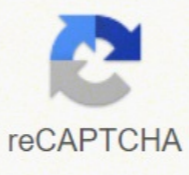




I'm not robot



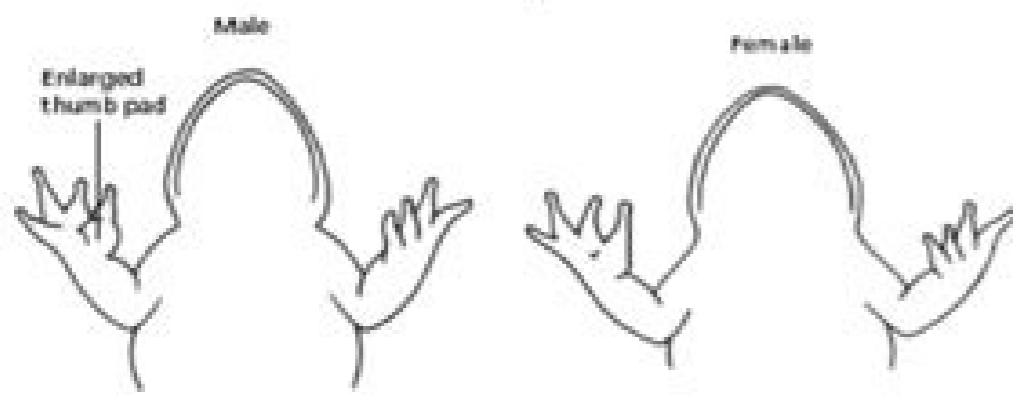
Open

Frog Dissection Lab

Name: _____
Date: _____

Procedure:

1. Put on safety goggles, gloves, and a lab apron.
2. Place a frog on a dissection tray. 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.

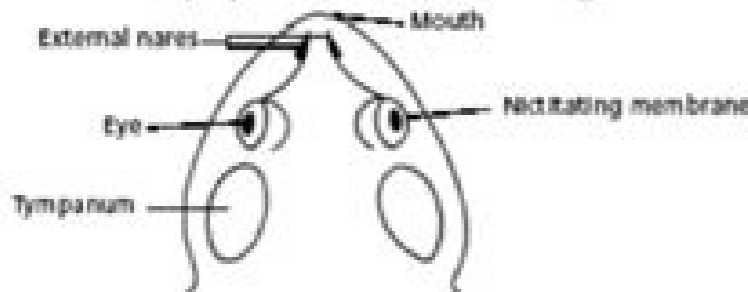


Questions

1. Examine the hind legs.
How many toes are present on each foot? _____
Are the toes webbed? _____
2. Examine the forelegs.
How many toes are present? _____
Are the toes webbed? _____
3. Use a ruler to measure your frog, measure from the tip of the head to the end of the frog's backbone (do not include the legs in your measurement).

Procedures:

3. Use the diagram below to locate and identify the external features of the head. Find the mouth, external nares, tympani, eyes, and nictitating membranes.



4. Locate the frog's eyes, the nictitating membrane is a clear membrane that attached to the bottom of the eye. Use tweezers to carefully remove the nictitating membrane. You may also remove the eyeball.
What color is the nictitating membrane? _____
What color is the eyeball? _____

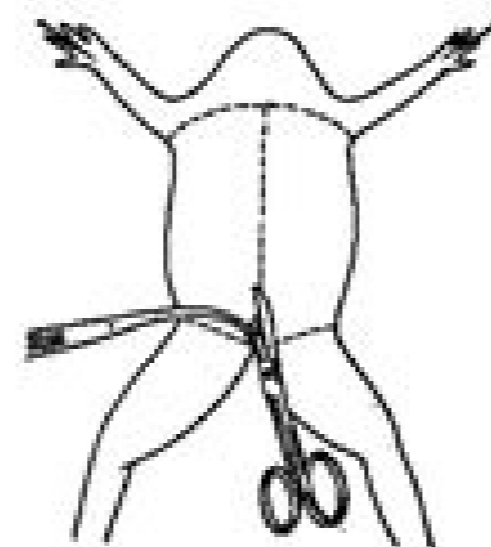
FROG DISSECTION



.....NAME

Dissection Instructions

1. Place the frog in the dissecting pan ventral side up.
2. Use scissors to lift the abdominal muscles away from the body cavity. Cut along the midline of the body from the pelvic to the pectoral girdle.
3. Make transverse (horizontal) cuts near the arms and legs.
4. Lift the flaps of the body wall and pin back.



*If your specimen is a female, the body may be filled with eggs and an enlarged ovary. You may need to remove these eggs to view the organs.

Locate each of the organs below. **Check the box** to indicate that you found the organs.

- Fat Bodies** --Spaghetti shaped structures that have a bright orange or yellow color, if you have a particularly fat frog, these fat bodies may need to be removed to see the other structures. Usually they are located just on the inside of the abdominal wall.
- Peritoneum** A spider web like membrane that covers many of the organs, you may have to carefully pick it off to get a clear view
- Liver**--The largest structure of the the body cavity. This brown colored organ is composed of three parts, or lobes. The **right lobe**, the **left anterior lobe**, and the **left posterior lobe**. The liver is not primarily an organ of digestion, it does secrete a digestive juice called bile. Bile is needed for the proper digestion of fats.
- Heart** - at the top of the liver, the heart is a triangular structure. The **left and right atrium** can be found at the top of the heart. A single **ventricle** located at the bottom of the heart. The large vessel extending out from the heart is the **conus arteriosis**.
- Lungs** - Locate the lungs by looking underneath and behind the heart and liver. They are two spongy organs.
- Gall bladder**--Lift the lobes of the liver, there will be a small green sac under the liver. This is the gall bladder, which stores bile. (hint: it kind of looks like a bogie)
- Stomach**--Curving from underneath the liver is the stomach. The stomach is the first major site of chemical digestion. Frogs swallow their meals whole. Follow the stomach to where it turns into the small intestine. The **pyloric sphincter valve** regulates the exit of digested food from the stomach to the small intestine.

INTERNAL MOUTH STRUCTURES:

6. Place the frog on its dorsal side in the dissecting pan and cut the corners of the mouth.
CAUTION: Be careful when using scissors.

7. **Locate the TONGUE. Is it attached to the front or the back of the mouth?**

Front
In a live frog, the tongue is sticky and is used to catch insects. Pull on the tongue. Notice that it is still flexible.

8. Feel the inside of the upper jaw (**maxilla**) and the lower jaw (**mandible**). The teeth you feel are the **MAXILLARY TEETH**. Locate the **2 VOMERINE TEETH** on the upper jaw. They are located toward the front of the upper jaw and between the **internal nares** (internal nostril openings).

What are the maxillary teeth and vomerine teeth used for?

To hold onto prey

9. Push carefully on the eyes observe how they fill a space in the mouth. The eyes help hold the prey as a frog is swallowing it.

10. Locate a vertical opening toward the back of the mouth. This is the **GLOTTIS**. It is the opening to the trachea (windpipe) that leads to the lungs.

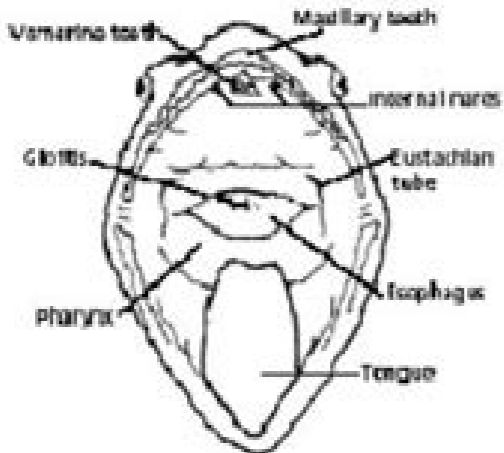
11. Find the **GULLET** (throat) it leads to the opening of the esophagus. On both sides of the gullet, near the cut jaws are opening to the **EUSTACHIAN TUBES**. Use your probe.

Where does the eustachian tube lead?

To the tympanic membrane

What is its purpose?

Equalize pressure of the inner ear



Cat Dissection PreLab

Name _____ Per _____

Review the websites in this activity as needed during the course of the dissection to review. Videos are available from any in school lab or by accessing the links from Edline.

DURING THIS PRE-LAB YOU ARE NOT TO BE ON ANY OTHER WEBSITE EXCEPT THOSE DIRECTED TO FOR THE PURPOSE OF THIS LAB. IF YOU ARE CAUGHT OFF-TASK YOU WILL GET A ZERO ON THIS ACTIVITY ON THE FIRST OFFENSE WITHOUT WARNING.

- Go to this online cat dissection. <http://go.bj.gsu.edu/cat/>. (HINT: If you are accessing this document on the computer you can hit ctrl+click on the link instead of typing it in)
- Click on EACH of the links at the website in #1 as a preview for what we are going to see when we dissect our cats. Look CAREFULLY at each of the pictures and review the organs/structures that we have covered during the year. **SPECIAL NOTE**- we will NOT be doing the sagittal section of the head as shown in one of the pictures. Your cat's head will remain intact! You may access this website from home for review.
- Control-Click on this link [Video link](#). Plug in your headphones and watch these videos. It is important to watch EACH VIDEO even if there isn't anything I am asking you to write down. This link is only accessible from a school computer but videos can be accessed through Edline.

Pectoral muscles (6 minute video. Just watch first 3 minutes) Watch carefully as she quizzes students on the muscles. I will give oral quizzes like this throughout the cat dissection experience.

Cat_digestive_System (3 min video) LIST at least TEN organs/structures you will see as presented in the video. Push pause if you need to. _____

Cat_Veins_and_Arteries_1 (5 min video) List TEN major veins and arteries you will see as presented in the video. Push pause if you need to. _____

What is the major difference between cat/human mentioned in the video? _____

Name _____ Section _____

Frog Dissection Lab

Why dissect a frog?

Frogs and humans are vertebrates with similar organ systems. Although all of the internal organs are not the same in frogs and humans, it is helpful to learn about anatomy through dissection. We will be looking at each body system, and exploring individual organs of the frog. We will make comparisons of the frog's anatomy to our own.

The companies that provide the frogs make sure that the frogs are not an endangered species. They supply companies also use safe solutions to preserve the specimens. We still need to use gloves and wash our hands while working with preserved specimens.

In order to best use this opportunity to learn and show respect for the frog, we must follow all directions that are given to us and follow all safety procedures.

Dissection Safety Rules

- Conduct yourself in a responsible and safe manner at all times during the dissection.
- Wear safety glasses while you are dissecting even if you wear glasses or contact lenses. Contact lenses can hold chemicals in the eyes increasing the potential damage in the event of an accidental splashing of chemicals into the eyes.
- The frog has been preserved with a sublethal dose, however, if you need to take a break in the lab or are beginning to feel unwell, notify the teacher.
- Wear gloves and avoid contact with preservative chemicals. Rinse the frog completely before dissection.
- Use the proper procedures described in the tutorial to pin the frog to the dissecting pan. Do not dissect the frog while holding it.
- Always keep dissection tools in the dissection pan, when working and when moving the pan.
- Always cut away from your body and away from others.
- Never remove frogs or frog parts from the classroom. Properly dispose of dissected materials.
- Save the frog in the labeled Ziploc bag at the end of each dissection period.
- Clear up the work area and return all equipment to the proper place when the dissection is completed.
- Wash off the plastic gloves with soap water and place them in the designated area of the classroom.
- Thoroughly wash your hands for a minimum of 20 seconds before returning to your seat.

