



**Biology  
Macon County High  
School**



**Teacher:** Ms. Lonisha K. Rogers

**Room Number:** Room 311

**Tutorial Hours:** Available for Virtual tutoring (check with teacher for availability)

**Tutorial Location:** Microsoft Teams

**Phone Number:** 478-472-8579 Ext. 5020

**Can also call and chat for the Microsoft Teams App.**

**Email:** [lrogers@macon.k12.ga.us](mailto:lrogers@macon.k12.ga.us)

**Tutorial Days:** By appointment

**The five most important expectations of at Macon County High School are as follows:**

**Course Goals:** To establish a basis in scientific research, to develop the methodology of science, and to foster a firm understanding of biology.

**Course Description:** The Biology curriculum is designed to continue student investigations of the life sciences that began in grades K-8 and provide students the necessary skills to be proficient in biology. This curriculum includes more abstract concepts such as the interdependence of organisms, the relationship of matter, energy, and organization in living systems, the behavior of organisms, and biological evolution. Students investigate biological concepts through experience in laboratories and field work using the processes of inquiry.

**Course Prerequisites:** Ecology or Environmental Science

**GPS Standards:**

SB1. Students will analyze the nature of the relationships between structures and functions

in living cells.

- a. Explain the role of cell organelles for both prokaryotic and eukaryotic cells, including the cell membrane, in maintaining homeostasis and cell reproduction.
- b. Explain how enzymes function as catalysts.
- c. Identify the function of the four major macromolecules (i.e., carbohydrates, proteins, lipids, nucleic acids).
- d. Explain the impact of water on life processes (i.e., osmosis, diffusion).

SB2. Students will analyze how biological traits are passed on to successive generations.

- a. Distinguish between DNA and RNA.
- b. Explain the role of DNA in storing and transmitting cellular information.
- c. Using Mendel's laws explain the role of meiosis in reproductive variability.
- d. Describe the relationships between changes in DNA and potential appearance of new



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traits including

- Alterations during replication.
  - Insertions
  - Deletions
  - Substitutions
  - Mutagenic factors that can alter DNA.
  - High energy radiation (x-rays and ultraviolet)
  - Chemical
- e. Compare the advantages of sexual reproduction and asexual reproduction in different situations.
- f. Examine the use of DNA technology in forensics, medicine, and agriculture.

SB3. Students will derive the relationship between single-celled and multi-celled organisms

and the increasing complexity of systems.

- a. Explain the cycling of energy through the processes of photosynthesis and respiration.
- b. Compare how structures and function vary between the six kingdoms (archaebacteria, eubacteria, protists, fungi, plants, and animals).
- c. Examine the evolutionary basis of modern classification systems (archaebacteria, eubacteria, protists, fungi, plants, and animals).
- d. Compare and contrast viruses with living organisms.

SB4. Students will assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.

- a. Investigate the relationships among organisms, populations, communities, ecosystems, and biomes.
- b. Explain the flow of matter and energy through ecosystems by
  - Arranging components of a food chain according to energy flow.
  - Comparing the quantity of energy in the steps of an energy pyramid.
  - Explaining the need for cycling of major nutrients (C, O, H, N, P).
- c. Relate environmental conditions to successional changes in ecosystems.
- d. Assess and explain human activities that influence and modify the environment such as global warming, population growth, pesticide use, and water and power consumption.
- e. Relate plant adaptations, including tropisms, to the ability to survive stressful environmental conditions.
- f. Relate animal adaptations, including behaviors, to the ability to survive stressful environmental conditions.

SB5. Students will evaluate the role of natural selection in the development of the theory of



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evolution.

- a. Trace the history of the theory.
- b. Explain the history of life in terms of biodiversity, ancestry, and the rates of evolution.
- c. Explain how fossil and biochemical evidence support the theory.
- d. Relate natural selection to changes in organisms.
- e. Recognize the role of evolution to biological resistance (pesticide and antibiotic resistance).

**I encourage you to review the complete description of the *Georgia Performance Standards (GPS)* found at the following website:**

**[www.georgiastandards.org/science.aspx](http://www.georgiastandards.org/science.aspx)**

**Additional Classroom information including daily work, project listings, test announcements, etc. may be found at:**

**Microsoft Teams (accessed through students' email)**

**Grading Scale\*:**

Daily Grades & Quizzes	45%
Unit Test	55%

**\*; Semester two** students are required to complete an EOCT (End-of-Course-Test) in biology. It will constitute 20% of the student's final grade. The score of the EOCT will appear on a student's final transcript. With this written, the above listing of grade breakdown for biology will constitute 80% of a student's final grade. Collectively the above portion (80%) and EOCT-Biology (20%) will determine a student's final grade for the course.

**Required Materials:**

- 2-Pen
- 2- Pencil



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Laptop (virtual learning for days not in class)  
Notebook for additional note taking (composition or spiral notebook)  
Calculator

**Classroom Expectations:**

It is imperative that students realize that the classroom is an academic institution and she/he is to conduct themselves accordingly. All students are expected to contribute to the learning environment in a positive manner. Deviations from this expectation will not be tolerated. While it is impossible to list all expectations, the following constitute a basis:

- a. The student will arrive to class on time even virtually. Disciplinary actions resulting from tardiness will ensue as per Macon County High School guidelines.
- b. The student will treat all individuals with respect and courtesy. Since this is a science/laboratory course, the student is responsible for conduct and technique resulting in the safe completion of laboratories and demonstrations.
- c. The student will leave a clean, orderly, safe and attractive learning environment.
- d. Student are expected to clean their area before leaving the class due to our current pandemic.**
- e. NO eating during class: Virtual student are expected to follow this rule as well. Eating includes Chewing gum, Fruit snacks, cookie, chips, etc...
- f. Drinking anything other than water is prohibited. Students may step away from electronics and drink. Students must have their own water bottle the use of the water fountain has been banned.

**Course Guidelines:**

1. All work is to be your own and not a copy of the work of others.
  - a. Plagiarism will result in a grade of zero.
2. Any and all reports, projects, etc. must be your original work. The research of others may and should be included in your work, but it is expected to be properly cited. Give credit where credit is due.
3. A test or quiz is an evaluation of your comprehension alone. Please treat it as such.
4. All work is expected to be turned in by the due date.
  - a. **Late Work Policy: 3 days after an excused absence student may come and retrieve or find out what they may have missed during class.**
    - i. **One-three days late 10 percent deduction, then 30 percent for work submitted up to a week or until the end of unit.**



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- ii. **Parent contact will be made if assignment are not turned in on time.**
  - iii. **Failure to not turn work in on time exclude you (student) from having feedback and improving your work on assignments.**
  - iv. **No Extension on deadlines unless teachers decides for the entire assignment or extenuating circumstances.**
5. Value your time wisely and work accordingly

Netiquette Guidelines:

6. **Make sure identification is clear in all communications.** Begin with a salutation (“Hi, Jason!”) and end with your signature (“Hannah Kay, 1<sup>st</sup> period Biology”).
7. **Review what you wrote and try to interpret it objectively.** When we speak face to face and are misunderstood, we have an on-the-spot opportunity to rephrase our words. In writing, we must strive twice as hard to be understood, as we do not have the benefit of modifying or elaborating in real time. All caps (“I’M SHOUTING”) and exclamation points (“Give me a break!!!”) can be misinterpreted as intense anger or humor without the appropriate context.
8. **If you wouldn’t say it face to face, don’t say it online.** When you’re working online, you’re safe behind a screen, but that’s no excuse to be ill-mannered or say things you would never say in public.
9. **Don’t assume everyone understands where you’re coming from.** Sarcasm and wit are often the spice of in-person conversation, but in online discussion, it can not only lose its edge, it can bite! With this in mind, review what you wrote before contributing to the conversation and ask yourself, “Will *everyone* get the joke?”
10. **Don’t spam.** Please don’t take advantage of your connection with the other students in your online classroom to forward emails and links regarding your political/spiritual beliefs or to sell your services.
11. **Use emoticons.** In casual chatroom settings, emoticons can help convey feelings that may otherwise get lost in translation, including humor, exasperation, exhaustion and even confusion.
12. **Respect others’ privacy.** Don’t give out another student’s personal email address without permission.
13. **Remember, if it’s on the internet, it’s everywhere.** Don’t share personal information about yourself in a public online forum, especially something that could put your safety or security at risk.
14. **Follow the rules.** Just as your online high school posts guidelines related to [academic integrity and student expectations](#), online forums also have rules of conduct. Make a point to read them every time, as they can vary from class to class.
15. **Forgive and forget.** If you’re offended by something another student says online, keep in mind that you may have misunderstood their intentions. Give them the benefit of the doubt.



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\*\*\* The teacher reserves the right to adjust any section of this course syllabus at any time during the school year to more adequately meet the needs, interests, and abilities of the students.

**Parents you may also receive access to your child's Class Notebook online please contact me from the above number and extension.**

**Student Printed Name:** \_\_\_\_\_

**Student Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Parent Printed Name:** \_\_\_\_\_

**Parent/Guardian Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Please, list parent contact information including phone number(s) and email address(es) below.**

**Parent(s)/Guardian(s) Phone Number(s):** \_\_\_\_\_  
\_\_\_\_\_

**Email address(es):** \_\_\_\_\_