



Links to Standards

NGSS Grade 4-Energy

(Link to NGSS: <https://www.nextgenscience.org/topic-arrangement/4energy>)

Practices

All practices, except Using Mathematical and computational thinking, are embedded in these investigations. Three are emphasized in particular:

- Developing and Using Models
- Constructing explanations
- Engaging in argument from evidence

Disciplinary Core Ideas

PS3.A: Definitions of Energy

- The faster a given object is moving, the more energy it possesses. 4-PS3-1)
- Energy can be moved from place to place by moving objects or through sound, light, or electric currents (4-PS3-2), (4-PS3-3)

PS3.B: Conservation of energy and energy transfer

- Energy is present whenever there are moving object, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced. (4-PS3-2), 4-PS3-3)
- Light also transfers energy from place to place. (4-PS3-2)
- Energy can also be transferred from place to place by electric currents, which can then be used locally to produce motion, sound, heat, or light. The currents may have been produced to begin with by transforming the energy of motion into electrical energy. (4-PS3-2);(4-PS3-4)

Crosscutting Concept

Energy and Matter

- Energy can be transferred in various ways and between objects. (4-PS3-1), (4-PS3-2), (4-PS3-3), (4-PS3-4)

Common Core ELA

COMPREHENSION AND COLLABORATION

CCSS.ELA-LITERACY.SL.4.1 (<http://www.corestandards.org/ELA-Literacy/SL/4/1/>)

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on GRADE 4 TOPICS AND TEXTS, building on others' ideas and expressing their own clearly.