

5-PS1-1 Matter and Its Interactions

California Alternate Assessment for Science—Item Content Specifications

# 5-PS1-1 Matter and Its Interactions

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Identify in a model (e.g., picture, diagram) that all matter can be broken down into smaller and smaller pieces until they are too small to be seen by human eyes. | 1. Ability to identify in a model (e.g., picture, diagram) that all matter can be broken down into smaller and smaller pieces until they are too small to be seen by human eyes.
 | Match a means of detecting the existence of matter by means other than by the human eye (e.g., use of an inflated vs. flat balloon, breath of air on hand, microscope magnifying). |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Develop a model to describe** **that matter** **is made of particles too small to be seen.** [Clarification Statement: Examples of evidence supporting a model could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.] *[Assessment Boundary*: *Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.]*

## Mastery Statements

Students will be able to:

* Identify a phenomenon that provides evidence of the presence of matter
* Identify the resulting image from looking through a microscope
* Identify tools that magnify objects
* Identify a magnified object
* Identify an example in which a substance dissolved in a liquid produces a change in the appearance of the liquid, which is evidence that the dissolved substance still exists
* Identify an object as being composed of particles that are too small to be seen

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Materials that seem to disappear when they dissolve or evaporate
* Materials that seem to appear when they condense or precipitate
* Objects that are expanded or compressed by air
* Objects that are moved by the wind
* Materials that are mixed in water, which causes physical appearance to change
* Objects viewed under magnification

## Additional Assessment Boundaries

* Assessment of molecules or atoms is not appropriate. Focus is simply on matter being made of tiny particles.

## Additional References

California Science Test Item Specification for 5-PS1-1

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-5-ps1-1.docx>

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>

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