

Honors Biology Syllabus 2017- 2018

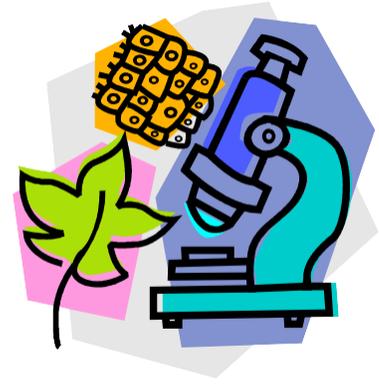
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Text: **Biology: by Stephen Nowicki; McDougal Littell Publishers**

Cost of text: \$75.00



Course Description:

This year long course includes the study of the methods of science, ecology, cell structures, functions and processes, basic organic chemistry, cell energy, heredity, evolution and the diversity of organisms.. Emphasis is placed on scientific inquiry and critical thinking. A variety of instructional methods will be used including computer-based instruction, learning centers, projects, discussions, and laboratory investigations.

There will be an End Of the Year Course Test in spring semester which will count as the final exam, It will cover material from both semesters. Honors classes will move at a faster pace, will require more independent study, will study topics in greater depth, and will include more enrichment topics/activities than a regular class. In addition, students enrolled in an honors science class must complete an independent project each semester.

Units of Study:

Georgia Performance Standards (GPS) (www.georgiastandards.org/science.aspx)	Unit
<p>SCSh1: Students will evaluate the importance of curiosity, honesty, openness, and skepticism in science.</p> <p>SCSh2: Student will use standard safety practices for all classroom laboratory and field practice investigations.</p> <p>SCSh3: Students will identify and investigate problems scientifically.</p> <p>SCSh4: Students will use tools and instruments for observing, measuring, and manipulating scientific equipment and materials.</p> <p>SCSh5: Students will demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.</p> <p>SCSh6: Students will communicate scientific investigations and information clearly.</p> <p>SCSh7: Students will analyze how scientific knowledge is developed</p> <p>SCSh8: Students will understand important features of the process of scientific inquiry.</p>	<p>Scientific Inquiry and Laboratory Safety Ch1</p>
<p>Standard SB4: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.</p>	
<p>Element A: The student will investigate relationships among organisms, populations, communities, ecosystems, and biomes.</p> <p>Element B: The student will explain the flow of energy and matter through ecosystems</p> <p>Element C: Relate environmental conditions to successional changes in ecosystems.</p> <p>Element D: Assess and explain how human activities influence the environment.</p>	<p>Ecology Ch 13,14,15 &16</p>
<p>Standard SB1: Students will analyze the nature of the relationships between structures and functions in living cells.</p>	
<p>Element C: Identify the function of the four major macromolecules of life</p> <p>Element B: Explain how enzymes function as catalysts</p>	<p>Chemistry of life Ch 2</p>
<p>Element A: Explain the role of cell organelles for both prokaryotic and eukaryotic cells, including the cell membrane, in maintaining homeostasis and cell reproduction</p> <p>Element D: Explain the impact of water on life processes (i.e., osmosis, diffusion)</p>	<p>Cell Structure and Function Ch 3,4, & 5</p>
<p>Standard SB2: Students will analyze how biological traits are passed on to successive generations.</p>	

Element A: distinguish between DNA and RNA Element B: explain the role of DNA in storing and transmitting cellular information	DNA, RNA and Protein Synthesis Ch 8 & 9
END OF FIRST SEMESTER UNITS OF STUDY	
Element C: Using Mendel's laws, explain the role of meiosis in reproductive variability. Element D: Describe the relationships between changes in DNA and potential appearance of new traits Element E: compare the advantages of sexual and asexual reproduction in different situations. Element F: Examine the use of DNA in forensics, medicine, and agriculture.	Heredity & Molecular Genetics Ch 6,7
Standard SB5. Students will evaluate the role of natural selection in the development of the theory of evolution.	
Element A: Trace the history of the theory. Element B: Explain the history of life in terms of biodiversity, ancestry, and the rates of evolution. Element C: Explain how fossil and biochemical evidence support the theory. Element D: Relate natural selection to changes in organisms. Element E: Recognize the role of evolution to biological resistance (pesticide and antibiotic resistance).	Evolution Ch 10, 11, & 12
Standard SB3. Students will derive the relationship between single-celled and multi-celled organisms and the increasing complexity of systems.	
Element A: Explain the cycling of energy through the processes of photosynthesis and respiration. Element B: Compare how structures and function vary between the six kingdoms (archaeobacteria, eubacteria, protists, fungi, plants, and animals). Element C: Examine the evolutionary basis of modern classification systems. Element D: Compare and contrast viruses with living organisms.	Diversity of Organisms Ch 17, 18, 23, 24, 26
END OF SECOND SEMESTER UNITS OF STUDY (PRIOR TO EOCT)	
Additional Units will be completed after the EOCT- TBD	

Grade Determination:

Fulton County Grading Scale will be used each semester.

A = 100 - 90 B = 80-89 C = 79-70 Below 70 is failing

First Semester Weighted Grades

- Tests 35%
- Quizzes 10%
- Labs 25%
- Homework/Class work 10%
- Honors Project 5%
- Final Exam/EOCT 15%

Second Semester Weighted Grades

- Tests 35%
- Quizzes 10%
- Labs 25%
- Homework/Class work 10%
- Final Exam/EOCT 20%

Classroom Procedures:

Absence from Class—Makeup Work is Your Responsibility

1. On your first day back to class, you must provide proof of excused absence. Students are not to be admitted to class unless they produce an admit slip.
2. It is the student's responsibility to handle scheduling of make-up work. Daily assignments, such as homework, are to be made up the day following the absence, as per student handbook.

3. I will be available for scheduling of make-up assessments, presentations, and labs and expect students to schedule the make-up work promptly. A student who fails to appear for *scheduled* makeup will receive a zero.
4. If a student is absent on any day before a test (including the day before the test) the student is still required to take the test on the given day. If absent on the day of the test, the test will be taken during the next class period the student is present. Exceptions will be made only at the discretion of the instructor.

Fulton County Recovery Policy - Provision for Improving Grades

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Opportunities designed to allow students to recover from a low or failing cumulative grade will be allowed when all work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including attendance.

Students should contact the teacher concerning recovery opportunities. Teachers are expected to establish a reasonable time period for recovery work to be completed during the semester. All recovery work must be directly related to course objectives and must be completed ten school days prior to the end of the semester. Teachers will determine when and how students with extenuating circumstances may improve their grades.

Honor Code

As explained in the student handbook, cheating is defined as “giving or receiving in any form, information relating to a gradable experience, either during or outside class.” Violations of the honor code will result in a zero for the assignment, plus an honor code violation form placed in the student’s disciplinary file. Read the student handbook carefully to fully understand what constitutes an honor code violation.

Upon teacher request, students may be required to email essays, research papers, or other written work to turnitin.com. The website checks the submission for plagiarism, provides a receipt for the student to give to the teacher, and reports to the teacher that the student’s work was not copied from any source. Students will be trained on the use of turnitin.com in the first week of school. Students who do not have email access at home may use the computers in the media center.

Parent Communication

Home Access Center allows parents/guardians to access their children’s school information via the Internet. Parents (and students) can see assignments, grades, attendance, and school information.

Technology Code of Ethics

According to the Fulton County Schools policy, "students shall not alter or attempt to alter school or private property including technology hardware and software." This includes: (a) changing desktop settings or control panels (b) removing or damaging mouse tracking balls, keys, cables, connectors, network jacks, or any other hardware (c) modifying computer software (d) damaging computer discs, CD-ROMS, or other media.

Classroom Behavior

In order for successful learning to take place, you are expected to behave in a manner that will not disrupt the class. You are required to follow all the classroom rules and to respect the consequences when you do not.

Students will:

1. Be responsible for one's own property and behavior.
2. Observe and follow rules stated in the student handbook
3. Bring required materials to class daily.
4. Be on time for class. Tardy is defined as "not in your seat when the final bell rings" (*please see your student handbook for the school's tardy policy.*) The school's tardy policy is enforced.
5. Turn in work on time.
6. Refrain from eating, drinking (exception PLAIN water); defacing desks, tables, walls, floors, posters, etc; throwing objects, or any behaviors that result in interference with learning.
7. Refrain from touching any equipment unless instructed to do so by the teacher.

8. Refrain from touching animals in the classroom unless permitted to do so by the teacher.
9. Keep the classroom neat and orderly. This includes proper lab clean up and putting chairs back.
10. Be expected to remain in class the entire period; please take care of restroom breaks before you come to class. Absolutely no one is allowed to leave the room the first or last ten minutes of class. Do not put away your class materials or “pack-up” until you are completed with your assignment or the bell rings.
11. Read, understand, sign and follow the Safety Contract.
12. Be courteous and respectful to the teacher and their classmates. Every student in the classroom is entitled to a safe and respectful environment. This will be adhered to without exception on a daily basis.

Failure to follow classroom behavior policy may result in a private detention, phone call to your parents, and/or a trip to the appropriate administrator.

Academic Information:

Required Materials

1. three ring binder and supply of lined paper
2. pencil and pen (colored pencils, if possible)
3. basic calculator
4. current assignments placed orderly in your notebook
5. textbooks are only brought to class on an as need basis (you will be notified ahead of time)

Notebooks

Organization is essential. Notebook organization will be explained in class.

Assignments

1. All questions from the book or labs **MUST BE IN COMPLETE SENTENCES** in order for you to receive credit for the assignment. All sentences must be grammatically correct *and legible*.
2. All work is due at the beginning of class on the date it is due. Students *will not* be allowed to go to their lockers to get work that is not in their possession at the beginning of class. Labs and projects will receive 20% off the grade for each day that the work is late. Other nightly homework will be worth 50% of the grade when one day late. If nightly work is later than one day, no credit will be given. Excused absences will be allowed to turn in work as per school policy.

Lab Expectations

1. You may be assigned a lab partner with whom you will work in each lab. Working together in an appropriate, cooperative manner is part of your lab grade.
2. Cleaning your lab space is expected when you are finished.
3. All lab drawings must be in **PENCIL** and labeled with magnification power, name, and appropriate structures.
4. Lab write-ups will follow a standard format. Guidelines will be given separately.
5. For safety purposes, goggles and aprons must be worn in lab. Full safety rules will be given separately.

Extra Credit

Extra credit will be available throughout each semester at the discretion of the teacher and will not be given to individual students. Please take advantage of this opportunity throughout each semester as there will be no opportunities near the end of the semester. Test grades will not exceed 100 as a grade.

Unit Tests and performance assessments

Unit Tests count 100 points each. Most of the test will be directly related to class notes and discussion, text readings, homework, class work, and labs. If you participate in class and study all materials given you will be successful. Unit or performance assessments, counting as half a test grade, will be given at the end of major units of study these will consist of research reports and presentations.

Final Exam

At the end of the semester you will be given a comprehensive final exam based upon all of the units for that semester. This test is worth 15% of your final grade for the course in the fall. During Spring Semester the EOCT counts as the final exam and is worth 20% of the grade.