Honors Biology

***Ms. Karen Ye*: kye@k12albemarle.org**

COURSE DESCRIPTION

This course will emphasize the development of the students' ability to think critically and express biological concepts with clarity in a scientific manner. Students will explore biological concepts through lessons and demonstrations as well as qualitative and quantitative analysis. We will work "small to big", starting with atoms and organic molecules, moving on to life functions and processes, and ending with genetics and an exploration of how life has changed over time.

REQUIRED MATERIALS

The following should be brought to class **EVERY DAY:**

- A **1-inch (or larger)** binder with loose-leaf paper
- **Pencil, pen, and eraser**

COURSE WEBSITE

The course website can be found at chemistrye.weebly.com. Resources regarding content covered in class, including Powerpoints, guided notes, and homework will be posted. Please check the website regularly to access resources and announcements.

COURSE EXPECTATIONS

1. **Expect Respect**
   - This applies to members of the class as well as class materials
   - One mic
2. **Be Professional**
   - Be **on time**, be **prepared**, be **ready to learn**
   - **Electronics— Out of sight, out of mind! May not be used unless given prior permission from the instructor.**
   - Take **personal responsibility**—see me if you missed class or need to make up a lab/assessment.
3. **I Will is just as important as IQ**
   - Actively **engage** and **participate** in class, put effort into all assignments, **study** for assessments
   - **Reach out** to me early on if you are struggling.
4. **Keep it real, keep it safe!**
   - Follow the laboratory safety rules contract when doing labs
   - Since this room is also a lab space, there is **no food, drink, or gum** allowed in the lab area regardless of whether or not a lab is being done that day in class
   - Students found **not following the lab safety rules may be dismissed from lab and will receive a 0 for that lab assignment**

GRADING POLICY

Final grades will be calculated using a weighted average as follows:

- **Tests/Quests/Quizzes—40%**
- **Laboratory Work/Projects—30%**
- **Homework/Classwork/Independent Studies—30%**

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Assessments

In order to assess and report on the student's progress and understanding, quizzes may be given prior to the completion of a unit. There will be tests and quests given at the conclusion of each unit or subunit as indicated by the course pacing guide. They will cover information from class material, notes, assignments, laboratory experiments, demonstrations, etc. In general, these tests will be a combination of multiple choice and short answer items, as well as chemical calculations (where appropriate). I do not offer test retakes, but I will provide opportunities for students to review missed questions and earn points back towards their test grades.

Laboratory Assignments

Laboratory work is generally completed in groups and given out as handouts. All pre-lab questions must be completed the day before lab as homework. Not completing the pre-lab ahead of time will prohibit you from starting the lab with everyone else. At the end of the lab, you will be able to answer post-lab questions and will be collected. There will be at least one or two labs for each unit or sub-unit.

Independent Study/Research

Students will be responsible for learning some material independently or applying class concepts to completing a project or case study. Material will be assigned to be completed by students both inside and outside of the classroom and will require internet use.

Homework

Homework is an essential part of this chemistry course as it is a means for students to practice the concepts that were taught in class. Homework assignments will be assigned each class period and may be **graded for completion or correctness**.

DO NOWs and Exit Slips

DO NOWs and/or exit slips are completed daily. These may also be graded for correctness and will be reflected on your participation or quiz grade. These works are an assessment of what you have learned in class.

Extra Credit: There will be various extra credit opportunities given throughout the semester to allow students to gain points back to their overall grade. Extra credit opportunities will be announced as well as posted on the class website.

Exams

All students must take the midterm semester exam; it counts for 20% of your midterm grade, per school policy. All students will have a final project that will be counted as the final exam grade. There are no exemptions.

LATE WORK:

All work is due at the beginning of class. Work turned in during or at the end of class is still considered late. Late work will receive an automatic 20% deduction and any late work that is not turned in by the unit test will receive no credit. Exceptions will be made for illness and extenuating circumstances, but it is your responsibility to discuss these options with me.

ABSENCES

It is best not to miss a class unless absolutely necessary. If you are absent from this class for any reason, it is **your responsibility** to seek the information necessary to make up your work as soon as possible. Check the course website for postings of new assignments, due dates, etc. Missed work and tests will be made up in accordance with the regulations as prescribed in the **Student Handbook:** a student has 5 school days from the day he/she returns to make up any missed work. Any work that was due on the day a student was absent will be due the day the student returns to class. If a test or a quiz was scheduled to be taken on the day the

student was absent, I must be contacted immediately (i.e. prior to our next class period) to schedule a time to complete the test or quiz. Otherwise, you should expect to take the test or quiz during class on the day you return to my classroom. If labs are missed due to absences, students will be expected to attend a make-up lab session. Regardless, makeup work of any kind must be completed **within 5 school days** of your absence and must be completed at a time other than our normal class time or you will receive no credit for the assignment.

OUTSIDE ASSISTANCE

I will be available to help you outside of classroom instructional time. I will be available during Mustang Mornings to assist you in any way that I can. Please let me know in advance if you plan to attend Mustang Morning for assistance on a particular day so that I can verify that I will indeed be available for assistance at the time you have requested. I am also available at other times (before/after school), by appointment only.

PARENT PORTAL

This portal will give students and parents access to student grades and attendance via the Internet. I will update assignments/grades at the end of each week. For major projects and tests, please give me up to 5 days after the completion date to complete grading and record into the PowerSchool Grade Book.

STANDARDS OF LEARNING

BIO. 1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations

BIO. 2 The student will investigate and understand the chemical and biochemical principles essential for life

BIO. 3 The student will investigate and understand relationships between cell structure and function.

BIO. 4 The student will investigate and understand life functions of Archaea, Bacteria and Eukarya

BIO. 5 The student will investigate and understand common mechanisms of inheritance and protein synthesis

BIO. 6 The student will investigate and understand bases for modern classification systems

BIO. 7 The student will investigate and understand how populations change through time.

BIO. 8 The student will investigate and understand dynamic equilibria within populations, communities, and ecosystems.

Topics Covered

- Scientific Method
- Intro to Biological Concepts
- Characteristics of Life
- Biochemistry
- Cells
- Energy
- Genetics
- DNA and Biotechnology
- Evolution
- Ecology