*Unless otherwise specified, "descriptions" referenced in the evidence statements could include but are not limited to written, oral, pictorial, and kinesthetic descriptions.

# K-LS1-1 From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can:

**K-LS1-1.** **Use observations to describe patterns of what plants and animals (including humans) need to survive.** [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

## Science and Engineering Practices

**Analyzing and Interpreting Data**

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.

***Connections to Nature of Science***

**Scientific Knowledge is Based on Empirical Evidence**

- Scientists look for patterns and order when making observations about the world.

## Disciplinary Core Ideas

**LS1.C: Organization for Matter and Energy Flow in Organisms**

- All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

## Crosscutting Concepts

**Patterns**

- Patterns in the natural and human designed world can be observed and used as evidence.

| Observable features of the student performance by the end of the grade: | | | |
|---|---|---|---|
| 1 | Organizing data | | |
| | a | With guidance, students organize the given data from observations (firsthand or from media) using graphical displays (e.g., pictures, charts), including: | |
| | | i. | Different types of animals (including humans). |
| | | ii. | Data about the foods different animals eat. |
| | | iii. | Data about animals drinking water. |
| | | iv. | Data about plants' need for water (e.g., observations of the effects on plants in a classroom or school when they are not watered, observations of natural areas that are very dry). |
| | | v. | Data about plants' need for light (e.g., observations of the effect on plants in a classroom when they are kept in the dark for a long time; observations about the presence or absence of plants in very dark places, such as under rocks or porches). |
| 2 | Identifying relationships | | |
| | a | Students identify patterns in the organized data, including that: | |
| | | i. | All animals eat food. |
| | | | 1. Some animals eat plants. |
| | | | 2. Some animals eat other animals. |
| | | | 3. Some animals eat both plants and animals. |
| | | | 4. No animals do not eat food. |
| | | ii. | All animals drink water. |
| | | iii. | Plants cannot live or grow if there is no water. |
| | | iv. | Plants cannot live or grow if there is no light. |
| 3 | Interpreting data | | |
| | a | Students describe* that the patterns they identified in the data provide evidence that: | |
| | | i. | Plants need light and water to live and grow. |
| | | ii. | Animals need food and water to live and grow. |
| | | iii. | Animals get their food from plants, other animals, or both. |