

HS-PS1-1 Matter and Its Interactions

California Alternate Assessment for Science—Item Content Specifications

# HS-PS1-1 Matter and Its Interactions

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Organize different materials based on properties of elements. | 1. Recognize that types of materials (e.g., elements) can be grouped together. | Recognize that materials have different properties. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.** [Clarification Statement: Examples of properties that could be predicted from patterns could include reactivity of metals, types of bonds formed, numbers of bonds formed, and reactions with oxygen.] *[Assessment Boundary: Assessment is limited to main group elements. Assessment does not include quantitative understanding of ionization energy beyond relative trends.]*

## Mastery Statements

Students will be able to:

* Recognize that materials have different properties
* Identify basic properties of materials
* Group objects together based on shared properties

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Familiar household materials, e.g., a fuzzy robe and a stuffed animal (soft), a spoon and a metal jar lid (hard metal), a rubber band and a spring (flexible)
* Familiar classroom materials can be used for hands-on items, e.g., a chair and a bookcase (hard), a playground ball and a golf ball (round) or a pencil and wooden ruler (inflexible)

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for HS-PS1-1

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-hs-ps1-1.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>

*Posted by the California Department of Education, August 2020*