

Sharing What We Know about Organisms

Overview and Objectives

What are some living things, or “organisms”? How are organisms alike? How are they different? What do they need to live and be healthy?

This lesson involves students in thinking and talking about these questions, and enables you to assess their existing knowledge about plants and animals. Lesson activities generate important pre-unit assessment products. These products can help you evaluate your students’ current understanding before the organisms they will study are brought into the classroom.

- Students draw a living thing and add the elements they think it needs to live and be healthy.
- Students share the ways they think all plants and animals are alike.
- Students share the ways they think all plants and animals are different.

Background

What do dogs, trees, worms, fungi, and bacteria have in common?

Each is an organism—a living thing. And most living things share the following characteristics:

- Organisms use energy.
- Organisms maintain themselves by using food, and they produce waste.
- Organisms generally are made of one or more cells.
- Organisms reproduce.
- Organisms grow, change, or develop.
- Organisms interact with their surroundings.
- Organisms have a life span (a beginning and an end).

Though bacteria and fungi are also organisms, this unit focuses on the two kinds of organisms that children of this age are naturally interested in: plants and animals. Many students, for example, will have a family pet or houseplants or gardens at home. The brainstorming session in this lesson will help you find out your students’ current thinking about plants and animals. (See pg. 7 of *Teaching Organisms* for more information on brainstorming.)

In this lesson, students individually draw and write about living things. First-graders’ writing skill will vary, depending on the point in the school year at

which you teach the unit as well as differences in individual ability. To better understand each student's thinking as the lessons progress, you may want to meet with students individually throughout the school day and have them describe their drawings to you. You may also enlist the aid of another adult to help with any dictation students need to do during the lesson itself. Both methods will help you assess students' grasp of key concepts when they are asked to write throughout the unit.

Students will also generate lists describing the ways they think all plants and animals are alike and the ways they are different. While most first-graders can handle the "alike" concept, some may not have any idea how plants and animals are different. It is a good idea to allow a few minutes for the class to share ideas and then let the discussion end naturally. Students will develop more ideas on these concepts as they undergo firsthand experience with organisms, and will revisit these lists later in the unit.

Note: You will notice **Record Sheet 1-A: My Living Thing** on the following materials list. If your class is using the Student Notebooks, you will find that they contain all the record sheets students will use throughout the unit. If your class is not using the Student Notebooks, you will need to copy this and all other record sheets for each student whenever a new one is listed in the **Materials** list. Record sheets are found at the ends of the lessons.

Materials

For each student

- 1 **Record Sheet 1-A: My Living Thing**
- 1 pencil
- 1 looseleaf notebook or folder with pockets (for record sheets)

For the group

Assorted crayons and markers

For the class

- 3 sheets of newsprint
- 3 different colored markers
- Library books containing pictures of a variety of plants and animals (optional)

Preparation

1. Title and date three sheets of newsprint, respectively:
 - Our List of Living Things
 - Ways We Think Plants and Animals Are Alike
 - Ways We Think Plants and Animals Are Different

Choose a place in the classroom where you can display the lists throughout the unit.

2. If you plan to use pictures to help launch the brainstorming session (see **Procedure**, Step 5), collect some books illustrating a variety of plants and animals.
3. Make a copy of **Record Sheet 1-A: My Living Thing** for each student.

Procedure

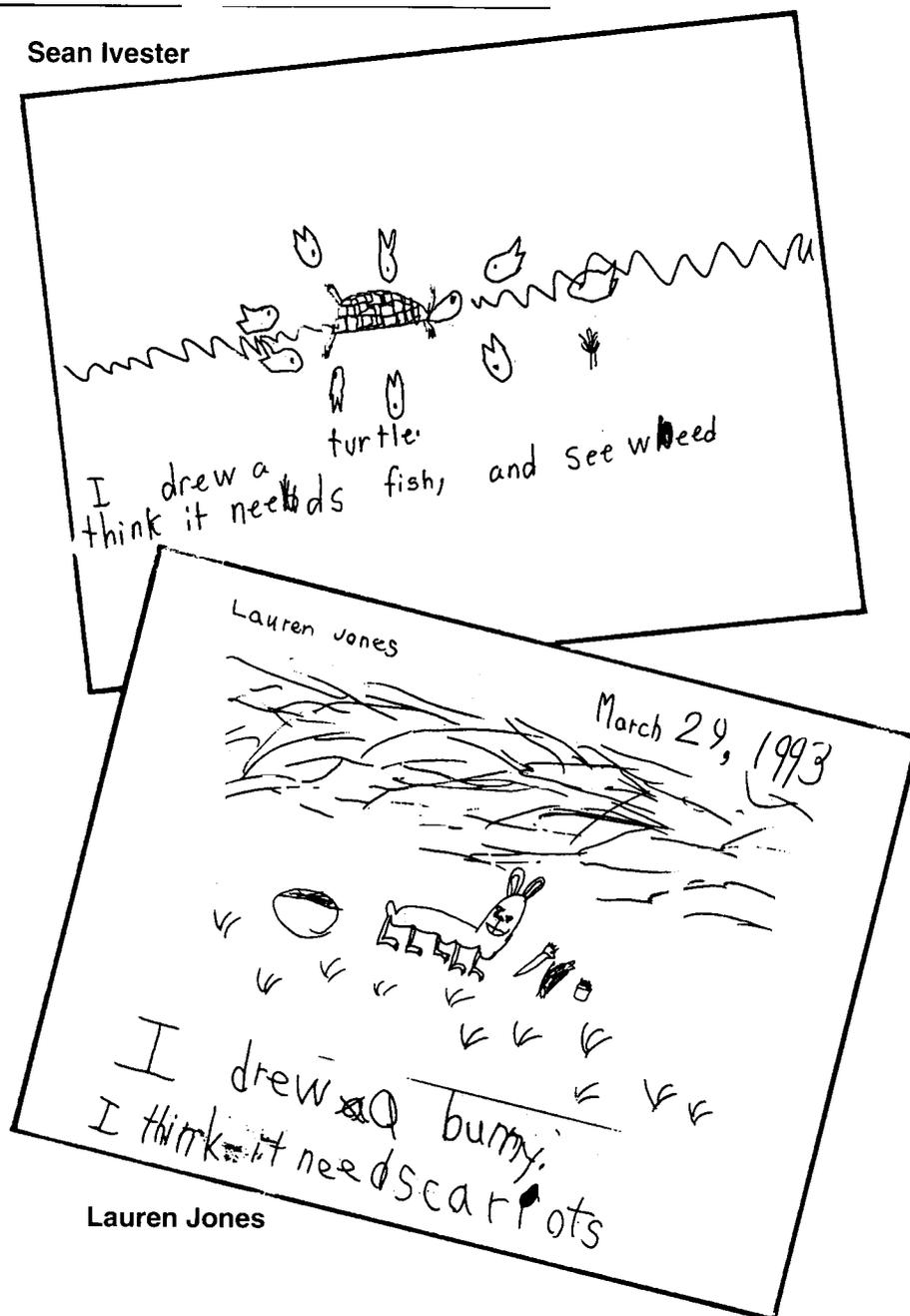
1. Introduce the unit. Explain that over the next few weeks, the class will be observing and talking about living things, also called organisms.

Note: The terms “organisms” and “living things” are used interchangeably in this unit.

2. Distribute a copy of **Record Sheet 1-A: My Living Thing** to each student and review it with the class. Ask students to do the following:
 - Put your name and today’s date on the paper.
 - Draw a living thing in the middle of the paper.
 - Add to the drawing what you think the living thing needs to live and be healthy.
 - Label the parts of the drawing.
 - Complete the sentences at the bottom of the drawing (see Figure 1-1).

Figure 1-1

Sample student drawings





3. Collect the students' drawings and save them for the post-unit assessment activity.
4. Display the large sheet labeled "Our List of Living Things." Ask the class to think of some living things and record their responses. As you record, place a check next to repeat responses to acknowledge all students' contributions.

Management Tip: If you would like to do this lesson in two parts, this is a good stopping point.

5. If you are using books to help students brainstorm, show the class some of the plant and animal pictures you have collected. Then show students the sheet labeled "Ways We Think Plants and Animals Are Alike." Ask questions such as the following:

- In what ways are all plants and animals like each other?
- How are all plants and animals the same?
- What are some things you think are true about all plants and animals?

Once again record your students' ideas. Encourage students to listen to each other, both to learn new information and to find out if others share the same ideas. Explain that all ideas will be accepted; ideas are not "right" or "wrong." Sample lists of responses to this question and the next one appear in Figure 1-2.

Final Activities

1. Now display the sheet labeled "Ways We Think Animals and Plants Are Different." This time, ask the class questions such as the following:
 - In what ways are all plants and animals different from each other?
 - In what ways are all animals different from plants? Plants different from animals?

As mentioned in the **Background**, allow a few minutes for the students to respond. If the students have no ideas at this point, move on to Step 2.

2. Explain that the lists will stay up during the unit. Students will have a chance to add new ideas to the lists and discuss old ones.

Extensions

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1. Ask the class to name all of the living things in the classroom. Record students' suggestions on a sheet and revisit this list as the unit progresses.

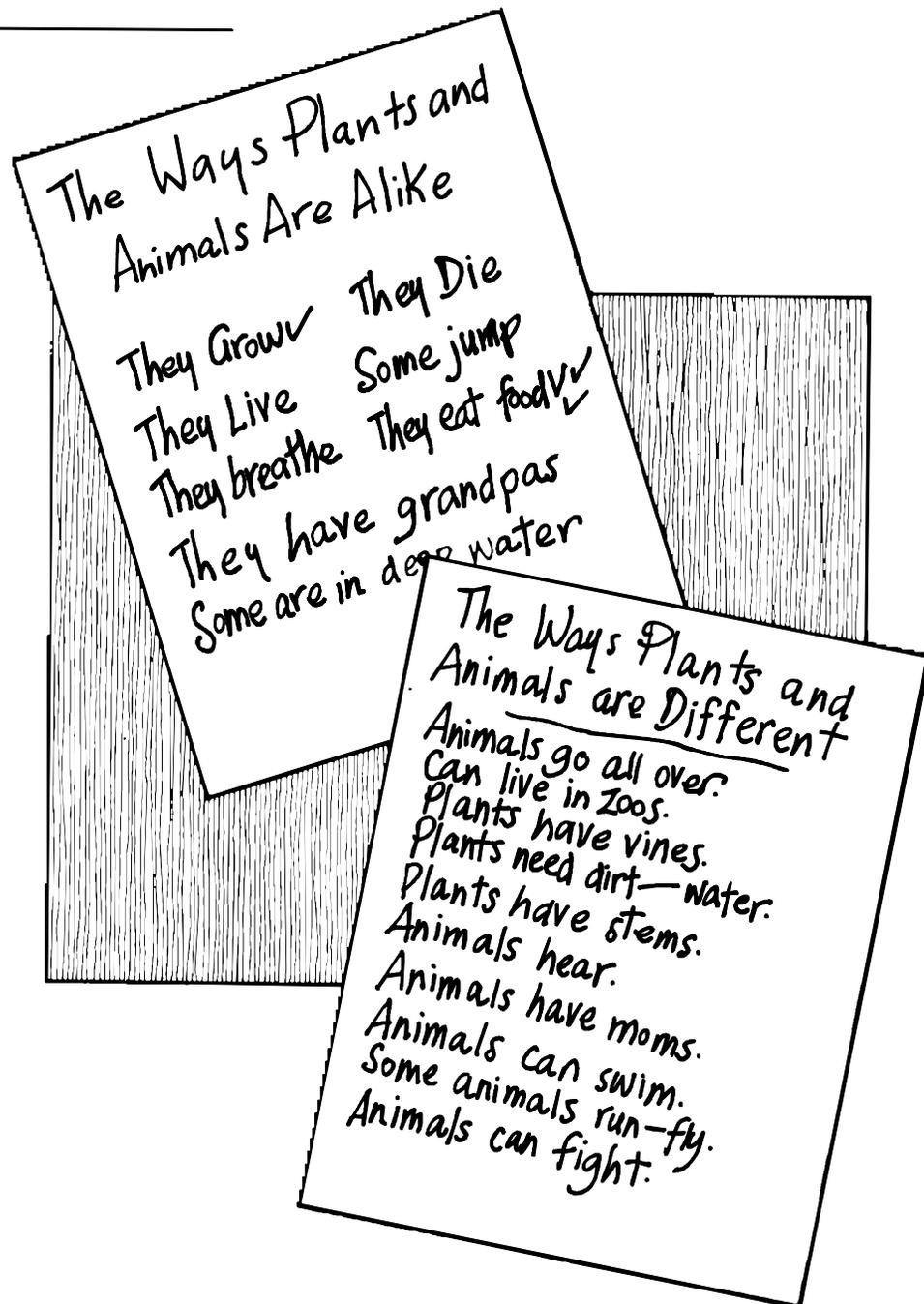
MATHEMATICS

SCIENCE

2. Have students make individual lists of the living things in their homes or living things they see on the way to school. Keep a class tally of the types and numbers of living things students notice.

Figure 1-2

Sample class lists



Assessment

This lesson has many assessment opportunities that you can use as a baseline to measure students' progress. You may want to use one or several of them. Record informal observations on charts, cards, or notes to help you keep track of information about each student. The following guidelines are suggested as ways to help you assess your students.

Record Sheet 1-A: My Living Thing

- Has each student drawn a living thing? (Most students probably will draw animals.) Was the student able to add one or two things it needs to live? For example: food, water, air, a home (shelter).
- Did the student add other elements to the drawing? For example: other plants or animals.

- Did the student show relationships between the organism and its environment? For example: a horse eating grass.

Class List of Living Things

- Does the class list of living things include both animals and plants?
- Does it include any other types of organisms?
- Does it include any nonliving things?

Bear in mind that most children this age will list animals and possibly one or two plants, such as “flower” or “tree.” Animals are more familiar and interesting to many young children than plants; therefore, most of their existing knowledge will be about animals.

Class Discussion

- Can students articulate their thoughts about living things?
- What information do students already have about plants and animals?
- In what ways do they think the two are similar? Different?

Most students' statements at this point may focus on specific animals and plants. For example, “A butterfly uses wings.” As the unit progresses, students increasingly may be able to make more general statements about plants and animals. For example, “Animals can move.”

Throughout the unit, students will be learning important skills basic to science: observing, recording, classifying, and comparing information. You can assess student progress in these skills in two ways: by observing and talking to students as they work individually and in groups; and by looking at individual student products. Both approaches are important.

In the section *Teaching Organisms*, on pgs. 7–15, you will find a detailed discussion about the assessment of students' learning. The specific goals and related assessments for this unit are summarized in Figure T-3 on pgs. 10–12. Please keep in mind that some first-graders may not completely understand every concept and goal listed. As you observe your class, look for the development of these ideas and skills rather than their mastery.

Note: At this time, refer to pg. 6 for essential information on ordering your live materials. You will need to send the pink card to order plants for Lessons 4 and 5, the yellow card to order snails and guppies for Lessons 7 and 8, and the blue card to order pill bugs and Bess beetles or millipedes for Lessons 9 and 10.

Take some time now to look at your calendar and decide when to send in the cards. Remember, you need to allow at least 20 business days from the date of order to the date of arrival.

If you are not using the *Organisms* kit from Carolina Biological Supply Company, be sure to contact your supplier of living organisms to establish a delivery schedule.

Name

Date

My Living Thing

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think it needs