

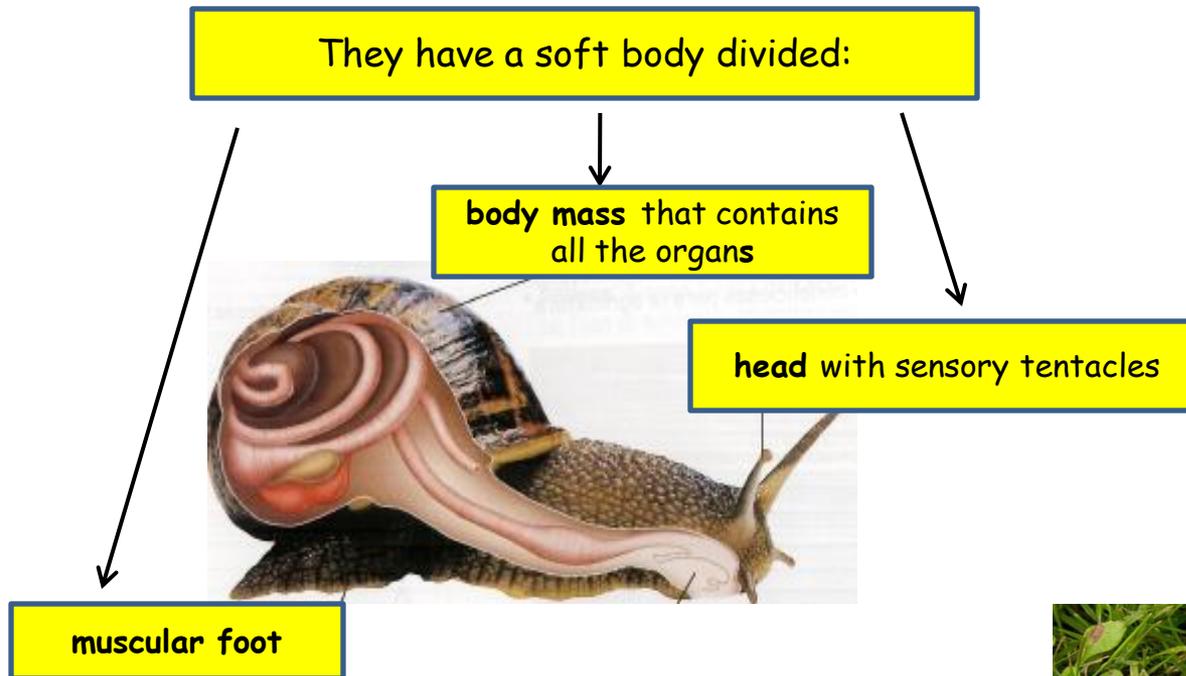


# THE GARDEN SNAIL

*Helix aspersa*

# What are garden snails?

- The snails are **invertebrates** in the group of **molluscs**.
- They are **gastropods**.
- They have bilateral symmetry



Spiral-shaped shell (single valve)



- They are **terrestrials**, they breathe through **lungs**.
- They live in **damp soil**.
- They are **herbivorous**, they feed off plants and small fruits.



- They are hermaphrodite, but they **need other snail to mate**.

They are **oviparous**.

- They expel a sticky substance (mucus) to move

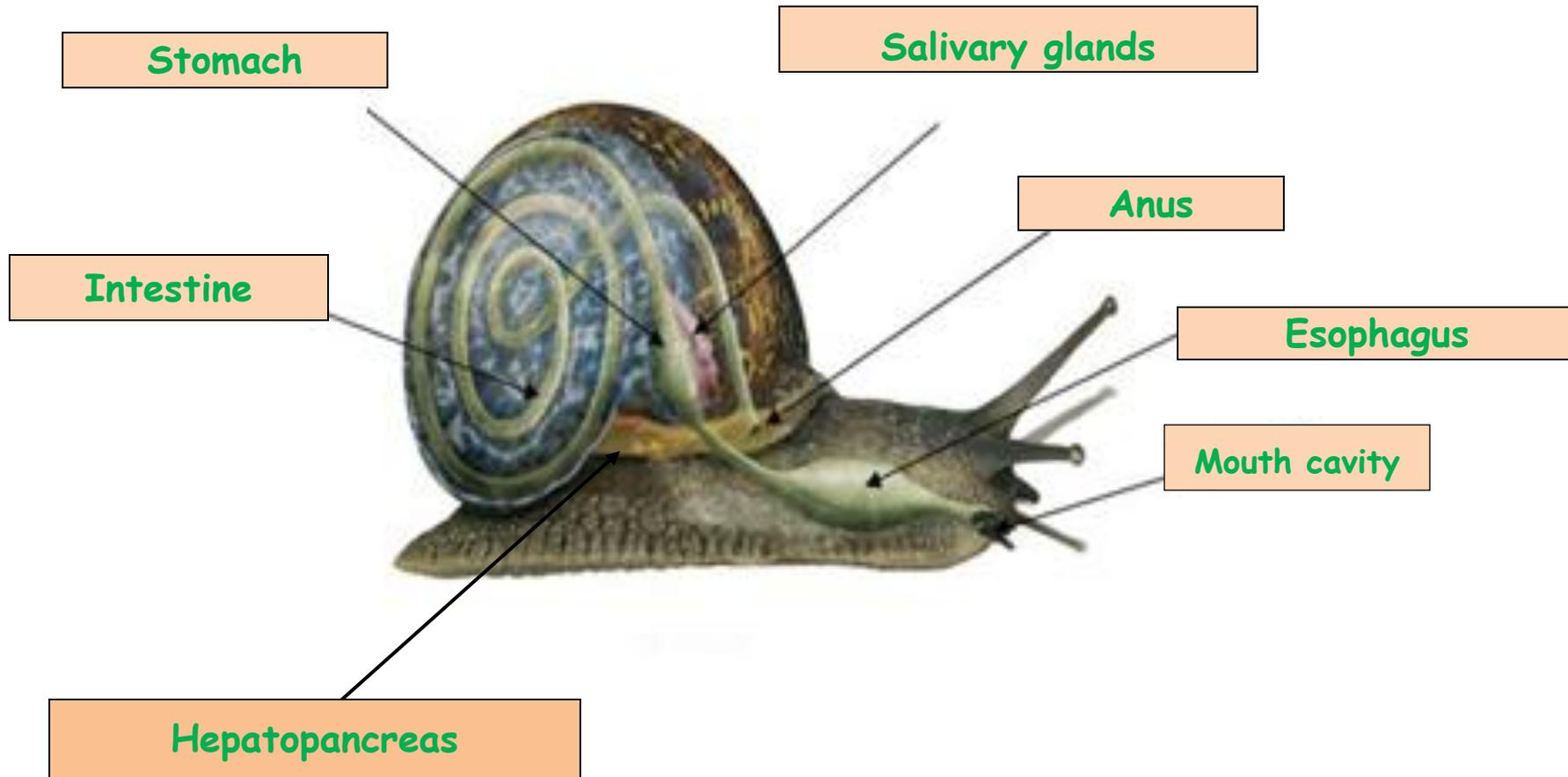




**My digestive  
process is...**

# Parts of the digestive system

They have a **complete digestive tube**



# The process of the digestion

The snail has **extracellular digestion**, takes place inside the digestive tube



**Glands**

**Salivary glands**  
They are around the stomach but they expell the saliva to the mouth cavity.

**Hepatopancreas**  
It produces the enzymes that goes to the stomach

**Mouth cavity with radula**  
The radula is a toothed structure that cuts the food and then it is mixed with saliva

**Esophagus**  
It is where the food is moved from the mouth to the stomach

**Stomach**  
The food receives enzymes

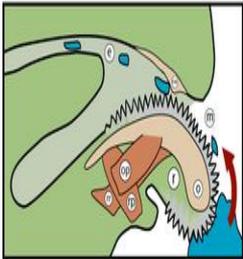
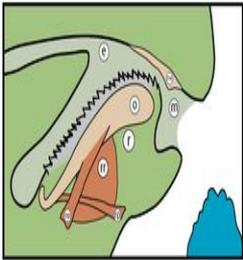
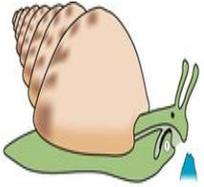
**Intestine**  
It has a spiral shape where the food is digested by the enzymes and the bacteria that are in the digestive tract. The nutriens goes to the blood and food remains are compressed and the feaces are formed.



**Anus**  
The feaces are expelled

# A machine eating

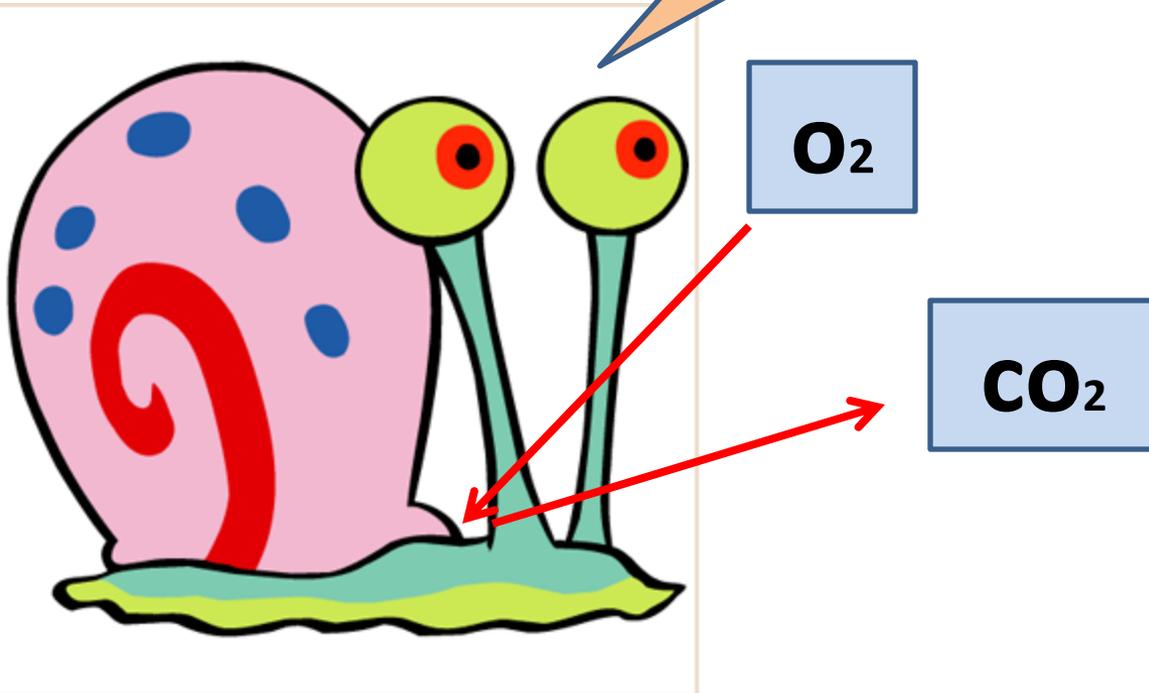
## The radula



- It is a specialised toothed structure found in the mouth, which acts like teeth.
- It is like a escalator that scratches food.

<https://www.youtube.com/watch?v=OY05O3a2Lcs>

My respiratory system is...



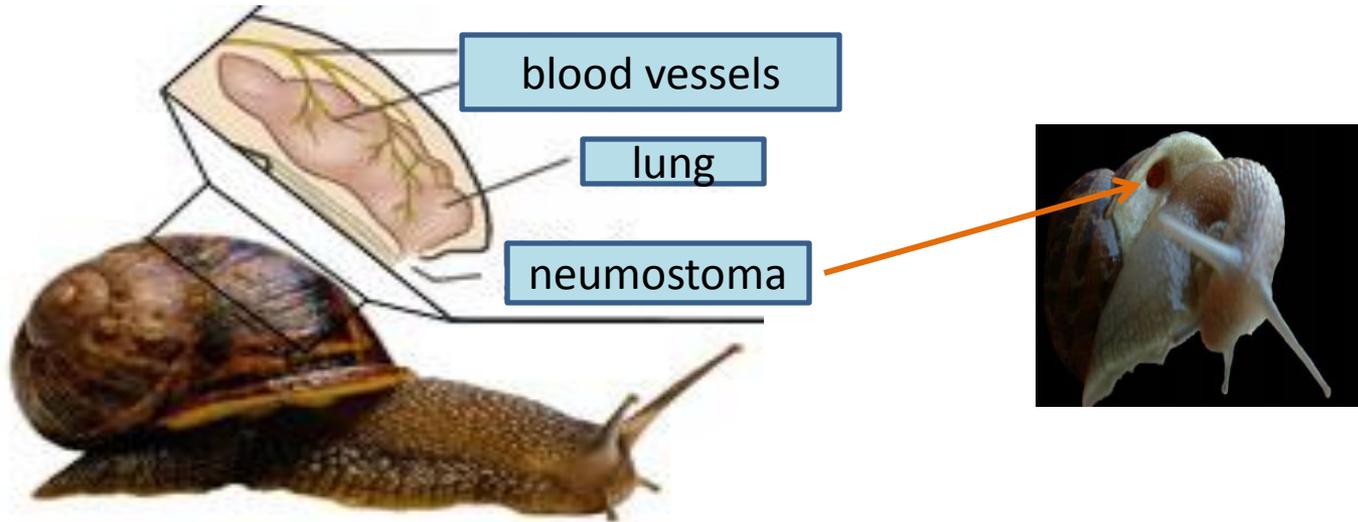


Garden snails have a **pulmonar respiration**, because they breathe through lungs.

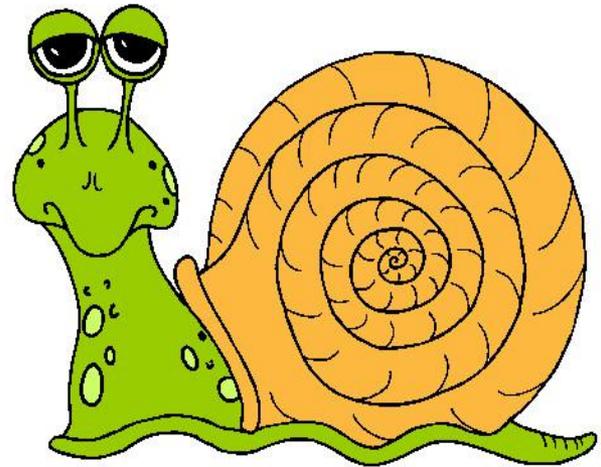
The respiratory speed depends of the weather conditions. They have **3 or 4 aspirations per minute**.

# RESPIRATORY SYSTEM

- **LUNG:** They have a **pallial cavity**, hole that is between the mantle and the body which is very vascularized, so acts as lung.
- **RESPIRATORY PORE:** It is called **Neumostoma**. It is the opening where air enters and leaves. It is continuously opening and closing to let the entrance or doesn't allow the exit of the air.



**My circulatory system is...**

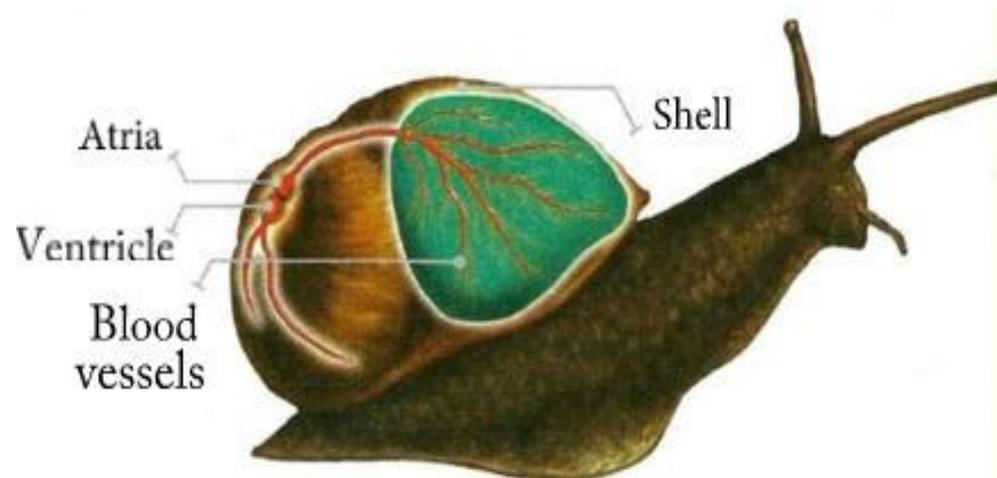
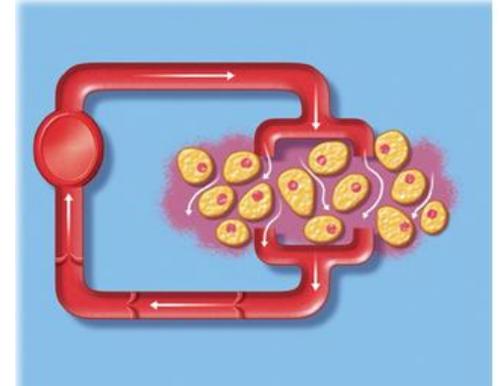


# CIRCULATORY SYSTEM

- They have an **open circulatory system**, it means that the blood is pumped by the heart to the body cavity directly to the internal organs through the blood vessels.

- Its heart is divided into **one atria and one ventricle**.

- Its **blood is blue** because they have a respiratory pigment, hemocyanin, that it's blue.



## The process...

First, the heart pumps the blood rich in  $O_2$  that comes from the lung. It goes through blood vessels but, it's different from the closed circulatory system because the blood can leave it. The blood vessels carry the blood to all the organs and tissues. Then in the cells, there is a gas exchange (cellular respiration) and now the blood rich in  $CO_2$  goes to the heart again that carries it to the lungs where it is exchanged again.

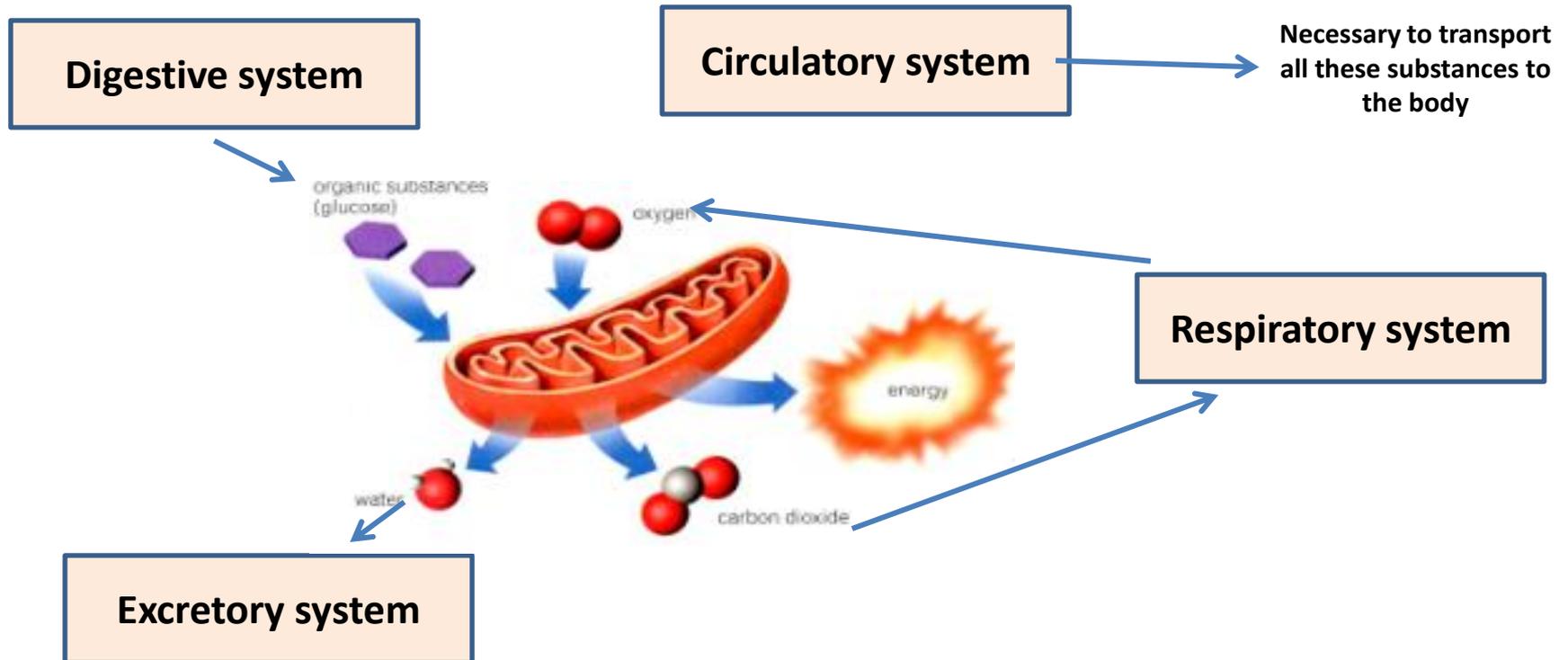
# BLOOD CURIOSITY!

The great secret of the snails' blood is that it **has the capacity to make it antifreezing**, so they can live in very cold places without freezing.

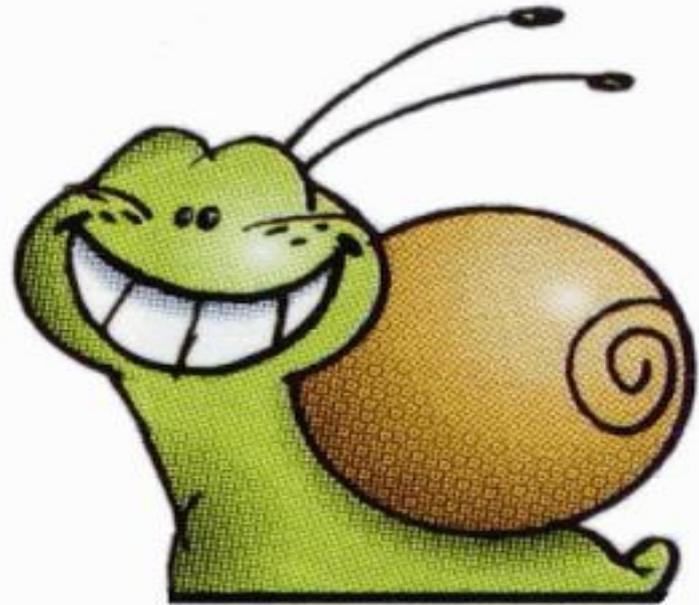


# Cellular respiration

- **The cellular respiration** is a process that occurs in **mitochondria**, and that using nutrients and oxygen produces waste products and energy, for that occurs is necessary the coordinated activity of four different systems.



My excretion  
process is...



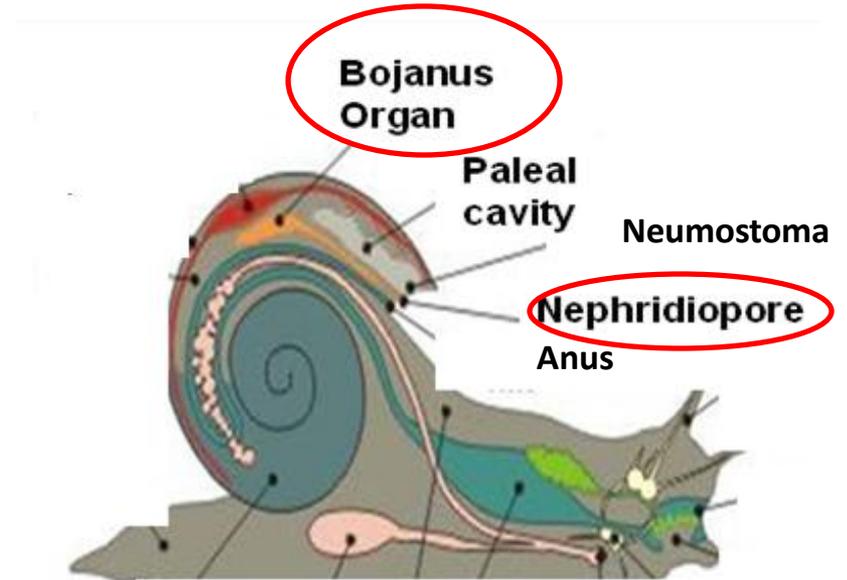
# EXCRETORY SYSTEM

## - Liver or bojanus Organ

Excretory organ that has the snail for the elimination of urine. It is situated between the heart and the rectum.

## -Nephridiopore

It is an **excretory pore** where the urine is expelled to the outside. It is in the mantle cavity, next to the anus and the neumostoma.





**We hope that you like it and yo have learnt many things of me.**