

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

California Science Test—Item Content Specifications

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

Students who demonstrate understanding can:

Construct an argument that some animals form groups that help members survive.

| Science and Engineering Practices | Disciplinary Core Ideas | Crosscutting Concepts |
| --- | --- | --- |
| Engaging in Argument from Evidence  Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).  Construct an argument with evidence, data, and/or a model. | LS2.D: Social Interactions and Group Behavior  1. Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size *(Note: Moved from K–2).* | Cause and Effect  Cause and effect relationships are routinely identified and used to explain change. |

## Assessment Targets

Assessment targets describe the focal knowledge, skills, and abilities for a given three-dimensional Performance Expectation. Please refer to the Introduction for a complete description of assessment targets.

### Science and Engineering Subpractice(s)

Please refer to appendix A for a complete list of Science and Engineering Practices (SEP) subpractices. Note that the list in this section is not exhaustive.

7.1 Ability to construct scientific arguments

### Science and Engineering Subpractice Assessment Targets

Please refer to appendix A for a complete list of SEP subpractice assessment targets. Note that the list in this section is not exhaustive.

7.1.1 Ability to identify evidence/data that supports a claim

7.1.2 Ability to develop scientific arguments that are supported by evidence/data

7.1.3 Ability to use reasoning to explain how relevant evidence/data supports or refutes the claim; the reasoning should reflect application of scientific concepts, principles, ideas, and models

### Disciplinary Core Idea Assessment Targets

#### LS2.D.1

* Identify types of animals that form or live in groups
* Explain how being part of a group can be beneficial to animals
* Recognize that groups of animals may serve different functions
* Recognize that groups of animals may vary dramatically in size

### Crosscutting Concept Assessment Target(s)

CCC2 Identify cause and effect relationships, using them to explain changes

## Examples of Integration of Assessment Targets and Evidence

Note that the list in this section is not exhaustive.

Task provides a scenario about a type of animal that forms groups:

* Constructs an argument containing a claim, evidence/data, and appropriate reasoning about how forming groups helps the animals survive (7.1.1, LS2.D.1, and CCC2)
* Completes an argument with a claim about how forming groups helps the animals survive (7.1.1, LS2.D.1, and CCC2)

Task provides evidence to support a claim about how forming a group helps some animals survive:

* Explains why the evidence/data is or is not relevant and sufficient to justify the claim (7.1.2, LS2.D.1, and CCC2)

Task provides a claim about how forming a group helps some animals survive:

* Identifies relevant, valid, and/or reliable evidence/data that support the claim (7.1.2, LS2.D.1, and CCC2)

Task provides multiple pieces of evidence/data from different sources, such as science journals, news reports, and fiction books, or provides arguments that include different amounts of relevant evidence/data to support a claim about how forming groups helps some animals survive:

* Evaluates the strength of the arguments based on whether they are supported by evidence or data from multiple sources of similar strength and reliability (7.1.2, LS2.D.1, and CCC2)

Task provides evidence/data in support of a claim about how forming a group helps some animals survive:

* Provides reasoning to explain how the evidence/data support the claim (7.1.3, LS2.D.1, and CCC2)

Task provides a list of arguments with different justifications for a claim about how forming a group helps some animals survive:

* Applies scientific concepts to correctly select the argument with the most convincing and appropriate justification (7.1.3, LS2.D.1, and CCC2)

## Possible Phenomena or Contexts

Note that the list in this section is not exhaustive.

* Access to resources (mates, food, water, etc.)
* Protection from predators or weather
* Increased survival rates during migration
* Division of labor: Limited number of hunters; others maintain and defend group

## Common Misconceptions

Note that the list in this section is not exhaustive.

* All animals live in groups.
* Living in groups is always beneficial to animals.

## Additional Assessment Boundaries

None listed at this time.

## Additional References

[3-LS2-1 Evidence Statement](https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/3-LS2-1%20Evidence%20Statements%20June%202015%20asterisks.pdf) <https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/3-LS2-1%20Evidence%20Statements%20June%202015%20asterisks.pdf>

The *2016 Science Framework for California Public Schools Kindergarten through Grade 12*

Appendix 1: Progression of the Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts in Kindergarten through Grade 12 <https://www.cde.ca.gov/ci/sc/cf/documents/scifwappendix1.pdf>

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