

## 7<sup>th</sup> Grade Interactive Science Course Description

***Topics include, but are not limited to:***

### **I. Matter and energy**

- A. Energy transformation and uses
- B. Physical and chemical changes and energy flow through organisms and ecosystems
- C. Basic biochemistry
- D. Law of Conservation of Mass

### **II. Force, motion and energy**

- A. Characteristics, measurements, calculations and data evaluations of work
- B. Law of Conservation of Energy

### **III. Earth and space**

- A. Identify geographical features and composition of planets, moons and asteroids as well as any atmospheres in the Solar System, particularly Mars.
- B. Analyze characteristics that would support life in the Solar System.
- C. Weathering, erosion and deposition – features and causes, conservation and preservation of land and water

### **IV. Organisms and environments**

- A. Organisms and the environment – characteristics of organisms with biodiversity and sustainability.
- B. Genetic and environmental factors
- C. Structure and function of the dynamics of an ecosystem
- D. Human body system parts and function.
- E. Cell Theory and organelles

#### **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.