

8th Grade Interactive Science Course Description

Topics include, but are not limited to:

I. Matter and energy

- A. Structure of Atoms
- B. Physical and properties of elements
- C. Interpret the arrangement of the Periodic Table of Elements
- A. Law of Conservation of Mass
- B. Evidence of chemical reactions

II. Force, motion and energy

- A. Balanced and unbalanced forces
- B. Speed, velocity and acceleration
- C. Newton's Laws of Motion

III. Earth and space

- A. Solar investigations, daily and solar trends and characteristics of our Sun
- B. Sun, planet and moon relationships in the Solar System - lunar cycles, eclipses and tides
- C. Stars – life and death, characteristics, H/R Diagram
- D. Exploring the universe – tools, measurements and Characteristics including light years
- E. Electromagnetic Spectrum, light speed, red shift and more
- F. Tectonics and composition of planets and moons
- G. Surface Investigations including: topographical maps, satellite photography and imaging, compositional maps
- H. Weather on Earth and in the Solar System

IV. Organisms and environments

- A. Interdependence of organisms
- B. Effects of humans on Earth's various systems

SPECIAL NOTE:

All MS Science students at Allen Academy participate in a yearlong coastal wetlands restoration project! Throughout the year they learn about the importance and types of wetlands, harvest smooth cordgrass from a power plant canal, plant the smooth cordgrass into estuary pools on campus, monitor and manage the growing and multiplying grasses throughout the school year. Finally students harvest and plant the grasses into a damaged wetland area on Galveston Island. This project teaches students independence in data collection and analysis, responsibility, collaboration and positive teamwork as well as pride in their service to the environment.