

HS-LS3-2 Heredity: Inheritance and Variation of Traits

California Alternate Assessment for Science—Item Content Specifications

# HS-LS3-2 Heredity: Inheritance and Variation of Traits

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Identify a model showing evidence that parents and offspring may have different traits. | 1. Identify examples of offspring who have different combinations of traits inherited from their parents. | Identify traits in offspring that are different from those of the parents. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.** [Clarification Statement: Emphasis is on using data to support arguments for the way variation occurs.] *[Assessment Boundary: Assessment does not include the phases of meiosis or the biochemical mechanism of specific steps in the process.]*

## Mastery Statements

Students will be able to:

* Identify offspring with traits different from those of their parents
* Identify offspring with combinations of traits different from those of their parents

## California Environmental Principles and Concepts

Principle 3—Natural systems proceed through cycles that humans depend upon, benefit from, and can alter.

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Plants or animals and their offspring
* Traits may include coat color and texture or length, tail shape, shape of head or ears, flower color, hair color, or eye color

## Additional Assessment Boundaries

* No reference should be made to meiosis.

## Additional References

California Science Test Item Specification for HS-LS3-2

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-hs-ls3-2.docx>

California 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, July 2025