

MS-LS1-2 From Molecules to Organisms: Structures and Processes

California Alternate Assessment for Science—Item Content Specifications

# MS-LS1-2 From Molecules to Organisms: Structures and Processes

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Identify the function of a cell as a whole and the function of a cell wall or cell membrane by using a model of a cell. | 1. Ability to identify the function of a cell as a whole by using a model of a cell. 2. Ability to identify the function of a cell wall by using a model of a cell. 3. Ability to identify the function of a cell membrane by using a model of a cell. | Identify a model of a cell. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.** [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall.] *[Assessment Boundary: Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of cells or cell parts.]*

## Mastery Statements

Students will be able to:

* Identify a model of a cell
* Recognize that cells are the building blocks for all parts of multicellular organisms
* Identify the functions of the cell wall
* Identify the functions of the cell membrane
* Recognize that an individual cell in multicellular organisms cannot carry out its functions alone
* Identify that plants and animals are made of cells

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Simple drawings of different types of cells
* Drawings of objects with a shape like that of a cell, but that are clearly not a cell
* Drawings of tissues with more than one kind of cell
* Structures and functions of plant and animal cells
* Cell walls of plants (not unicellular organisms)

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for MS-LS1-2

<https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-ms-ls1-2.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*