

## ACTIVITY | Twin Twigs

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 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, as well as an artist to illustrate the group's findings. 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.

- ▶ How can you tell when two people are related?
- ▶ How can you tell when two plants are of the same type? How are the clues similar to or different from those you would use for people?

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, and the artist will illustrate some of those findings. Remember to record your observations and explanations in your journal for your own research notes. Include drawings to illustrate your findings.



## ACTIVITY | Twin Twigs

### MATERIALS

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- ▶ twigs
- ▶ activity sheets
- ▶ journals
- ▶ magnifying glass/other tools to look closely at the twigs

### PROCEDURE

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- PART 1:** There are two bags of twigs for you to use. Each bag contains one of two twig twins. The other twig twin will be in the other bag, along with many twigs that do not match. Select a twig from the first bag. Then find its twin from the twigs in the second bag. Use the activity sheet to observe the first twig and to record your process as you look for its twin.
- PART 2:** Find the plant/tree/shrub from which your twig twins came. Look for the twin twigs' mother by searching out in the field or in a field guide. Use the activity sheet to guide your investigation and to record your process.



**ACTIVITY** | Twin Twigs: PART 1

**GROUP WORKSHEET 1**  
TEAM \_\_\_\_\_

GROUP MEMBERS \_\_\_\_\_

CAPTAIN \_\_\_\_\_ NOTE TAKER \_\_\_\_\_

ARTIST(S) \_\_\_\_\_

1. Before you gather your twigs, establish your hypothesis: How will you be able to tell the twigs apart?
  
2. Draw a picture of your first twig. Include a written description discussing color and texture of bark; color, size and shape of leaves or buds; color or ring pattern of the wood; arrangement of leaves or buds on the stem—for example, do they alternate? Are the opposite each other?

DRAWING	DESCRIPTION

3. Head over to the second pile of twigs to seek a match for your twig. As you examine each twig to decide if it is a match, explain why you select and reject each sample. Then explain why you chose the final match.



**ACTIVITY** | Twin Twigs: PART 1

**GROUP WORKSHEET 2**  
TEAM \_\_\_\_\_

**WHICH TWIG MATCHES?**

SPECIMEN #	DESCRIPTION	REASON FOR ACCEPTING/REJECTING IT
1		
2		
3		
4		
5		
6		
7		

4. Explain what you learned today about identifying and classifying twigs. Explain how your new understanding could be applied to the identification and classification of other plants.

**GROUP DYNAMICS**

Who did what? How did you solve problems?



**ACTIVITY** | Twin Twigs: PART 2

**GROUP WORKSHEET 1**  
TEAM \_\_\_\_\_

GROUP MEMBERS \_\_\_\_\_

CAPTAIN \_\_\_\_\_ NOTE TAKER \_\_\_\_\_

ARTIST(S) \_\_\_\_\_

1. Before you head out into the field (or into a field guide) to find the plants/shrubs/trees that produced your twin twigs, develop a hypothesis. What qualities must the plants/shrubs/trees from which your twigs came have? Include written and visual explanations.

2. Head to the great outdoors or to a field guide to search for the source of your twigs. As you examine each plant/shrub/tree to decide if it is a match, explain why you select and reject each sample. Then explain why you chose the final match. Use the chart below to explain your process. Use the back if you need more space.

**FINDING THE TWIN TWIGS' MOTHER**

SPECIMEN #	DESCRIPTION	REASON FOR ACCEPTING/REJECTING IT
1		
2		
3		
4		

