Greater New York Academy
AP Biology Syllabus

Teacher: Mr. J. Patterson
Room: # 5
Prerequisites: Biology and Chemistry (minimum 85 average in class and regents exams)
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Office hours: Wednesdays after school and by appointment.
Motto: I can do all things…
Quote: Wisdom is the gift, the endowments are to know how to use power…

COURSE DESCRIPTION: Biology is the study of life and its creator. The Advanced Placement Biology course is designed to be equivalent of a college introductory course taken by biology majors during their first year at colleges and universities across the nation. This course differs significantly from the usual high school course in respect to the textbook used, the range and depth of topics covered, the laboratory work done by students, and the time and effort required. Although much of the content will be presented during class, students will be expected and required to cover additional materials on their own.

Students in AP Biology will only succeed if they appreciate that this course will be taught at the college level and will be very challenging. It is recommended that students be prepared to spend a minimum of 1 ½of study time per 1 hour of the time spent in class.

After showing themselves to be qualified on the Advanced Placement Examination, some students, as college freshmen are permitted to take upper-level courses in biology or register for courses for which biology is a prerequisite.

TEXTBOOK AND STUDY GUIDE: Biology, by Campbell, Reece and Mitchell 6th ed.

CLASS MATERIALS: Textbook, notebook, Pens (only black or blue ink) and pencils.

COURSE GOALS

The biology course will promote the following:

- Recognition of the role of God as Creator, Master Designer, and Sustainer of all life.
- Development of an appreciation for both the exquisite beauty and complexity created for us by a generous God.

- Respect for the earth's resources and recognition of the individual's role in the wise and ethical stewardship of resources.

- Understanding the classification system of organisms.

- Understanding of the interrelationship between structure and function in cells, tissues, organs, and systems.

- Recognition of the molecular basis of structure and function.

- Understanding of the interaction of living organisms and the environment.

- Understanding the principles of heredity and genetics.

- Recognition of the factors that influence population growth, stability and decline.

- Application of the mathematics necessary for understanding the quantitative aspects of biology.

- Provide students with a good college-level introductory biology course.

- Prepare students well for the AP exam by helping them acquire the necessary content information and training them in exam strategies and essay writing skills.

- Help students develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process.

Course Outline:

1st Semester

Week 1	**Overview**	**2**	CH 1
Week 2	Atoms, Molecules		CH 2
	Water and Organic Molecules	**4**	CH 3-4

Week 3	Proteins		CH 5
	UNIT EXAM CH 1-5		CH 7
	Cells	**1,3**	
Week 4	Cells		CH 7
	Movement Across Membranes	**5**	CH 8
Week 5	***UNIT EXAM CH 7-8***		
	The Flow of Energy		CH 6
	Cellular Respiration		**CH 9**
Week 6	Glycolysis and Respiration	**6**	CH 9
Week 7	Photosynthesis	**7**	CH 10
Week 8	***UNIT EXAM CH 6, 9, 10***		CH 11-13
	Cell Communication, Mitosis, Meiosis	**8**	
Week 9	Genetics	**9**	CH 14
	The Chromosomal Basis of Inheritance		CH 15
Week 10	***UNIT EXAM CH 11-15***		CH 16
	Molecular Basis of Inheritance	**Modeling Activity**	
Week 11	Protein Synthesis		CH 17
	UNIT EXAM CH 16-17		
Week 12	Microbial Models: Viruses and Bacteria	**DNA Extraction**	CH 18
	Eukaryotic Genome	**10**	CH 19
	DNA Technology		CH 20
Week 13	DNA Technology	**10**	CH 20
Week 14	Genetic Basis of		CH 21

	Development ***UNIT EXAM CH 18-21***		
Week 15	Descent with Modification	**11A**	CH 22-23
	Populations		
Week 16	Macroevolution and Phylogeny	**11B**	CH 24-25
	UNIT EXAM CH 22-25		
Week 17	Origin of Life, Prokaryotes, Protists	**Coacervates**	CH 26-28
Week 18	***UNIT EXAM CH 26-28***		
	Plants and Fungi	**12**	CH 29-31, 36
	Fungi		
Finals Week	***UNIT EXAM CH 29-31, 36***		

2nd Semester

Week	Description	Lab	Reading
Weeks 1-2	Invertebrates		CH 32-33
Week 3	***UNIT EXAM CH 32-33***		
	Vertebrates		CH 34
Week 4	Fish, Amphibians, Reptiles		
Week 5	Birds, Monotremes, Marsupials, Mammals		
	TEST CH 34		
Week 6	Physiology		CH 40-42
	Tissues, Nutrition, Circulation and Gas Exchange	**13, 14**	
Week 7	Circulation and Gas Exchange	**13, 14**	CH 42
Week 8	Immune System	**14**	CH 43
Week 9	Excretory System	**14**	CH 44
Week 10	Endocrine System		CH 45

	Reproductive System		CH 46
	Development		CH 47
Week 11	Development		CH 47
	Nervous System		CH 48
Week 12	Sensory System		CH 49
Week 13	***UNIT EXAM CH 40-49***		
	Ecology		CH 50
Week 14	Ecology		CH 50
	Behavioral Biology	**15**	CH 51
	Population and Community Ecology		CH 52-53
	Ecosystems	**16**	CH 54
Week 15	***AP EXAM - May 12***		
Week 16	Ecology		CH 50-56
Week 17	Field Studies -- Watershed Activity		
Week 18	Field studies Poster Presentation		
Finals Week	***FINAL EXAM***		

Grading Policy**:**

Your semester grade is divided in these areas:

Tests	**30%**
Quiz	**30%**
Labs.	**20%**
Homework	**20%**

The final letter grade will be determined by the following criteria:

93-100=A	79-82=B-	66-68=D+
89-92= A-	76-78=C+	63-65=D
86-88=B+	73-75=C	Below 63=F
83-85=B	69-72=C-	

Laboratory Exercises:

The AP Biology course requires 12 laboratory exercises. These labs are part of the national AP Biology exam. Additional lab activities beyond the 12 required will be conducted. These are designed to supplement the lecture coverage of various topics.

The final semester examination is worth 45% of the overall grade.

NOTE: STUDENTS MUST TAKE THE AP Exam IN MAY!!!

Classroom regulations:

1. It is the student's responsibility to familiarize himself/herself with all school policies in the Greater New York Academy's bulletin and follow them.
2. No one may leave their seat without permission.
3. Students will not be allowed in the classroom if they are not properly attired.
4. No student may leave the room without permission.

Examinations:

1. It is the student's responsibility to request a make-up exam within the first two days of returning to school.
2. A doctor's note, a phone call from a parent/guardian or note from them is required to take the exam.
3. All make-up exams are given after school and will be in essay format.
4. All tests missed and not made up will receive a grade of zero.

Heading:

1. Must be at the top of paper
2. Must have first and last name
3. Must have the date
4. Must have the class period.
5. Must have page of assignment.
6. Must have the subject.

Class preparation and deportment:

1. Absolutely no eating or drinking anytime in class (gum, Mints, candy, juice etc.)
2. Leave work area around chair and desk clean.
3. Bring all books to class everyday.
4. Bring writing materials that write.
5. Carry a positive attitude.

Remember:

I can do all things…

HAVE A WONDERFUL YEAR!!!