

# MY SECRET PLANT

Students record observations of a plant using words, pictures, and numbers, then challenge a partner to find the plant using their notes.

This activity helps students develop essential journaling skills: focusing on details; selecting relevant and useful observations to record; using words, pictures, and numbers; and communicating ideas on a data-rich page. Knowing that the journal entry will have an audience helps students focus on the task.

## NATURAL PHENOMENA

Find an outdoor area with a diversity of plants and enough room for students to spread out. This could be a natural area; vacant lot; or the “weeds” growing around a lawn, an unmanaged margin of a sports field, or a playground.

## PROCEDURE SUMMARY

1. Use words, pictures, and numbers to describe a plant.
2. Record unique features, such as growth forms, holes, and colors
3. When I call “time,” give your journal to a partner and challenge them to find your plant by using your notes.

## DEMONSTRATION

When the whiteboard icon appears in the procedure description: Draw a plant and add written notes. As students suggest elements that would help their partner find their plant (color notes, scale, location map, details about insect bites or other unique markings), add the ideas to the demonstration.



## Time

Introduction: 5 minutes  
Activity: 15–30 minutes  
Discussion: 15 minutes



## Materials

Journals and pencils

### optional

Rulers



## Teaching Notes

The scaffolding and instructions for this activity are essential to students' success. Don't skip over the steps where students brainstorm ways of showing information and details to include in their journal entry. This is not cheating; it is clarifying your expectations and setting students up to succeed.



## PROCEDURE STEP-BY-STEP

1. Tell students that they will create a treasure hunt for a classmate in their journals, using words, pictures, and numbers to describe a plant.
  - a. “In a moment you are going to create a treasure hunt for one of your classmates. We will spread out in this area, and each of you will choose one plant, then describe it as accurately as you can using words, pictures, and numbers.”
  - b. “You'll need to include enough information so that another person will be able to pick out your individual plant (not just the species or type of plant) from the

others around it. You win if your partner can identify your plant using your journal entry."

**2. Explain that students' journal entries should include words, pictures, and numbers and that they can rely more on whichever mode is most comfortable for them.**

- a. "This is not about making a pretty picture. It's about recording accurate information."
- b. "You will need to use words, pictures, and numbers to record your observations."
- c. "If you're more comfortable writing, you may write more. If you're more comfortable drawing, you may draw more. If you like using numbers, you can do more of that. But you must use all approaches to show what you see."

**3. Ask students what clues they could include to help their partner find the plant, then record their suggestions in an example demonstration on the whiteboard.**



- a. "What are some of the clues you could include in your notes that would help your partner find your plant?"
- b. If students don't mention the following ideas, then share them yourself: notes on color and size of the whole plant and individual parts; numbers of things such as leaves, seed pods, or branches; notes on what is near the plant; a small map showing where it is; or locations and numbers of unusual details such as bug bites or holes.

**4. Define boundaries for the activity.**

If you've done a lot of outdoor exploration with your students, you may simply instruct them to stay within earshot. Give clear and specific boundaries for larger groups or in a context where students should stay close.

**5. Explain that when you call "time," students will use their partner's journal to find their partner's plant.**

- a. "You will have only thirteen minutes to record your notes. At the end of that time, I will call for you to come in. When you hear the call, come back here to find a partner, but first, look at your surroundings and pick out a couple of landmarks to make sure you can find your own plant again!"
- b. (Optional, if it will work for your group of students) "You can keep working for a short while if you aren't ready."

- c. "Then you will bring your partner to the area near your plant and give them your journal notes. Give some boundaries for where they should search for your plant. Make this area bigger for larger or more obvious plants, and smaller for smaller plants. You want it to be challenging, but still possible to find your plant."
- d. "If your partner has trouble finding your plant, narrow down the area for them or show them the angle you were observing from. If they still have trouble, you can make the search area even smaller."

**6. Remind students of expectations, ask whether there are any questions, and tell the group to begin.**

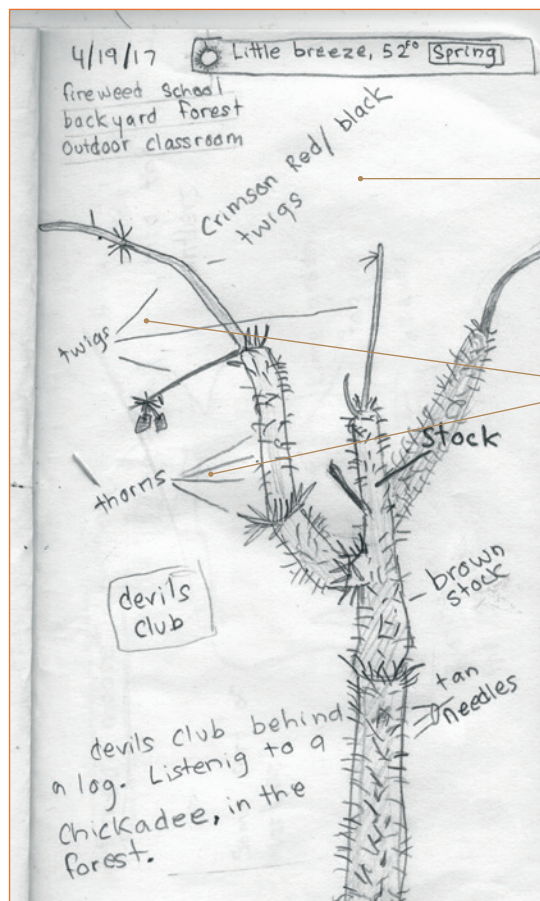
- a. "We will be working separately and quietly. Do not distract other students. If there is someone whom you really want to be your partner, make sure you are not working near them, because you do not want to see what plant they are working on."

- b. "Any questions? Go for it!"

**7. Circulate and troubleshoot as students are getting started with their work, helping students who are struggling to choose a plant or focus on the activity.**

**8. When the time is two-thirds done, give reminders about using words, pictures, and numbers and adding metadata.**

- a. "Be sure you are using pictures, numbers, and words in your diagram. If you've only used one approach for



Encourage students to make rich color descriptions. *Crimson* is a wonderful elaboration of *red*. The descriptive palette of red, orange, yellow, green, and blue does not fully describe the variations in color.

Label lines integrate writing and drawing. This helps students make specific notes about unusual details. It also takes much of the Art pressure off drawing. The drawing does not need to stand alone. What details are best shown with drawings? What details are best shown with words?

Cyrus, age 11

recording information, be sure to incorporate other approaches into your note taking."

- b. "If you have not already done so, add the date and location [metadata] to your work."

**9. When time is up or students seem ready, give the signal to find the plants with a partner, then help any pairs that are having trouble finding their plants.**

*Note:* If some students do not come in immediately, this is a great sign. They are so into it that they are forgoing the game to record more details about their plant!

## DISCUSSION

Lead a discussion using the general discussion questions and questions from one of the Science and Engineering Practices or Crosscutting Concept categories. Intersperse pair talk with group discussion.

### General Discussion

- a. "How many of you were able to find your partner's plant? Did your partner find yours?"
- b. "What were some of the details that really helped you find your partner's plant?"
- c. "When your partner was using your notes to try to find your plant, were there any details you wished you had included?"
- d. "What kinds of details might be helpful to record in future journal entries?"
- e. "Were there any interesting approaches you saw in your partner's entry that you might want to use in the future?"

### Obtaining, Evaluating, and Communicating Information

Tell students to put out their journals, then circulate, noticing patterns or interesting approaches their classmates used to record information.

- a. "Let's take a look at our journal entries. Everyone has a different way of recording information, and that's OK, but we can learn new ideas from looking at one another's work."  
"Open your journal to the page from this activity and put it on the ground in front of you."

"If you don't want anyone to know which page is yours, you can put it down and walk quickly to another place in the circle. In a moment, when everyone's journal is on the ground, no one will remember which one is yours."

"Walk around and look for patterns, similarities, and differences in the journal entries. How did different people lay out the page? How did people use words and pictures together to show observations? Discuss what you notice with the people around you."

### Patterns

- a. "Compare your notes with other students in your group. Can you see any patterns in the plants—such as forms of growth, branching, flower shape, leaf color, or leaf shape—across the species and individual plants you studied?"
- b. "What common characteristics—similarities in growth pattern, leaf shape, leaf color, and so on—would you use to categorize these plants into groups?"

### Cause and Effect

- a. "Look at some of the unique features you recorded on your plants, like holes, spots, tears, shapes, or unexpected patterns of growth. What might have caused some of these features to occur?"
- b. "What things in the surrounding environment might impact or affect this plant? Can you see any evidence that these could have influenced your plant?"
- c. "How might this plant affect its surroundings? Can you find any evidence of this?"
- d. "Were there any features, like certain leaf shapes or types of holes, common to many plants in the area? How might you explain them?"

### Structure and Function

- a. "Pick an interesting structure, or part, of the plant that you drew in your journal. Then discuss: How might its shape, texture, or other feature help it function in this environment?"
- b. "With a partner, compare the leaves, stems, fruits, seeds, and other features of your two plants. Discuss: How are they different? How might they function differently?"