

MS-ESS2-5 Earth’s Systems

California Alternate Assessment for Science—Item Content Specifications

# MS-ESS2-5 Earth’s Systems

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Identify how air masses influence weather using data and/or simulated demonstrations. | 1. Ability to identify how air masses influence local weather using temperature models.
2. Ability to identify how air masses influence local weather using landform models.
3. Ability to identify how proximity to an ocean influences local weather using models.
 | Identify weather information used to compare weather conditions in different locations on the same day. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.** [Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within probabilistic ranges. Examples of data can be provided to students (such as with condensation).] *[Assessment Boundary*: *Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.]*

## Mastery Statements

Students will be able to:

* Identify weather conditions on a map
* Compare weather conditions in two different locations
* Recognize the effect the movement of air masses has on the weather
* Recognize the effect the proximity to the ocean has on weather
* Recognize the influence of landforms on weather
* Recognize the effect that the temperature of air masses has on the weather
* Recognize how air masses will move based on temperatures

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* The role of mountain ranges in influencing weather patterns
* The effect of proximity to an ocean on weather patterns
* The effect of heating and cooling air on the movement of air masses

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for MS-ESS2-5

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-ms-ess2-5.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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