Class Amphbia has three orders

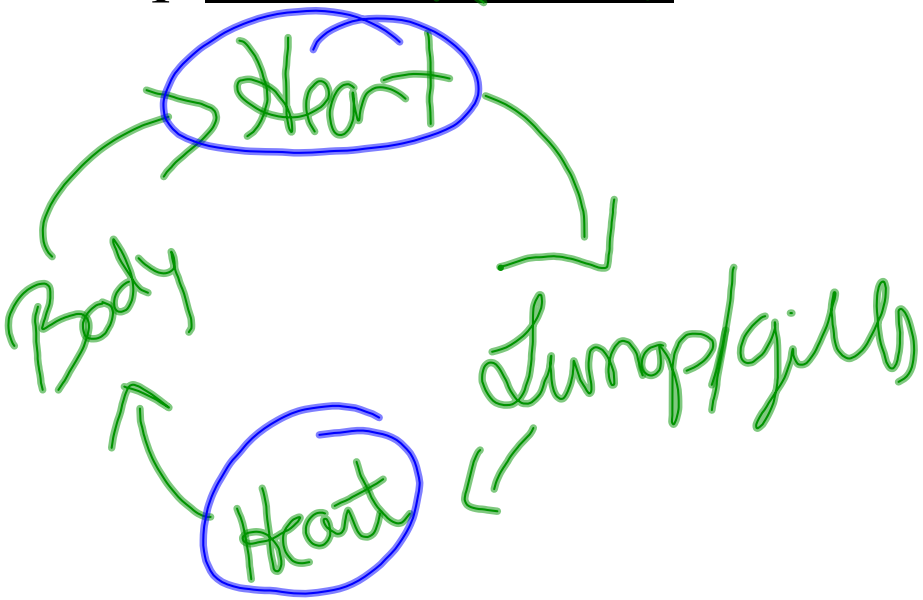
Anura (Frogs and toads)

Urodela (salamanders and newts)

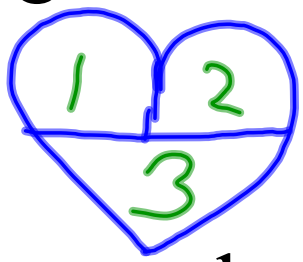
Apoda (caecilians)

Today's Amphibians Share Five Key Characteristics

1. Legs - an adaptation for living on land
2. Lungs- larval amphibians have gills, most adults use lungs
3. Double-loop circulation



4. Partially divided heart- the atrium is divided into left and right sides, but the ventricle is not



5. Cutaneous respiration- supplement O_2 intake by taking in air through their moist skin This limits to maximum size of the animal because it needs s high skin surface to body volume ratio

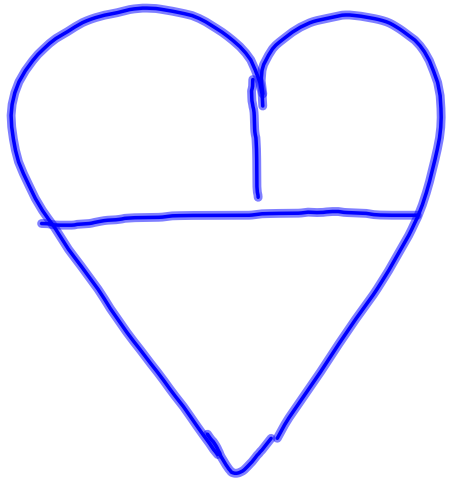
Lungs- internal, baglike respiratory organ that allows carbon dioxide exchange between the air and the blood stream. The larger the surface area the more oxygen absorbed

Double-loop circulation- the advantage is that oxygen rich blood can be pumped to the tissues at a higher pressure

Look at figure 34-13 in book

Heart- the oxygen rich and oxygen poor blood enter seperatly and septum keeps in them separate in the atrium.

The blood is together in the ventricle though so why does it not completely mix?



Class Reptilia

Live throughout the whole world in a variety of habitats except for the coldest regions

Snakes kill larger numbers of insects and small rodents

An alligator is approximately 8 feet long but has a brain the size of a walnut.

Strong, bony skeletons and toes with claws

The move on land easier than amphibians because their legs are position more vertical so they can support more weight.

Claws allow them to get a good grip on the ground and run quickly for short distances

Ectodermic Metabolism

They cannot generate their own heat so they absorb it from their surroundings
Reptile's body temperature is close to that of its environment.
They can move around to regulate temperature

Dry, scaly skin, almost watertight

Their light, flexible scales overlap and create an almost watertight layer

Amniotic eggs, almost watertight

An amniotic egg contains both a water supply and a food supply
The shell is watertight so it does not dry out
Most reptiles, all birds, and 3 species of mammals reproduce by means of amniotic eggs

Respiration through well-developed lungs

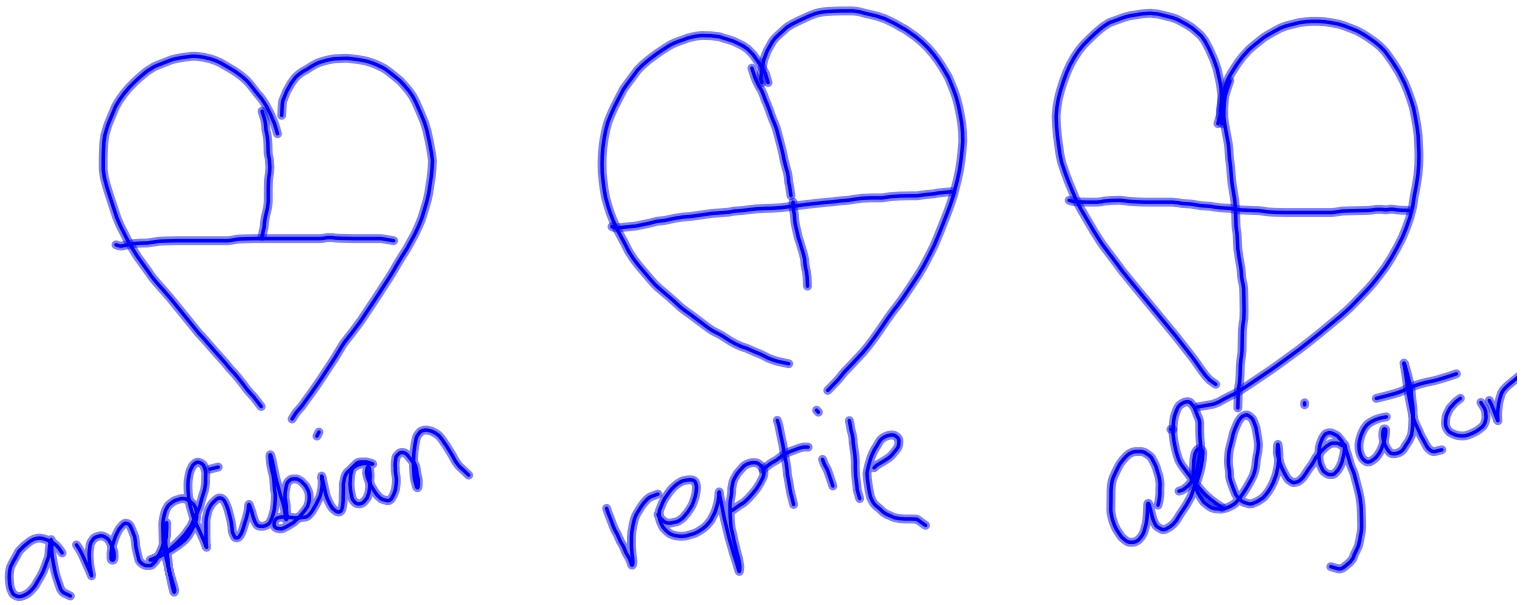
Reptiles are more active than amphibians require more oxygen for metabolism

Lungs-The scaly skin does not allow for gas exchange. Most lungs have chambers called alveoli (increase the surface area) Also they have strong muscles in their rib cage for moving air into and out of lungs

Heart

The right and the left ventricle are partially divided.

Crocodiles and Alligators have a completely divided ventricle.



Internal Fertilization

The eggs are fertilized inside the female

Internal fertilization keeps the eggs from drying out

Many reptiles are oviparous (young hatch from eggs)

The eggs are deposited somewhere and the environment incubate them

Ovoviviparous- female retains the eggs inside until almost hatching or the eggs actually hatch inside the female's body

Some snakes and lizards are like this