

Evolution of Early Predators

Guided Practice: Watch the movie **Molluscs: The Survival Game**

California Standards

3.a Students know both genetic variation and environmental factors are causes of evolution and diversity of organisms.

5.a Students know plants and animals have levels of organization for structure and function.

Middle School NGSS

MS-LS1.A - Structure and Function: In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions.

Student's Name: _____

Concept Development: Evolution is the “change in an animal species over time.” A scientist named Charles Darwin believed what drove evolution is “natural selection.” Natural selection is a process where individuals with traits that are better suited to the environment in which they live, are more likely to survive longer and reproduce. In the video **Molluscs: The Survival Game**, you will see that molluscs have “descended with modification” to create a very diverse group of modern species. The basic parts of the molluscan body plan, the shell, the foot, the radula, the mantle, have all been adapted over millions of years to serve many different functions. The need to obtain food and avoid predation has driven this diversity.

1. The ancestral mollusc was a small creature with a tiny shell. How did the struggle for survival create so many different types of modern molluscs?
2. What is the name of the structure that is a rasping tongue
3. What is the function of the rasping tongue?
4. What is the name of the structure that resembles skin in a mollusk?
5. Name some different activities that molluscs perform with their foot.
6. What is the function of its shell?



7. What is the structure of a cockle's foot?
8. What animal preys on cockles and how does it do it?
9. What adaptations in the nautilus allow it to swim off the bottom of the sea floor?
10. What is the function of the chambers in a nautilus shell?
11. A nautilus is a "buoyant" battle ship able to float. So is the nautilus more or less dense than water?
(underline)
12. Which nautilus structure pushes water out for jet propulsion?
13. What structure has evolved in Squid to give it a more stream-lined body?
14. How did the mollusc body plan respond to the rise of fish?
15. How do squid and octopus swim?
16. What is the function of a squid's three hearts?
17. What behavioral adaptation does an octopus have when it is scared or actively hunting?
18. What is the function of the color change in the blue ring octopus?
19. Write two sentences explaining what you learned about evolution of structure and function by watching the video.