



Mollusca

Gastropods,
bivalves and
cephalopods

What are Mollusca?

Mollusca are a group of living things that have a mantle with a cavity used for breathing and excretion. Many have a shell made of calcium carbonate which serves as the exoskeleton to enclose, support and protect soft body parts. The mantle secretes, repairs, and maintains the shell of those mollusks that have shells. The epithelial layer secretes a scaffold on which calcium carbonate crystals grow.





What are Mollusks?

Bivalve mollusks (e.g., clams, oysters, mussels, scallops) have an external covering that is a two-part hinged shell that contains a soft-bodied invertebrate.



What are Cephalopods?

Cephalopods have the most complex brain of any invertebrate and are the most complicated. Cephalopods have a merged head and foot, surrounded by a ring of arms and/or tentacles around the head. While one species of octopus has been observed in Gulf waters, we see most cephalopods in Texas in fossils.

What are Gastropods?

A gastropod's foot is under its gut. They were originally called univalve to underscore the single shell.



Snails

A snail is a member of the molluscan class Gastropoda with a coiled shell large enough for the animal to retract completely into.





Slugs

A slug is a land-based gastropod without a shell. Slugs can have no shell, a very reduced shell, or only a small internal shell.

There are also semi-slugs with almost vestigial shells and beautifully colored sea-slugs like Nudibranchs.

Snail mucus serves 5 functions:

lubricant/locomotion slime for gliding,
adhesive glue for clinging to vertical surfaces,
protective body coating to stop water loss,
defensive sticky glue to trap predators,
defensive foam to wash away pests.

The mucus varies slightly in composition for each kind of slime. Snail slime is a gel made of 90% to 99.7% water combined with unique core components like glycoproteins, hyaluronic acid, glycolic acid, and allantoin, tuning the relative proportions of proteins, calcium, and ions from multiple glands to produce distinct types of mucus for locomotion, defense, and hibernation.



Shell Game fingerplay

Are you a snail or are you a slug? (looking puzzled)

It all depends on the shell. (hands forming shell)

If it's coiled and it's there, you're a snail, don't you know, (finger twisting)

If a slug, it is absent as well. (all gone motion)



Singing Snails!— to *I'm a Little Teapot*

I'm a little snail with eyes on stalk,
(finger pointing up)

And one big foot to help me walk.
(pointing to foot)

I am soft with a shell outside (hands
forming shell)

--a perfect place for me to hide!
(hands covering eyes)



The main differences between slugs and snails:

Anatomy—snails have shells and slugs don't

Habitat—snails like rocks, sand, dirt and slugs like moist damp places

Speed—snails .03 mph, slugs .18 mph

Behavior—snails search for food 24/7 slugs are nocturnal

Lifespan—snails 23- years, slugs 1-6 years

Slime trail—snails broken; slug continuous

Size-snails up to 10", slugs 15"

Be a snail hunter!

Where can you find snails in the park?





Art for Little Hands Snails

You can make a snail community by pressing small, medium, and large pasta shells into play dough.

Mollusca creations!

What can you use to make a mollusk or a gastropod?



How to eat mollusca?

Cookie, marshmallow and
pretzel!



Books



