

# Rat dissection

## Check list and Questions

Notice the **external** features first:

Eyes

- How do they differ from us?
- Where are they facing and why?

Amount of hair

- Why might they have a lot of hair?

Whiskers

- what is their purpose?

Teeth

- How do their teeth differ from ours?
- What is their diet and why might the shape of their teeth help?

Claws

Tail

Genitalia

- What is the relative size of their genitals to their body?

Nipples

- How many nipples to the female rats have?
- How many babies can they have during a single pregnancy?

# Internal features

## Abdominal Cavity

While dissecting the internal organism of the rat, notice the amount of fat on particular organs, also notice the amount of connective tissue located throughout the rat.

○ Liver

- What is the function of the liver?
- How large is it compared to the stomach of the rat?

○ Diaphragm

- Where is it located?
- What does it look like?

○ Stomach

○ Spleen

- What is the function of the spleen

○ Small intestine

- Notice the amount of fat
- Locate the mesentery, what is its purpose?
- Does the mesentery have a lot of fat and blood vessels or not much?
- Where is the stomach in relation to the small intestine?

○ Pancreases

- Describe the structure of the pancreas and its function

○ Ceacum

- What is its function?
- Where is it located?

- What system does it belong to?
- Do humans have one?

- Large intestine
  - Where does it connect to and from?
  - What is inside the large intestine?

○ Anus

○ Rectum

- Uterus (if female)
  - What shape does it make?
  - What is the function of the uterus?

### Thoracic cavity

○ Rib cage

- What is its function?

○ Heart

- Where is the heart located ?
- Why is it so close to the lungs?

○ Lungs

- Explain the consistency of the lungs

○ Trachea

- Where does the trachea connect to?

○ Kidneys

- If you can create an incision in the trachea, use a pipette to inflate the lungs
- What is their function?

- How many kidneys are there?
- Can humans live with only one kidney?



○ Adrenal glands

- Where are they located?
- What do they release?



○ Brain

- What do you notice about the brain?

## Questions

List the 4 different organ systems that you can see in the rat

What is the largest organ in the rat's anatomy? Why?

Why is the gallbladder absent in rats?

What organs make up the digestive track?

How long is the small intestine?

How many chambers does the heart have?

Are all the chambers in the heart the same thickness? Explain why.

Compare the rat's heart structure to that of a human heart. Outline the similarities and differences, if any.

Describe 3 ways in which the organs of the circulatory system and respiratory system are protected.

On the next page is a diagram of a rat. On it draw a neatly label the internal organs.

Organs to include are: Trachea, Lungs, Heart, liver, stomach, kidneys, large and small intestines, pancreas and spleen.

Marks will be deducted for messy and inaccurate work.

