

## **AP Biology – Syllabus**

### **Course Overview:**

Our AP Biology course is run on a block schedule. We meet 5 times every two weeks for 1 hour and 20 minute blocks. We also run an SRT (Student Resource Time) block, which is used for labs and review sessions. Lastly, an AP Biology Prep Course will be offered in the summer. Instructional time is split between lectures, discussions, tests, labs, and other hands-on activities. We run all twelve of the AP labs in the *AP Lab Manual for Students* as well as a few other labs (see Course Planner section below). The lab portion of the class is approximately 25% of the instructional time.

### **Textbook and Supplemental Readings:**

We use the following textbook:

Purves, William K., et al. *Life: The Science of Biology*. Cranbury, NJ: Sinauer Associates, Inc. Other supplemental readings are used throughout the year as well. These will come from peer reviewed science journals such as *Science* and *Nature*; as well as national magazines and newspapers.

### **Teaching Strategies:**

The eight major themes (as presented in the *AP Biology Course Description*) are emphasized throughout the coursework. The class topics are all tied to the three overarching themes: Molecules and Cells, Heredity and Evolution, and Organisms and Populations.

Each student is expected to be at the center of his or her own learning. Students spend a great deal of time reading and taking notes\* on their own, as well as writing various papers such as research papers, argumentative papers, topic review essays, etc. Students learn better in an environment where they are interacting and manipulating with the material, so I emphasize hands-on learning as much as possible. Along with the required twelve AP labs, we also perform a few outdoor labs, and multiple hands-on mini-labs and demonstrations.

In order for students to be successful on the AP test, they need to be exposed to sample test questions as often as possible. Practice problems from previously released AP materials as well as from various exam review books will be exposed to students within quizzes and tests.

(\*Note taking tips: When taking notes on readings for homework focus on the bigger message that is being conveyed and for class lectures focus on the facts that are in bold face on the power points.)

### **\*\*Summer AP Biology Prep Course-Unit 1: Molecules and Cells**

#### **Session 1 – Biochemistry-2.5 hours**

-Organic Chemistry/ Biochemistry (Ch. 3)

#### **Session 2-Enzymes and Metabolism-2.5 hours**

-Energy, Enzymes, and Metabolism (Ch. 6)

-*Enzyme Catalysis Lab (AP Lab 2)*

#### **Session 3 – Cells and Cell Transport-2.5 hours**

-Cell Structure and Function (Ch. 4)

-Cell Membranes (Ch. 5)

-*Diffusion and Osmosis Lab (AP Lab 1)*

#### **Session 4 – Cell Respiration and Photosynthesis-2.5 hours**

-Cellular Respiration (Ch. 7)

-Cellular Respiration Diagram

-Photosynthesis (Ch. 8)

-Photosynthesis Diagram