

**3-LS4-2 Biological Evolution: Unity and Diversity**

California Alternate Assessment for Science—Item Content Specifications

# 3-LS4-2 Biological Evolution: Unity and Diversity

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Using evidence, through observation, identify features and characteristics that enable an organism to survive in a particular environment. | 1. Ability to identify features and characteristics that enable an organism to survive in a particular environment using evidence through observation. | Match characteristics of a plant or animal to their survival function (e.g., thorns on a plant, camouflage of an animal). |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing**. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to produce offspring.]

## Mastery Statements

Students will be able to:

* Match a characteristic or feature of an organism to its role in supporting the survival of the organism
* Identify a single feature or characteristic of an organism that would help it survive in a specific environment
* Identify how a feature or characteristic would help an organism survive in a specific environment
* Identify two features or characteristics of an organism that would help it survive in a specific environment

## California Environmental Principles and Concepts

Principle 2—The long-term functioning and health of terrestrial, freshwater, coastal, and marine ecosystems are influenced by their relationships with human societies.

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Desert environment—cacti, animals that go underground during the day, animals that need very little water, animals that are active at night
* Arctic environment—animals with thick fur, animals with white coloration, animals that hibernate, plants that grow and reproduce very quickly
* Water environment—animals with webbed feet or fins, plants with leaves that float on the surface (water lilies)

## Additional Assessment Boundaries

* Phenomena should not include any kind of group behavior that provides advantages in surviving in a particular environment (assessed in 3 LS2-1).

## Additional References

California Science Test Item Specification for 3-LS4-2

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-3-ls4-2.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>

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