# Scientific Sketching

## Objective:

Students will learn how scientists use sketches to identify and document organisms. Then they will use their skills to identify, sketch, and label the parts of an intertidal organism (or other item).

## Concept:

Students will identify important physical characteristics of an intertidal organism through the creative mode of sketching.

## You Will Need:

- Journal page or sketching paper
- Example of scientific sketch(es) (See 3rd page)
- Pens or pencils
- Intertidal guidebooks or pictures of marine animals)
- Intertidal ID cards
- Something to sketch (shells, bones, etc.)

## What To Do:

### Introductions:

This activity provides students with an opportunity to hone their skills for scientific sketching and express themselves creatively. Scientific sketching requires that students look closely at an organism and identify important physical characteristics. Scientific sketching is most exciting with live intertidal organisms, but can also be conducted with shells and bones or plant/lichen/fungus specimens.

Be careful when selecting organisms for sketching. Slow moving organisms are usually easier to sketch, and less likely to try to escape from the containers. Change seawater out as necessary to ensure healthy temperatures and oxygen levels, and occasionally nudge mollusks (chitons, limpets, etc.) and echinoderms (sea stars, sea cucumbers) that might otherwise latch onto the containers and prevent later removal. If an animal does attach to the container and cannot be budged with gentle pressure, simply place the container in the live tank and return later; the organism should eventually move out.

### Procedures & Activities:

Begin by asking students how they identified organisms on the beach. When a student mentions the ID guides, explain that these ID guides are made up of scientific sketches created by ecologists who live in Homer! Ask students what makes a scientific sketch useful and examine an example. Arrange a variety of organisms in containers spread out between 2-4 tables. Let students choose which organism to sketch and sit at the appropriate table. Pass out journals, pencils, & pens. Students should begin their sketch in pencil, but may choose to outline in pen if time allows. Provide ample time for students to sketch and label their organism. Students should use the ID guide and guidebooks to identify the organism by scientific name and label physical characteristics. Check in on students as they work on their drawings and provide positive feedback.

### Wrap-up & Extensions:

Come together as a group and ask for volunteers to share their sketches, or ask each student to share. Ask students what parts were easy to draw and what parts were difficult.

Some students are nervous about drawing. To get "warmed up" for scientific sketching, you can have students begin by doing a blind contour drawing of their organism. To do this, draw the outline, or "contours," of the organism without looking

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at the paper, keeping their eyes on the organism the whole time. Do one yourself to share with the group. The results are usually a bit silly looking and break the ice before scientific sketching.

After students complete scientific sketches of the physical characteristics of their animal, you can ask them to tap into their more creative side and do a drawing that captures more of the behavior and their impressions of an organism. Encourage students to use colors for the drawing and go beyond the physical characteristics of an organism. Students can create an abstract representation, realistic sketch of the organism interacting with its environment, or even a cartoon. Explain how you might create such a drawing. Have willing students share their drawings.

Steller's Jay

"Cyanocitta Stelleri"

- 12 - 13½" length
- 17" wing-span

Beautiful blue!

- Steller's Jays are rather noisy birds that are very bold!
- We see them in the evergreen forests - 3,000 - 10,000 ft.
- They have a harsh distinctive all-shook, shook, shook.
- They eat insects, seeds, berries, nuts, small animals, eggs.
- They use mud in their nests.