

9th Grade Biology Syllabus

Course Description

Biology is the study of living organisms and their interactions with the environment. This course will explore a wide range of topics including cellular structure and function, genetics, evolution, biological processes, and ecology. Students will engage in laboratory investigations, data analysis, and critical thinking aligned with the Texas Essential Knowledge and Skills (TEKS) for Biology.

TEKS Overview

The course will cover the following strands of the TEKS:

1. Scientific and Engineering Practices

- Lab safety and scientific inquiry
- Use of models, tools, and technology
- Experimental design and data interpretation

2. Cell Structure and Function

- Cell theory
- Prokaryotic vs. eukaryotic cells
- Cellular processes: osmosis, diffusion, photosynthesis, and cellular

3. Genetics and Heredity

- DNA structure and replication
- Mendelian genetics and Punnett squares
- Mutations and genetic disorders
- Gene expression and biotechnology

4. Biological Evolution and Classification

- Natural selection and adaptation
- Evidence for evolution
- Classification systems and taxonomy

5. Biological Processes and Systems

- Homeostasis and feedback mechanisms
- Human body systems
- Plant systems and response to stimuli

6. Ecology and the Environment

- Ecosystems and energy flow
- Biogeochemical cycles
- Biodiversity and human impact

Grading Policy

Major Assessments (tests, projects) - 40%

Daily Work / Homework - 60%

Supplies Needed

Composition notebook

Binder

Pencils and pens

Classroom Expectations

Be respectful to peers and teacher

Come prepared and on time

Follow all lab safety rules

Submit assignments on time