2023 Honors Biology I Course Syllabus
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ASA Vision

Our vision is to create a nurturing, supportive, and collaborative learning environment that focuses on growing each student as an individual through a unique, high-quality, and rigorous educational experience immersed in the college atmosphere, preparing Scholars for entrance into an ever-changing and advanced society. To accomplish our vision, Aiken Scholars Academy integrates our Scholar Profile and the Dispositions for College Success.

Service Curiosity & Life-Long Learning Honor Ownership Leadership Advocacy Resilience	Beliefs: Conscientiousness, Sense of Belonging, Self-Efficacy, and Growth Mindset Motivation: Utility Goals and Intrinsic Goals Positive Future Self

Course Description

This course is an introductory laboratory-based course designed to meet the 2021 SC Curriculum Standards in Biology. Students will engage in thinking and solving problems the way scientists and engineers do to help

Instructional Context

Science and Engineering Practices - Scientific Literacy Skills

1. Ask questions and define problems
2. Develop and use models
3. Plan and conduct investigations
4. Analyze and interpret data
5. Use mathematical and computational thinking
6. Construct explanations and design solutions
7. Engage in scientific argument from evidence
8. Obtain, evaluate, and communicate information

Crosscutting Concepts - Scientific Literacy Vocabulary

1. Patterns
2. Cause and Effect: Mechanism and Explanation
3. Scale, Proportion, and Quantity
4. Systems and System Models
5. Energy and Matter: Flows, Cycles, and Conservation
6. Structure and Function
7. Stability and Change

Disciplinary Core Ideas - Academic Standards

1. **LS1**: From molecules to organisms- Structures and processes
    a. 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. B-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
    c. B-LS1-5 Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
    d. 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.
    e. 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.

2. **LS2**: Ecosystems: Interactions, energy, and dynamics
    a. 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. 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.
    c. B-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on biodiversity and ecosystem health.

3. **LS3**: Heredity: Inheritance and variation of traits
    a. 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. B-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

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Required Materials

1) 3-Ring Binder **or** Multiple Folders for each Unit
2) Lose Leaf Paper
3) Pencils and Blue/Black Ink Pens
4) Scientific Calculator for all Science Courses (My Suggestion is TI-30IIx or Higher)
5) Optional, but highly encouraged: pack of color pencils

Laptops will be used DAILY. Please be prepared by having your laptop charged each day.

Assessment and Grading

All Formative and Summative work must be completed in pencil or blue/black ink using complete sentences unless instructed by instructor or specific rubric. Each student's grade will be reported as the point earned out of the maximum number of points possible.

The **Quarter** grades will be weighted in the following manner:

60% Summative Assessments – Unit Tests, Formal Lab Reports, and Projects

40% Formative Assessments – Daily Assignments, Homework, and Virtual Lab or Data Analysis Activities

The **Semester** grade will be weighted in the following manner:

Quarter 1 --- 40% | **Quarter 2 ---** 40% | **End of Course Test ---** 20%

As per the policy of all South Carolina, all numerical grades will correspond to the following letter grade:

A	B	C	D	F
100 - 90	89 - 80	79 - 70	69 - 60	59 and Below

Summative Assignments: Summative assessments must be turned in on the due date even if the Scholar is absent from school. In the event of an emergency or extreme situation, a Scholar may request a conference with the teacher to request an extension. Conferences must be requested within 24 hours of the original due date. If granted, the assignment must be submitted within three calendar days from the initial deadline and there will be an automatic 20% deduction of points.

Make-Up Work: Scholars are responsible for making up any work missed during an absence from school. It is the **Scholar's responsibility** to collect assignments prior to, during, or immediately upon return from an absence. Scholars must turn in previously assigned work upon return to school and should be prepared to take any assessments where new information was not covered during the absence immediately upon return. Summative assessments must be turned in on the due date even if the Scholar is absent from school regardless of the reason. For new assignments, Scholars will be given the amount of days missed or a specific deadline by the teacher to complete the work. If assignments are not completed and submitted in the allotted time, a zero will be recorded.

Reassessment:

Scholars should always be prepared to take summative assessments the day they are scheduled and should review results to determine areas of need for tutoring or extra help as they move on to new skills or concepts. The purpose of reassessing is to give Scholars an additional opportunity to move towards mastery of concepts/skills. **Reassessment may be encouraged for multiple classroom assessments; however, only ONE opportunity will be offered per quarter for an improved grade.**

Scholars who wish to take advantage of this must make a formal, **written request** utilizing the provided orange reassessment form. The Scholar must participate in remediation prescribed by the teacher. **Teachers will set reassessment dates and deadlines to be followed for their individual classes.**

End of Course Requirement

The End of Course Examination Program (EOCEP) is a statewide assessment program of end of course tests for gateway courses awarded units of credit in English/language arts, mathematics, science, and social studies. The EOCEP encourages instruction in the specific academic standards for the courses, encourages student achievement, and documents the level of students' mastery of the

Classroom Expectations

To promote a positive collaborative learning environment all students should strive to:

1. Respect Yourself and Others.
2. Be on Time (Inside the room at your seat and working on the bell ringer).
3. Come Prepared for Class (Homework completed and all materials with you).
4. Be willing to contribute in the class.

Laboratory Rules and Safety Contract

1. **Follow All of the Laboratory Safety Rules** as outlined in the School District of Aiken County adopted Student Safety Contract (Flinn Lab Safety Contract)
2. **DO NOT** play around or waste time off-task during lab activities.
3. **No Eating or Drinking** in the laboratory area.
4. Clean up your lab area before leaving the lab. This includes returning lab materials and chairs etc. to the proper place. Failure to clean will result in loss of points or possible late dismissal.
5. If absent from a lab, set-up a make-up appointment within one week of the missed lab.

   Consequences for Violation of Rules

   1. Verbal Warning/ Conference with Student Outside of the Classroom or after class
   2. Call/email to your Parent or Guardian
   3. Referral to Guidance or Administration

      Severe and Repeating Refractions may involve immediate referral to administration.

Formal Lab Report Rubric and Claim, Evidence, and Reasoning Expectations*

Criteria/Conditions	Grading Scale				
Cover Page and Introduction Cover Page includes - Name, Date, Lab Partner Title is relevant/describes the lab Introduction Summarizes the major concept/content the lab is focused on exploring and outlines the purpose of the lab with correct use of vocabulary. APA citations rules applied appropriately.	**5** ALL of the "excellent" conditions are met	**3** One of the "excellent" conditions is not met	**2** Two of the "excellent" conditions is not met	**1** Three of the "excellent" conditions is not met	**0** No evidence of the criteria was found
Pre-Lab Questions Pre-lab questions are reproduced from the lab handout. All questions have been answered completely and thoroughly in complete sentences.	**3**				