EXAMPLE OF A COMPLETED TIDE POOL REPORT

(NOTE: your report will vary depending on the organism you pick and the info you find)

Pick one tide pool organism you found and complete the following information:

Common name: **Southern California Sea Cucumber**

Scientific name: ***Stichopus*** **(NOTE: you cannot use this organism for your report!)**

Phylum: **Echinodermata** Order/Class: **Class Holothuroidea**

General description of the organism, including a photo:

Sea cucumbers are members of the holothuroidea, which are a group of echinoderms (echinodermata) that include sea stars and sea urchins. All 1400 species of sea cucumbers have 5-sided symmetry. Sea cucumbers have 3 rows of suckers that run the length of its body that are uses for locomotion, although they move slowly.

They grow up to about 8 inches in length and generally have a warty appearance with leathery skin. They resemble a cucumber, hence the common name. They can also change to be quite smooth. They can extend their feeding tentacles outside of their bodies (see photo).

Tide zone(s) found:
Sea cucumbers range from the intertidal, where they may be exposed briefly at low tide, to the floor of the deepest oceanic trenches. Because they are a soft-bodied organism, they are most commonly found in the **low tide zone**.

Geographic range (Ex.: Baja California to Vancouver Island):
Stichopus is found along the West Coast from **southeast Alaska to Baja California, Mexico**.

Food source:
Sea cucumbers are decomposers that eat **detritus** (dead and decaying organic matter and waste) contained on the sea floor or by filtering it from seawater with their sticky tentacles, which they can extend outside of their body and then retract into their mouth to feed.

Reproduction:
The most common type of reproduction by sea cucumbers is by **broadcast spawning**, which involves releasing egg or sperm directly into seawater. In addition, many species of sea cucumbers are known to have **asexual reproduction** whereby the two ends of the organism slowly rotate in opposite directions, resulting in a constriction. Then, the two halves slowly move in opposite directions, until the bodywall tears at the constriction and the two halves become completely separated, thereby creating 2 different organisms.

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Special adaptation(s) for survival in the tide pool environment:

- They are **well-camouflaged**, generally with subdued colors that tend to blend into the tide pool enviornment.
- When threatened, the sea cucumber will **extend its feeding tentacles** and detach them, hoping that the predator will eat those and leave the animal alone. It will regrow the feeding tentacles later.

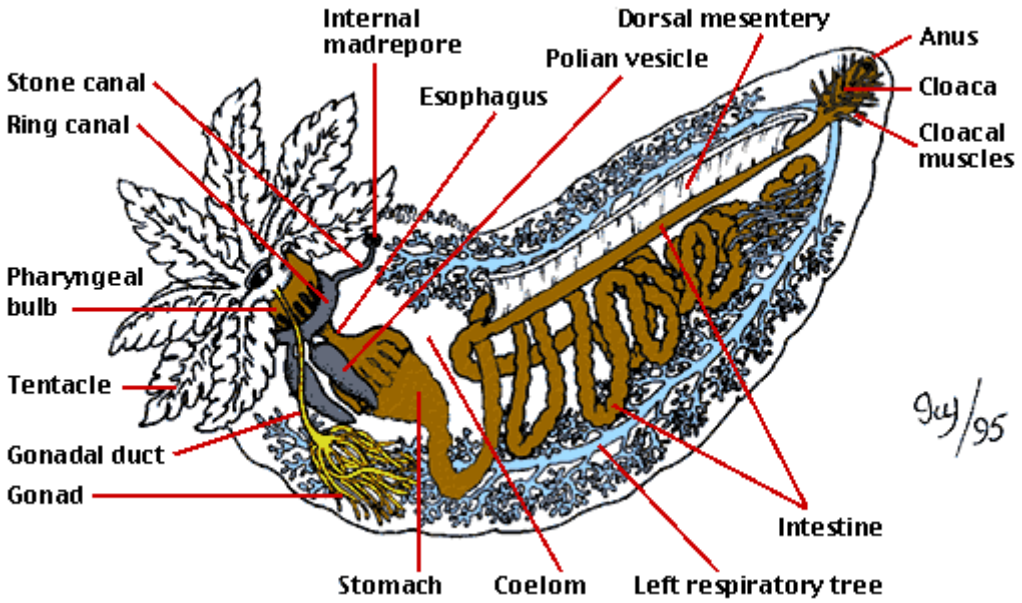
Other interesting facts I found:

- Because they are considered a delicacy, they are often **collected** and removed from tide pools, even in marine preserves (which constitutes poaching and is illegal).
- Some sea cucumbers are being investigated for their **aquaculture** potential. Sea cucumbers are boiled, gutted, reboiled, and then smoked before eaten.
- Some sea cucumbers show **parental care** and hold babies under their bodies.
- Recently, a chemical discovered in a sea cucumber is being used to **combat malaria**.
- One of their two body openings is its stomach and is involved in digestion. The other is used for everything else, so it is said that sea cucumbers **breathe through their anus**.
- The scientific term *Stichopus* means "**feet in a row**."

References used (if you use an Internet site include full URL address):

1. Tree of Life Website at: http://www.tolweb.org/Holothuroidea
2. UC Berkeley Museum's Website at: http://www.ucmp.berkeley.edu/echinodermata/holothuroidea.html
3. *Life Between the Tides: The Natural History of Common Seashore Life of Southern California* by Jeffery L. Brandon and Frank Rokop, American SW Pubs. SD © 1985
4. *Sea Cucumbers of British Columbia, Southeast Alaska and Puget Sound* by Philip Lambert, Royal British Columbia Museum, Royal BC Museum, UBC Press © 1997
5. Wikipedia: Sea Cucumbers at: http://en.wikipedia.org/wiki/Sea_cucumber

A **detailed** diagram (showing external and internal parts, all labeled):



From the Tree of Life website at: http://www.tolweb.org/Holothuroidea