

5-LS2-1 Ecosystems: Interactions, Energy, and Dynamics

California Alternate Assessment for Science—Item Content Specifications

# 5-LS2-1 Ecosystems: Interactions, Energy, and Dynamics

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Identify a model that shows the movement of matter (e.g., plant growth, eating, composting) through living things.  | 1. Ability to identify a model that shows the movement of matter (e.g., plant growth, eating, composting) through living things.
 | Identify that an animal needs the plant in a food chain or food web and that the food chain or food web has two main parts: producer and consumer.  |

## CA NGSS Performance Expectation

Students who demonstrate understanding can:

**Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.** [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] *[Assessment Boundary*: *Assessment does not include molecular explanations.]*

## Mastery Statements

Students will be able to:

* Identify which common animal consumes another in a food chain or food web
* Identify a plant or an animal that is consumed by an animal in a food chain or food web
* Identify the order in which a plant and an animal should be placed in a food chain
* Identify the direction matter flows in a simple matter pyramid
* Recognize that water, air, and light are needed for plant growth
* Identify the location of decomposers in a food chain, food web, or matter pyramid

## Environmental Principles and Concepts

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

Principle 4—The exchange of matter between natural systems and human societies affects the long-term functioning of both.

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Pictures showing interactions of common plants and animals in ecosystems
* Food web interactions showing the interactions of common plants and animals
* Food pyramids depicting common plants and animals and highlighting the change in biomass as energy and materials move up the pyramid

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for 5-LS2-1

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-5-ls2-1.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>

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