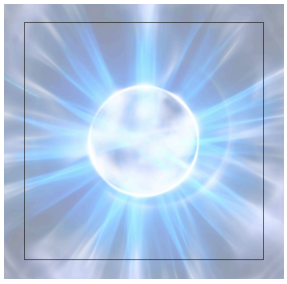
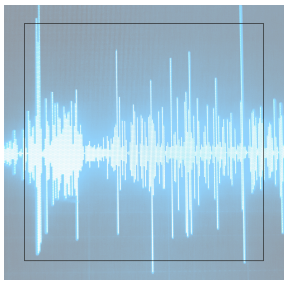


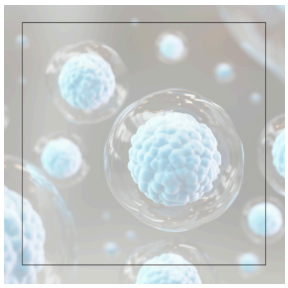
Unit 1: Matter, Energy and their Interactions

Students explore the interactions of matter and energy. Matter is any substance that has mass and takes up space. Energy is the ability to do work. This unit includes wave properties and behaviors, heat, and energy transfer. Students may build and design a device to minimize or maximize heat transfer.



Unit 2: Waves and Their Applications

Students will use models to describe wave behavior. Students will explore how waves are reflected, absorbed, or transmitted through various materials.



Unit 3: From Molecules to Organisms: Structures and Processes

Students explore the properties of living things. This unit includes opportunities for students to conduct investigations on cells, create models of the parts of the cell, and explore how groups of cells make up the human body. In addition, students will discover how the brain responds to stimuli and stores memories.

Unit 4: Earth's Geologic Systems and Human Activity

Students explore the geologic processes that shape earth. Topics include plate tectonics, meteor impacts, weathering, landslides, continental drift, and the geologic time scale. Students will apply their knowledge by using data on natural hazards to forecast and mitigate a potential catastrophic event.

Unit 5: Earth's Atmospheric Systems and Human Activity

Students explore the water cycle and weather patterns. They will develop models to understand how the uneven heating of earth and the rotation of earth determines the climate of a region. Students will apply their knowledge by using data to forecast and mitigate a potential catastrophic event.