

Dear Students and Parent(s)/Guardian(s),

Welcome to Ms. Seargeant's AP Biology class! This class is fast-paced and rigorous. I am here to help guide your student through the wonderful world that is biology.

Course Content: This course is designed to cover the various aspects of biology with same depth as would be covered in entrance level college biology. A variety of biological levels ranging from molecule to organism to ecosystem will be studied. Students will not only study these individual levels but also the interrelationships between them. Laboratory work and writing will be an integral part of this course. It is intended that students taking this course will take the AP Biology Test in mid-May. The content of this course has been aligned with the California State Science Education Standards.

Course Overview: This class can be divided up into 3 basic components. First of all is the lecture component. A variety of activities, depending on the topic, will occur including group discussions, think-pair-share groups, class debates, individual student presentations, and other techniques to engage students with the materials. The second part is lab. Lab reports will be required at completion of each lab and a lab quiz will be taken to see if objectives have been met. Labs will take up about 25 percent of the instructional time in this class.

Textbook: Campbell and Reece: Biology, seventh edition

Procedures

- All materials should be out on your desk and your backpacks should be stowed in the appropriate area.
- The class runs from bell to bell. The teacher, not the bell, will excuse you.
- There is absolutely no use of the restroom in the first or last 10 minutes of class.
- To use the restroom, you must bring up your bathroom pass to be punched and fill out a written slip. This slip must be turned back in to me when you return.
- Attendance is required for success in this class. The more days that you miss, the more likely it is that you will not pass. If you need to be excused from class, please notify me ahead of time.
- If you are absent, it is your responsibility to get the assignments from a classmate and to make up the work. For every day you are absent, you have one day to make up the work. (Ex. If you miss 2 days, you have 2 days to turn in make up work)

Rules and Expectations

- No Food or Drinks (Bottled Water OK)
- No Electronic Devices
- Be in your seat with materials when class starts.
- Be respectful and courteous to everyone.
- Follow Directions

Discipline

1. Warning.

2. Student-teacher conference / item is taken away for the rest of the day
3. Parent phone call and low level referral / parent must pick up item at the end of the day
4. Parent-teacher-student conference and second low level referral to the counselor
5. Referral to the VP's office.
6. Suspension from class
7. Any or all of these steps may be skipped according to the nature of the offense.

Materials

Students are required to bring the following items to class every day:

- A spiral notebook
- Pen/pencil

All coursework will be completed in the spiral notebook. If a student does not have his/her notebook that student will still be responsible for completing the assignment and copy that assignment into their spiral notebook.

Course Schedule:

Unit 1. Molecules and Cells

- A. Biochemistry (3 Weeks)
 - a. Structure of an atom—Chapter 2
 - b. Types of bonding—Chapter 2
 - c. Water—Chapter 3
 - d. Functional Groups—Chapter 4
 - e. Organic Molecules in Organisms—Chapter 5
 - f. Enzymes—Chapter 5 and 8
- B. Cellular Structure and Function (3 Weeks)
 - a. Prokaryotic vs. Eukaryotic Cells—Chapter 6
 - b. Cell organelles: Structure and Function—Chapter 6
 - c. Cell membrane—Chapter 7
 - d. Cell Transport—Chapter 7

Unit 2. Metabolism

- A. Cellular Respiration (1 week)
 - a. Aerobic Respiration—Chapter 9
 - b. Anaerobic Respiration—Chapter 9
- B. Photosynthesis (1 week)
 - a. Light-dependent reactions—Chapter 10
 - b. Light-independent reactions—Chapter 10

Unit 3. Cellular Reproduction (2 weeks)

- A. Cell Cycle and Its Organization—Chapter 12
- B. Mitosis—Chapter 12
- C. Meiosis—Chapter 13

Unit 4. Classical Genetics (1.5 weeks)

- A. Mendelian Genetics—Chapter 14
- B. Non-Mendelian Genetics—Chapter 14

Unit 5. Molecular Genetics (3 weeks)

- A. DNA—Chapter 16
 - a. Structure
 - b. Replication
- B. RNA—Chapter 17
 - a. Structure
- C. Protein Synthesis—Chapter 17
- D. Viral Genetics—Chapter 18
- E. Bacterial Genetics—Chapter 18
- F. Biotechnology—Chapter 20

Unit 6 Evolution (2.5 weeks)

- A. Darwin and his Theory—Chapter 22
- B. Evidence of Evolution—Chapter 22, 23, 24
- C. Modes of Evolution—Chapter 22, 23, 24

Unit 7 Plant Diversity, Anatomy and Physiology (3 weeks)—Chapter 29, 30, 31, 35-39

- A. Plant evolution
- B. Plant structure and growth
- C. Plant transport
- D. Plant Reproduction
- E. Plant Responses to Signals

Unit 8 Animals: Their Diversity, Anatomy, Physiology, and Behavior (3 weeks)—Chapter 32-34, 40-49

- A. Circulation and Gas Exchange
- B. Regulating the Internal Environment
- C. Chemical Signals in Animals
- D. Animal Reproduction
- E. Nervous System
- F. The Body's Defenses
- G. Sensory and Motor Mechanisms—Chapter
- H. Animal Development

Unit 9 Ecology (Students will be required to cover this material over Christmas Break)—Chapters 50, 52-55

Grades:

The grading scale is done on a point system. The scale has been weighted and will be as follows:

- A – 85-100%
- B – 75-84.9%
- C – 65-74.9%
- D – 60-64.9%
- F – 0-59.9%

Grades will be determine based on performance on homework, class work, projects, presentations, tests/quizzes, and lab/lab reports.

Contact Information

Email: Nicole.Seargeant@sbcusd.com

Room: B-3

School Phone: 909.388.6419 ext. 2240

If you have any questions or concerns, please feel free to contact me. I am available before and after school for conferences and extra help. I look forward to working with you and your student and having a successful school year.

Nicole Seargeant

Please completely fill out the following and return!

I, _____ have received your letter regarding _____'s Biology class.
YOUR NAME **STUDENT NAME**

So that I may keep in touch with you about your student's progress, please fill out the following contact information:

Email: _____
_____ (additional addresses)

Home phone: _____
_____ (additional #)

Cell phone: _____
_____ (additional #)

Best time to reach you (circle all that apply): Morning Afternoon Evening

Best way to reach you (circle one): Email Phone

Please provide any comments about your student that might be helpful to me as your child's instructor:

ME _____
PARENT/GUARDIAN SIGNATURE

STUDENT SIGNATURE

DATE