

ARTHROPODA



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ANIMALS IN THE PHYLUM:



The Arthropoda phylum consists of a wide variety of animals that have hard exoskeletons and jointed appendages.

Animals in this phylum consist of spiders, scorpions, centipedes, millipedes (all on land), as well as crabs, crayfish, shrimp, lobsters, and barnacles that are in the water!

Some characteristics are having exoskeletons, segmented bodies, jointed appendages such as mouthparts and appendages, bilateral symmetry, dorsal blood vessels, and ventral nerve cords.

MORE DETAILED INFO

Habitat: Arthropods live on land, freshwater, and some in the sea.

Reproduction: All terrestrial arthropods reproduce by internal fertilization. Gravid Scorpions produce eggs that hatch inside their bodies.

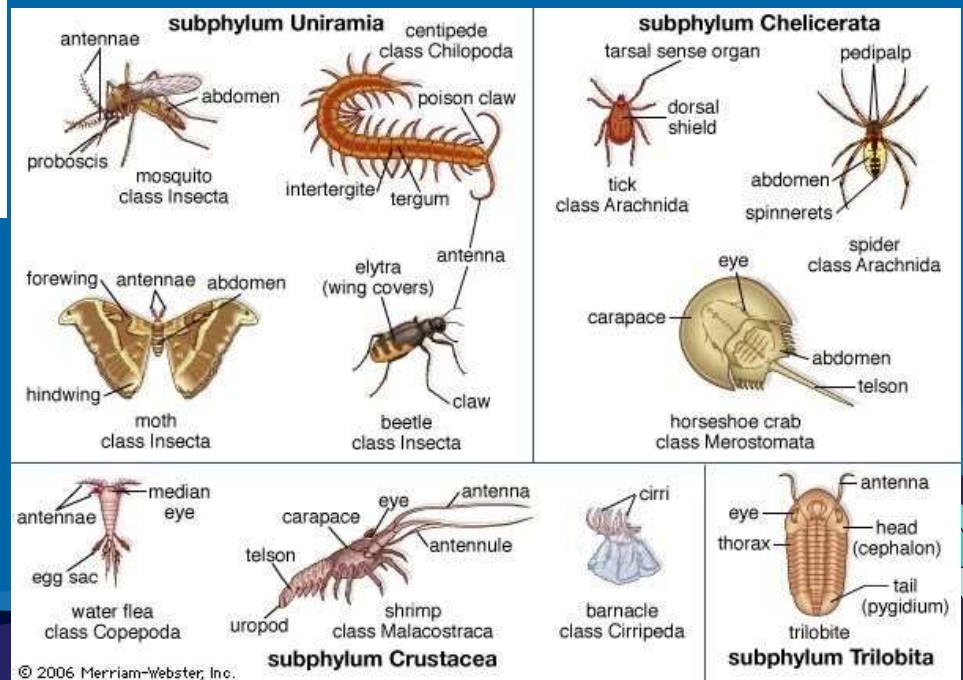
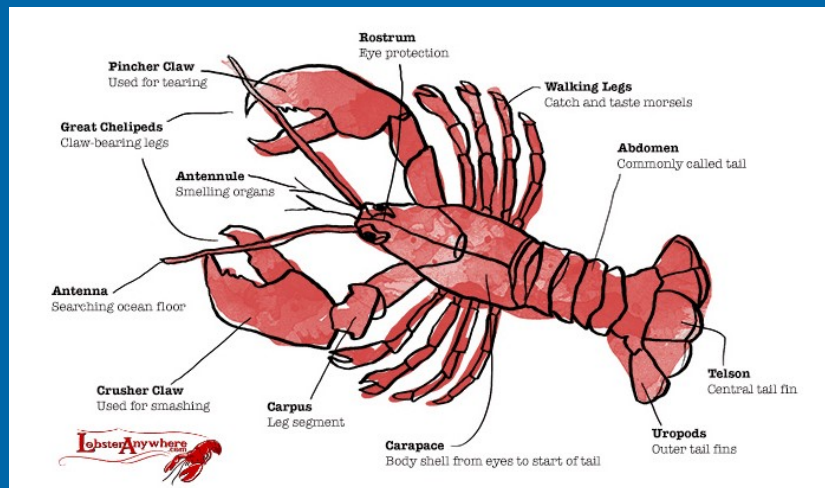
Feeding Strategies: Arthropods can be carnivores, herbivores, detritus feeders, filter feeders, parasites, etc.

Predator/Prey Relationships: The most common arthropod predator are spiders. They are the main predators for all vertebrates except for birds. Birds are mainly consumed by praying mantises. More common predators are centipedes, scorpions, beetles, and crustaceans.

Symmetry/Anatomy: Arthropods are bilaterally symmetrical, both halves are mirror images of one another. Just like cats, dogs, humans, fish, and some other types of animals display bilateral symmetry.



DIAGRAM

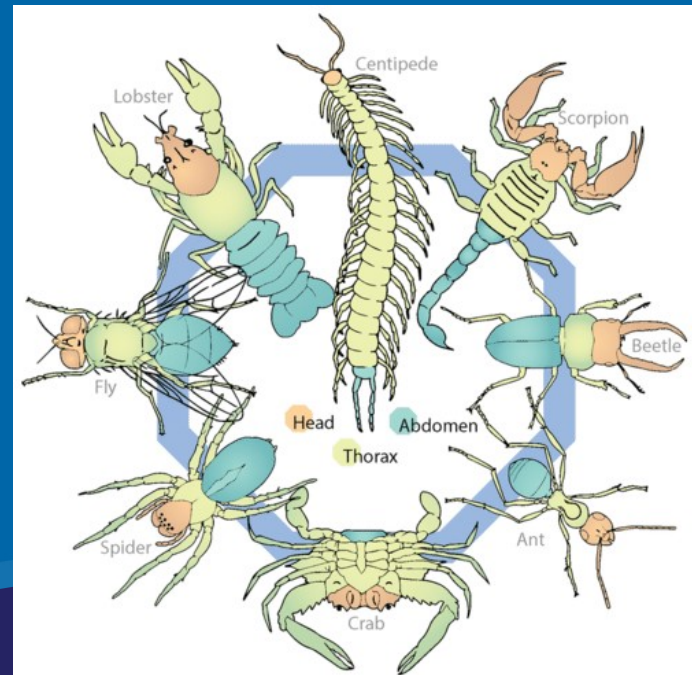


ADAPTATIONS

Some adaptations that make Arthropods successful are:

1. Structural support
2. Impermeable surface for prevention of water loss.
3. A system of levels for muscle attachment for movement/locomotion.

<https://youtu.be/bz4ODmqbnQA>



3 ANIMALS TO HIGHLIGHT

01

HORSESHOE CRABS



Specific Details/Characteristics: Horseshoe crabs can grow up to 2 feet in length and have hard, rounded, brownish-green exoskeletons, a spike-like tail, and five pairs of jointed legs. They have widely spaced eyes that look like bumps on the top of their shells. They have gills that have membranes that look like the leaves of a book.

Special/Unique Info: They have copper-based blue blood which contains a substance called “Limulus Amebocyte Lysate” or LAL.

02

CRABS



Specific Details/Characteristics: Crabs are decapod crustaceans that have very short tails and are covered with thick shells or exoskeletons. They are armed with single pairs of claws and are invertebrates (w/o a backbone). Their exoskeletons protect them from predators and provide support for their bodies.

Special/Unique Info: Crabs can walk in all directions but mostly walk/run sideways. They have 10 legs, and their lifespans are 3-4 years. The Japanese Spider Crab can live as long as 100 years.

03

LOBSTERS



Specific Details/Characteristics: Lobsters have compound eyes on moveable stalks, 2 pairs of long antennae, several pairs of swimming legs (swimmerets) on the elongated abdomen, and flipper-like muscular tails used for swimming, and flexure of the tail and abdomen that propel the animal backward.

Special/Unique Info: They swim both forward and backward. When alarmed, they scoot away in reverse by rapidly curling and uncurling their tails. They are sometimes called bugs. Sometimes they feed on bottom dwellers, such as clams and snails that live in the murk/mud at the bottom of the ocean.

HUMAN IMPACTS

1. Positive Impact: Humans conserve shorelines for horseshoe crabs.
2. Negative Impact: We use mites to prey on unwanted arthropods on farms or in our homes. Arthropods are also used in human-made products.
3. How the Organisms are Biological Resources That Are Used for Humans:
 - They pollinate more than 100 types of food crops
 - They are food sources
 - We are a food source for mosquitoes, ticks, and biting flies



FINAL ANALYSIS

They are an extremely diverse group, and many arthropods molt. They have paired, jointed appendages, segmented bodies, and exoskeletons.



QUIZ

<https://create.kahoot.it/share/arthropods/c68aab00-f54c-428c-98f4-eb1df3ff4a0b>

