

Frog Anatomy Lab

Adapted from Ms. Polson
November 15, 2009

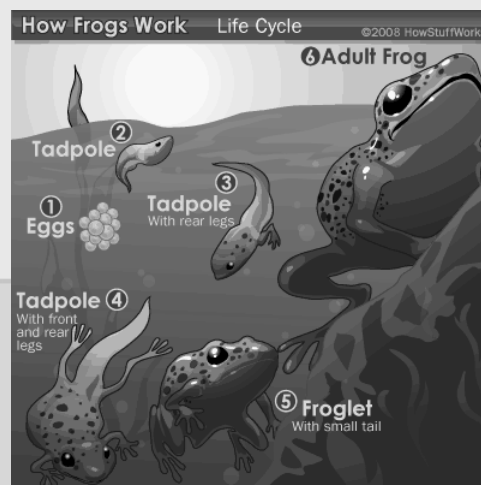
Frog Facts

- Classified as amphibians, Anura
- Tadpoles: aquatic and herbivores
 - gills
- Adults frogs: land or water, carnivores
 - cutaneous respiration, lungs
- Camouflage
- Brain less developed
- Three chambered heart

Amphibians Provide Benefits to Humans

1. The glands of some frog species contain 20- 30 chemical compounds used to produce antibiotics.
2. Chemical in the skin can make a painkiller 200 times stronger than morphine.
3. Some amphibians (like salamanders) can regrow their tails if bitten off by a predator. Researchers are trying to develop new ways to help humans who have lost limbs due to accidents or birth defects.
4. Gastric brooding frog of Australia might provide answers for humans suffering from gastric ulcers.

Frog Life Cycle



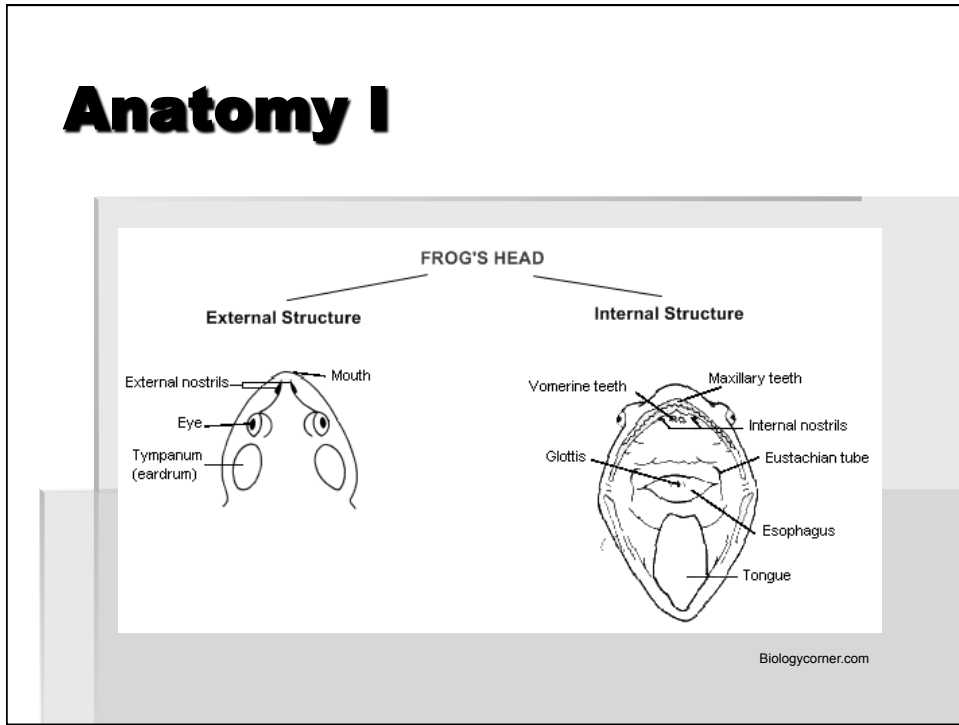
Sexing Frogs

- **Determine sex:**
 - Look at hand digits on forelegs
 - **Male**
 - thick pads on “thumbs”
 - usually smaller than females
 - **Female**
 - normally larger in size

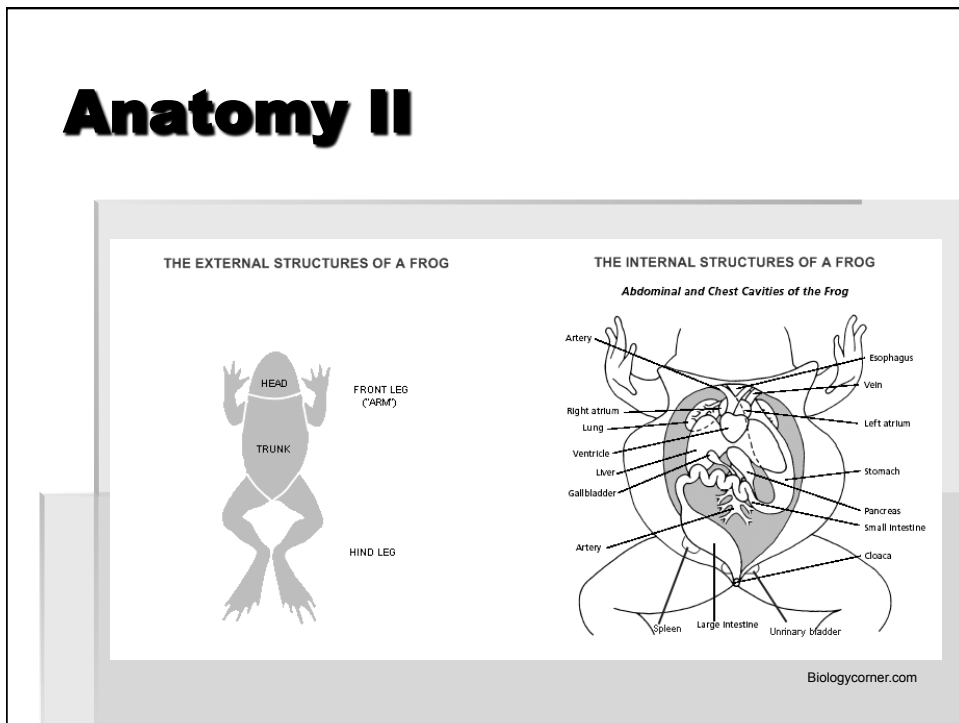
Why Study Frogs?

- **Similar to humans**
 - skin, bones, muscles and organs
 - skeletal system, nervous system, circulatory system, digestive system, urinary system, reproductive system
- **Frog anatomy is much simpler**
 - no ribs or diaphragm

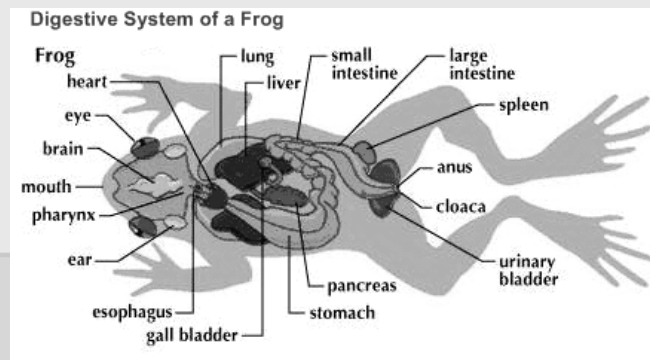
Anatomy I



Anatomy II



Anatomy III



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Dissection Tools



- Gloves (non-latex)
- Dissecting tray
- Scissors
- Magnifying glass
- Dissection pins
- Frog

Lab Safety



- You will wear goggles, gloves and apron throughout the dissection
- Do not dissect specimen while holding it
- Cut away from your body and away from other students
- Never ingest specimens
- Do not remove specimen parts from lab
- All dissection parts will remain in the dissection tray at all times
- Properly dispose of dissected materials
- Keep work station clean at all times
- Using aseptic techniques clean lab bench at end of class
- Wash hands after handling specimen
- If we do not finish on day 1, make sure your frog is labeled.