

3-LS1-1 From Molecules to Organisms: Structures and Processes

California Alternate Assessment for Science—Item Content Specifications

# 3-LS1-1 From Molecules to Organisms: Structures and Processes

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Identify a common pattern between models of different life cycles. | 1. Ability to identify a common pattern between models of different life cycles (e.g., birth, growth, reproduction, death). | Identify a life cycle stage that all organisms have in common (e.g., birth, growth, death). |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.** [Clarification Statement: Changes organisms go through during their life form a pattern.] *[Assessment Boundary*: *Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]*

## Mastery Statements

Students will be able to:

* Recognize a life cycle stage that all organisms have in common when shown pictures of the stages
* Recognize a common stage in the life cycle of two organisms that have similar life cycles when shown pictures of the life cycles
* Identify two life cycles that have similar patterns
* Complete a life cycle diagram when provided a completed diagram of a similar cycle
* Identify similar life cycles among different types of organisms

## 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:**

* Life cycles of common mammals, including humans, that include birth, growth (may include juvenile stage), and adulthood
* Life cycles of reptiles and amphibians that include eggs, birth (e.g., hatching), growth (may include juvenile stage), and adulthood
* Life cycles of common and familiar insects (e.g., butterflies and bees) that include eggs, larva, pupa, and adulthood
* Life cycles of plants that include seeds, seedlings, and adult flowering plants

## Additional Assessment Boundaries

* Life cycles should be circular, with the life beginning on the left side.
* Items should avoid using death in the life cycle.
* When the terms larva(e) and pupa(e) are used, they should only function as labels for stages. Students should not be required to know what those terms mean. Stages may also be referred to as beginning, middle, and end, or may be numbered.

## Additional References

California Science Test Item Specification for 3-LS1-1

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-3-ls1-1.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