

NGSS STANDARDS

GRADE 4

ENERGY

- 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 AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER

- 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.

FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES

- 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'S PLACE IN THE UNIVERSE

- Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.

EARTH'S SYSTEMS

- 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.

EARTH AND HUMAN ACTIVITY

- 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.