Honors Biology
Course Syllabus
Arizona College Preparatory

Instructor: Kristi Glassmeyer **Room:** A103
Email: Glassmeyer.Kristi@cusd80.com **Voicemail:** (480) 424-8034
Website: Click Glassmeyer, Kristi under the ACP-Erie Faculty tab

COURSE DESCRIPTION

Welcome to Honors Biology with Mrs. Glassmeyer! This course is an innovative, activity-driven biology program aligned with, and designed to prepare students for Advanced Placement (AP)/College level Biology. The curriculum strongly emphasizes the development of the conceptual framework of biology by providing a comprehensive survey of the key principles and issues of life sciences including the following: biochemistry, cell biology, metabolic processes, DNA and its associated technologies, genetics, ecology, evolution, organism diversity and systems. Modern Biology is an exciting and challenging field that is in a continuous state of advancement due to new knowledge and technological progress. The curriculum emphasizes critical thinking and problem solving skills through application of key principles. As part of the honors requirements, this course integrates additional problem solving and reasoning skills as well as laboratory and field research skills. This course will also have an extensive writing component for developing scientific literacy. Students are prepared for success in the Arizona High School science exam and are expected to take the exam. Over the course of the year, students will be developing a skill set to help build a successful a transition into the AP science courses.

TEXTBOOK

- The Living World, 7th or 8th Edition, by George B. Johnson (ISBN: 978-0-07-802417-7 or 978-0-07-802421-4, respectfully)

REQUIRED MATERIALS

- 1 5x5* graphing composition lab notebook with name, course, and teacher on outside cover in permanent marker or pen
- 3-ring binder (or part of) with 4 dividers labeled specifically for Honors Biology (course docs, current unit (all notes and completed work), past units, science fair)
- Writing utensils: blue or black pens, pencils, highlighters, red pen, colored pencils, ruler for creating data tables and graphs in lab book, lead (if needed)
- Glue stick *or* clear plastic tape for lab book
- 4-function calculator (with square root). May NOT use scientific or graphing calculator in Honors or AP Biology!!!
- Scissors (some are provided in the classroom)
- Flash drive or method of storing and retrieving electronic documents.
- Optional: dry erase markers, colored markers

*5x5 graphing means there are 5 squares for every inch in the composition book. There are also 4x4 so watch out.

COURSEWORK

1. **Tests & Quizzes:** Exams will consist of multiple choice questions, experimental design, graphical analysis & free response questions (short and long answer). All exams are comprehensive for the semester. Quizzes will be topic specific but will include any material that overlaps across topics already covered.
2. **Laboratory Work:** Labs will be conducted throughout the year during traditional and block days. Lab write-ups include both formal & informal write-ups. Pre & post lab assessments and lab practicals are to be expected. Labs are typically due one week after completion of the lab.
3. **Outside Class Learning:** Students are expected to keep up with the assignments for the current unit. Possible assignments may include: vocabulary building, reading focus questions, technology based assignments, and laboratory questions.
4. **Science Fair Project:** Students will work on researching a project appropriate for entrance into a science fair competition the following academic year. Project due dates are spaced throughout the school year and students are expected to work on it during assigned class time as well as outside of school.

SCIENCE FAIR RESEARCH PROJECT

Each student will be required to complete a scientific fair research project on a topic of his or her choosing, but is subject to the instructor's approval. This research project is to be done in preparation for an experimental project to be done in a higher level science class. Students must work independently on this long-term assignment. Assignments will be spread out throughout the school year. Some class time will be arranged to work on these deadlines, but the completion of the assignments must be done outside of class time. The research project involves the following components:

1. Survey of science fair categories that are of interest
2. Multiple reference critiques to establish a strong background of topic of interest
3. Development of a thorough scientific journaling process
4. Outreach to and interviews with community members involved in topic of interest
5. Presentation and paper of information learned for topic
6. Proposal of project question and hypothesis based on research

CLASSROOM EXPECTATIONS & MANAGEMENT PLAN

1. **Model Strong Character:** Be respectful of yourself, your classmates, your teacher and property. Treat others and as you would like to be treated.
   Misconduct – student will be assigned a lunch detention and the situation handled according to Family Handbook depending upon level of misconduct
2. **Do Your Best:** Do your own work! Don't give up! Try everything. Keep up with the work on a daily basis by studying the material and completing all assignments. Please ask questions during class when you don't understand something.
   Office Hours - Be sure to come in for office hours if you need further assistance learning or studying material. See teacher website for office hours.
3. **Influence Those Around You:** Be seated and prepared for class when the bell rings. Listen to and follow instructions the first time they are given. Be on task! At the end of class, remain seated when the bell rings until you are dismissed.
   Tardies - Students must be in their seats when the tardy bells rings or they will be considered tardy. Students will be assigned lunch detention for repeated tardies.
4. **Responsible Electronic Use:** Students are expected to use electronics responsibly. Electronics should be away unless being specifically utilized by teacher or student for academic purposes. If students would like to utilize electronics, they should ask permission of the teacher first.
   Inappropriate Use of Devices - Electronic devices will be confiscated if being use inappropriately during class time.
5. **Academic Integrity**: *Copying and plagiarizing are considered cheating and includes, but is not limited to, copying homework, labs, tests and quizzes.*
   Cheating – a deduction will be given for the assignment to any student involved. Additional information can be found in the family handbook.
6. **Safe Environment:** Safety is a major consideration in any science laboratory. All students will be required to sign a safety contract before participating in any laboratory experiments. Specific directions are given as a mean of keeping everyone safe. It is everyone's responsibility to maintain a safe environment.
   Unsafe behavior: Students *will not* be permitted to participate in lab and will be assigned a lunch detention or a referral depending upon situation. ***Absolutely no lenience will be given***.
   Food/Drink/Water: For student safety, food and drinks are *not permitted* in class. Bottled water is permitted as long as it has a screw cap.
7. **Family Handbook:** All Arizona College Preparatory policies in family handbook apply in this class. Students should be familiar with those that have not been covered in the above classroom expectations.

NO RESCUE POLICY: (Please see Family Handbook for further clarification, if necessary)

- Students will not be permitted to call home in order to have a family member bring a forgotten assignments to campus.
- If a parent brings an assignment to the office after the start of the school day, the assignment will be placed in the appropriate teacher's mailbox and standard late work policies will be enforced.
- The policy is enforced after 1st quarter mid-quarter progress reports.

GRADING POLICIES

Grades are based on weighted categories. The percentage for each category is determined by cumulative points in the semester and calculated into a percentage. Grades are only rounded to the next highest whole percentage if the tenths place is a 5 or higher! For example: 79.50 will round to an B; however, a 79.49 will remain as a C. Grades can be viewed through Infinite Campus which is available online or as an app for most mobile electronic devices.

Grading Scale:	**Grade Categories:**		**Semester Grade:**
A = 100% - 90%	Tests/Quizzes	60%	Semester Fall/Spring = 80%
B = 89% - 80%	Labs/Projects	40%	Final Exam = 20%
C = 79% - 70%	Classwork/Homework	0%	
D = 69% - 60%			
F = 59% and below			

Coursework:

- All assignments due on a given day are due at the beginning of class, should be placed on the student desk, and should be complete before coming to class.
- Late work is accepted for **one school day following the due date** and will be **deducted 50% of credit earned**. After one school day, late work receives 0% credit. All late work submitted must have a late work pass attached in the upper left corner.
- Absent work is accepted according to the policies below and those listed in the family handbook. All absent work must be handed in according to classroom procedures. It is the student's responsibility to turn in missing assignments.

Absences:

- A student will receive one day per each day they were absent to make up an assignment.
- Missed tests/quizzes need to be scheduled upon return to school; Appointments must be made within 1 week of return to school.
- Labs must be made up after school, by appointment, within 1 week, or they will be considered late; however, the teacher reserves the right to give an alternative lab assignment if necessary.
- If the student has an **excused** absence, it is the **students' responsibility** to retrieve the assignments, notes, etc. by checking with a peer or the location recommended by the teacher (class website or Infinite Campus).
- If the student was present when an assignment was given, but absent the day the assignment is turned in, **the assignment will be due the day the student returns to school**. An absent pass must be attached.
- If a student was present when a long term assignment was given, the due date stands even if a student is absent during the duration of the assignment.
- If an assignment is due on turnitin.com, it is due at that time even if the student is absent that day.
- **NO CREDIT** will be given for all assignments missed on the day of an **unexcused** absence.

HONORS BIOLOGY COURSE OUTLINE

Semester I

Science of Biology

Chapter(s): 1

Topics: Class Orientation
Course Expectations and Procedures
Use of Lab Notebook
Cornell Note Taking
Nature of Science
Themes of Modern Biology
Scientific Process & Inquiry
Lab Tools and Techniques
Characteristics of Life

Chemistry

Chapter(s): 2, 3

Topics: Chemistry Basics
Water
Macromolecules of Life

Cells

Chapter(s): 4

Topics: Cell Theory
Plasma Membrane
Cell Types
Cell Structure and Function
Cell Transport

Processing Building Blocks

Chapter(s): 5, 6, 7

Topics: Cells and Energy
Chemical Reactions in Biology
Enzymes & ATP
Photosynthesis
Cellular Respiration

Gene to Protein

Chapter(s): 8, 11, 12

Topics: History of DNA
DNA Structure and Function
Mitosis & Cell Cycle
Cancer
DNA Replication
Protein Synthesis

Semester II

Genetics

Chapter(s): 9, 10, 13

Topics: Meiosis
Mendelian Genetics
Non-Mendelian Genetics
Karyotypes
Pedigrees
Genomics
Human Genome

Ecology

Chapter(s): 35, 36, 37

Topics: Levels of Organization
Species Interactions
Ecosystems
Geochemical Cycles
Behavioral Ecology

Evolution

Chapter(s): 14, 15

Topics: Darwin vs. Lamarck
Hardy-Weinberg
Evolution of Populations
Speciation & Cladograms
Modern Evolutionary Classification

Microorganisms and Fungi

Chapter(s): 16, 17, 18

Topics: Origin of Life
Bacteria and Viruses
Protists
Fungi

Plantae Kingdom

Chapter(s): 32, 33, 34

Topics: Plant Diversity
Structure and Function
Adaptations to Environments
Reproduction

Animalia Kingdom

Chapter(s): 19, 23, 25, 26, 28

Topics: Evolution of Animal Phyla
Circulation, Digestion, & Homeostasis
Nervous System
Animal Behavior