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.