

CONTRACT OF EXPECTATIONS

Name: _____

Home Phone: _____

Class (circle one):

Academic Biology

Honors Biology

AP Biology

1. I will respect all people at all times, and treat everyone as I expect to be treated. This includes the use of vulgar language, inappropriate physical contact, interrupting anyone who is talking, and any other behavior that can be perceived as rude or demeaning to others.
2. I will arrive to class on time unless I hold a valid pass.
3. I will remain in class for the duration of the period and will leave early only if I am asked or in the case of emergency.
4. I will pick up all my trash and dispose of it in an appropriate way.
5. During class or group discussions I will discuss only the topic assigned.
6. I will complete all work and hand it in on time.
7. I will put all my effort into all my work all of the time.
8. I will put my cell phone away as soon as I enter the class and will not use it unless given specific instructions to do so.
9. I understand that there are consequences to my actions.

I agree to observe the above expectations.

Signature

ADVANCED PLACEMENT BIOLOGY
GRADING PLAN

Mr. Nicolaou
Room 128

Chapter Tests: 40% of the grade for the quarter.

Quizzes: 20% of the grade for the quarter.

Labs and research papers: 30% of the grade for the quarter.

Homework, class participation, behavior, and attitude: 10% of the grade for the quarter.

Midyear exam: 20% of the grade for the semester.

Late work (except in the case of absence from school):

Any assignment that is handed in late will be penalized 10 points (out of 100) per day late. Any assignment not handed in by the third day after its due date will receive a 0.

Wheeler High School Academic Expectations met by this course: *Analysis*

Performance Indicators	Descriptor
Usage of Resources	<i>Able to select a variety of appropriate resources/strategies to use to arrive at a solution for a question, task or problem</i>
Application & Analysis	<i>Analyzes key information, questions/tasks and problems, and makes inferences based on background knowledge, observations and/or information to arrive at a solution</i>
Organization & Evaluation	<i>Evaluates according to a given set of criteria and collects, organizes and communicates information in an appropriate format</i>
Synthesis & Reflection	<i>Evaluates process and validity of results to create new ideas and/or draws appropriate conclusions based upon knowledge and experiences from several areas</i>
Utilization of Technology (if applicable)	<i>Demonstrates an appropriate use of technology to address an objective or task when applicable</i>

<i>Exceeding (4)</i>	Went above and beyond the expectation	Work was completed independently Y N
<i>Attaining (3)</i>	Met the expectation	
<i>Emerging (2)</i>	Approaching the expectation	Assessment at grade level Y N
<i>Beginning (1)</i>	Expectation yet to be attained	

WHEELER HIGH SCHOOL COURSE EXPECTATIONS

Advanced Placement Biology

I. Course Overview:

This course is a college-level biology class. While each college is different, students who earn a 4 or a 5 on the AP exam may receive college credit for this course. This course will include the following units: chemistry of life, a study of the cell and its processes, genetics, evolutionary mechanisms, diversity of life, plants, animal form and function, and ecology. The course is designed to prepare students for the AP exam. Students will study one unit during the summer before taking this course. *Prerequisite: Successful completion of Biology and Chemistry (or taking Chemistry at the same time), be a junior or a senior.*

II. Overall Course Objectives:

The High School Science Department, in an attempt to develop scientifically literate students, incorporate the following underlying principles as part of instruction and assessment throughout the high school science courses:

Identify questions that can be answered through scientific investigation.

Read, interpret, and examine the credibility and validity of scientific claims in different sources of information.

Formulate a testable hypothesis and demonstrate logical connections between the scientific concepts guiding the hypothesis and the design of the experiment.

Design and conduct appropriate types of scientific investigations to answer different questions.

Identify independent and dependent variables, including those that are kept constant and those used as controls.

Use appropriate tools and techniques to make observations and gather data.

Assess the reliability of the data that were generated in the investigation.

Use mathematical operations to analyze and interpret data, and present relationships between variables in appropriate forms.

Articulate conclusions and explanations based on research data, and assess results based on the design of the investigation.

Communicate scientific knowledge in different formats, using relevant science vocabulary, supporting evidence, and clear logic.

The following topics will be covered in this course:

1. Chemistry of life:
 - a. water
 - b. organic molecules
 - c. free energy changes
 - d. enzymes
2. Cells:
 - a. prokaryotes and eukaryotes
 - b. membranes
 - c. subcellular organization
 - d. cell cycle
3. Cellular processes:
 - a. coupled reactions
 - b. fermentation and cellular respiration
 - c. photosynthesis
4. Heredity:
 - a. mitosis and meiosis
 - b. eukaryotic chromosomes
 - c. inheritance patterns
5. Molecular genetics:
 - a. DNA and RNA
 - b. gene regulation
 - c. mutations
 - d. viruses
 - e. nucleic acid technology
6. Evolution:
 - a. evolution of life
 - b. evidence for evolution
 - c. mechanisms of evolution
7. Diversity of organisms:
 - a. evolutionary patterns
 - b. diversity of life
 - c. phylogenetic classification
 - d. evolutionary relationships
8. Structure and function of plants and animals:
 - a. reproduction, growth, and development
 - b. structural, physiological, and behavioral adaptations
 - c. response to the environment
9. Ecology:
 - a. population dynamics
 - b. communities and ecosystems
 - c. global issues

The major themes in this course:

- I. Science as a Process
- II. Evolution
- III. Energy Transfer
- IV. Continuity and Change
- V. Relationship of Structure to Function
- VI. Regulation
- VII. Interdependence in Nature
- VIII. Science, Technology, and Society

III. Material Required:

Textbooks:

- Urry, Cain, Wasserman, Minorsky, Reece. *Campbell Biology, 11th Edition*. Pearson, 2017.
- Feldkamp. *Modern Biology*. Holt, Rinehart and Winston, 1999.

The student should supply his/her own notebook, pen and pencil, and calculator.