

HS-LS1-4 From Molecules to Organisms: Structures and Processes

California Alternate Assessment for Science—Item Content Specifications

# HS-LS1-4 From Molecules to Organisms: Structures and Processes

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
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| Identify how growth occurs when cells multiply (mitosis) by using a model. | 1. Ability to use a model to identify how organisms grow in size through the process of mitosis.
 | Recognize that organisms are composed of a collection of different types of cells. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.** *[Assessment Boundary: Assessment does not include specific gene control mechanisms or rote memorization of the steps of mitosis.]*

## Mastery Statements

Students will be able to:

* Identify an example of a structure made of more than one kind of cell
* Recognize organisms that are made of more than one kind of cell
* Recognize an example of an organism growing by increasing the number of cells
* Identify examples of cell division
* Identify the correct order for the process of one cell dividing to become up to four cells

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Examples of multicellular and unicellular organisms
* Examples of body parts composed of different types of cells
* Simple models of cell division

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for HS-LS1-4

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-hs-ls1-4.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>

*Posted by the California Department of Education, August 2020*