

**4-ESS1-1 Earth’s Place in the Universe**

California Alternate Assessment for Science—Item Content Specifications

# 4-ESS1-1 Earth’s Place in the Universe

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Identify patterns of fossils and rock formations that show how the Earth’s surface has changed over time. | 1. Ability to identify patterns of fossils and rock formations that show how the Earth’s surface has changed over time. | Match fossils with a landscape that has changed (e.g., marine fossils in an area previously covered by water). |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.** [Clarification Statement: Examples of evidence from patterns could include rock layers with marine shell fossils above rock layers with plant fossils and no shells, indicating a change from land to water over time; and, a canyon with different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.] *[Assessment Boundary*: *Assessment does not include specific knowledge of the mechanism of rock formation or memorization of specific rock formations and layers. Assessment is limited to relative time.]*

## Mastery Statements

Students will be able to:

Recognize that a fossil may have originated in a different type of landscape than where it was found

Identify how the Earth’s surface has changed using evidence from fossils

Identify how the Earth’s surface has changed using evidence from rock formations

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Marine fossils are found in rock layers in a rock outcrop, indicating that the area was once below water.
* A canyon has different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.
* Fossils of different types of plants and animals are found in different layers of an outcrop indicating changes in climate over time.

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for 4-ESS1-1

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-4-ess1-1.docx>

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>

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