

HS-ESS1-5 Earth’s Place in the Universe

California Alternate Assessment for Science—Item Content Specifications

# HS-ESS1-5 Earth’s Place in the Universe

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Identify the relationship between the motion of continental plates and how materials of different ages are arranged on Earth’s surface. | 1. Ability to identify the relationship between the motion of tectonic plates and how materials of different ages are arranged on Earth’s surface. | Identify that the Earth has continental and oceanic crusts. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.** [Clarification Statement: Emphasis is on the ability of plate tectonics to explain the ages of crustal rocks. Examples include evidence of the ages of oceanic crust increasing with distance from mid-ocean ridges (a result of plate spreading) and the ages of North American continental crust decreasing with distance away from a central ancient core of the continental plate (a result of past plate interactions).]

## Mastery Statements

Students will be able to:

* Identify that Earth has continental and oceanic crusts
* Identify the age of materials based on their arrangement on Earth’s surface
* Identify the relationship between the motion of tectonic plates

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Diagrams showing continental and oceanic crust
* The increasing age of oceanic crust from a ridge to a trench
* The difference in age between continental crust and ocean crust
* The cycle of ocean crust formation and destruction in the continental crust history

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for HS-ESS1-5

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-hs-ess1-5.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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