WELCOME TO BIOLOGY 1 HONORS

MS. T. GVANS

Welcome to Biology 1 Honors! I am very excited for you to be a part of my class! I am confident that we've got a lot to learn from one another. Please show up ready to learn & ready to extend grace to your classmates and me. Thoroughly read through this syllabus - it will help you get a better understanding of the course and my expectations. It's going to be a fantastic semester!

COURSE DESCRIPTION, GOAL AND OUTCOME

Biology 1 Honors is an introductory, laboratory-based course that is designed to familiarize the college preparatory student with the major concepts of biological science: scientific inquiry; interdependence of organisms; the cell; matter, energy, and organizations of living systems; molecular basis of heredity; and biological evolution. This course provides numerous opportunities for students to develop science process skills, critical thinking, and an appreciation for the nature of science through inquiry-based learning experiences. Through this course, students develop the ability to synthesize the content knowledge and the skill sets outlined above, giving them the ability to investigate, manipulate, and develop a more complete understanding of their world. Investigative, hands-on activities that address the high school biology standards are an integral part of this course as well as providing the students with more opportunities to problem solve using the knowledge they have gained in the classroom and through applicable research. Biology 1 Honors is a precursor to higher level science courses and fulfills one of the three lab science credits necessary to receive a high school diploma. Completion of this course will provide foundational skills that are transferable to other science courses.

Projects & Labs: Students will be responsible for participating in several labs and projects throughout the semester. These labs and/or projects may consist of experiments, research, and observations made outside of the classroom that will foster an extension to the concepts being learnt as well as provide students with the opportunity to engage in exploration centered around their own interests but are still aligned with the curriculum . Students will be expected to make oral and visual presentations on the research or projects they completed. It is also important that students be mindful of any work that needs to be completed outside of the classroom as this may constitute lab grades as well.

Specific units to be studied include:

- Lab Safety and Science & Engineering Practice (SEP) Skills
- Structure and Process of Organisms
- Ecosystems
- DNA and Heredity
- ➔ Biological Evolution

SUPPLY LIST:

Students are expected to bring the following to class every day.

1) A willingness to learn and active engagement in the lessons
2) A charged Chrome book
3) Writing instruments – pencils with eraser, and or pens
4) Binder or Spiral Notebook
5) Online Textbook: Miller & Levine. Experience Biology.
Available in student backpack through Savvas Realize

COMMUNICATION

My email address is **TGIVANS@GEENVILLE.K12.SC.US OR TGIVANS@GREENVILLESCHOOLS.US** . I will respond to your emails as quickly as possible, typically 24-48 hours. My school telephone number is **(864) 355-3095** or you may reach me by phone or by calling the Berea High School Main Office. If you leave a message, please leave your name, message, and a phone number so I can address your needs when I am finished teaching. Backpack is an essential tool for accessing grades. Additionally, Google Classroom will be your greatest asset for staying up to date with student assignments and deadlines.

Attendance and Tardy Policy

1. This is a semester class that allows five missed days. According to district policy, any absences over five days must have a doctor's note, or must be made up during seat recovery time. Students must be present for 50 minutes of the class period to be counted present. Any student accumulating more than five unexcused absences will not receive credit for the course.
2. Students are expected to be in the room by the tardy bell. Students marked as tardy will be issued lunch detention. Failure to attend detention will result in a referral. Any student accumulating more than five tardies will be issued a referral automatically.

CLASSROOM EXPECTATIONS

1. Be RESPECTFUL and COURTEOUS to the instructor, yourself, and your classmates!!!
2. Disruptive behavior during instructional time will NOT be tolerated. Students will be given a warning and the behavior will be discussed with the instructor for the first offense. Persistent disruptions will warrant parent contact and/or an administrative referral.
3. Be on TIME and in your seat every day.
4. LISTEN and follow directions.
5. Come to class PREPARED to learn.
6. The use of cellphones is NOT permitted in class or in the hallway. If a student is caught with their cell phone out they will face the consequences outlined in the BHS handbook policy.

7. Mobile devices and/or headphones must not be a distraction from learning. Mobile devices must be turned off and put in students' bags, which are placed at the front of the classroom. Headphones and other devices must be put away in a backpack, or purse at the beginning of class. Failure to follow this policy will result in:
    a. First Infraction - School level detention
    b. Second Infraction - In-school suspension (ISS)
    c. Third Infraction- Out-of school suspension (OSS)

Additional Expectations

Be an active listener.

Be honest when sharing ideas and take risks.

Find connections among ideas, justify your thinking and be able to fully explain when responding to questions that require higher level thought processes (analysis and synthesis)

Respect and appreciate different ideas.

Support each other's learning and risk-taking.

Identify your strengths and talents and use them to enhance your learning.

Use technology in learning mode.

Assume positive intentions.

Start and end on time.

GRADING

DISTRICT GRADING POLICY

Berea High School will follow the District Grading Policy. Students will be assessed as described below.

Science	**(12 assignments) 40%** Grades based on discipline-specific content knowledge, science and engineering practices (SEPs), thinking/reasoning skills, and disciplinary literacy practices (thinking, reading, writing, and communicating) for science; may include quizzes, journals, informal writing assignments, informal oral presentations, informal laboratory write-ups/reports, homework, class-work.	**(3-4 assignment) 60%** Grades based on discipline-specific content knowledge, science and engineering practices (SEPs), thinking/reasoning skills, and disciplinary literacy practices (thinking, reading, writing, and communicating) for science; may include tests, research based products, culminating products, major oral presentations, formal lab write-ups and

	Laboratory experiences should be designed to explore discipline-specific content.	presentations. Laboratory experiences should be designed to explore subject specific content.

A student's final grade will be calculated as follows:

- The final semester grade for academic courses with an EOC will be determined by the calculation of
  - Q1 - 40%
  - Q2 - 40%
  - EOC - 20%
- The final semester grade for academic courses without an EOC will be determined by the calculation of
  - Q1 - 45%
  - Q2 - 45%
  - Final Exam - 10%

COMMON GRADING POLICIES

Student achievement and college readiness are two of our main focuses at Berea High School. While it is the responsibility of each student to inquire about late work upon returning from an absence or asking for feedback to revise an assignment, we want to establish common practices for all students and teachers to work harmoniously towards student achievement and college readiness.

LATE WORK POLICY

Classwork Assignments Only

- Students are responsible for notifying the teacher of their absence to receive information on missed assignments.
- Communication of an absence must be submitted by **EMAIL** only.
- Students have **THREE** (3) days from the Backpack/Powerschool due date to complete and submit their assignment.
- Students should communicate by email their submission of their work.
- The teacher will provide assignment feedback to the student within **SEVEN** (7) days to allow the student an opportunity to utilize the **REVISION AND FEEDBACK POLICY**.

REVISION AND FEEDBACK POLICY

Classwork Assignments Only

- Allow the teacher up to **SEVEN** (7) days after an assignment's due date to grade and provide feedback for the assignment.
- Once the student has received their grade and feedback, students must request by **EMAIL** to revise their assignment for **FULL CREDIT**.
- Students have **THREE** (3) days from their return date to submit revisions to their teacher. Teachers will grade and return the submission **WITHIN A WEEK** of the submitted work.
- The number of revisions on assignments are at the discretion of the teacher.
- **THE REVISION AND FEEDBACK POLICY DOES NOT APPLY FOR ASSIGNMENTS**

TEST/RETEST POLICY

Summative Assessments Only

- **ONLY ALLOWED FOR ASSESSMENTS THAT MARK THE CONCLUSION OF A LEARNING UNIT.**
- After the grading and return of the Summative Assessment, the student must request by email the opportunity to retake their assignment.
- The teacher and student will follow the terms of the **TEST/RETEST CONTRACT AND CALENDAR**.
- The student will retake their assessment at the next Test/Retest Session.
- The teacher will grade the new assessment within **THREE** (3) days.
- The student will receive the averaging of the old and new assessment grade.
- **THE REDO/RETAKE CONTRACT AND SESSION MUST BE COMPLETED PRIOR TO STORING OF GRADES FOR A GRADING QUARTER.**

BIOLOGY 1 HONOR COURSE OVERVIEW

Unit: Lab Safety and Experimental Design *(approximately 5 days)*

Unit Learning Target: By the end of the Lab Safety and Experimental Design unit, I will be able to conduct a lab experiment using the scientific method and safety procedures as evidenced by lab activities throughout the semester.

Unit 1: Structures of Organisms *(approximately 3 weeks)*

Unit Learning Target: By the end of the Structures of Organisms unit, I will be able to explain how cells are the basic unit of life and the role specialized cells play in maintenance and growth. I will develop models that illustrate the hierarchical system of organizations and how cell division allows for growth, repair, and maintenance of complex organisms. I will design experiments to illustrate how systems of cells function together to support life processes.

Standards:
B-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.
B-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.

Unit 2: Processes of Organisms *(approximately 2 weeks)*

Unit Learning Target: By the end of the Processes of Organisms unit, I will be able to explain interactions among organisms and their environment and how organisms obtain and use resources. I will be able to use mathematical concepts to construct explanations for the role of energy in the cycling of matter. I will be able to examine complex interactions among all organisms and design solutions to lessen the effects of changes to ecosystems.

Standards:
B-LS1-5 Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
B-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and other large carbon-based molecules necessary for essential life processes.
B-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy.

Unit 3: Energy of Ecosystems *(approximately 2 weeks)*

Unit Learning Target: By the end of the Energy of Ecosystems unit, I will be able to explain interactions among

organisms and their environment and how organisms obtain and use resources. I will be able to use mathematical concepts to construct explanations for the role of energy in the cycling of matter. I will be able to examine complex interactions among all organisms and design solutions to lessen the effects of changes to ecosystems.
I will be able to use evidence to evaluate the role of biodiversity in ecosystems and the role of animal behavior on survival of individuals and species. I will be able to evaluate interactions among organisms, including humans, and how those interactions influence the dynamics and health of ecosystems, and biodiversity.

Standard:
B-LS2-5 Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.

Unit 4: Dynamics of Ecosystems *(approximately 2 weeks)*

Unit Learning Targets: By the end of the Dynamics of Ecosystems unit I will be able to use evidence to evaluate the role of biodiversity in ecosystems and the role of animal behavior on survival of individuals and species. I will be able to evaluate interactions among organisms, including humans, and how those interactions influence the dynamics and health of ecosystems, and biodiversity.
I will be able to explain with evidence factors causing natural selection, the process of evolution of species over time, and how multiple lines of evidence contribute to the strength of scientific theories of natural selection and evolution. I will be able to engage in the engineering design process to investigate and test solutions to reduce the human impact on biodiversity.

Standards:
B-LS2-1 Use mathematical and/or computational representations to support explanations of biotic and abiotic factors that affect carrying capacity of ecosystems at different scales.
B-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on biodiversity and ecosystem health.

Unit 5: Inheritance & Variation of Traits (approximately 3 weeks)

Unit Learning Targets: By the end of the Inheritance and Variation of Traits unit I will be able to ask questions to clarify the relationship of DNA and chromosomes in the processes of cellular division that pass traits from one generation to the next. I will be able to use data and mathematical evidence to explain why individuals of the same species vary in how they look, function, and behave.

Standards:
B-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.
B-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

Unit 6: Evolution *(approximately 2 weeks)*

Unit Learning Targets: By the end of the Evolution unit I will be able to explain with evidence the factors causing natural selection, the process of evolution of species over time, and how multiple lines of evidence contribute to the strength of scientific theories of natural selection and evolution. I will be able to engage in the engineering design process to investigate and test solutions to reduce the human impact on biodiversity.

Standards:
B-LS4-1 Communicates scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

B-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
B-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
B-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

Instead of having your parent or guardian sign and return your syllabus, I would like to confirm that you have both read and understood the syllabus by email. Please Confirm that both student and parent/guardian have read and understand the contents of this syllabus via the confirmation form linked in google classroom.