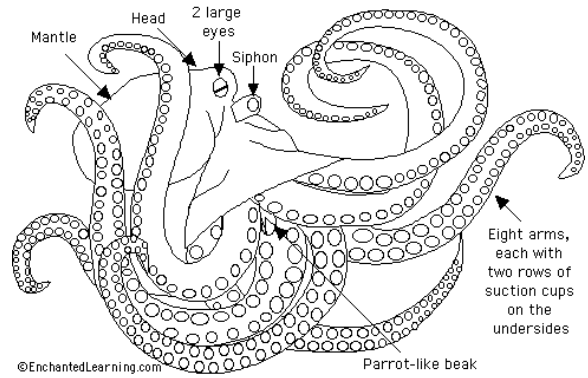


Mollusca

Latin: *mollus* means “soft”

Classes:

- Bivalvia: Two-shell mollusks, like clams
- Gastropoda: “stomach-foot” such as snails
- Cephalopoda: “head-foot” like squids



General body plan

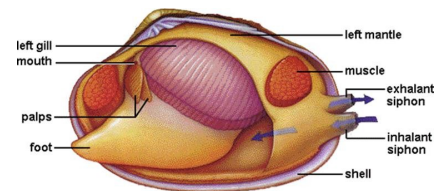
All mollusks have a coelom, or body cavity. This contains the organs such as digestive tract, gills, and heart. Generally the soft body is protected with a shell, though this is reduced in the squid and absent in the octopus. Many mollusks have a toothed tongue, called a radula, with which they scrape off their food.

Their digestive tract is complete, and they excrete solids, which helps so their wastes don't pass over their gills (ew!). They have a complex nervous system, and the cephalopods have large, complex eyes and a mental capacity similar to a house cat.

The simple mollusks have open circulatory systems which means that although they have hearts, there are no vessels, and the blood flows between cells. In the cephalopods, the circulatory system is closed, making their circulation more efficient, and allowing for larger body sizes. The giant squid can have a total length of 18 meters.

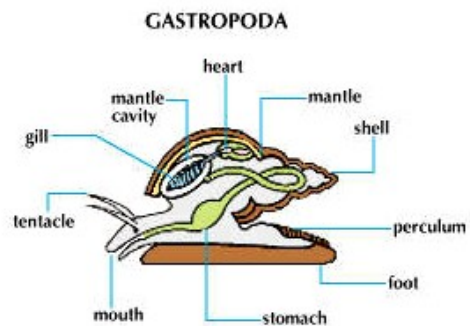
Bivalves

Clams oysters, scallops, muscles. They have a very strong muscle called the adductor muscle which causes the two shells to close. They can use this to propel themselves through the water. Bivalves have no heads and no radula, but they have siphons where they take in water and expel extra water and wastes. They have really simple nervous systems. Most bivalves have separate sexes. Some can produce nacre for pearls. Found in both fresh and salt water



Gastropods

Snails, slugs, whelks, abalone, periwinkles, sea slugs. Either a single shell or no shell. Most have gills (in water) although land gastropods (slugs and snails) have modified their body to get oxygen out of the air. They have a nervous system with ganglia – more developed areas of nerves. Some gastropods have separate sexes, but most are hermaphroditic. Some gastropods are male when younger, but are female when they are older and larger.



Cephalopods

Octopus, squid, nautilus, cuttlefish. All are predators, and have tentacles, though different numbers in different species. For example, there are 90 tentacles in a chambered nautilus, 8 in an octopus, and 10 in a squid.

The nautilus is the only modern cephalopod with a shell. In the squid it has gone internal and is called a pen, which works like a spine. In the octopus, this is gone completely, making the octopus able to squeeze into tight areas. Cephalopods have large brains, eyes, nerve fibers, and usually separate sexes.

