

Frog Thoughts

1. Where have you seen frogs hanging out (where do they live)?
2. Why do frogs croak?
3. How does a frog breathe?
4. How are frogs similar to humans?
5. How are frogs different from humans?

What did the frog
order at McDonalds?

French Flies and a
Diet Croak

Frogs are amphibians which means "double life". They live part of their life on land and part in the water.

Characteristics of Amphibians:

- cold-blooded: rely on outside temperatures to survive

salamander



frog

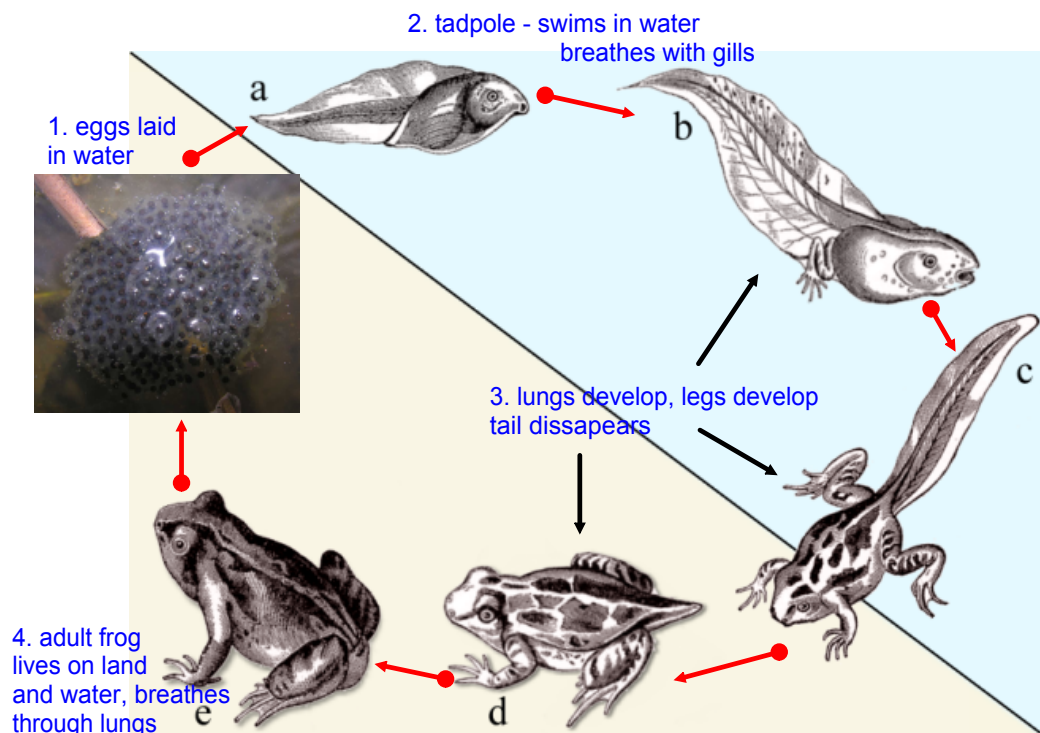
- webbed feet
- no scales
- lay eggs

- have gills at some point in their life

newt



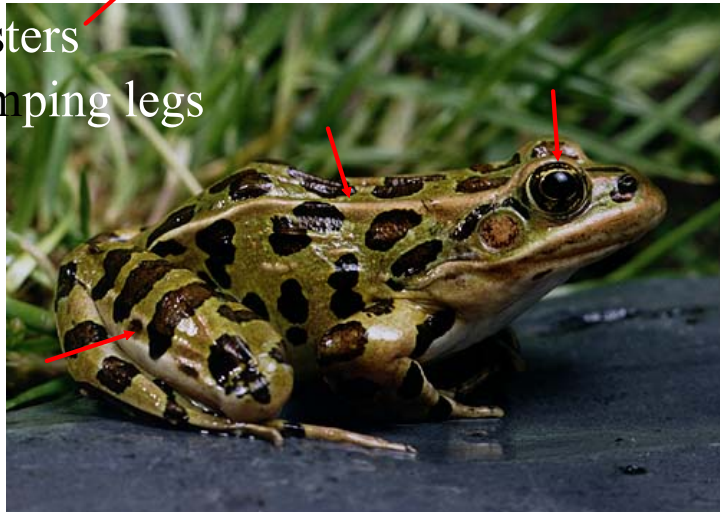
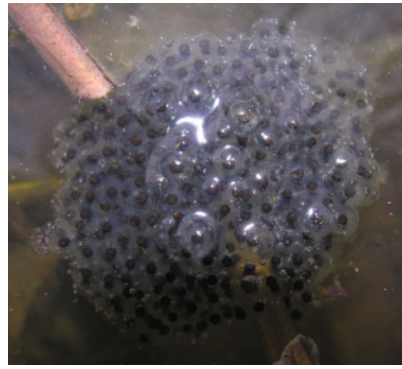
Frogs go through metamorphosis - *the transformation in body structure over a lifetime*



Frogs are different than toads

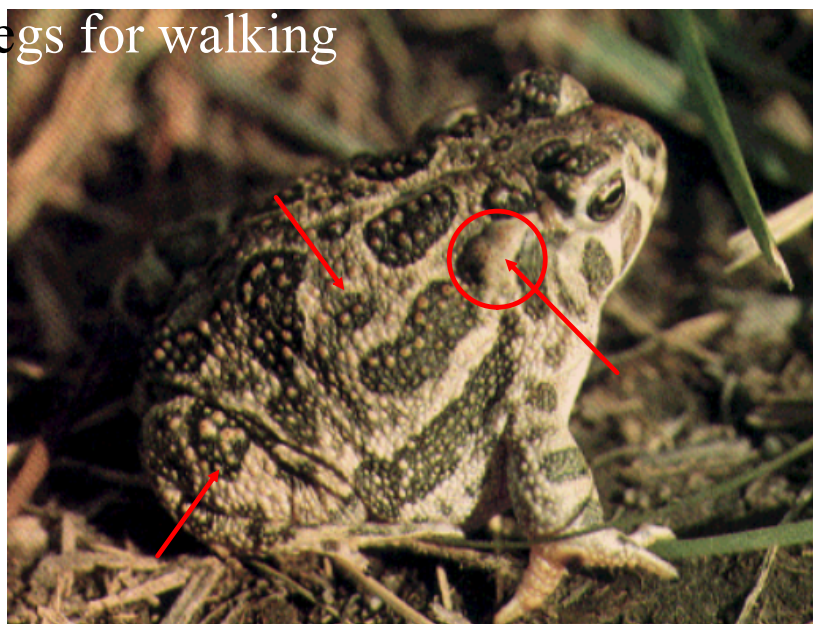
Characteristics of Frogs:

- 2 bulging eyes
- smooth, slimy skin
- eggs laid in clusters
- strong, long, jumping legs



Characteristics of Toads:

- poison glands behind their eyes
- dry, warty skin
- eggs laid in chains
- short hind legs for walking



Why Learn about Frogs?



1. Frogs are part of earth's biodiversity.
(diversity, uniqueness of life)

a) **Variety** - lots of different species of frogs found all over the globe.



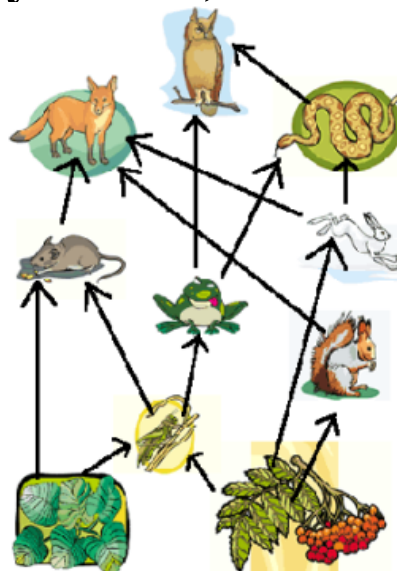
b) frogs interact in important ways with other types of organisms.

2. Frogs are an important part of the food web.

a) **they eat** anything they can fit in their mouths like floating plants, bugs, mice, fish, etc.

- *they keep the bug population under control*

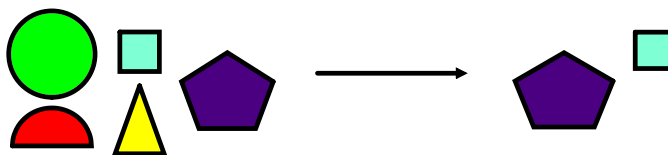
b) **eaten by** snakes, birds otters, etc.



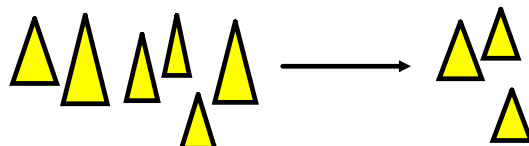
3. Frogs have adapted amazing survival techniques.
- a) Hibernation over winter
 - b) Wood Frogs produces glucose (sugar) in their liver that acts as "antifreeze"



4. Amphibian populations, including frogs, are declining drastically around the world
- a) the number of different kinds of frogs

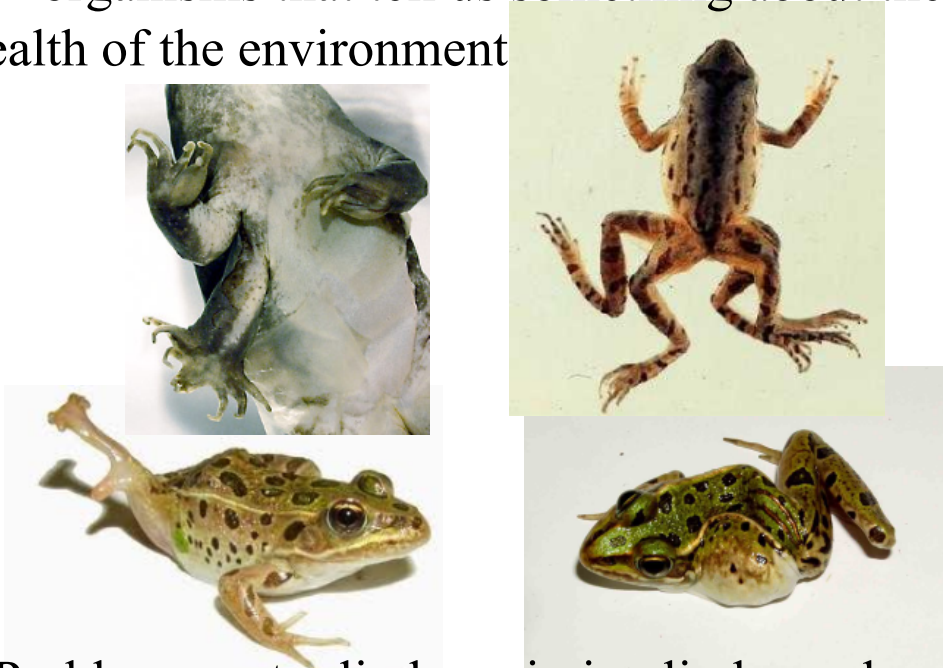


- b) the size of each individual population



5. Frogs and other amphibians are Bio-Indicators

- organisms that tell us something about the health of the environment



Problems: extra limbs, missing limbs, reduced numbers, lack of offspring

Possible Causes: (*presentations!!*)

- pollution (acid rain, chemicals in water) from factories, cars, farms, etc.
- UV-B exposure - weakens immune system
- fungus/parasite - covers skin and suffocates them
- global temperature change - dries out ponds so offspring don't survive
- habitat destruction (and fragmentation)- people destroying the places where frogs live
- frogs taken out of the wild for dissection and consumption (eating!)
- invasive species - non-native organisms that either prey on frogs, bring in disease, or take over frog habitats and food supply

Eating	<ul style="list-style-type: none"> • When a frog eats, it uses its eyeballs to push food into its mouth • frogs have 2 kinds of teeth
Legs	<ul style="list-style-type: none"> • frogs can jump up to 20x their length! • frogs also have webbed feet to help them swim
Skin	<ul style="list-style-type: none"> • <i>semipermeable</i> - can drink and breath through their skin • some frog skin contains antibiotics and painkilling chemicals • frog skin contains mucus glands and sometimes poison glands
Heart	<ul style="list-style-type: none"> • have a 3 chambered heart (right atrium, left atrium, ventricle) • cold blooded - their temperature matches their surrounding

What are some of the similarities and differences between frogs and humans?

Similarities:

1. organs
 - organs - heart, lungs, teeth, legs, gall bladder, skin, kidney etc.

Differences:

1. organ structure/function
 - frog liver and heart have 3 parts (ours have 1 and 4)
 - skin, feet, fat bodies, etc.

2. DNA - humans and frogs share about 90% of their DNA

2. life cycle