



CALIFORNIA
ACADEMY OF
SCIENCES

Science Notebooks Across Time

GRADE LEVEL 3rd-12th
SUBJECTS Science
DURATION 45 minutes
SETTING Classroom

MATERIALS

- Academy Fieldbook pages* (1 set per class)
- Teacher & Student notebook pages* (1 set per class)
- Student science notebooks* (1 per student)
- Additional notebook examples* (optional)

BACKGROUND FOR EDUCATORS

Scientists in the field take notes to help remember the specific details about what they are observing. Even in today's digital world, there is information that can only be captured in field notes such as size, texture and smell. Experimental science must be replicable and consistent. When doing experiments, researchers take notes to document exactly what they did so their procedure can be replicated.

This lesson can be taught as an introduction to science notebooks or it can be taught once students have already been using science notebooks for a few weeks. It will help students identify what components they want to include in their notebooks and can help improve the overall quality of the notebooks.

TEACHER PREP

- Print and set around the room (tape to tables or walls) one set of Academy Fieldbook pages
- Print and set around the room (tape to tables or walls) one set of Teacher & Student notebook pages
- (Optional) Gather any additional science notebook examples from colleagues or students at other grade levels, and set around the room.
- Write Focus Question on board

INTRODUCTION (15 MIN)

1. Facilitate a discussion about why scientists use notebooks.
2. Introduce the focus question: "How do scientists use notebooks?"

OBJECTIVES:

Students will be able to:

1. Observe a variety of strategies that scientists use to document their thinking.
2. Select strategies they'd like to incorporate into their own science notebook.

FOCUS QUESTION:

How do scientists use notebooks?

3. As a class, brainstorm a list of evidence students expect to see in scientist field notes, teacher science notebooks, and student science notebooks.

GALLERY WALK (20 MIN)

1. Have students walk around to the different examples (student, teacher, and scientist) notebooks. Instruct students to look for different strategies scientists use for recording data and observations.
2. (Option 1) Have students sketch a snapshot of one favorite page in a science notebook and explain why they like it.
2. (Option 2) Have students carry post-it notes with them and place post-its on different notebook pages with comments. They can use the sentence-stems "I value..." and "I wonder..."

WRAP UP (10 MIN)

Discuss in small groups or as a class:

- What did you notice in the notebooks?
- What ways did scientists collect and communicate their data and observations?
- What strategies did you see that you would like to incorporate into your own science notebook?
- What notebook components were most helpful as an outsider?

EXTENSIONS

After students have been working in their science notebooks for a few weeks, have them do a gallery walk of their own science notebooks to see what others are doing and share their work.

SUPPLEMENTARY RESOURCES

The Smithsonian Field Book Registry Project: <http://www.mnh.si.edu/rc/fieldbooks/>

Biodiversity Heritage Library: <http://biodiversitylibrary.org>

Patton, James, and John Perrine. "Letters to the Future." *Field Notes on Science & Nature*. Ed. Michael Canfield. Cambridge: Harvard UP, 2011. 211-250.