

DCI: Energy

K.PS3.B: Conservation of Energy and Energy Transfer

Sunlight warms Earth's surface. (K-PS3-1), (K-PS3-2)

Performance Expectation

K-PS3-1: Make observations to determine the effect of sunlight on Earth's surface.

Clarification Statement: Examples of Earth's surface could include sand, soil, rocks, and water

Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler.

Performance Expectation

K-PS3-2: Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on an area.

Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.

Assessment Boundary: none

Science and Engineering Practice

Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.

Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)

Science and Engineering Practice

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomenon and designing solutions.

Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)

Crosscutting Concept

Cause and Effect

Events have causes that generate observable patterns. (K-PS3-1), (K-PS3-2)

Connection to Nature of Science

Scientific Investigations Use a Variety of Methods

Scientists use different ways to study the world. (K-PS3-1)

Common Core State Standards for ELA/Literacy

Card Type name

W.K.7 - Research to Build and Present Knowledge

Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS3-1), (K-PS3-2)

Common Core State Standards for Mathematics

Measurement & Data

K.MD.A.2 - Describe and compare measurable attributes.

Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. (K-PS3-1), (K-PS3-2)