



# SHAPE OF LIFE: MOLLUSCA

1. List 5 mollusks that you see in the first few minutes of the video.

**Snail, cockle, top snail, squid, limpet, octopus, giant clam, abalone**

2. According to the narrator, how many species of mollusks exist today? Over 150,000

3. Mollusks are often the target of predators. Why do predators choose mollusks as a food source?

**The body of a mollusk is rich in protein and tastes good.**

4. Most mollusks, such as the abalone, have a foot muscle for movement.

5. To eat, most mollusks have a rasping, sand-paper like tongue called a radula.

6. Which structure covers the organs of the mollusk and secretes the shell? mantle

7. Based on the mollusks that you have seen so far, do all mollusks have an external shell? Which don't?

**While many mollusks do have an external shell, not all do. Squid and octopuses lack an external shell.**

8. How is the shell of the leafy hornmouth adapted to avoid predation?

**The shell of the leafy hornmouth has three high ridges. When a crab tries to crack open the shell, the ridges make it difficult for the crab to get a strong grip.**

9. Describe the foot of the abalone and how it enables movement.

**The foot of the abalone is soft and muscular, lacking a skeleton or bones. It is able to stretch out while simultaneously holding on.**

10. How does the cockle use its foot to avoid predation by the moon snail?

**The cockle uses its foot to burrow or to kick away from the hunting moon snail.**



11. How does the moon snail use its foot to capture and feed upon a buried cockle?

**The moon snail uses its foot to burrow beneath the sand and come up from underneath a cockle, grabbing it and surrounding it while it feeds.**

12. Describe the radula and what it is used for.

**The radula is a rasping tongue-like structure in the mouth that is covered with rows of sharp teeth. The radula moves back and forth like a chainsaw blade, grinding into prey.**

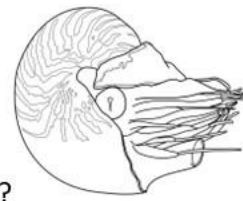


13. Which mollusk evolved to leave the bottom of the ocean and swim? Nautilus

14. How many tentacles does a nautilus have to capture prey? 90 or more

15. How do nautilus swim?

**Nautilus don't use their tentacles, but instead pull water into their body and force it out through a funnel. This propels and steers the nautilus.**



16. Why is the body plan of a nautilus outdated compared to the evolving fish in the sea?

**Nautilus are slow.**

17. To gain speed, what did squid have to sacrifice?

**To gain speed, the squid had to lose its protective outer shell.**

18. Squid today still have a narrow remnant of their shell called a pen. What does this modified shell provide to a squid?

**The pen provides support.**



19. How fast can some squid travel? \_ **20 miles per hour** \_

20. How are squid superior to the mollusks that came before them?

**Squid are efficient and fast swimmers, allowing them to hunt and evade predators.**

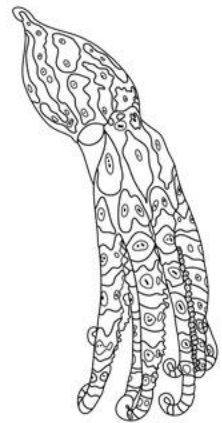
21. How many blood-pumping hearts does every squid have? \_ **3** \_

22. What "impressive weapon" do octopuses possess that sets them apart from other mollusks?

**Intelligence**

23. How did octopuses change and adapt to survive on the bottom?

**Octopuses can camouflage into their surroundings. They can change both their color and their texture instantaneously.**



24. How does the blue-ringed octopus warn predators of its poison?

**The blue-ringed octopus flashes its colorful rings at predators.**

25. As you watch the octopuses, how do they use their arms to move?

**Octopuses tuck most of their arms in and awkwardly walk on two or three of them along the ocean floor.**

26. How have mollusks endured for so long under constantly changing environments?

**The body plan of a mollusk has greatly adapted over time.**

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**Zooology Unit 9**  
*Phylum Mollusca*

Notes, Slides, Activities, & Test

The cover for 'Squid Anatomy Coloring Activity' shows a detailed anatomical diagram of a squid's internal organs. The diagram is labeled with various parts like the mantle, siphon, and digestive system. The 'Science from SCRATCH' logo is in the bottom right corner.

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