

Karraker
Life Science
2009-10 COURSE SYLLABUS

Course Description: Life Science is designed to promote comprehension at a controlled reading level. It begins with the basic levels of biological organization and proceeds logically to the more complex levels. Emphasis is placed on the contributions of science in daily living, curiosity about the natural environment, and the complexity of life and living things. The student will acquire a clear understanding of key biological concepts and ideas with emphasis on scientific problem-solving and the inquiry process. Literacy will be a daily practice in the classroom.

Instructional Philosophy: Students will be challenged with a variety of activities that will aid in developing positive attitudes of curiosity and involvement with their natural surroundings. They will also develop an appreciation for the contributions of science to daily living and the skills necessary for scientific inquiry.

Major Course Goals:

1. The student will develop abilities in the process of scientific inquiry and investigations.
2. The student will describe the structure and organization of cells.
3. The student will compare and contrast mitotic and meiotic cell division.
4. The student will demonstrate an understanding of Gregor Mendel's discoveries of inheritance.
5. The student will compare and contrast the chromosomal and molecular basis of inheritance.

Major Course Objectives/Benchmarks by Quarter:

First Quarter

1. Develop abilities in science including scientific inquiry and investigations.
2. Examine the goals of Science and Biology.
3. Describe the two types of microscopes & two common laboratory techniques to observe microorganisms

Second Quarter

1. What are the characteristics of living things
2. The student will describe the structure and organization of cells.
3. Describe the structure and function of cells including the differences between different cell types.
4. Examine the relationship between photosynthesis & cellular respiration in terms of Energy.

Third Quarter

1. Compare and contrast the phases of cell division as well as the difference between mitosis & meiosis
2. Focus on DNA structure and function in eukaryotic cells.

Fourth Quarter

1. Describe reproduction, growth, & development in terms of genetics.
2. Relate the theories of heredity with everyday life.
3. Compare and contrast the chromosomal and molecular basis of inheritance including discoveries made by Gregor Mendel.

Required/Recommended Reading:

1. Students will be required to read their textbook.
2. Students will be required to read their laboratory and be prepared before class.
3. Students will be required to have appropriate reading material to read during all SSR times.
4. Students will read articles from scientific journals and magazines during the school year.
5. Students will participate in the literacy program by reading 300 pages of science related material.

Major course projects and Instructional Activities: Students will participate in the following projects and activities:

1. Students will participate in a variety of laboratory activities centered around the scientific method.
2. Students will participate in a variety of laboratory activities that will introduce them to the instruments and procedures used by laboratory technicians.
3. Students will participate in a variety of laboratory activities that will tie together our units of study.
4. Students will have a group project during the quarter that will be graded as a group and individual grades will also be given.

Course Assessment Plan: Students will be assessed in the following manner:

1. All students will be required to keep a portfolio of their work in a 1 inch 3-ringed binder to be assessed at the end of each quarter.
2. There will be a test and/or project at the completion of each unit of study. Test will consist of open ended constructive response questions, performance events, and objective questions.
3. Students will be required to complete homework as part of their grade.
4. A comprehensive quarter final will be given at the end of each quarter & you will be required to take the End of Course Exam for the Biology requirement .

Classroom Expectations:

1. Be on time and in your seat when the bell rings.
2. Be prepared at the beginning of class. Have your textbook, loose-leaf notebook paper, binder, homework, and a pen or pencil. On SSR days, you must have your reading material.
3. Be respectful of all people and property in the room.
4. Read and follow all directions, as given , the first time.
5. No food or drink in the room at any time.
6. No grooming (fixing hair, make-up, etc.)
7. Keep your feet on the floor and not on the chairs.
8. Keep book bags out of the aisles and purses on the floor during class.
9. The teacher, NOT THE BELL, dismisses the class.

All discipline problems will be handled as described in the student handbook. Be sure you know the consequences for your actions in this classroom. Absentee and late work policies are as described in the student handbook.

Supplies and Materials Needed: Students should have the following materials for class:

1. Loose-leaf notebook paper
2. 1 inch, 3-ringed binder to keep all assignments.
3. Pen or pencil (not green ink)

Homework Policy and Grading Scale: Please refer to the Student Handbook for the Homework Policy. The grading scale is as follows:

A	100-95	C	76-73
A-.....	94-90	C-.....	72-70
B+.....	89-87	D+.....	69-67
B	86-83	D	66-63
B-.....	82-80	D-.....	62-60
C+.....	79-77	F.....	59-0

Extra Help: If you are having problems with any of the material or would like extra study time we have the P.A.S.S program in place, which begins at 2:45.

Time and Place to be Reached by Parent: If you need to contact me for any reason please feel free to call me before school, after school, or during my plan period 2nd hour (8:39-9:29 a.m.) the phone number at the high school is 431-2616 ext 4165. I can also be reached by email at kkarraker@centralr3.org. Homework assignments can be found online at schoolnotes.com.