



Sharyland Pioneer High School



BIOLOGY: 2nd, 3rd, & 4th Blocks

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Course Outline/Topics

Biology is the study of life. Topics covered in this course include: biomolecules, cells and cell cycle, genetics, evolution, ecology, taxonomy & classification, plants, animals, and human biology. Course work, lab work and examinations will prepare students for EOC state exams as well as future courses. The student must have pencils or pens, a composition notebook, and a positive attitude. Instructional days will include checking/reviewing assignments, quizzes, writing assignments, lecture/explanation, lab activities and individual practice/questions/feedback.

UNIT	TOPICS COVERED
Unit 1 Biochemistry	Scientific method, Biomolecules, Enzymes, Dehydration Synthesis, Hydrolysis
Unit 2 Cells	Cell theory, Prokaryotic cells, Eukaryotic cells, Animal and plant cell organelles
Unit 3 Cellular Transport	Plasma membrane, Passive transport, Active transport, Tonicity, Homeostasis
Unit 4 Cellular Energy	Cellular energy, Photosynthesis, Cellular respiration, Aerobic and anaerobic respiration
Unit 5 Cell Division	Cell cycle, Cancer, Mitosis, Meiosis
Unit 6 Genetics	Genetics, Punnett Squares, Monohybrid Cross, Dihybrid Cross, Non-Mendelian Genetics, Pedigree, Karyotype
Unit 7 DNA	DNA Structure, DNA Replication
Unit 8 Protein Synthesis	Transcription, Translation, Mutations
Unit 9 Evolution	Evidence of common ancestry, Convergent & Divergent Evolution, Adaptations, Natural Selection, Evolutionary Mechanisms
Unit 10 Taxonomy	Classification, Cladograms, Phylogenetic tree, Dichotomous key, Kingdoms
Unit 11 Viruses	Viral Structures, Viral cycles, Viruses vs Bacteria
Unit 12 Body Systems	Human body systems, System interactions, Immunology
Unit 13 Ecology	Plant systems and types, Plant adaptations and hormones, Ecology, Food chains, Food Webs, Energy pyramids, Ecological relationships, Biogeochemical cycles

- **There will be an exam (test for a major grade) for each unit.**
- **1st Semester exam will be at the end of Semester 1 and will be over Units 1-6**
- **2nd Semester exam will be at the end of Semester 2 and will be over Units 7-13**
- **STAAR BIOLOGY EOC TEST will be in May and will cover ALL of the units taught throughout the class.**



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Textbooks/Materials/Suggested Readings

- Class set Biology Textbooks (online textbook website: my.hrw.com)
- Pencils, pens, highlighter and colored pencils/markers
- Composition Notebook (NOT A SPIRAL)
- Glue and Scissors

Instructional Procedures and Support

A Biology teacher will be available for tutoring before and after school. It is the student's responsibility to ask for help when needed and to make the required transportation arrangements. Retesting will be available in accordance with SISD High School Grading Policy.

Grading Distribution

- 60% Major Grades
 - Exams, projects, lab reports
- 40% Minor Grades
 - Daily assignments, quizzes, notebook checks, etc.

Classroom Management Procedures

District and Campus Policies Will Be Enforced.

Classroom Expectations

- Get to class on time.
 - If not on time, a tardy slip from the office will need to be obtained.
- No food, gum or drinks (except for bottled water).
- No phone, tablet, or any other electronic device without permission.
- Follow the school policy for make-up work when you have been absent.
 - It is the students responsibility to ask for assignments they have missed.
- Organization, communication and effort are the keys to success in this class.

Statement for Academic Dishonesty

Academic integrity is fundamental to the activities and principles of our school. *No student shall cheat or copy the work of another. Plagiarism, the use of another person's original ideas or writings as one's own without giving credit to the true author, will be considered cheating, and the student will be subject to academic discipline that may include loss of credit for the work in question.*

Honors Class only

Honors students will not be allowed to submit late minor work. They will be allowed to submit late MAJOR assignments with a progressive grade penalty of 15 points per day. Honors students will not be allowed to retest or redo any major assignments unless 50% of the class fails.