

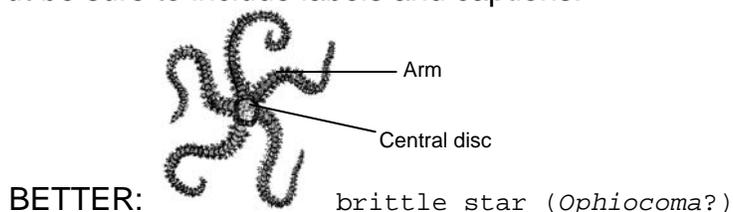
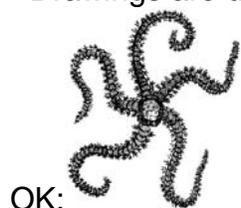
Suggestions for Notebooks

- Record everything that you do and observe, even if it is an accident or seems unimportant.
- Record what you did each day, even if you only write a line or two.
- Don't forget to sign your name and date all your entries.
- Use appropriate language; be respectful of the organisms and your colleagues.
- Data tables are a good way to organize your thoughts, but be sure you label them thoroughly.
- Be very descriptive and use specific language when making observations.

OK: "Sponges come in many colors."

BETTER: "We found bright orange sponges. We also found a pale purple sponge and a light blue one. The light blue sponge was white at the tips."

- Drawings are useful, but be sure to include labels and captions.



- If you tried something and it didn't work the way you expected or you made an unexpected observation, you should still describe it. Don't just say it "didn't work", but describe what happened and why it didn't turn out the way you expected.

- Be sure to use scientific names, not just common names, because these differ from place to place.

OK: "It is a glass anemone."

BETTER: "It is *Aiptasia pulchella*, the glass anemone."

- If you can't identify something, at least describe it as best you can.

OK: "We failed to identify the tunicate."

BETTER: "We couldn't completely identify the tunicate. It was soft and white with multiple openings about 3 millimeters apart. It looks most like a Didemnid"

- If you can identify it, explain how you arrived at that conclusion.

OK: "We think it is an *Echinothrix diadema*."

BETTER: "We think it is an *Echinothrix diadema* because it has long narrow black spines."

***Use your own language, do not just copy from a field guide. It's great to use scientific terms, but you should also define these terms in your notebook so you can learn what they mean.*

- Hypotheses should have justification- Explain why you think the way you do.

OK: "We think the painted nudibranch laid the eggs."

BETTER: "We think the painted nudibranch laid the eggs because the Spanish dancer lays its eggs in the same pattern and they are both classified as dorids in the suborder Doridacea."

- Explain statements that you make about your organisms.

OK: "Anemones are fairly resilient creatures."

BETTER: "Anemones are fairly resilient creatures because they resume activity 33 minutes after being detached from the side of the tank."

- Be sure to include lots of details on your experiments. Remember someone else should be able to repeat your experiment just by reading your procedure.

OK: "We put the snail in a tub and then put it on top of the bookshelf."

BETTER: "We put the snail in a clear tub, and then we put the clear tub on a plexiglass shelf that stuck out from the top of the bookshelf so we could observe the snail from underneath. We left it there for 10 minutes before we began observations, and then observed it crawling for 20 minutes"

→ In all of these examples – why are the "better" observations better?

Here are good examples of notebook use:

2/20/03 Megan T. & Keoki E.

In the book "Reef & Shore Fauna of Hawaii" on page 142 is a picture of the Aiptasia pulchella and on page 143 there is a description. We think this anemone is Aiptasia pulchella because it matches the description and looks similar to the picture. We at first thought it was a dusky anemone, Anthopleura nigrescens but we noticed white dots on the tentacles which hinted to be an Aiptasia pulchella. We believe the other anemones are pleasing anemones because they also have white dots. At about 1:25 pm the largest anemone held in water and inflated. It returned to normal soon after.

2/20/03 Ani S. & Kelli T.

We also think that it is a glass anemone, but it is called the pleasing anemone too. We looked in the book "Reef & Shore Fauna of Hawaii" on page 142, and think that it is Aiptasia pulchella, which is what the specialist also believed. One of the anemones found in the field we weren't able to bring back, but we compared photos and think it was a zooanthid called Zooanthus kealakekuaensis. The description says it is found on the West coast of Oahu, and the site we visited is a West coast site. We found it in the book "Hawaii's Sea Creatures" on page 45.

We tried to feed the anemones:

Food	Eat it?	Other observations
Flake fish food	Yes	The tentacles grabbed it quickly
Algae piece	Yes	Only two anemones ate the algae
Candy bar	Yes	One anemone ate the chocolate, but the piece in the tank made the water very cloudy, we had to change it
Notebook paper	No	They ignored it