

Expectations and Outcomes

Grade Level/Course: Fourth Grade

Content Area: Science

Unit Title	Guarantees
Energy Unit	<ul style="list-style-type: none"> • Use evidence to construct an explanation relating the speed of an object to the energy of that object. • Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. • Ask Questions and predict outcomes about the changes in energy that occur when objects collide. • Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.
Waves Unit	<ul style="list-style-type: none"> • Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. • Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. • Generate and compare multiple solutions that use patterns to transfer information.
Molecules and Organisms Unit	<ul style="list-style-type: none"> • Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. • Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.
Earth Unit	<ul style="list-style-type: none"> • Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. • Make observations and /or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. • Analyze and interpret data from maps to describe patterns of Earth's features.

Unit Title	Guarantees
Earth and Human Activity Unit	<ul style="list-style-type: none"> • Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. • Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.
Engineering & Design Unit	<ul style="list-style-type: none"> • Define a simple design problem reflection a need or a want that includes specified criteria for success and constraints on materials, time, or cost. • Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. • Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.