

## Biology

### 9<sup>th</sup> Grade (10 Credits)

- *Meets high school graduation requirement for life science*
- *Meets the UC/CSU subject area "D" requirement*



### General Information

#### Description

Biology is a college preparatory science course. Emphasis is placed on laboratory work using scientific methodology and research. The course will include the following topics: chemistry, ecology, cells, genetics, evolution and physiology.

Students will explore these topics through classroom discussions, laboratory investigations, teacher demonstrations, and in-class assignments. This course is aligned with the California State Standards in Biology.

#### Expectations and Goals

A student entering College Preparatory Biology should have successfully completed the following courses:

- 7<sup>th</sup> Grade Life Science (earning a grade of "B" or better)
- 8<sup>th</sup> Grade Physical Science (earning a grade of "B" or better)
- Have completed or be currently enrolled in Integrated Math 1

Student background and skill set should include:

- Selecting and using appropriate tools and technology (including calculators, computers, balances and microscopes) to perform tests and to collect and analyze data
- Using a variety of print and electronic resources (including the internet) to collect information and evidence as part of a research project
- Communicating the logical connection among hypotheses, cross cutting concepts, tests conducted, data collection and conclusions drawn from scientific evidence
- Communicating the steps and results derived from an investigation in written and oral presentations
- Constructing graphs from data and developing quantitative statements about the relationship between variables
- Applying mathematical relationships to determine a missing quantity in a mathematical expression given two remaining terms (including  $\text{speed} = \text{distance}/\text{time}$ ,  $\text{density} = \text{mass}/\text{volume}$ ,  $\text{volume} = \text{area} \times \text{height}$ )
- A high level of personal organization and the ability to self-start and manage time effectively

#### Estimated Homework

60 minutes per day. This is a general guideline for planning and scheduling purposes. A student's individual ability level and competency may affect the actual preparation times needed.

#### This Class Is Best For...

Students who demonstrate excellent understanding and have a passion for science and who typically earn the highest marks in both math and science. For freshman, these are typically students that earned "A's" and "B's" in both life and physical science. These are also students that have good organization and well developed study skills.

## Course Materials

### Required Materials

. Text book: Pearson/Prentice Hall “Biology” California edition 2007.

[http://www.amazon.com/Biology-California-Kenneth-R-Miller/dp/0132013525/ref=sr\\_1\\_1?ie=UTF8&qid=1426207975&sr=8-1&keywords=prentice+hall+biology+california+edition](http://www.amazon.com/Biology-California-Kenneth-R-Miller/dp/0132013525/ref=sr_1_1?ie=UTF8&qid=1426207975&sr=8-1&keywords=prentice+hall+biology+california+edition)

### Internet resources

- Prentice Hall textbook companion website  
<http://www.phschool.com/webcodes10/index.cfm?fuseaction=home.gotoWebCode&wcprefix=cbk&wcsuffix=9999>
- MP3/podcast files of chapters  
<http://books.pearsonsuccessnet.com/ph/0-13-203416-6/player.html?moduleurl=132034166/>
- Authors companion website for the textbook  
<http://www.millerandlevine.com/intro.html>