

MS-PS1-2 Matter and its Interactions

California Alternate Assessment for Science—Item Content Specifications

# MS-PS1-2 Matter and its Interactions

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Using data provided through observation, identify evidence that proves a chemical reaction has taken place (e.g., change in color, gas is created, heat or light is given off or taken in). | 1. Ability to identify evidence that proves a chemical reaction has taken place.
 | Identify examples of change (e.g., color, temperature). |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.** [Clarification Statement: Examples of reactions could include burning sugar or steel wool, fat reacting with sodium hydroxide, and mixing zinc with hydrogen chloride.] *[Assessment Boundary*: *Assessment is limited to analysis of the following properties: density, melting point, boiling point, solubility, flammability, and odor.]*

## Mastery Statements

Students will be able to:

* Identify a chemical change in matter
* Recognize that a chemical reaction has occurred
* Identify evidence that a chemical reaction occurred

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Common examples of burning materials
* Simple chemical reactions that cause copious amounts of bubbles to form
* Combinations of materials that cause the temperature of the resulting substance to change significantly, becoming either hotter or colder
* Combinations of materials that cause the resulting substance to have a completely different color

## Additional Assessment Boundaries

* Do not refer to specific chemicals in items; use a general term, such as liquid or powder.

## Additional References

California Science Test Item Specification for MS-PS1-2

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-ms-ps1-2.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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