

Scientific Sketching Resources

Engaging students in close observation fosters wonder, investigation, and meaning-making. Incorporating sketching into scientific notebooking is a powerful strategy to bridge scientific thinking and language arts skills.

Some tips to get started

No fancy art supplies needed: incorporate scientific sketches right into students' science notebooks.

Purpose is to convey important information about an observed specimen or phenomenon, not to make a beautiful art project

Look at examples of real scientist notebooks for inspiration, real world connections.

- Samples available online from BEETLES at Lawrence Hall of Science.
<http://beetlesproject.org/cms/wp-content/uploads/2015/12/Naturalist-Journal-Samples.pdf>
- "Notable Notebooks: Scientists and their Writings" by Jessica Fries-Gaither, kid-friendly book

Where to start

- Form – look at the shape, the basic outline and dimension. Simple lines.
- Detail – once the outline is in place, add the most noticeable details; use words to describe detail that might be too difficult to draw
- Add shading and texture for a more specific, accurate depiction

Encourage students to focus on "ABCDE"

Accurate: make your sketch accurate (not beautiful, but descriptive); focus on shape, outline first

Big: use the whole page, draw your item at different scales (the whole thing, zoom in on one part)

Colorful: add color with colored pencils or crayon, if the colors help to represent the object. If you don't have colored pencils, you can just write a note with an arrow (For example: This part of the flower is light blue; this part is yellow.)

Detailed: After you get the outline, add in important details. If you are drawing a leaf, what makes this leaf different from a leaf from another type of plant?

Explain: Add a few words to describe what you might not be able to draw, add arrows or other symbols to help explain what you are observing

Simple sketching prompts to focus student attention

1. Comparison – Students sketch two different examples of the same sample (leaf, rock, tree). Use labels and arrows to highlight similarities, differences
2. Zoom in – zoom out – Students sketch a specimen, and then draw a large circle to sketch a close up of one specific segment of the specimen
3. Up close & wonder – Student selects one object to observe closely, sketch, and write "1 thing I notice.... 1 thing I wonder..... It reminds me of....."

Want to learn more? Great free and local resources

BEETLES, Lawrence Hall of Science

<http://beetlesproject.org/resources/for-program-leaders/field-journaling-with-students/>

John Muir Laws, Nature drawing workshops, online resources

<https://johnmuirlaws.com/>