

Biology Syllabus Fall 2009



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Course Description:

This course includes the study of the methods of science, ecology, cell structures, functions and processes, basic organic chemistry, and genetics. 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** covering material from both semesters.

Units of Study:

Georgia Performance Standards (GPS) (www.georgiastandards.org/science.aspx)	Unit	Textbook Correlation	Approximate Pacing
<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>	Scientific Inquiry and Laboratory Safety	Chapter 1	1 week (and ongoing throughout the semester)
Standard SB4: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.			
<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>	Ecology	Chapters 4,5, and 6	3 weeks
Standard SB1: Students will analyze the nature of the relationships between structures and functions in living cells.			
<p>Element C: Identify the function of the four major macromolecules of life</p> <p>Element B: Explain how enzymes function as catalysts</p>	Biochemistry	Chapter 3	3 weeks

Element A: Explain the role of cell organelles for both prokaryotic and eukaryotic cells, including the cell membrane, in maintaining homeostasis and cell reproduction Element D: Explain the impact of water on life processes (i.e., osmosis, diffusion)	Cell Structure and Function	Chapters 7 and 8	3 weeks
Standard SB2: Analyze how biological traits are passed on to successive generations.			
Element A: distinguish between DNA and RNA Element B: explain the role of DNA in storing and transmitting cellular information c. use Mendel's laws to explain the role of meiosis in reproductive variability Element E: compare the advantages of sexual and asexual reproduction in different situations.	DNA, RNA and Heredity	Chapters 13 and 14	4 weeks
Element D: Describe the relationship between changes in DNA and potential appearance of new traits Element F: Examine the use of DNA in forensics, medicine, and agriculture	Genetics	Chapters 11, 12 and 15	2 weeks

Behavioral Expectations

1. Enter the classroom in an orderly and timely manner. When the tardy bell rings you should be in the classroom and go to your seat so that role can be taken. Tardy guidelines are in the student handbook and will be enforced.
2. Bring required materials to class daily. This includes textbook, notebook, and something to write with to class every day.
3. Do not put away your class materials or "pack-up" until you are completed with your assignment or the bell rings.
4. Refrain from touching any equipment unless instructed to do so by the teacher. Please keep the classroom neat and orderly. This includes proper lab clean up and putting chairs back.
5. Absolutely no food, candy or drinks (including flavored water and drink mixes) in the classroom. **Water is the only thing that is permitted in the classroom.**
6. There are no bathroom privileges during lecture or instructional time. Please take care of this before you come to class. You must have a restroom pass in order to leave the room. Be expected to remain in class the entire period. Absolutely no one is allowed to leave the room the first or last ten minutes of class.
7. Be responsible for your own property and behavior. ANY behavior that is inappropriate or disruptive to my teaching and/or the learning of others WILL NOT BE TOLERATED.
8. Above all I expect a daily display of good manners. Be courteous and respectful to the teacher and your 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.

Consequences for failure to follow behavior policy

If any disrespectful or disruptive behavior occurs, you may be sent directly to your grade level principal for disciplinary action. OTHERWISE, the following steps will be taken.

- a) 1st offense: Warning given and private conference with teacher and E-mail or phone call to parents
- b) 2nd offense: Public Detention
- c) 3rd offense: Discipline referral to grade level principal who will assign Saturday School, ISS or OSS at their discretion.

Absence from Class—Makeup Work is Your Responsibility

1. If you are absent, you must present an admit slip to your teacher upon returning to class.
Students are not to be admitted to class unless they produce an admit slip.
2. Students are responsible for make-up work and turning it in a timely manner. Students are given the same number of days to complete make-up work, as the absence, not including the day of return. (handbook)
3. I will be available for scheduling of make-ups and expect students to schedule the make up work promptly. A student who fails to appear for *scheduled* makeup work 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.

Academic Information

1. Late Work

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 and 25% when two days late. If nightly work is later than two days than it will be given only 1 point. Excused absences will be allowed to turn in work as per school policy.

2. Notebooks

Organization is essential. Notebooks will be checked periodically for a grade. A separate sheet explains notebook organization.

3. Assignments

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.

3. Openers

Every class will begin with an "Opener". The students will be expected to read the board and begin the opener immediately when the bell rings. The openers will be kept in a separate section of the notebook. Periodically, quizzes will be given based on the openers. Students will be allowed to use the openers to answer the questions on the quizzes. If the notebook is not brought to class, the student will not be allowed to go to the locker and get it. They will have to take the quiz without the use of the openers.

4. Lab Expectations

When observing with the microscope, a formal drawing must be completed in a 7.7 cm (3 inch) circle. **You need to cut one out of a piece of manila folder and keep it in your notebook all year.**

- a) All lab drawings must be in **PENCIL** and labeled with magnification power, name, and appropriate structures.
- b) 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. Cleaning your lab space is a must when you are finished.
- c) For safety purposes, goggles and aprons must be worn in lab.
- d) **Many labs will require a formal typed lab write-up.**

