

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

California Alternate Assessment for Science—Item Content Specifications

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

| California Science Connector | Focal Knowledge, Skills, and Abilities | Essential Understanding |
| --- | --- | --- |
| Using model(s), identify that different systems of the body carry out essential functions (e.g., digestive system, respiratory system, circulatory system, nervous system). | 1. Ability to identify how the digestive system of the body carries out essential functions (e.g., breakdown and absorption of fats, proteins, and carbohydrates). 2. Ability to identify how the respiratory system of the body carries out essential functions (e.g., movement of oxygen to the body). 3. Ability to identify how the circulatory system of the body carries out essential functions (e.g., movement of blood and nutrients throughout the body). 4. Ability to identify how the nervous system of the body carries out essential functions (e.g., brain controls body movement, breathing, and heartbeat; brain processes physical sensations). | Identify which organ performs a specific function. |

## **CA NGSS Performance Expectation**

Students who demonstrate understanding can:

**Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.** [Clarification Statement: Emphasis is on functions at the organism system level such as nutrient uptake, water delivery, and organism movement in response to neural stimuli. An example of an interacting system could be an artery depending on the proper function of elastic tissue and smooth muscle to regulate and deliver the proper amount of blood within the circulatory system.] *[Assessment Boundary: Assessment does not include interactions and functions at the molecular or chemical reaction level.]*

## Mastery Statements

Students will be able to:

* Identify the function of the brain, stomach, lungs, or heart
* Identify the function of the digestive system
* Identify the function of the respiratory system
* Identify the function of the circulatory system
* Identify the function of the nervous system
* Recognize how the digestive system works
* Recognize how the respiratory system works
* Recognize how the circulatory system works
* Recognize how the nervous system works

## Possible Phenomena or Contexts

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

**Possible contexts include the following:**

* Circulatory system
* Respiratory system
* Digestive system
* Nervous system

## Additional Assessment Boundaries

* None listed at this time

## Additional References

California Science Test Item Specification for HS-LS1-2

[https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-hs-ls1-2.docx](https://www.cde.ca.gov/ta/tg/ca/documents/itemspecs-hs-ls1-2.docx" \o "California Science Test Item Specification for HS-LS1-2)

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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