

28-1 Introduction to Arthropods



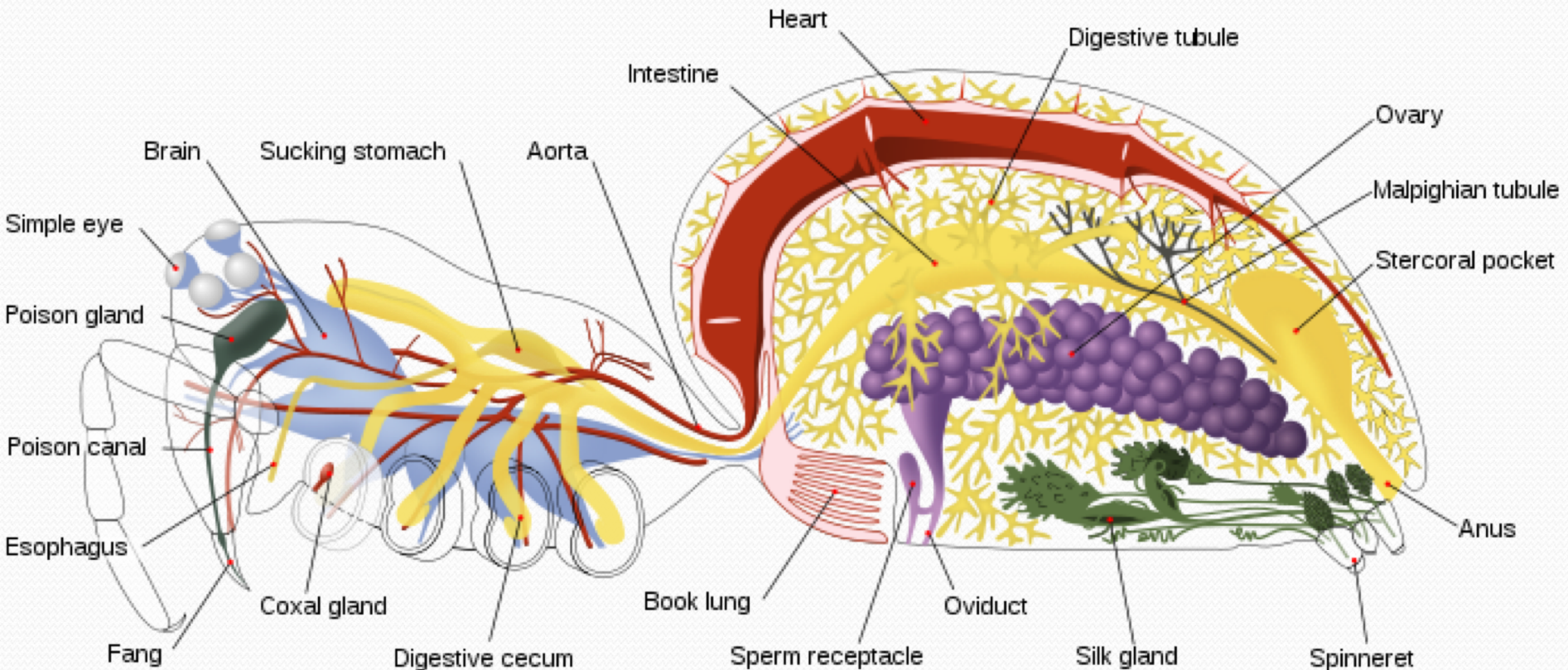
Marine Arthropods
Video

I. Form and Function in Arthropods

- A. All arthropods have 3 key features:
1. *Tough exoskeleton*
 2. *Jointed appendages*
 3. *Segmented body*



- B. Many arthropods have 3 additional features:**
- 1. *Brain in the dorsal part of the head***
 - 2. *Ventral nerve cord***
 - 3. *Open circulatory system with a heart***



C. Arthropod body plan

1. **Exoskeleton:** *A system of external supporting structures that are made of carbohydrate chitin*

a) **Function:**

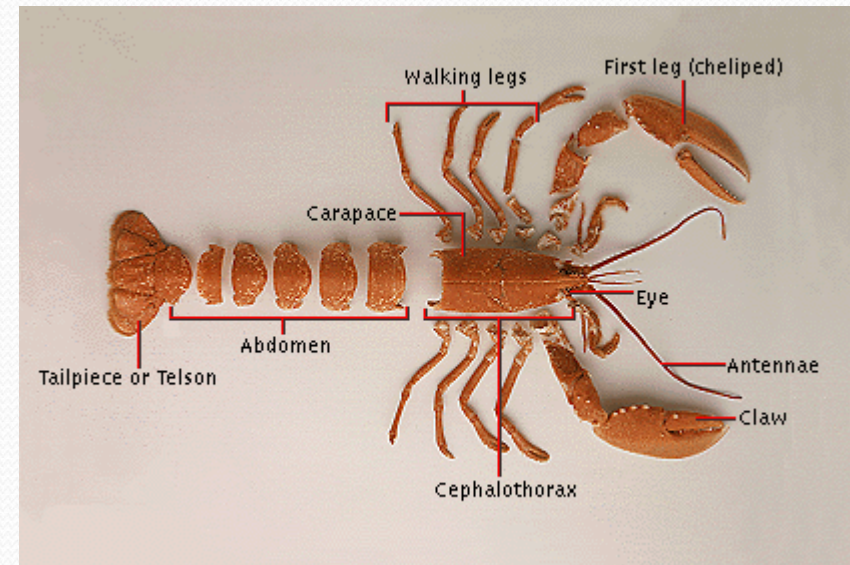
i) *Protection*

ii) *Waterproof (prevents water loss)*

iii) *Move efficiently*

b) **Disadvantage:**

Skeleton cannot grow as the animal grows



D. Feeding

1. List and give an example of each type of feeding method

a) *Herbivores – locusts*



b) *Carnivores - spiders, centipedes*



c) *Parasites - ticks, fleas, lice*



d) *Filter feeders - marine arthropods (barnacles)*



e) *Detritus feeders - crayfish*



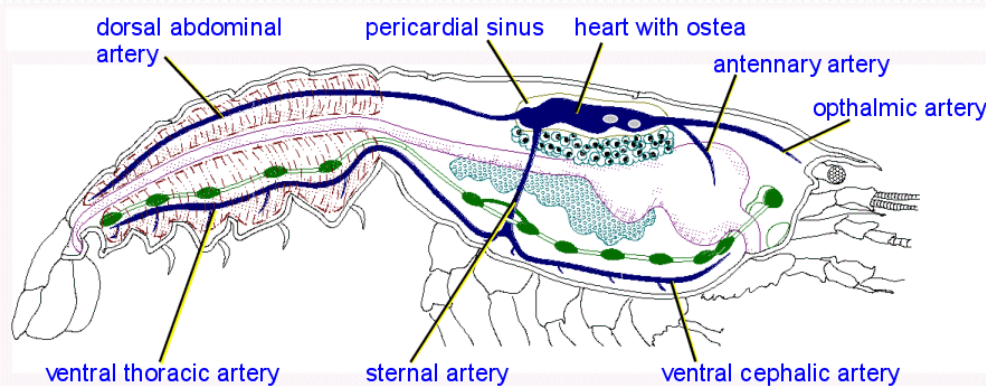
E. Respiration

1. 3 basic types of respiratory structures:

a) *Gills*

b) *Book gills and book lungs*

c) *Tracheal tubes*



E. Internal Transport

1. Have a well-developed heart pumping blood through an open circulatory system.
2. Blood moves out of heart moves through spaces called sinuses.