Activity: Field Journals

Researchers take special care to record information about specimens and objects they observe or collect. Without proper documentation, a specimen is far less valuable to scientists. One way scientists record information is with a *field journal*.

Main Ideas

1) Collections teach us about our environment.
2) Scientists use field journals to record what they find, observe, and collect.

Learning Objectives

Students will:

- Explain why scientists document what they find, observe, and collect.
- Practice observation and recording skills by making and using field journals.

Learning Standards

Alaska Science Content Standards: G.4. Develop an understanding that advancements in science depend on curiosity, creativity, imagination, and a broad knowledge base.
Alaska Anchor Standards English Language Arts: W.10. Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.

Additional Resources

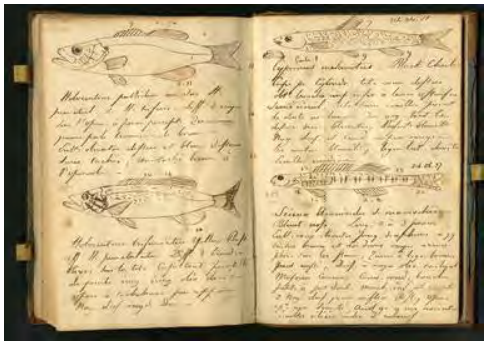
Smithsonian Field Book Project: nmnh.typepad.com/fieldbooks/

Time Needed: 30 minutes

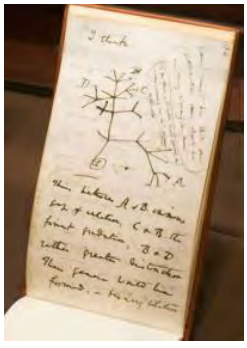
Materials

- Construction paper squares, 4.5 in. x 6 in. [two for each student]
- Field Journal pages [6-10 for each student]
- Twigs (about 4 in. long) or popsicle sticks [one for each student]
- Rubber bands
- Two-hole punch
- Colored pencils, crayons, or markers
- Pencils
- *Using a Field Journal* handout

UAMN photo.



Page from Constantine Samuel Rafinesque's journal, 1818. Smithsonian Institution Archives, SIA2012-6105.



Page from one of Charles Darwin's notebooks. Photo from University of California Cooperative Extension.

Activity: Field Journals

Directions

- Introduce the concept of a *field journal*: a notebook to record what you find, observe, and collect in the natural world.
    - Ask students to describe an animal or plant they saw recently. What details do they remember about it? Would it have helped to write down what they saw?

- Discuss why scientists keep field journals. Brainstorm what can we learn from keeping and reading field journals. [Answers include learning where certain species are located, how many of a species there are in a specific place, and how species and landscapes change over time.]

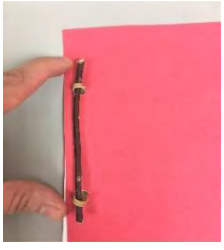
- Lead students in making their own field journals.
    - Have students choose two pieces of construction paper for covers. Take 6-10 blank field journal pages and put them between the covers.
    - Line up the edges of the papers. Hole punch two holes on the side.
    - From the back, pull one end of a rubber band through one hole and the other end through the other hole. Poke a twig or popsicle stick through the ends of the rubber band.
        - *Optional:* Students can staple the pages together instead.
    - Decorate the covers with colored pencils, markers, or crayons. Encourage students to personalize their field journals.

Pulling a rubber band through the holes. UAMN photo.

- Pass out *Using a Field Journal* handout. Go over the information and brainstorm different ways students can record their observations (sketches, descriptions, diagrams, maps, lists, etc.) Encourage students to think about what methods would work best for them.
    - *Extension:* Show students images of field books from the Smithsonian Field Books Project (nmnh.typepad.com/fieldbooks/2012/05/field-books-through-the-ages-a-visual-timeline.html). Discuss similarities and differences between the field journals.

- *Optional:* Take students outside to practice observing nature. Have each student pick a location and sit quietly for 5-15 minutes, writing what they observe. Afterward, discuss the experience as a group. What did they see and experience? Did anything surprise them?

- *Wrap Up:* Discuss the following questions with your students:
    - Why do scientists keep field journals?
    - What can we can learn about the world around us from field journals?
    - After recording your observations in a field journal, what can you do with that information (add it to a database, use observations to conduct an experiment, make a checklist of species, etc.)?



Poking a twig through the rubber bands. UAMN photo.

Decorating a field journal. UAMN photo.

Field Journal

Date:
Location:
Description:

Sketch:

Notes:

Field Journal

Date:
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Sketch:

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Date:
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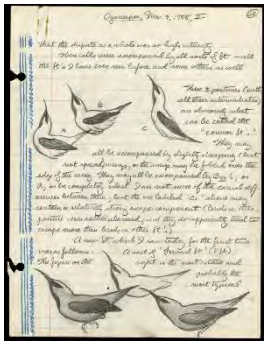
Using a Field Journal

Scientists use **field journals** to record what they find, observe, and collect. They often include sketches, diagrams, observations, and questions. A field journal helps you remember details and identify patterns over time.

Field book by Jesse Herman Holmes, 1890. Smithsonian Institution Archives.

There are many ways to keep a field journal. Some scientists record their observations with charts and lists, while others write long, detailed descriptions. You can sketch simple pencil drawings, paint colorful images, or draw maps or diagrams. You can write everything on one page, or divide it into multiple pages.

Your field journal will be unique, reflecting your personal style. Experiment with different methods to find out what works for you!



Field notes by Martin H. Moynihan, 1958. Smithsonian Institution Archives, SIA 2012-1880.

Tips for Keeping a Field Journal

- Each time you go into the field, write down some basic information:
  - Date and time of day
  - Location (be specific)
  - Weather conditions
- Think of some questions to help you get started: What do I see? Do I see anything that surprises me?
- Record your observations in words or pictures. Be detailed; you never know what information will be important later! Some things to consider recording are:
  - If there are fruits or flowers on individual plants
  - Interactions among animals, like mating or fighting; or between animals and plants, like feeding or pollinating
  - If you see any changes from the last time you were there
- Look closer! Try observing a small section of the ground. How many kinds of plants do you see? What does the soil look like? Do you see any insects?
- Use your senses. In addition to what you see, record what you hear, smell, and feel. (Never smell or touch anything that might be harmful!)
- Write down questions you have about what you observe.
- When you return from outside, read over your notes and underline or highlight what you think are the most important observations.

Adapted from University of California Cooperative Extension (cemarin.ucanr.edu/files/220523.pdf) and American Museum of Natural History (www.amnh.org/learn/biodiversity_counts/read_select/hs/fieldjnl.htm).