ACTIVITY

Describing Oak Leaves

You and your team will investigate how scientists use the physical characteristics of living things to classify them. After you have completed the activity, respond to these questions directly in your journal.

- ► How do scientists classify living things?
- ► How can we use the physical characteristics of living things to help us identify them in the field?

Gather with your team and choose a captain and a note taker for today. Before you begin your investigation, consider with your team what you already know about classification. Use the questions below to structure your discussion and jot down your notes.

- ► Imagine you have to explain to someone how to classify a group of things—in other words, how to divide the group into smaller groups. What rules need to be followed in classifying something?
- ▶ Why do scientists need to classify living thing?

The captain will appoint group members to collect the required materials while the rest of the group reviews today's procedure. Before beginning, the captain will make sure that the group has all required materials, and that everyone knows the day's procedure.

The note taker will take notes on the group's findings for your team. Remember to record your observations and explanations in your journal for your own research notes. Include drawings to illustrate your findings.







ACTIVITY Describing Oak Leaves

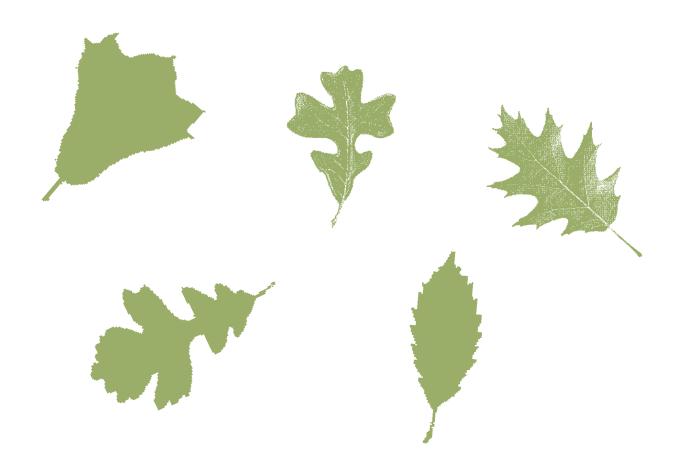
MATERIALS

► journals

- ► Types of Oak Leaves sheet
- ► activity sheets

PROCEDURE

- 1. Examine drawings of oak leaves to figure out how to classify and identify them. Before you start, develop your hypothesis. Create a drawing, showing what you think an oak leaf looks like. Explain your drawing in words as well; and explain how you think different types of oak leaves might vary. As a group, create a drawing together on the activity sheet, while you sketch a copy of the group's drawing in your journal.
- 2. Use the activity sheet to help you examine and classify the oak leaves.



ACTIVITY | Describing Oak Leaves



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| GROUP | WORKSHEET |
|-------|-----------|
| TEAM | |

| GROUP MEMBERS | |
|---------------|------------|
| CAPTAIN | NOTE TAKER |

1. Before you examine your oak leaf drawings, establish your hypothesis: What does an oak leaf look like? How might different types of oak leaves vary, while still showing the common characteristics of an oak leaf?

2. Use the space below to draw a picture of what you think a typical oak leaf looks like.

3. Take a look at the oak leaves on the handout, **Types of Oak Leaves**. Do you notice anything you didn't include in your drawing and explanation? What makes an oak leaf an oak leaf?

- **4.** Look closely at the samples of oak leaves. Fill out the chart on the next page as you and your team observe the leaves. As part of your description, consider some of the criteria listed on the next page. Develop your own criteria for classifying the leaves.
 - ► Leaf shape—narrow, oval, heart-shaped, arrow-shaped
 - ► Leaf margin/edge—smooth, lobed, toothed, spiny
 - ► Veins—parallel, branching, netted

Leave the last column blank for now. After you complete your investigation, conduct research to find out the common and scientific names for the oak leaves.

| ACTIVITY | Describing | Oak Leaves |
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|----------|------------|------------|

GROUP WORKSHEET 2
TEAM

| SPECIMEN # | GENERAL DESCRIPTION | HOW DOES IT SEEM TO FIT INTO THE OAK LEAF FAMILY? | COMMON AND SCIENTIFIC NAME |
|---------------|---------------------|---|----------------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |

| ACTIVITY | Describing | Oak Leaves |
|----------|------------|------------|
|----------|------------|------------|

| GROUP | WORKSHEET | 3 |
|-------|-----------|---|
| TEAM | | |

| SPECIMEN # | GENERAL DESCRIPTION | HOW DOES IT SEEM TO FIT INTO THE OAK LEAF FAMILY? | COMMON AND SCIENTIFIC NAME |
|---------------|---------------------|---|----------------------------|
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

5. What did your group learn today about classifying oak leaves? What do all oak leaves have in common? In what ways can they be different while still being considered oak leaves?

GROUP DYNAMICS

Comment on how each group member participated in today's discussion.