

There are six important function to tissues and organs:

digestion

respiration

circulation

conduction of nerve impulses

support

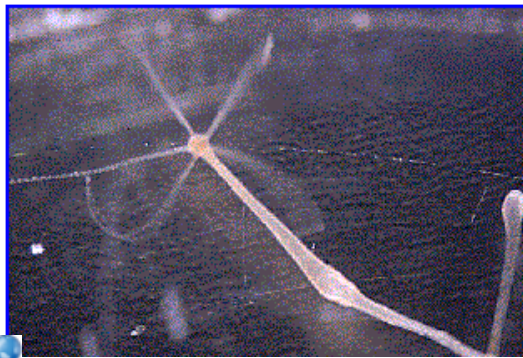
excretion

# Digestion

Single cell organisms digest their food  
inside their cells.

Other animals use digestive enzymes  
outside of their cells.

Gastrovascular cavity-  
a digestive cavity with one opening.



where  
food goes  
in, water  
comes  
out!

<http://www.ucmp.berkeley.edu/cnidaria/hydrozoa.html>

Other animals have a digestive tract with 2 openings (mouth and anus)

This system allows for Specialization.



## Respiration

Respiration is the uptake of Oxygen and the release of carbon dioxide.

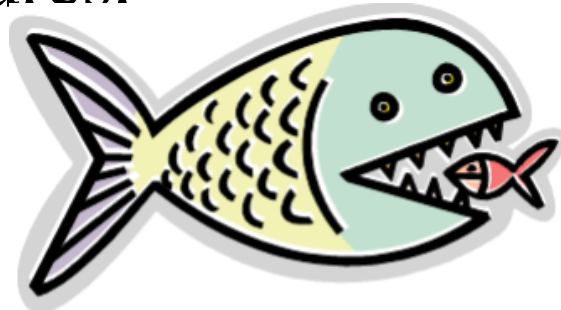
It can only take place across a moist surface.

Simple animals use diffusion



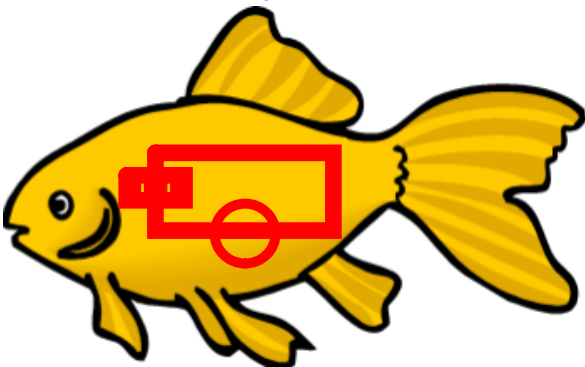
Complex animals have specific respiratory structures.

lungs  
gills



# Circulation

Open circulatory system

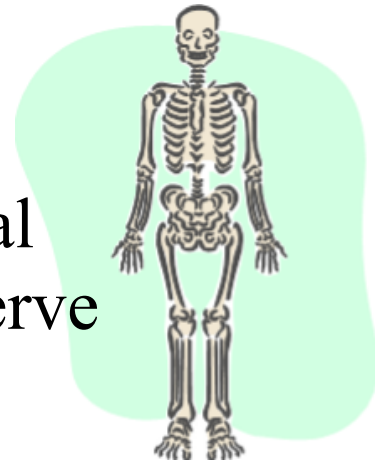


closed circulatory system



## Conduction of nerve impulses

Members of all the major animal phyla except Sponges have nerve cells.



Nerve net- all cells are similar and linked together



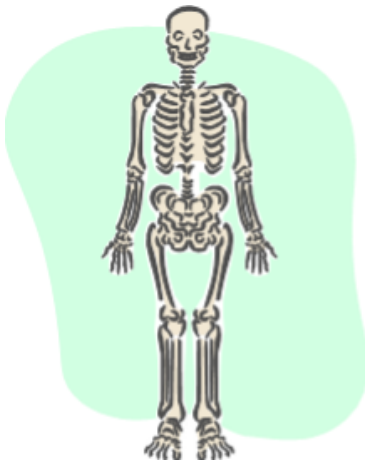
Cephalization- anterior concentration of sensory structures and nerves

## Support

Hydrostatic skeleton- water that is contained under pressure in a closed cavity. jellyfish, water balloon

Exoskeleton-a rigid external skeleton  
clam, insect

Endoskeleton- hard material within the animal  
human, dog



Excretion  
Removal of  
wastes produced  
by cellular  
metabolism