



Academy of Science, Research & Medicine
Honors Biology Syllabus- 2014-2015
Paulding County High School



Classroom Website

Teacher: Marc Pedersen

Email Address: mpedersen@paulding.k12.ga.us

Classroom Website: Scan QR Code or Paulding County High School → Staff → Pedersen

School Phone Number: (770)-443-8008

Course Description: This laboratory-based course will focus on instructing students on the research, laboratory, and technical skills needed in the study of Biology. The course will be taught through the process of scientific inquiry, which will require the students to conduct investigative labs that apply biological concepts. Biology is the study of life and will be taught in five major domains: cells, organisms, genetics, ecology and evolution. Each honors student will need to:

- Complete the Honors Biology Research Project; an independent investigative research-based project.
- Actively participate in both oral and written discussions.
- Conduct a variety of inquiry-based laboratory investigations.
- Take the Biology End-of-Course Test to insure mastery of the Georgia Performance Standards.
- Monitor the classroom website on a daily basis.

This course will aid in the preparation of students for the state-mandated Biology End of Course Test (EOCT), which will be administered at the end of the year (May 2014). To be successful in this course the student must complete all assignments and participate in all lab activities. Students may be assigned a separate laboratory manual and/or guided reading workbook that will be used as a resource throughout the course. Students will also be provided with several options for the required textbook including their choice of a hardcopy, an online version and a CD-rom version. Detailed information packets and rubrics will be provided for the Honors Biology Research Project during the first week of school and are always available on the classroom website.

Grading Policy: (Subject to change based county policy)

A	90-100	B	80-89	C	70-79	F	below 70
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60% summative, 20% formative, 20% semester exam/EOCT

Textbook: *Biology: Exploring Life* (Campbell)

Cost: \$78.97 (CD and textbook)

Class/Lab Procedures and Rules: Students must return their signed Flinn Safety contracts before participating in lab-based activities. All school policies in the student handbook will be followed, as well as all lab safety rules and teacher policies. Tardy policy will be followed as listed in the handbook.

Performance Assessments will include but will not be limited to District Benchmark Assessment (DBA), quizzes, unit tests, lab reports, projects, portfolios and final exams.

Recommended Materials: Students will need a designated area in their notebooks for biology materials (notes, labs, warm-ups, etc.). Students will also need a dedicated three-ring binder and a composition notebook for their Honors Biology Research Project.

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Honors Biology Curriculum Pacing Guide and Georgia Performance Standards

1 st 9-week	2 nd 9-week	3 rd 9-week	4 th 9-week
<p>Unit One Focus:</p> <p>Study of Life and Cellular Structure and Function.</p> <p><u>EOCT Domain Weights:</u> Cells - 17.5% Organisms - 17.5%</p>	<p>Unit Two Focus:</p> <p>Growth and Heredity</p> <p><u>EOCT Domain Weights:</u> Genetics - 25%</p>	<p>Unit Three Focus:</p> <p>Energy Transformations and Ecology</p> <p><u>EOCT Domain Weights:</u> Ecology - 25%</p>	<p>Unit Four Focus:</p> <p>Organism Diversity and Evolution</p> <p><u>EOCT Domain Weights:</u> Organisms - 17.5% Evolution - 15%</p>
<ul style="list-style-type: none"> Lab Safety & Equipment (SCSh2 a,b,c) Scientific Measurement (SCSh3c, d, e, f; SCSh4 a, b, c; SCSh5 a, b, c, d) Microscopes (SCSh 2a, b) Scientific Method (SCSh 3a, b, c, d, e, f) Chemistry of Life (SB1b, c, d) Function of Organic Molecules (SB1b,c,d) Enzymes (SB1b) Characteristics of Life (SB3b) Viruses - as they relate to Char. of Life (SB3d) Cell Structure and Function (SB1a) Homeostasis (SB1a) Cellular Transport - Osmosis & Diffusion (SB1a, d) 	<ul style="list-style-type: none"> Asexual & Sexual Reproduction (SB2e) Cell Growth (SB2) Mendelian Genetics (SB2c) DNA and RNA Processes (SB2a,b) Chromosomes and Mutations (SB2d) Genetic Engineering (SB2d) DNA Technology and Cloning (SB2f) Biological Resistance and Bioethics (SB2d) 	<ul style="list-style-type: none"> Photosynthesis (SB3a) Cellular Respiration (SB3a) Cycles of Matter (SB4b) Energy Flow (SB4b) Food Chains and Webs (SB4b) Succession (SB4c) Human Impact on the Environment (SB4d) Ecosystem Structure (SB4a) Biomes (SB4a) Plant Adaptations (SB4e) Animal Adaptations and Behavior (SB4f) 	<ul style="list-style-type: none"> Classification of 6 Kingdoms (SB3b,c) Comparative study of system complexity of organisms (SB3b) Viruses (SB3d) Evolutionary History (Theorists) (SB5 a,b) History of Life - (Evidences) (SB5a, b, c) Natural Selection (SB5d) Population Genetics and Evolutions of Populations (SB5b,e)

Make-up Work

It is the student's responsibility to get his/her makeup work. For excused absences, all makeup work must be completed and turned in within **three** days upon the student's return to school. However, if a student is absent on the day an essay or long-term project is due; it is due the day the student returns. It is an expectation that students monitor the classroom website for all assignments.

Late work

Late work for assessments will be accepted within **three** (3) days of the due date with a **10% deduction for each day it is late**. Any work turned in after 3 days will not be accepted, and you will receive a zero (0) on that assignment. For example, if an assignment is due on Monday, it will be accepted, with penalty, until Thursday.

QR Codes for documents referred to in this syllabus. Remember all files and relevant materials are also on the classroom website.



Flinn Safety Contract



Research Project Guide



End-of-Course Test



Georgia Performance Standards