**FROG DISSECTION PRE-LAB**

1. Which body system protects our organs, gives the body structure, and allows us to move?

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1. Which body systems delivers blood all over our body? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Arteries are blood vessels that carry blood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the heart.
3. Which body systems breaks down food into nutrients? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Which body system tells the skeletal system to move? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Which body system brings air into the lungs?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. You go out for a jog in the spring to shed some winter pounds. Which body systems are working? Explain how.

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**Frog Dissection Pre-Lab**

Directions: Read the following information about dissections and about frogs. Then, answer the pre-lab questions.

**Important Dissection Vocabulary:**

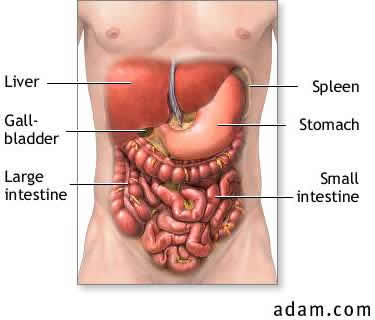
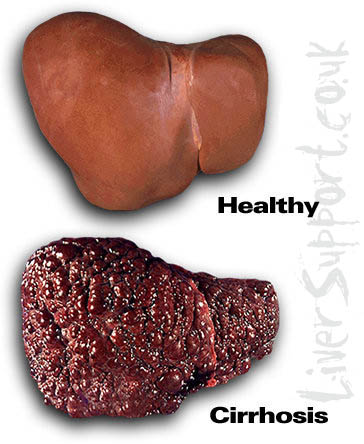
* Dissect: to cut something open and study it carefully
* Anatomy: the study of body structure (the shape of the body and what the body is made of)
* *External* anatomy: the outer structure of an organism (Ex: skin, outer organs, like the ears)
* *Internal* Anatomy: the inner structure of an organism (Ex: inside organs, like the stomach)
* Vertical: going up and down
  + A vertical line looks like this:
* Horizontal: going from side to side
  + A horizontal line looks like this:

**Digestive System Organs**

* Mouth
* Esophagus
* Stomach
* Intestines

bile is a digestive juice that helps break down fats!

* Rectum and anus
* Liver: gets rid of toxins (poisons) in the body, makes bile
* Gallbladder: stores and releases bile
* Kidneys: two bean-shaped organs that filter blood

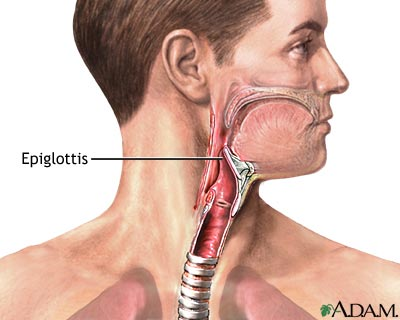


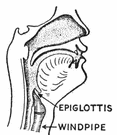
Healthy liver

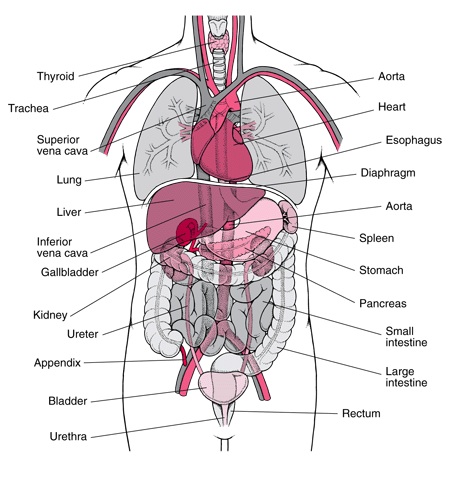
Unhealthy liver

**Parts of the Circulatory and Respiratory Systems**

* Heart
* Lungs
* Blood
* blood vessels
* Trachea: the windpipe (what you breathe through)
* Glottis: the flap that covers the windpipe when you’re swallowing







**Ten Things You Need to Know About Frogs**

**1**. Frogs Are Amphibians.

* Amphibians are animals that spend half their life on land and half on water
  + Amphibian means “double life”

**2.** Amphibians are cold-blooded vertebrate animals.

* They are different from reptiles in that they lack scales and generally return to water to breed (reproduce).

**3.** When a frog swallows a meal, his bulgy eyeballs will close and go down into his head! This is because the eyeballs apply pressure and actually push a frog's meal down his throat



**4.** Frogs have teeth.

* They have two vomerine teeth in the middle of the roof of the mouth
* They have two maxillary teeth at the sides of the mouth



**5.** Frogs’ ears are called tympani, or tympanic membranes.

* These ears pick up vibrations from the water and the air and turn them into sound waves so that the frog can hear.



**6.** When they’re underwater, frogs breathe through their skin.

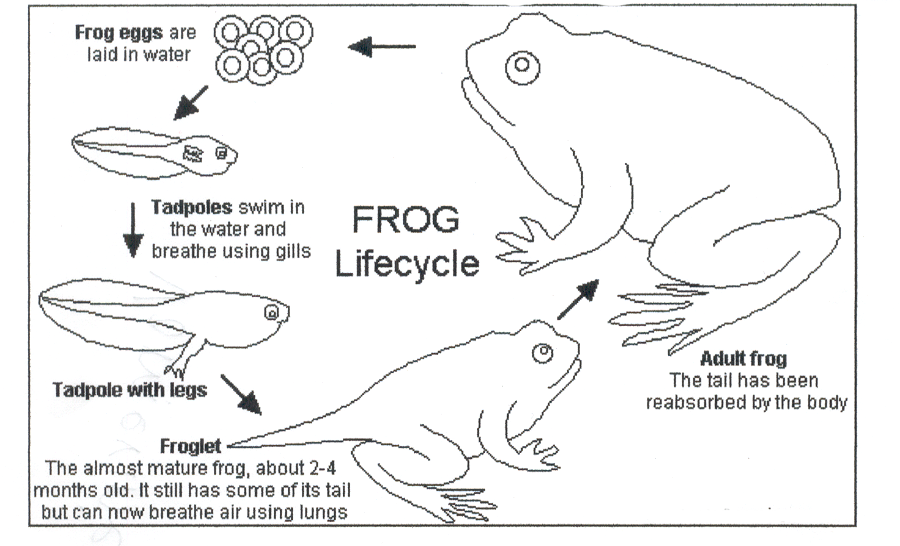
* Frogs usually live near water because they need to keep their skin wet so they can breathe through it!

**7.** When they’re on land, frogs breathe through lungs.

* Air enters through their mouth and external nares (nostrils)

**8.** Frogs usually lay their eggs in water.

* Each female lays hundreds to thousands of eggs at a time, in slimy masses.



**9.** You can determine the sex of a frog by looking at its thumbs.

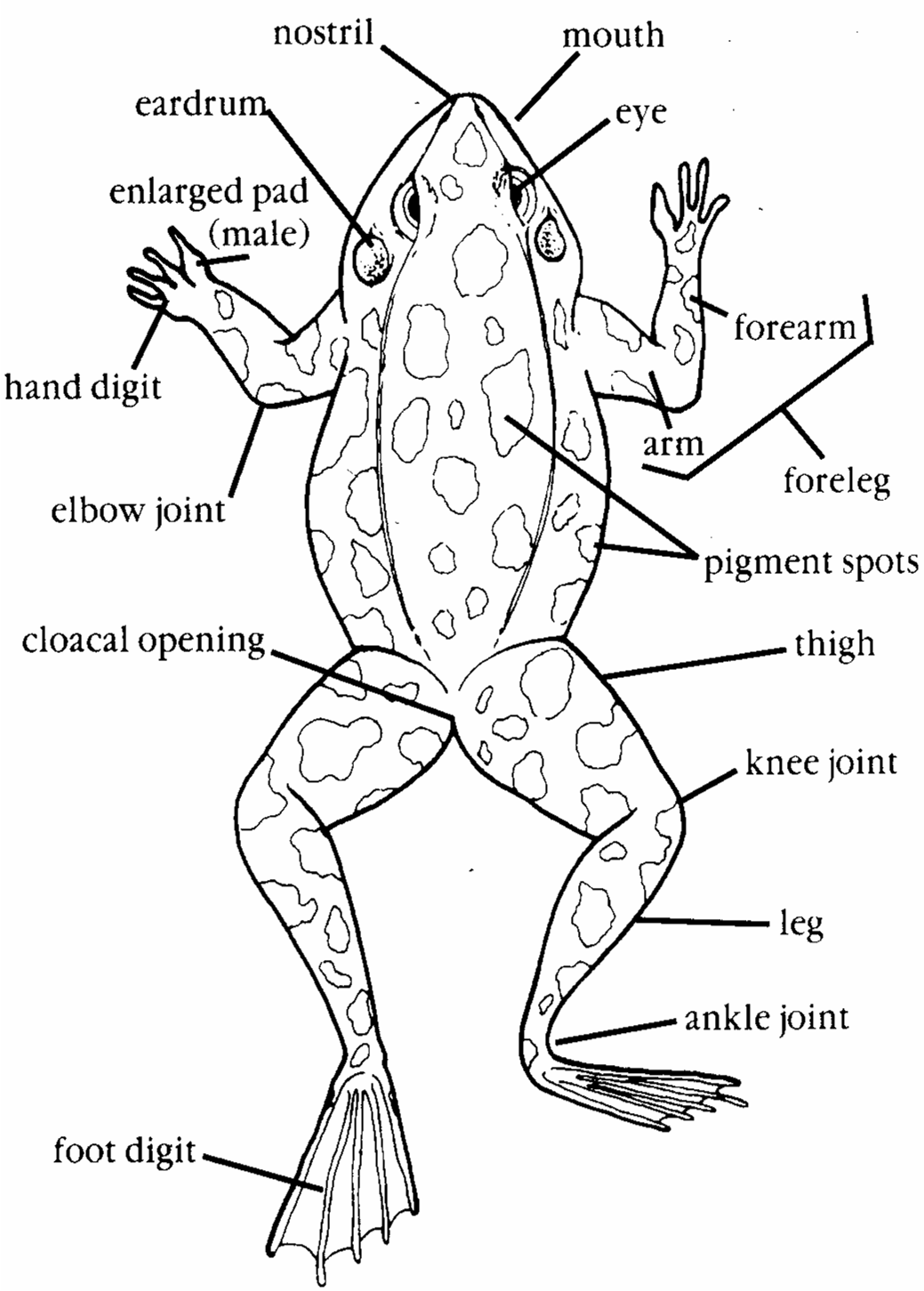
* A male frog usually has thick pads on its "thumbs," which is one external difference between the males and females, as shown below.
* Male frogs are also usually smaller than females.





**10.** Frogs have 3 eyelids.

* The nictitating membrane is a third eyelid.
* It is clear and protects the frogs’ eyes when it is underwater.
* It keeps the eyes moist when the frog is on land.
* Frog Eyelid: Nictitating membrane:





Fun fact: The skeletal shape of the frog has remained almost unchanged over the last 190 million years!

1. Tomorrow, we are going to dissect a frog. In your own words, what does “dissection” mean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. We will first be studying the external anatomy of the frog, then the internal anatomy. In your own words, what is the difference between external anatomy and internal anatomy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What level of organization is a frog? (cell, tissue, organ, organ system, organism) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What are frog ears called? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. How do frog ears work? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What are frog teeth called? (There are 2 kinds of teeth). \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Where in the mouth are these 2 kinds of teeth located? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. How do frogs breathe? (There are 2 ways. Explain both). \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. How can you determine the sex (gender) of your frog, just by looking at its external anatomy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What is the nictitating membrane, and why do frogs have them? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. How do you think the frog’s anatomy will be different from your own anatomy? How do you think it will be similar? Write at least 6 similarities and/or differences below in the Venn Diagram.