

Unit 4 - Changes to Matter

Content Area: **Science**
Course(s): **Science 2**
Time Period: **April**
Length: **15 days**
Status: **Published**

Unit Summary

In this unit of study, students continue to develop an understanding of observable properties of materials through analysis and classification of different materials. The crosscutting concepts of cause and effect and energy and matter are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in constructing explanations, designing solutions, and engaging in argument from evidence. Students are also expected to use these practices to demonstrate understanding of the core ideas.

Standards

SCI.2.2-PS1-1	Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
SCI.2.2-PS1-2	Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
SCI.K-2.K-2-ETS1-3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.
SCI.K-2.K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
SCI.K-2.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
SCI.2-PS1-3	Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
SCI.2-PS1-4	Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.
TECH.8.1.2.A.CS1	Understand and use technology systems.

Student Learning Objectives

Students will learn to...

- make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
- independently use their learning to construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

Essential Questions

- In what ways can an object made of a small set of pieces be disassembled and made into a new object?
- Can all changes caused by heating or cooling be reversed?

Enduring Understanding

Students will understand that...

- different properties are suited to different purposes.
- objects can be built up from a small set of pieces.
- heating or cooling a substance may cause changes that can be observed.
- changes are reversible, and sometimes they are not.