

Phylum Cnidaria (prhlivce)

# Warm-up

<https://www.youtube.com/watch?v=hUTr0ufJGgo>

# Intro

Terms in **green** are key terms to know

Terms in **blue** are important facts you should remember

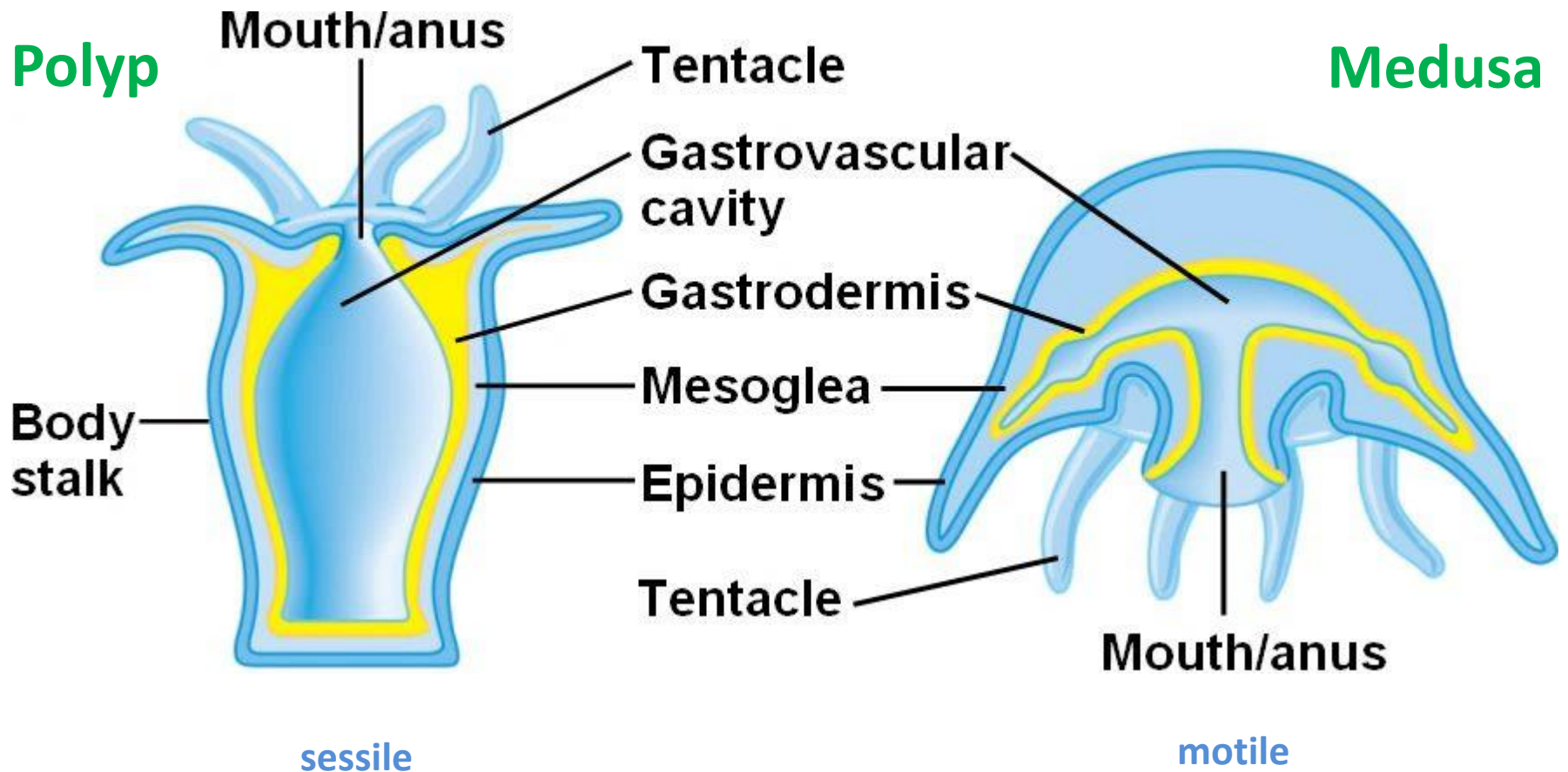
Make notes please!

# General characteristics

- soft body animals
- includes **marine and freshwater organisms**
  - marine: jellyfish, coral, sea anemone or sea fans
  - freshwater: hydra
- **sessile** members as well as **free living (floating)** ones
- **radial symmetry** as adults
- all **carnivorous**
- **single opening (mouth/anus)** surrounded by **tentacles** to capture the food pull it towards the mouth
- have 2 cell layers (epidermis & gastrodermis) with a hollow inside the body called **gastrovascular cavity**

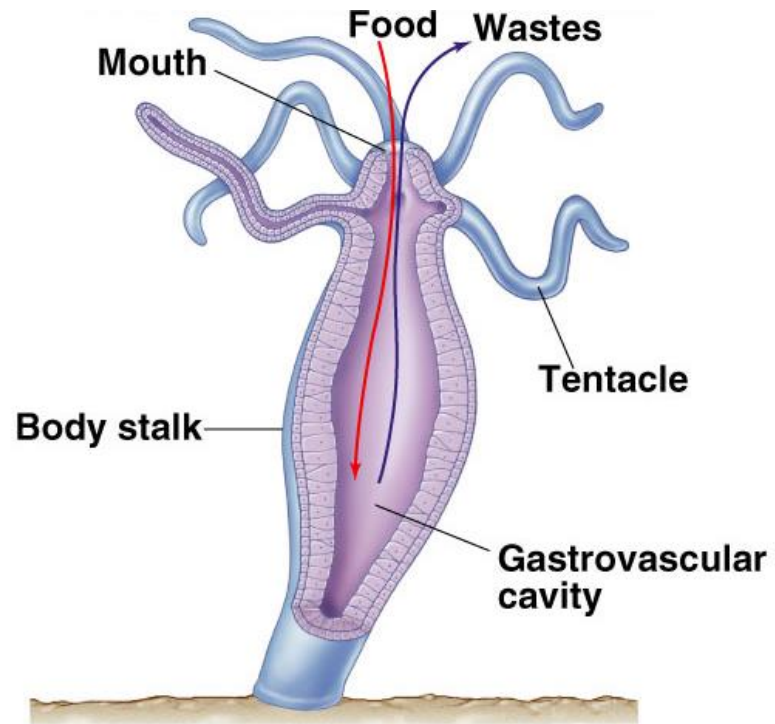
# Structure

2 body forms



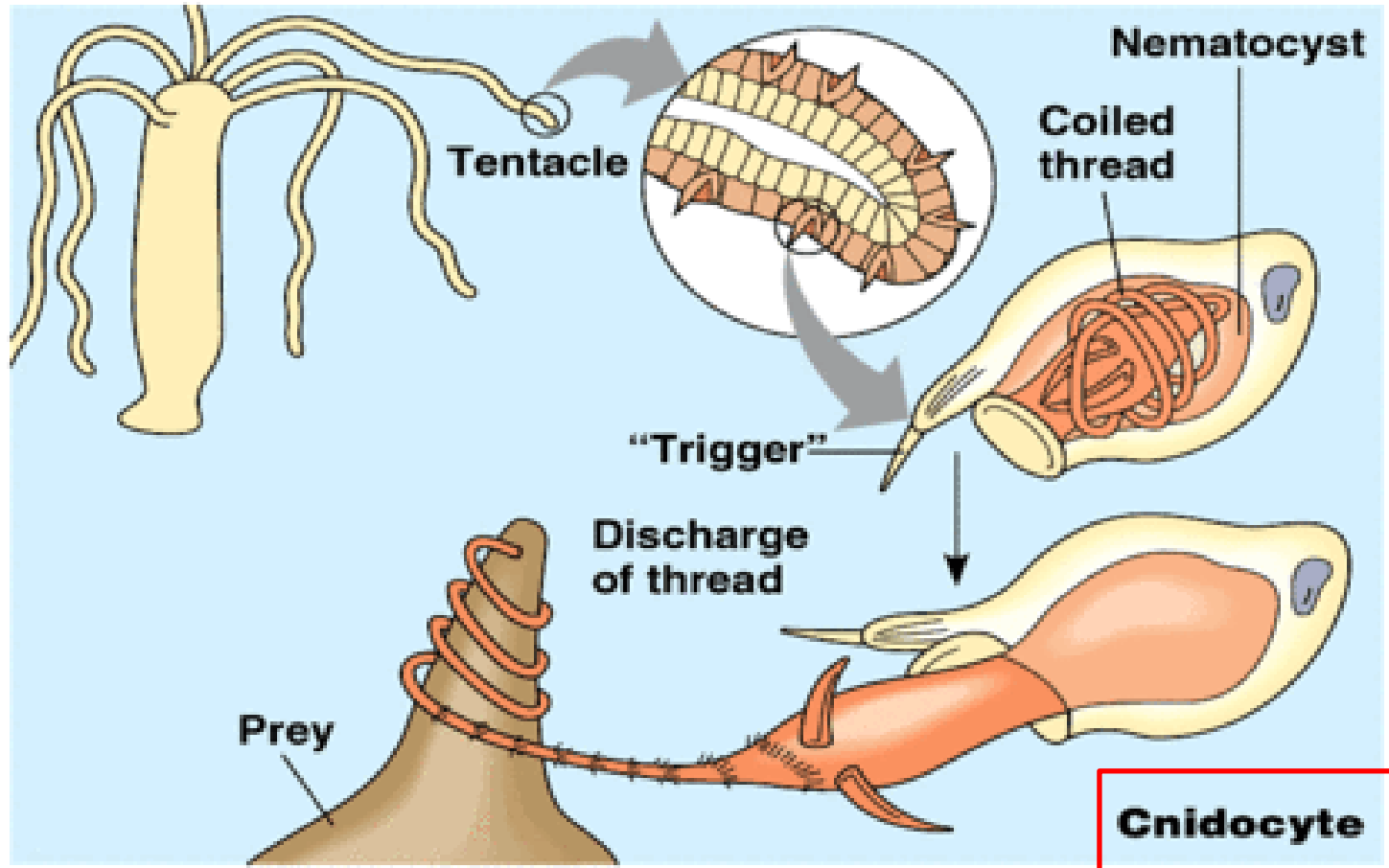
# Function

## Digestive system



- **two-way digestive system** - single opening (mouth/anus) to gastrovascular cavity where food and water enter and waste leaves

<https://www.youtube.com/watch?v=TfaafxnnJIY>



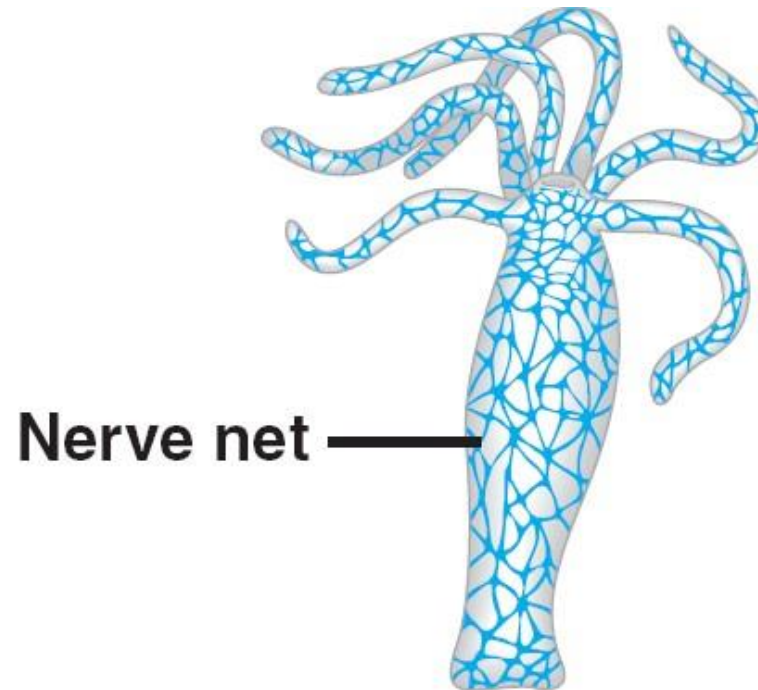
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**Cnidocyte** in tentacles contains **nematocyst** - poisonous darts that spring out when touched and paralyze prey



# Function

## Nervous system



- simple **nerve net** and **sensory cells** to help with movements and hunting



# Function

Respiratory system

Circulatory system

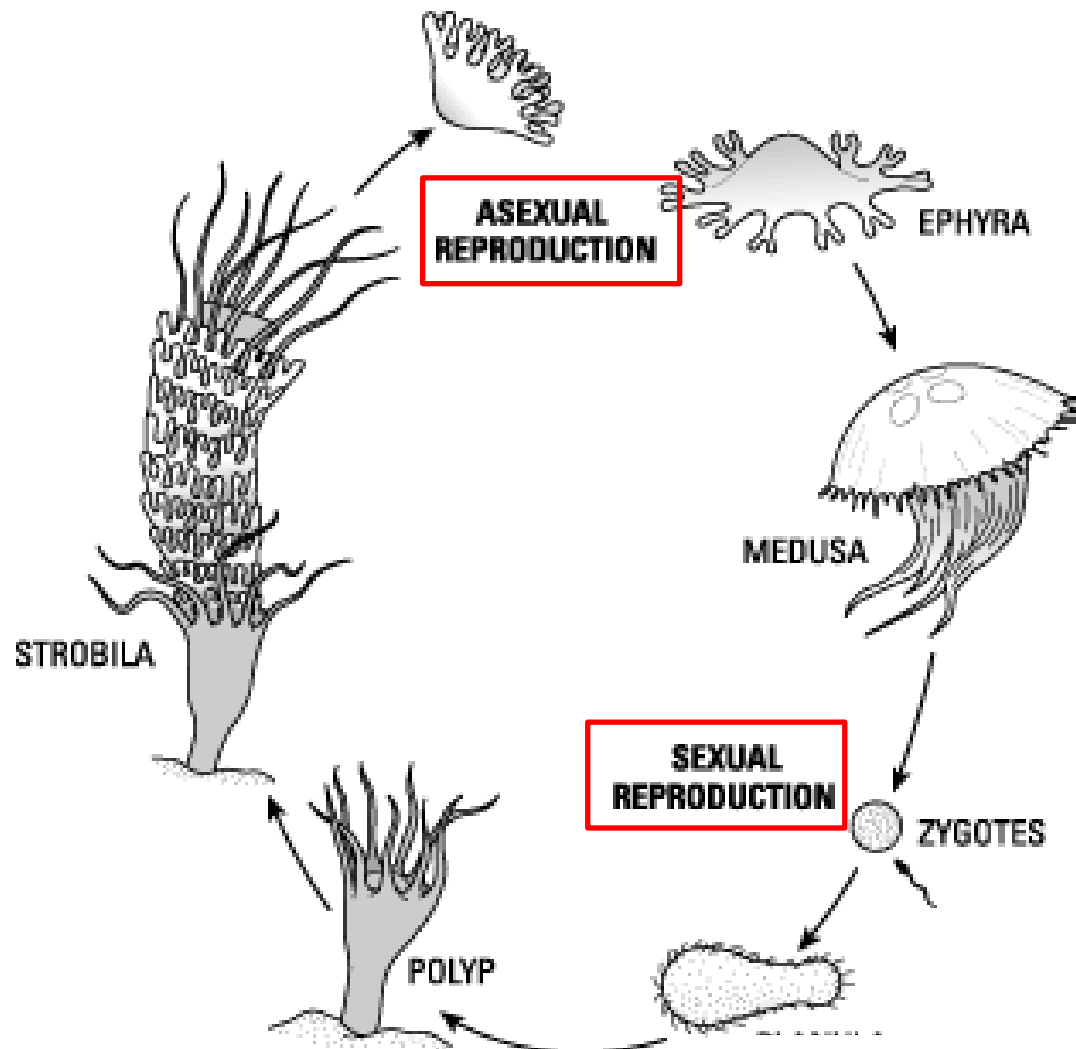
Excretory system

} no organised systems

- simple **difusion** of gasses through epidemis and gastrodermis (O<sub>2</sub> in & CO<sub>2</sub> out) – **direct exchange** with surrounding water

No **muscular system** either

# Reproduction



**PLANULA**

- larval stage of cnidaria  
freely moving in the water

# Ecology

- **symbiosis**  between sea anemones and clown fish
- **coral reef**  are major habitats for many organisms
  - and are  **very sensitive to pollution**



# Diversity

## Cnidaria

Cubozoa

Scyphozoa

Anthozoa

Hydrozoa



Box Jelly



Moon Jelly



Purple Jelly



Anemone



Coral



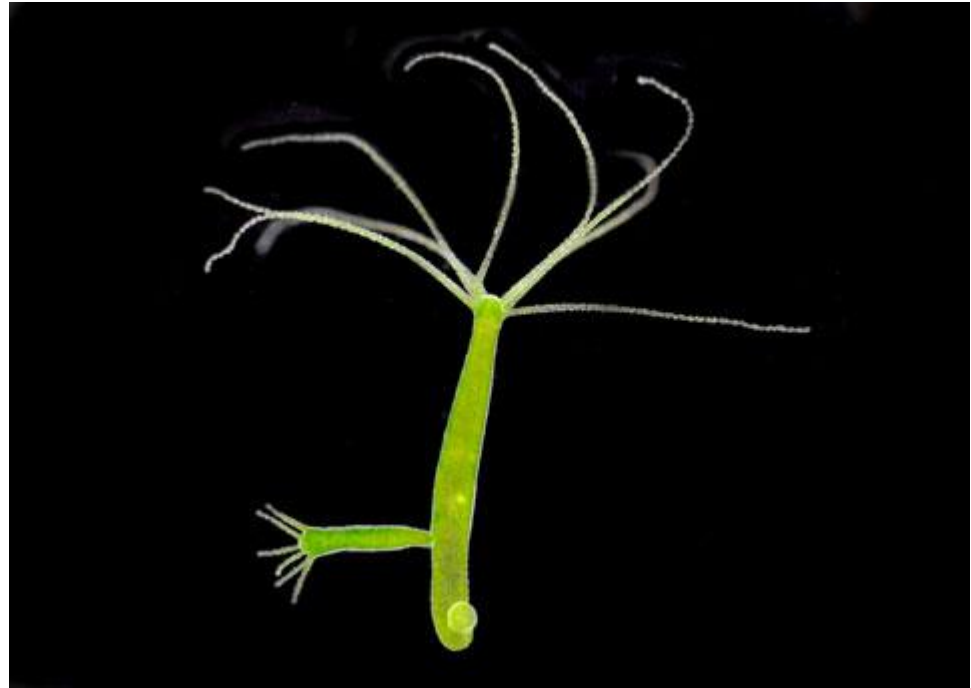
Hydra



Portuguese man of war

# Class Hydrozoa

- mostly **polyps**, short stage of medusa
- **live in colonies**
- often in **symbiosis with photosynthetic organisms**



*Hydra*

# Class Scyphozoa

- **medusa** is dominant stage



*Moon jellyfish*

# Class Cubozoa

- deadly  
poisonous



*Box jellyfish*



# Class Anthozoa

- **polyps only**
- coral create protective „cups“, anemones don't
- some corals are **reef building**



*red coral and anemones*

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