

## **AP Biology**

### **Syllabus**

#### **Course Overview**

Our class meets 5 days a week. The schedule alternates every other day between 80 minute periods and 40 minute periods with a total of 280-320 minutes a week. Laboratory exercises take up 25% or more of the total class time. There are about 36 weeks in our school year.

#### **Course Outline**

In addition to the specific course materials outlined below, central themes of biology are emphasized throughout the units. These topics include, but are not limited to: the molecular diversity that contributes to life, the cell as the functional unit of life, specialization of cells and organisms, fitting organisms into an evolutionary context, heredity, the relationship between organisms and their populations, and the relationships between organisms and their environments. Additional emphasis is placed on the process of science and distinguishing between public conceptions of science and how scientists view science including differences in vocabulary and methods. Ethics in science are also explored and debated to emphasize the role scientists, politicians, and the public in determining the direction of biology in the future.

#### **Text and Supplemental Materials**

We use Campbell and Reece's 6<sup>th</sup> edition of Biology (Campbell, NA and Reece, JB. 2002. Biology 6<sup>th</sup> edition. Benjamin Cummings, Boston, MA). For laboratory activities, we use the AP Biology Laboratory Manual for Students Edition D and the laboratory manual for the introductory biology course taught at the local university, written by the current laboratory coordinator. In addition, students read various primary source scientific journals, magazine and other literature to illustrate scientific discoveries and current science technology and events.

#### **Laboratory Component**

Laboratory activities generally take 120 min. including student preparation time (~40 min.) and actual lab time (~80 min.). Laboratory assignments are due two class days after completion of the lab. The goals of each lab are to illustrate concepts from each unit, emphasize recurring themes of biology, promote a greater understanding of the scientific process including communication of results, and generate interest in the students through hands on activities.