BIOLOGY SYLLABUS

Mr. Lavelle

Course Description

Biology can be broken down into two major themes, the unity of life and the diversity of life. Students will study unifying concepts that all organisms share. This will begin with a summary of how atoms form organic molecules, how these organic molecules form cellular components, how cells form tissues, and tissues living systems.

The study of the diversity of life will include an in depth analysis of ecological and evolution-related concepts.

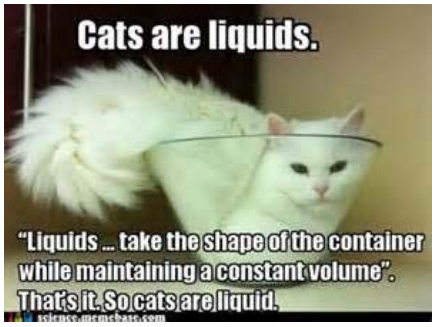
The primary focus of this course is to provide students with a solid foundation and appreciation of Biological knowledge as well as provide them with an overall modernized laboratory experience.

Special points of interest:

- **Website**: Planners, Notes, Review Games, and some handouts will be available at: quia.com. An updated address to this website will be provided to students at the beginning of the year.
- **Laboratory Activities**: We will partake in several lab-oriented activities. Westminster College's Science in Motion program will be used to enhance and modernize the laboratory experience.

Need Help?

Please feel free to ask relevant questions anytime during the lesson. If this should be a little intimidating, ask me after class or before the next time we meet. It is critical that you do not put off any questions. That will only lead to future confusion and poor exam performance. Helping students is a huge priority. I do not want any student to be confused about the subject matter and not seek further assistance.



Contact Information

The best way to get in contact with me is through email. My email address is lavelletc@svsd.net.

Exams and Such

- All exams will be instructor created and taken electronically through my quia website on the students' own time.

Classroom Rules and Regulations

- Please raise your hand to speak.
- Keep all bags, purses, and backpacks off the desktops at all times.
- Come to class on time!
- Unless otherwise told, students are to remain seated throughout the class.
- Lab Safety rules and regulations will be covered separately.

Theme	Quarter Taught	Duration Taught	Subtopics
Scientific Method/Characteristics of Life	1	2 weeks	Steps of Investigation/Graphing/5 Kingdom Survey/ Characteristics of Life
Biochemistry	1	5 weeks	Atomic Structure/Bonding/Properties of Water/pH/ Organic Polymers
Cells	1	2 weeks	Prokaryote vs. Eukaryote/Structure and Function of Bacteria, Animal and Plant Cells
Cell Processes	2	5 weeks	Cell Transport/Photosynthesis/Cellular Respiration/Cell Division
Ecology/Environmental Science	2	4 weeks	Ecosystems/Populations/Energy Flow/Biomes/Succession/ Renewable and Nonrenewable Resources/ Cycles
Molecular Genetics	3	3 weeks	DNA Structure/DNA Replication/Transcription/RNA Processing/ Protein Translation
Heredity/Gene Technology	3	6 weeks	Mendel/Patterns of Inheritance/Pedigrees/Disorders/ Punnett Squares/Mutations
Classification	4	3 weeks	Taxonomy/Binomial Nomenclature/Kingdom Classification System/Dichotomous Key
Microorganisms	4	3 weeks	Viruses/Bacteria/Protists
Botany/Zoology	4	3 weeks	Characteristics and Adaptations of Flora and Fauna