



BIOLOGY

Course Guidelines & Philosophy
2021-2022



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WELCOME TO BIOLOGY!

WE ARE SO FIRED UP & EXCITED THAT YOU ARE IN OUR CLASS!!! WE WILL DO EVERYTHING IN OUR POWER TO HELP YOU BE SUCCESSFUL!!! WE WILL ASK YOU TO BE WILLING TO WORK HARD, ASK INSIGHTFUL QUESTIONS, THINK AND PARTICIPATE IN THE ACADEMIC PROCESS THAT AWAITS YOU! LET'S ROW THIS BOAT TOGETHER!!!

I. COURSE OUTLINE:

- Lessons, Units and Tests will focus on the NGSS and Scientific Literacy Standards for Biology.
- Topics Covered During the Year:
 - Introduction to the Science of Biology
 - Structure, Function & Growth
 - History of Earth's Atmosphere: Photosynthesis & Cell Respiration
 - Inheritance and Variations of Traits
 - Natural Selection and Evolution
 - Ecosystems: Ecology Interactions, Energy & Dynamics
 - Ecosystems: Stability & Response to Climate Change

II. RECOMMENDED MATERIALS:

- A three-ring binder with dividers specifically for Biology.
- A writing utensil
- The textbook for this class is Prentice Hall Biology by Miller and Levine.

III. GRADING PROCEDURES:

- **Grading Scale:**
 - 100-90%= A 89-80%= B 79-70%= C 69-60%= D 59-0%= F
- **Final Grade Percentage Breakdown:**
 - **Unit Tests and Quizzes** – worth 60% of overall grade
 - **Classwork, Homework and Labs** – worth 40% of overall grade
 - **Extra Credit** – a maximum of 2% extra credit may be offered during the semester

IV. UNIT TEST RETAKES OR LATE WORK/ASSIGNMENTS or ABSENCES:

- **Absences:** If you are absent, PLEASE check our website and/or Google Classroom. **GONE ONE DAY—GET ONE DAY!** To earn full credit, your missed assignments need to be turned in by the next time our class meets. If your absence is for Co-Curricular, please ask us for your assignments prior to your event.

- **Unit Test Retake Policy:** Test retakes are to be scheduled with your teacher. The average of the two exam scores will be given as your final score.
- **Late Work:** You have an opportunity to earn up to 70% credit by turning in any missing assignments for the *current* unit. Students may also turn in work for the *directly previous* unit for up to 50%. No late work will be accepted from any other units.
 - **Late work must be 100% complete or it will not be accepted.**
 - **Please email teacher after submitting LATE assignments with information regarding which assignments were submitted.**

V. CLASS PROCEDURES/GUIDELINES:

- **Be on Time** - Please be in your seat and ready to go when the tardy bell rings.
- **Be Responsible for YOUR Actions** - Be a student who demonstrates character and respect for each other in our classroom and our school daily.
- **Cell phones** - Cell phones are not allowed to be utilized during class unless using it for an educational resource for a lesson/lab. Cell phones must be turned off and in your backpack/phone motel during class. Cell phones will be collected and held by the teacher when the restroom is needed.
- **Seating Assignments** - Seats are assigned and may change regularly throughout the year. You will also be assigned a particular lab group. You are responsible for leaving your table neat and clean at the end of the class period.

VI. General Expectations of Students during Class EVERYDAY!

- **Treat EVERYONE (other students, the teacher and yourself) with Courtesy and Respect.**
- **Do Not TALK when the Teacher or Another Student is talking!**
- **Be Honest!!**

VII. DISCIPLINE PROCEDURES:

- *The Biology Department will enforce the guidelines set forth in the Buchanan Student Handbook.*
- Students will be held responsible for their actions and completion of assigned classroom, lab and homework. Your **attitude** and **behavior** are **CRUCIAL** to your **grade**.

VIII OPPORTUNITIES FOR EXTRA HELP

- Your Teacher
- After School Labs – see teacher office hours.
- Resources available: Google Classroom, Teacher Websites

FINAL NOTES

Do your own work and you will be amazed at the success you will have this year! We are VERY excited to get to know you and help you be successful in Biology! We are looking forward to a great year!

SCIENCE DEPARTMENT STUDENT SAFETY CONTRACT

PURPOSE

Science is a hands-on laboratory class. You will be doing many laboratory activities, which may require the use of hazardous materials. To ensure a safe science classroom a list of rules and procedures has been developed and provided to you in this safety contract. These rules must be followed at all times. Two copies of the contract are provided. Both the student and a parent or legal guardian must sign one copy before you can participate in any laboratory activity. *The second copy is to be kept in your science notebook as a constant reminder of the safety rules.*

GENERAL GUIDELINES

1. Conduct yourself in a safe and responsible manner at all times. Absolutely no practical jokes or horseplay will be tolerated.
2. Follow all written and verbal instructions carefully. If you do not understand a direction or part of the procedure, ask the instructor before proceeding. Perform only authorized experiments. Never do anything that is not called for in the lab procedure or by the teacher. Unauthorized experiments are prohibited.
3. No student may work in the laboratory without an instructor present.
4. Do not touch any of the equipment, chemicals or other equipment in the laboratory area until you are instructed to do so.
5. Do not eat food, drink beverages, or chew gum in the lab. Do not use lab glassware as containers for food or beverages.
6. Observe good housekeeping practices. Work areas should be kept clean and organized at all times. Backpacks, books, purses, etc. should be placed on a side counter or out of the way and not left on the lab table.
7. Keep aisles clear. Push chairs in or under the table when not in use.
8. Know the locations and operation of all safety equipment including the first aid kit, eyewash station, safety shower, and fire blanket. Know where the fire alarm and exits are located.
9. Always work in a well-ventilated area. Use a fume hood when working with volatile substances or poisonous vapors. Never put your head in the fume hood.
10. Immediately notify the instructor of any accidents, broken glassware or equipment, injuries or other unsafe conditions.
11. Dispose of all chemical wastes properly. Never mix chemicals in the sink. Sinks are to be used only for water and those solutions designated by the instructor. Solid chemicals, metals, matches, filter paper and other materials are to be disposed of in the proper waste containers, not in the sink.
12. Keep hands away from face, eyes, mouth, and body while using chemicals or preserved specimens. Wash your hands with soap and water at the end of all experiments. Clean, rinse and dry all work surfaces and apparatus at the end of the experiment. Return all equipment in working order to the proper storage area.
13. Experiments must be personally monitored at all times. You will be assigned a lab station at which to work. Do not wander around the room, distract other students, or interfere with the lab experiments of others.
14. Students are never permitted in the science storage rooms or preparation areas unless given specific permission by their instructor.
15. Know what to do if there is a fire drill during an experiment; containers must be closed, gas valves turned off, fume hoods turned off and any electrical equipment turned off.
16. Handle all living organisms used in a lab activity in a humane manner. Preserved biological materials are to be treated with respect and disposed of properly.
17. When using knives, scalpels and other sharp instruments, always carry with tips and points pointing down and away. Always cut away from your body. Never try to catch falling sharp instruments. Grasp sharp instruments by the handle only.
18. Never remove any materials or equipment from the lab.

CLOTHING

1. Any time chemicals, heat, glassware, or dissecting equipment are used, and students will wear lab goggles. There are no exceptions to this rule!
2. Dress properly during a lab activity. Confine loose hair, dangling jewelry, and secure loose or baggy clothing.
3. Lab aprons should be worn when using caustic, poisonous or corrosive chemicals.

ACCIDENTS AND INJURIES

1. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the instructor immediately, no matter how trivial it may appear.
2. If a chemical should splash in your eye(s) or on your skin, immediately flush with running water from the eyewash station or safety shower for at least 20 minutes. Notify the instructor immediately.
3. When mercury thermometers are broken, mercury must not be touched. Notify the instructor immediately.

HANDLING CHEMICALS

1. All chemicals in the lab are to be considered dangerous. Do not touch, taste, or smell chemicals unless specifically instructed to do so. The proper technique for smelling chemicals, wafting, will be demonstrated to you.
2. Check the label on chemical bottles twice before removing any of the contents. Take only as much chemical as you need.
3. Never return unused chemicals to their original containers.
4. Never use mouth suction to fill a pipet. Use a rubber bulb or pipet pump.
5. When transferring chemicals from one container to another, hold the containers away from your body.
6. Acids must be handled with extreme care. If you need to dilute a strong acid, always add the acid to water, swirl or stir the solution and be careful of the heat produced.
7. Handle flammable liquids over a pan to contain spills. Never dispense flammable liquids anywhere near a flame or source of heat.
8. Take great care when transferring acids or other chemicals from one part of the lab to another. Hold them securely and walk carefully.
9. Do not hold a container in which a reaction is taking place. Keep a safe distance from containers during a reaction. Never look into a container during a reaction.

HANDLING GLASSWARE AND EQUIPMENT

1. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken glass in a designated broken glass container.
2. Inserting and removing glass tubing from stoppers can be dangerous. Always lubricate the glassware before inserting it into a stopper. Protect your hands with towels or cotton gloves when inserting glass into or removing it from a stopper. If glassware is stuck in a stopper, take it to your instructor for removal.
3. Fill wash bottles only with water and use it only as intended, e.g. to rinse or wash glassware or to add water to a container.
4. When removing an electrical plug from a socket, grasp the plug not its cord. Your hands must be completely dry before touching an electrical plug, outlet or switch. Never place anything other than a plug in an outlet.
5. Never use damaged electrical equipment. Look for frayed cords, exposed wires, and loose connections. Report damaged electrical equipment immediately.
6. Examine glassware before use. Never use chipped or cracked glassware. Wash dirty glassware before using.
7. Assume glassware is hot. Check glassware by bringing the back of your hand near the glassware to check if it is cool before grasping it.
8. Do not place hot glassware in cold water - it may shatter.

HEATING SUBSTANCES

1. Exercise extreme caution when using a gas burner. Take care that hair, clothing, and hands are a safe distance from the flame at all times. Do not put any substance into the flame unless specifically told to do so by your instructor. Never reach over an exposed flame. Only light burners when instructed by the teacher.
2. Never leave a lit burner unattended. Never leave anything that is being heated or is visibly reacting unattended. Always turn the burner or hot plate off when not in use.
3. Do not point the open end of a test tube that is being heated at yourself or anyone else.
4. Heated metals and glassware remain hot for a very long time. They should be set aside to cool and picked up with caution. Use tongs or heat-protective gloves.
5. Never look into a container that is being heated.
6. Do not place hot apparatus directly on the desk - use an insulating pad.

BUCHANAN HIGH SCHOOL—BIOLOGY 2021-2022
Parent/Guardian/Student Permission Signature Form



*Student's Name: _____ Period # _____

Please read, sign and return this portion of the syllabus to your teacher.

Throughout the year we may be viewing scientific videos/movies. Some may be rated G, PG or PG-13. Here are some examples but not limited to: NOVA, How the Earth Was Made, Bill Nye the Science Guy, Planet Earth, Amoeba Sisters, Discovery Channel films and National Geographic, GATTACA, Contagion, and The Universe. These films will relate to material we are studying in science and material covered in the state standards. If a student is unable to view these movies an alternative assignment will be assigned. These films will be used as an educational tool NOT as a reward.

_____ I give my child permission to view PG-13 videos in the classroom.

_____ I DO NOT give my child permission to view PG-13 videos in the classroom.

Comments: _____

Thank you for your support,

Biology Team

Any concerns or questions, please email your biology teacher.

****This suggestion form acknowledges that I have received, read, and comprehend that information provided within each of the following forms:*

1. *Course Guidelines*
2. *Lab Safety Contract*
3. *Video Permission Slip*

Parent/Guardian Signature: _____ Date: _____

Student Signature: _____ Date: _____