the pace of the curriculum, timely completion of all assignments is essential for maintaining academic standing and ensuring mastery of sequential concepts.

Late Work and Credit



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- **Submission Deadlines:** To be eligible for maximum point allocation, all assignments must be submitted by the specified date and time.
- **Impact of Delays:** Submissions received after the deadline may be subject to grade depreciation or may not be accepted, depending on the specific criteria outlined in the course grading rubric.

Attendance and Responsibility

- **Absenteeism:** In the event of an absence, the student retains full responsibility for the acquisition of missed instructional materials.
- **Peer Collaboration:** Students are expected to coordinate with classmates to obtain lecture notes, handouts, and primary information regarding missed classroom discourse.
- **Instructional Continuity:** Missing a session does not exempt a student from upcoming deadlines or the responsibility to remain current with the course progression.

Note: Students are encouraged to develop a contingency plan for information retrieval early in the semester to mitigate the risks associated with unforeseen absences.

Academic Integrity, Cheating, and Plagiarism

Honesty is expected of all LW students. In academic matters, this includes the submission of work that clearly indicates its sources. Dishonest acts include cheating and plagiarism, as well as other forms of academic misconduct.

- **Cheating** is defined as copying or otherwise using material from others or using sources not approved by the faculty.
- **Plagiarism** is defined as using the work (ideas, words, artwork, etc.) of another person as one's own. The failure to cite sources or the extensive use of others' work in written material are the most common types of plagiarism.

Cheating, plagiarism, and other forms of academic misconduct are considered serious disciplinary matters and are subject to the same penalties and procedures as other LW disciplinary matters. Students should be aware that penalties levied in substantiated cases of cheating or plagiarism may include, but are not limited to, the issuance of a grade of F, which may, in turn, lead to delay of graduation. Repeated offenses may lead to dismissal from a program or from the college. Refer to the Academic Honesty Policy in the Student Handbook.

- **Electronics in the Classroom:** New Hampshire state law (HB2/SB 206) mandates a "bell-to-bell" ban on the use of personal cell phones and electronic devices in all public and chartered schools.



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- Unsafe lab practices will cause your dismissal from that day's lab exercise, and you will not be allowed to make up the missed work.
- Check your student email and Google Classroom frequently! Updates, schedule changes, and other important announcements will be posted on Google Classroom and sometimes emailed. It is your responsibility to stay current with any announcements or changes posted.

HELPFUL HINTS

- Don't Panic: Physics is a journey of problem-solving. Stay calm and take it one step at a time.
- Find Your Tribe: Join a study group immediately. They are your most valuable resource. If your current group isn't clicking or stays off-task, don't hesitate to find a new one that better supports your learning.
- The "Pre-Game" Strategy: Always pre-read the textbook and lab manual before you walk into class. Lectures are designed to reinforce and clarify what you've already encountered, not to introduce it for the very first time.
- Mindset Matters: Maintain a positive outlook. Physics can be challenging, but don't let negative self-talk stall your progress.
- Open Communication: If you're struggling or need a different explanation, tell me! I can only adapt to your learning style if I know what you need.
- Teach to Learn: The best way to master a concept is to explain it to someone else. Teach your classmates, or go home and explain a concept to your friends and family.
- Maximize Your Textbook: * Focus on the summaries at the beginning and end of chapters.
 - Analyze the diagrams and visuals—physics is a highly visual science!
 - Remember: Anything in the assigned reading is "fair game" for exams, even if we didn't cover it in detail during class.

I reserve the right to change these policies if necessary, given unexpected or unusual circumstances – please see Google Classroom for announcements of changes and posted revisions