

WHAT LIVING THINGS NEED

Performance Standard 12B/11A.A

Students will apply the process of scientific inquiry to explore how living things are dependent on one another for survival accordingly:

- *Knowledge*: Describe and identify the survival needs of plants and animals.
- *Application*: Match animals with their generalized food source.
- *Communication*: Predict what will happen to the organisms when their environmental resources are changed (seasonally or climatically).

Procedures

1. ***In order to know and apply concepts that describe how living things interact with each other and with their environment (12B) and apply the concepts, principles and processes of scientific inquiry (11A)***, students should experience sufficient learning opportunities to develop the following:

- Compare the survival needs for plants and animals.
- Predict possibilities for what would happen to an organism when its environmental resources are changed.
- Describe an observed science concept.
- Begin guided inquiry.
- Communicate results.

Note to teacher: This activity relates to knowledge associated with standard 12B, while addressing the performance descriptors for stage B within standard 11A. Applying scientific habits of mind noted in standard 13A are foundational to these activities.

Preparation note: Prepare or obtain images or pictures of plants and animals and use them to promote questions which can help students identify survival needs; pictures of seasonal variations will help generate questions about changes in the environment.

2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.
3. Begin guided inquiry by having students ask questions about normal living conditions and conditions that can influence responsive changes (for example: good and bad weather conditions or food supply changes, etc.) Guide students toward answering their questions using applicable scientific vocabulary terms and resources.
4. Ask students to match at least six pictures of animals with the foods they primarily eat (i.e, plants or animals). Students may indicate that some animals eat both plants and animals. Some sample starter questions could be:
 - What do different plants need to survive? What do they all need to survive? What does this make you think of?
 - What do different animals need to survive? What do they all need to survive? What does this make you think of?
 - How do plants and animals depend on each other to survive (generally and specifically)? What does this make you think of?
 - What would happen to the plant eaters if their plant supply was changed or depleted? What does this make you think of?
 - What would happen to the meat eaters if the plant eaters were gone? What does this make you think of?
- Ask each student to answer the following questions regarding “What Living Things Need – Cows” task sheet:
 - What do the animals in the picture eat for food?
 - What things do the plants in the picture need to stay alive?
 - What things that you can’t see in the picture are needed by the animals to stay alive?
 - What things that you can’t see in the picture do the plants need to stay alive?
6. Evaluate each student’s work using the Science Rubric as follows and add the scores to determine the performance level:
 - *Knowledge*: Identification of the essential requirements for plants and animals was complete and correct,
 - *Application*: The matching of the animals to what they eat was complete and correct: 4 = 6 or more correct; 3 = 5 correct; 2 = 3 to 4 correct; 1 = 1 to 2 correct. Note: If student correctly matches an animal to both plants and animals, add 1 point for each correct match.
 - *Communication*: The explanations were thorough, well-reasoned and well-detailed.

Examples of Student Work not available

Time Requirements

- 15 minutes for matching task sheet
- 2 – 3 minutes per student for explanation

Teacher annotations for student responses to questions from What Living Things Need (Cows) task sheet

Resources

- Copies of the “What Living Things Need” task sheets
- Sources of plant and animal pictures for student use
- Science Rubric

<p>Meets:</p> <p>What do these animals eat for food?</p> <ul style="list-style-type: none">• grass <p>What things do the plants in the picture need to stay alive?</p> <ul style="list-style-type: none">• water, sunshine, air <p>What things that you can't see in the picture are needed by the animals to stay alive?</p> <ul style="list-style-type: none">• nothing <p>What things that you can't see in the picture do the plants need to stay alive?</p> <ul style="list-style-type: none">• sunshine, water	<p>Exceeds:</p> <p>What do these animals eat for food?</p> <ul style="list-style-type: none">• grass, hay, corn <p>What things do the plants in the picture need to stay alive?</p> <ul style="list-style-type: none">• lots of water to help them grow; they need lots of sunshine and air <p>What things that you can't see in the picture are needed by the animals to stay alive?</p> <ul style="list-style-type: none">• hay and corn <p>What things that you can't see in the picture do the plants need to stay alive?</p> <ul style="list-style-type: none">• water—there's no water; I don't see sunlight
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NAME _____ DATE _____

WHAT LIVING THINGS NEED - COWS



1. What do these animals eat for food?
2. What things do the plants in the picture need to stay alive?
3. What things that you can't see in the picture are needed by the animals to stay alive?
4. What things that you can't see in the picture do the plants need to stay alive?