

## 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: <ol style="list-style-type: none"> <li>Different types of animals (including humans).</li> <li>Data about the foods different animals eat.</li> <li>Data about animals drinking water.</li> <li>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).</li> <li>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).</li> </ol>
2	Identifying relationships
a	Students identify patterns in the organized data, including that: <ol style="list-style-type: none"> <li>All animals eat food.               <ol style="list-style-type: none"> <li>Some animals eat plants.</li> <li>Some animals eat other animals.</li> <li>Some animals eat both plants and animals.</li> <li>No animals do not eat food.</li> </ol> </li> <li>All animals drink water.</li> <li>Plants cannot live or grow if there is no water.</li> <li>Plants cannot live or grow if there is no light.</li> </ol>
3	Interpreting data
a	Students describe that the patterns they identified in the data provide evidence that: <ol style="list-style-type: none"> <li>Plants need light and water to live and grow.</li> <li>Animals need food and water to live and grow.</li> <li>Animals get their food from plants, other animals, or both.</li> </ol>