Seventh Grade Science

Amy Stewart
Colegio Panamericano

Science Department Philosophy

In a more complex, competitive, and changing world, to teach science means to contribute to the education of our citizens, and to enable them to develop critical thinking, creativity and curiosity. This challenge gives us the opportunity to promote a critical education, which is tolerant of diversity in the community. This education should be a bridge based on solidarity and responsibility among the community members. Our students should be able to utilize science to understand natural phenomena, theories, laws, and make contributions to society.

Course Description

In seventh grade science, students will explore the world around them through the study of physical, earth, and life science. We will learn through hands-on activities and experiments, research, and cooperative learning. Students will be expected to take pride and joy in their learning, to push their thinking, and to respect the ideas of others.

Policies & Procedures

During the first week of school, each class will hold and discussions to create a class contract that will serve as our policies and procedures for the year. This document will cover expectations of behavior, work ethic, and homework, and will be sent home for both parent and student signatures once complete. Our policies will be consistent with those created and sent home by the entire 7-8 team.

Units:

Properties of Matter
-Chemical & physical properties of matter
-Chemical & physical changes of matter
-Atomic compositions of simple and complex compounds
-Molecular properties of states of matter
-Law of conservation of mass

Solar Systems
-Structure of the Universe and the solar system
-Relative movement of solar system bodies
-Seasons, eclipses, and other phenomena

Cells: Structure & Function
-Structure & Function of cells
-Structure & functions of organelles
-Types of cells
-Cell-cell communication & transport

Animals: Structure and function of body systems
-Major systems of the human body, with special focus on the nervous system
-Structure & function of tissues & organs

Ecosystems & Populations
-Roles & levels of organization in ecosystems
-Flow of energy in ecosystems
-Limiting factors in ecosystems
-Interactions between organisms
-Ecosystem health
Renewable and Nonrenewable Resources
-Geologic processes that deposit natural resources
-Distribution of natural resources on Earth
-Impacts caused by human use of natural resources
-Climate change: causes & mitigation

Distance Forces
-Attractive vs. Repulsive forces
-Factors that increase and decrease force strength