

SCIENCE LONG TERM TRANSFER GOALS

Students will be able to independently use their learning to:

1. Approach science as a reliable and tentative way of knowing and explaining the natural world.
2. Weigh evidence and use scientific approaches to ask questions, investigate, and make informed decisions.
3. Make and use observations to analyze relationships and patterns in order to explain phenomena, develop models, and make predictions.
4. Evaluate systems, in order to connect how form determines function and how any change to one component affects the entire system.
5. Explain how the natural and designed worlds are interrelated and the application of scientific knowledge and technology can have beneficial, detrimental, or unintended consequences.

PHYSICAL SCIENCE BIG IDEAS AND ESSENTIAL QUESTIONS

Big Ideas	Essential Questions
Big Idea 1: Matter can be understood in terms of the types of atoms present and the interactions both between and within atoms.	<i>How can one explain the structure, properties, and interactions of matter?</i>
Big Idea 2: Interactions between any two objects can cause changes in one or both of them.	<i>How can one explain and predict interactions between objects within systems?</i>
Big Idea 3: Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.	<i>How is energy transferred and conserved?</i>
Big Idea 4: Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.	<i>How are waves used to transfer energy and information?</i>