



# Frog Dissection Student Answer Sheet

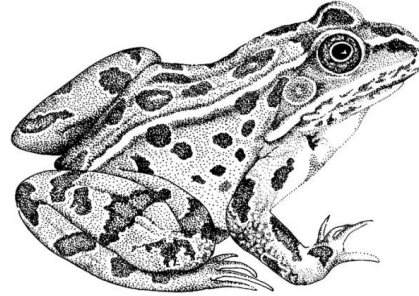
Name: \_\_\_\_\_

## Orientation

Locate the following orientations:

- **Dorsal:** The back which is usually uppermost
- **Ventral:** The lower surface
- **Anterior (Cranial):** the forward part
- **Posterior (Caudal):** the hind part
- **Medial:** the central longitudinal axis of the body
- **Lateral:** the longitudinal line along the sides of the body

Using the picture below, label the anatomical regions. (6 CM)



## Part I - External Anatomy

Get a frog from your teacher.

### Observe the Size

Use a ruler to measure your frog, measure from the anterior tip (tip of the head) to the posterior tip (end of the frog's backbone --do not include the legs in your measurement). Compare the length of your frog to other frogs and find an average. (2 TI)

Your Frog (cm)	Frog 2	Frog 3	Frog 4	Frog 5	Average Length

To determine the frog's sex, look at the hand digits, or fingers, on its forelegs. A male frog usually has thick pads on its "thumbs," which is one external difference between the sexes, as shown in the diagram below. Male frogs are also usually smaller than female frogs. Observe several frogs to see the difference between males and females.

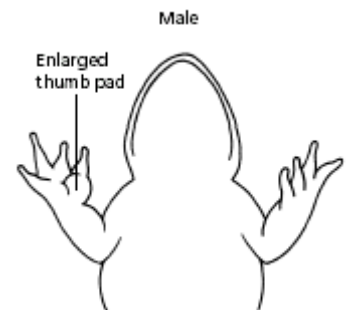
### Observe the appendages (5 TI)

Examine the hind legs.

- ★ How many toes are present? \_\_\_\_\_. Are the toes webbed? \_\_\_\_\_

Examine the forelegs.

- ★ How many toes are present? \_\_\_\_\_. Are the toes webbed? \_\_\_\_\_
- ★ Do you **think** your frog is male or female? \_\_\_\_\_

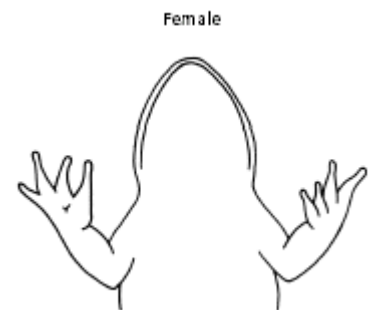


### Observe the Skin (1 TI)

Feel the frog's skin. Is it scaly or is it slimy? \_\_\_\_\_

### Observe the Eyes (2 TI)

- ★ What color is the nictitating membrane? \_\_\_\_\_
- ★ What color is the eyeball? \_\_\_\_\_



### Observe the "Ears" (2 TI)

- ★ What structure in humans works like the frog's **tympanic membrane**? \_\_\_\_\_
- ★ Diameter of tympanic membrane \_\_\_\_\_cm

## Part II – Internal Anatomy

### Observe the Anatomy of the Frog's Mouth (4 TI)

Turn the frog on its back and pin down the legs. Cut the hinges of the mouth and open it wide.

Where does the tongue attach to the mouth?

What keeps food and water from entering the frog's lungs?

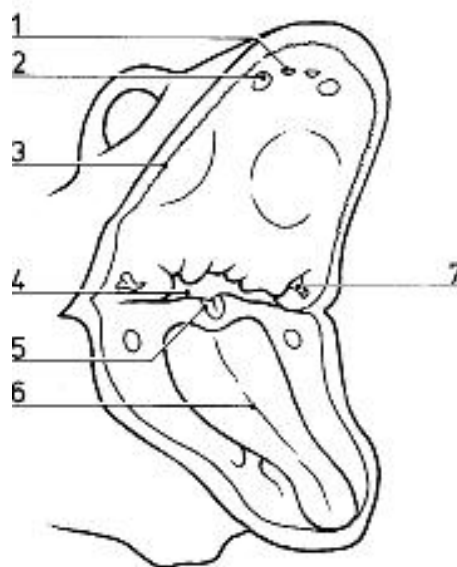
What structure leads to the frog's stomach?

What structure does the Eustachian Tube lead to?

Label each of the structures in the following diagram and complete the following table

Structure	Function	Teacher Check
1. Nictitating Membrane		
2. Tympanic Membrane		
3. Eustachian Tube		
4. Vomerine Teeth		
5. Internal Nares		
6. Tongue		
7. Glottis		

Identify the following mouth structures. (7 CM)



## Observe the Body Cavity

Look for the opening to the frog's cloaca, located between the hind legs. Use forceps to lift the skin and use scissors to cut along the center of the body from the cloaca to the lip. Turn back the skin, cut toward the side at each leg, and pin the skin flat. The diagram above shows how to make these cuts

Lift and cut through the muscles and breast bone to open up the body cavity. If your frog is a female, the abdominal cavity may be filled with dark-colored eggs. If so, remove the eggs on one side so you can see the organs underlying them.

Locate each of the structures below and complete the chart.

Structure	Function	Teacher Check
Heart (Ventricle and Auricles)		
Lungs		
Liver		
Gall Bladder		
Fat Bodies		
Esophagus		
Stomach		
Small Intestine		
Mesentery		
Large Intestine		
Spleen		
Kidney		
Pancreas		
Testes		
Ovaries		
Eggs		

**STOP!** If you have not located each of the organs above, do not continue on to the next sections! (4 TI)

**Lung Inflation:** Insert the tip of a pipette into the glottis in the mouth. When you squeeze the pipette you should see the lungs inflate if you have not damaged the lung. Were you able to inflate the lungs? \_\_\_\_\_

**Removal of the Stomach:** Cut the stomach out of the frog and open it up. You may find what remains of the frog's last meal in there. Look at the texture of the stomach on the inside. What did you find in the stomach?

**Measuring the Small intestine:** Remove the small intestine from the body cavity and carefully separate the mesentery. Stretch the small intestine out and measure it. Now measure your frog. Record the measurements below in centimeters.

Frog length: \_\_\_\_\_ cm

Intestine length \_\_\_\_\_ cm