

Energy

Content Area: **Science**
Course(s): **Science 3**
Time Period: **Undefined**
Length:
Status: **Published**

Unit Overview

Essential Questions

How can energy change?

What are some forms of energy?

How do light and matter interact?

What is electrical energy?

Content

Some forms of energy are: electrical energy, light energy, heat energy, mechanical energy, sound energy, potential energy and kinetic energy.

When light hits matter it is reflected, refracted, or absorbed.

Electrical energy that is formed from small particles in matter that have electric charges.

Skills

Identify the forms energy takes and explain that energy causes motion and creates change.

Describe how light is reflected, refracted, and absorbed and demonstrate how light forms shadows.

Explain how electricity moves through circuits and identify some materials that conduct electricity.

Assessments

Apply understanding of energy to tell how certain things in their home use energy.

Study Guide

Chapter Review

Chapter Test

Benchmark Practice

Performance-Based Assessment, Program Guide pg 70: Use Light Energy, Toy Power, and/or Write a Poem

STEM Activity Book

Lessons/Learning Scenarios

Chapter 9: Chapter Opener, Lesson 1, Lesson 3, Lesson 6

Inquiry, pg. 354-355: How can energy of motion change?

Inquiry, pg. 392-393: How does heat cause motion?

Vocabulary

Study Guide

Chapter Review

Standards

SCI.3-4.5.2.4	All students will understand that physical science principles, including fundamental ideas about matter, energy, and motion, are powerful conceptual tools for making sense of phenomena in physical, living, and Earth systems science.
SCI.3-4.5.2.4.A	All objects and substances in the natural world are composed of matter. Matter has two fundamental properties: matter takes up space, and matter has inertia.
SCI.3-4.5.2.4.A.d	Objects vary in the extent to which they absorb and reflect light and conduct heat (thermal energy) and electricity.
SCI.3-4.5.2.4.C	Knowing the characteristics of familiar forms of energy, including potential and kinetic energy, is useful in coming to the understanding that, for the most part, the natural world can be explained and is predictable.

SCI.3-4.5.2.4.C.3	Draw and label diagrams showing several ways that energy can be transferred from one place to another.
SCI.3-4.5.2.4.C.a	Heat (thermal energy), electricity, light, and sound are forms of energy.
SCI.3-4.5.2.4.E	It takes energy to change the motion of objects. The energy change is understood in terms of forces.

Resources
