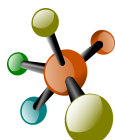


Sixth Grade Science Syllabus

This phenomena-based course is designed to encourage students to use **Recurring Themes and Concepts (RTCs)** to develop a deep understanding of science in our natural world. Students will use **Scientific and Engineering Practices (SEPs)** to analyze, evaluate, and communicate scientific concepts identified in the **Texas Essential Knowledge and Skills (TEKS)**. Emphasis will be placed on fostering scientific thinking and participation in hands-on activities to investigate the world around us.



Unit 1: Matter & Energy (31 instructional days)

Activities in this unit explain that matter can be classified according to its properties and matter is conserved in chemical changes that occur within closed systems. Major topics include classification of matter, chemical reactions, density of substances, properties of elements, and the organization of the Periodic Table. This unit concludes with a performance assessment where students will create a superhero using an element to demonstrate mastery of unit objectives.



Unit 2: Force, Motion, & Energy (46 instructional days)

Activities in this unit rationalize how forces of motion and energy can impact decisions in everyday society. Major topics include Newton's third law of motion, forces acting on objects, energy transformations and conservation, potential and kinetic energy, and energy transfer through waves. This unit concludes with a performance assessment where students will use engineering practices to build and launch a rocket and then communicate their findings on a Plano Independent Exploration (PIE) virtual display board.



Unit 3: Earth & Space (43 instructional days)

Activities in this unit describe the effects of the cyclical movements of the Sun, Earth, and Moon and the structure of Earth. Major topics include seasons, tides, layers of the earth, the rock cycle, and the impact of conserving natural resources. This unit concludes with a performance assessment where, using information about Earth as well as conservation of natural resources, students will create a brochure that persuades extraterrestrials to visit Earth.



Unit 4: Organisms & Environment (34 instructional days)

Activities in this unit describe how an organism's survival depends on its cellular characteristics as well as its interactions with factors in its environment. Major topics include cell theory, characteristics of organisms, relationships between organisms, variations in species, and ecosystem organization. This unit concludes with a performance assessment where students will create an organism and explain how it would survive in a given environment.