Snips and Snails and Gastropod Tails

For complete handout, see website.

Snail Trails: *Describe any patterns of movement you see.*

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A Very Special Bathrobe: *Why do you think gastropod shells gradually "diverged" from a simple dome into so many complex shapes?*

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Early in their evolutionary history, gastropods used their foot only for crawling. And they used their radula to graze on algae or scrape up food. But in modern moon snails – as seen on the Shape of Life – the foot and radula "diverged" for NEW functions and a NEW lifestyle. ***Explain****:*

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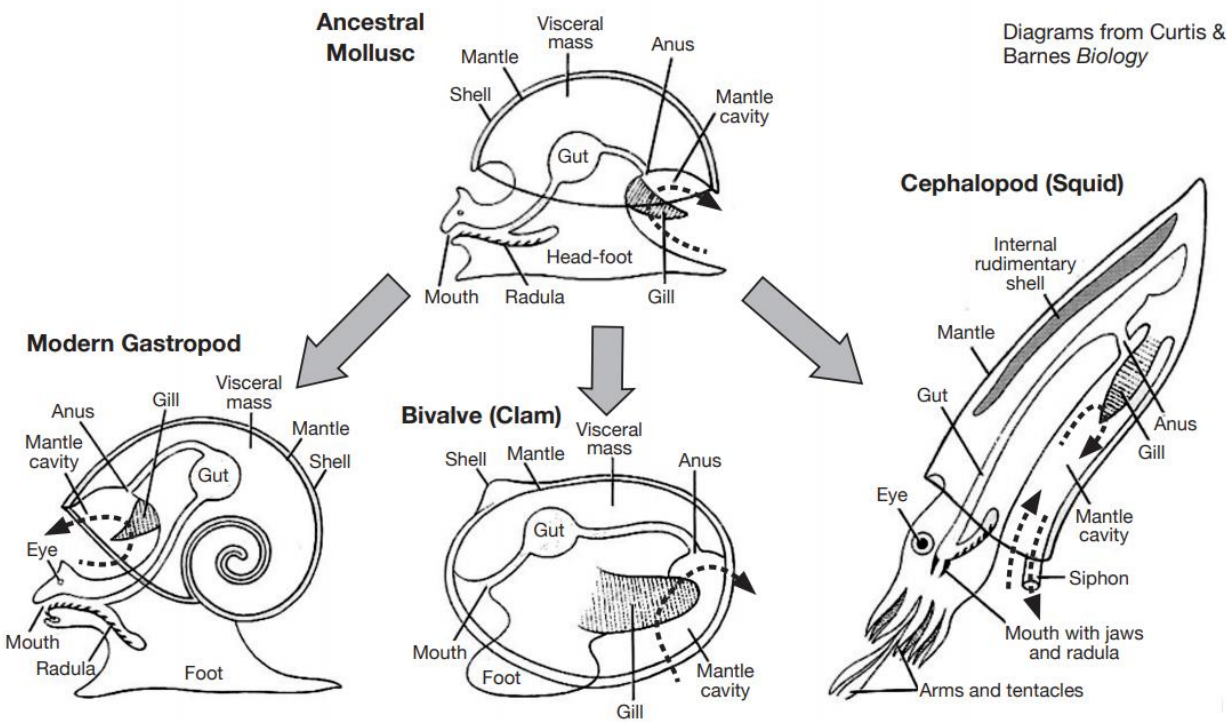

The First Snail: *In modern gastropods, the beach umbrella shell has become coiled. Also, the mantle cavity has swung around 180˚ to the anterior end. What might be the benefit of these changes?*

Clams use their foot to burrow into the seafloor for safety. The beach umbrella shell has turned into a tightly closed hinged box, with a wedge shape to make burrowing easier. Clams quietly filter food from the water. What ancestral body features have they lost? Why?

In squid, on the other hand, the shell has actually moved INSIDE its body. It has become lightweight and supports a long, streamlined body. What does this tell you about the squid's new lifestyle, versus its sluggish ancestors?

The squid is in fact an active predator. It no longer crawls on the seafloor, but instead uses jet propulsion for fast swimming and hunting fish in open water. Besides the shell, what other features of the ancestral mollusc have changed for this new niche? Why?

Why was there such pressure for so many different types of molluscs to evolve?