

# Gwynn Park High School

Science Department  
2006-2007

Course Title: Honors Biology

Teacher: Dr. Stein

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work# - 301-372-0140

## Course Description

### Aim:

Honors Biology is designed to help students develop skills in laboratory safety, use of lab equipment and scientific inquiry, as well as develop an understanding of biological concepts and processes. This course will examine these concepts and processes in great detail to prepare the student for Advanced Placement Biology and/or introductory college biology courses.

### Topics Covered:

1. Demonstrate an understanding of laboratory safety procedures and scientific method.
2. Carry out scientific investigations effectively and employ the instruments, systems of measurement and materials of science appropriately.
3. Explain the correlation between the structure and function of biologically important molecules and their relationship to cell processes.
4. Demonstrate an understanding that all organisms are composed of cells which can function independently or as part of multi-cellular organisms.
5. Explain the use and transfer of matter and energy in photosynthetic and non-photosynthetic organisms.
6. Demonstrate an understanding of certain biological pathways.
7. Analyze how traits are inherited and passed on from one generation to the next.
8. Interpret how the effects of DNA alterations can be beneficial or harmful to individuals, society and/or the environment.
9. Explain the mechanism of evolutionary change.
10. Analyze interrelationships and interdependencies among different organisms and explain how these relationships contribute to the stability of the ecosystem.
11. Identify the structure and function of human body systems.

**Length:** This course is one year.

**Prerequisites:** None

## **Instructional Philosophy**

- Each student is expected to attend class every day, arrived with required materials, participate in class activities, review materials introduced and complete all application, mastery and challenging problems when assigned for class work or homework.
- Instruction will address various learning styles.
- Laboratory activities are an integral part of the course, and will be used to reinforce core concepts.
- Written and critical thinking activities will be geared towards biology HSA exams.
- Instruction will be connected to real world applications.

## **Major Course Projects**

The student will complete reinforcement activities at the end of each quarter.

## **Assessment Plan/Grading Factors**

Class work	15%
Homework	10%
Written Assignments/Projects/Labs	25%
Tests	15%
Quizzes	10%
Quarterly Exams/Benchmark	25%

## **PACING GUIDE**

### **Quarter 1**

Introduction  
Safety and Scientific Method  
Basic Chemistry  
Water and pH  
Macromolecules, Vitamins, Minerals  
Enzymes

### **Quarter 2**

Cells/Membranes/Cell Chemistry  
Photosynthesis and Cellular Respiration

Cell Division (Mitosis/Meiosis)  
Begin Genetics

### **Quarter 3**

Genetics cont'd  
DNA and Protein Synthesis  
Genetic Engineering  
Evolution  
Classification and Biological Diversity

### **Quarter 4**

Ecology  
Human Body Systems  
REVIEW FOR BIOLOGY HSA TEST  
Biological Issues (after HSA)

### **Additional Information**

- Will be given out by the teacher on separate documents as needed.

### **Textbook**

Miller, K. and J. Levine (2006) Biology. Prentice Hall; New Jersey.

### **Supplies/Materials:**

- Textbook is to be brought to class daily
- Workbook is to be brought to class daily
- Three-ring binder to brought to class daily
- Pen/pencil/loose-leaf paper

### **Rules and Procedures**

- ID badges should be worn around the neck always.
- Food, gum, and beverages are not allowed.
- Take care of all personal and grooming needs between classes.
- Be in your seat when the bell sounds.
- Students must obey all classroom and safety rules and procedures.
- Class is dismissed by the teacher only.
- Respect yourself and others.

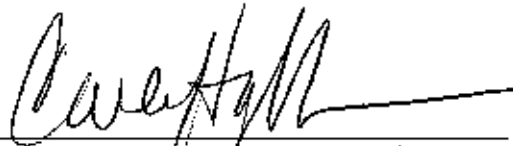
Attendance is an important aspect of your education at Gwynn Park High School. In accordance with Prince George's County Public Schools' (PGCPS) Administrative Procedure 5113, *Pupil Attendance and Absence*, "five (5) days of unlawful absence

per semester in a semester course, or ten (10) days of unlawful absence per year in a full year course shall result in no grade ("N") for course." Additionally, students will receive a zero (0) for all work done on the day of an unexcused absence and will not be given the opportunity to make up work missed because of an unlawful absence.

When absent, a student has two (2) days in which to bring in a note that excuses him/her for the absence. After that time, the absence becomes unexcused. The reason for the absence must be stated in the note. This note must be given to the attendance specialist in the main office who will issue an attendance form (PA-1) to the student. This form will denote whether the absence is lawful (excused) or unlawful (unexcused). It is the student's responsibility to present this attendance form to each of his/her teachers.

According the PGCPs' Administrative Procedure 5121.2, *Assessment and Grading for All Secondary School Programs*, "students who are considered lawfully absent from school will have the opportunity to make up missed assignments in a timely fashion (a maximum of three (3) days for each day's absence). Students who fail to complete missed work in a timely fashion will receive "zero" grades for those assignments."

Approved: \_\_\_\_\_



Carletta Marrow, Principal

Parent/Guardian signature: \_\_\_\_\_

Student Name & Signature: \_\_\_\_\_