

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

California Alternate Assessment for Science—Item Content Specifications

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

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Use a model, through observation, to identify that a variety of inherited traits passed from parents to offspring lead to differences in offspring (e.g., eye color, fur pattern, plant height). | 1. Ability to identify that a variety of inherited traits passed from parents to offspring lead to differences in offspring (e.g., eye color, fur pattern, plant height).
 | Identify similarities and differences between animal or plant parents and their offspring. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.** [Clarification Statement: Emphasis is on using models such as Punnett squares, diagrams, and simulations to describe the cause and effect relationship of gene transmission from parent(s) to offspring and resulting genetic variation.]

## Mastery Statements

Students will be able to:

* Identify a trait that is similar when comparing a parent and offspring plant or animal
* Identify a trait that is different when comparing a parent and offspring plant or animal
* When shown the two parents of a plant or animal, identify the parent that contributed a specific trait to an offspring plant or animal
* When shown the two parents of a plant or animal, identify which parents contributed specific traits to two or more plant or animal offspring

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Animal traits such as ear shape, fur color, fur length, characteristics of tails, etc.
* Plant traits such as flower color, seed color and texture, height, etc.

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for MS-LS3-2

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

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