

**4-PS3-2 Energy**

California Alternate Assessment for Science—Item Content Specifications

# 4-PS3-2 Energy

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Through observation of a model, identify that energy can be moved from place to place (e.g., by moving objects, through sound, light, or electric currents). | 1. Ability to identify a model showing that energy can be moved from place to place. | Identify evidence that an object has energy (e.g., heat, lighted light bulb). |

## CA NGSS Performance Expectation

Students who demonstrate understanding can:

**Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.** *[Assessment Boundary*: *Assessment does not include quantitative measurements of energy]*

## Mastery Statements

Students will be able to:

* Identify objects giving off light as having energy
* Identify objects giving off sound as having energy
* Identify objects giving off heat as having energy
* Identify energy that is transferred by electricity to produce motion, sound, heat, or light
* Identify energy that is transferred by sound traveling from one place to another
* Identify energy that is transferred by light or heat traveling from one place to another

## Possible Phenomena or Contexts

*Note that the list in this section is not exhaustive or prescriptive.*

**Possible contexts include the following:**

* Light energy moves from the Sun to Earth
* The movement of energy involved during the operation of simple household appliances
* The movement of thermal energy when using a stove or a heater
* Sound energy moves from a musical instrument to the ear

## Additional Assessment Boundaries

* Items should not assess the transfer of energy by moving objects, such as a ball or the wind, and should not assess energy transformations.

## Additional References

California Science Test Item Specification for 4-PS3-2

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-4-ps3-2.docx>

Environmental Principles and Concepts <http://californiaeei.org/abouteei/epc/>

The *2016 Science Framework for California Public Schools Kindergarten through Grade Twelve* <https://www.cde.ca.gov/ci/sc/cf/cascienceframework2016.asp>

Appendix 1: Progression of the Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts in Kindergarten through Grade Twelve

<https://www.cde.ca.gov/ci/sc/cf/documents/scifwappendix1.pdf>

Appendix 2: Connections to Environmental Principles and Concepts

<https://www.cde.ca.gov/ci/sc/cf/documents/scifwappendix2.pdf>

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