

Froggies

Amphibians vs reptiles, and growing and changing

Reptiles and amphibians are both cold-blooded vertebrates.

Amphibians spend part of their lives in water and the remaining part on land. They have smooth, slimy, permeable skin which requires moisture. They breathe first with gills, and then with their skin, mouth lining, nostrils and lungs. They lay their eggs, which are covered with gel, in water. Some secrete unpleasant chemicals to protect themselves. Amphibians undergo complete metamorphosis.

Reptiles live on land, breathe through lungs, and lay eggs with a protective shell on land. They have a dry, hard and scaly skin, to retain moisture in hot dry conditions, and to protect them. Reptiles do not undergo metamorphosis.



Reptiles and amphibians are both mainly omnivores and both can use camouflage.

Amphibians have a narrow range of color perception. They have webbed feet for swimming and jumping.



Reptiles have a wide range of color perception. Their feet are adapted for running.



Salamanders and lizards can be confusing. Salamanders are amphibians and lizards are reptiles.

Salamanders are amphibians, requiring moist conditions in which to live. They can be found under leaves in the forest, or under rocks near a stream. Lizards are adapted for hotter climates and can even live in the desert. They often are found basking in the sun.

Salamanders and lizards may appear similar, but there are differences. Salamander skin is smooth and moist, without scales. They have stumpy toes. Lizard skin is dry and scaly, like a snakes. Their toes are longer and can be used for climbing.

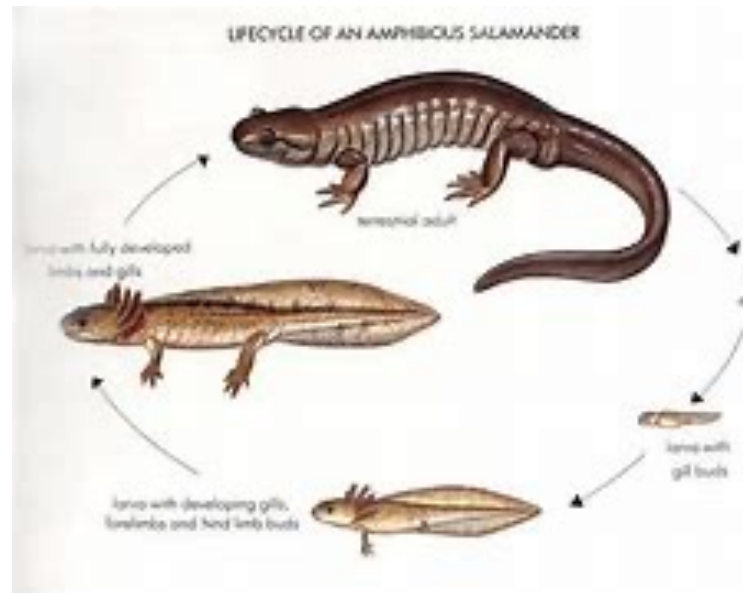
Salamanders and lizards both have the capability to regenerate parts of their bodies.



© Mike Hutchison

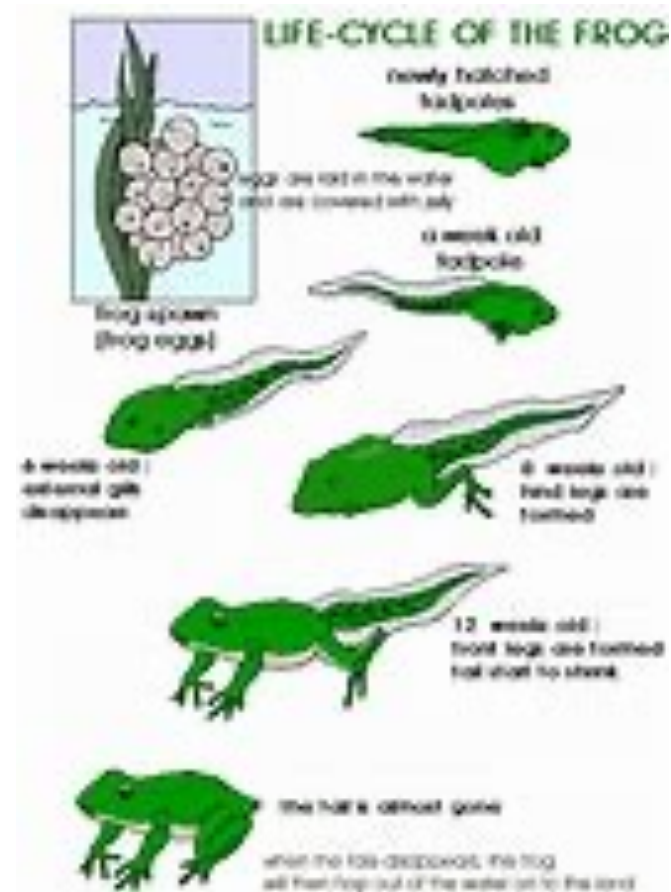
Most salamanders have eggs without shells and lay them in a moist environment. Many salamander eggs, in fact, must be entirely submerged because the larvae have gills and are dependent on water to breathe. These salamanders go through metamorphosis just as frogs do. Lizard eggs have shells, and their nests typically are in the sand. Young lizards are simply small versions of their parents, with no metamorphosis necessary. While lizards are generally omnivores, salamanders tend to be carnivores.

While some amphibians can be 6 feet, this is not usual. Very large lizard-like animals probably are lizards.



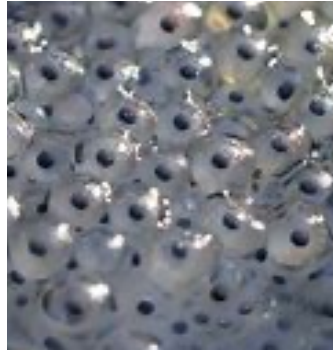
Metamorphosis

Living things grow and change. Plants begin as seeds and grow into plants that flower and produce more seeds. Animals begin as eggs. Some animals develop inside the mommies and then are born as baby animals. Some animals lay eggs that hatch into baby animals, and some animals go through different stages between being an egg and a baby animal. This process is called metamorphosis. In complete metamorphosis there are four changes in form. In incomplete metamorphosis there are three changes in form.





Toad and tadpoles!



Metamorphosis

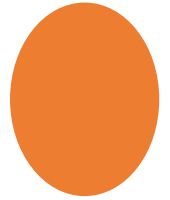
Frogs begin as a gelatinous (jelly covered) mass of eggs. The jelly protects the eggs. Then they hatch as tadpoles with gills and a tail, but no limbs. Next the tadpole develops legs. Gradually the tadpole changes into a froglet with front legs and a wider mouth; the tail grows shorter and disappears. The food for the frog is stored in the tail. The froglet also develops lungs and the gills disappear. Now the froglet is a frog.



Frogs and toads

You can tell most toads and frogs apart by the appearance of their skin and legs. Most frogs have long legs for jumping, and smooth skins covered in mucus. Toads generally have shorter legs for crawling, and rougher, thicker skins.

Toads generally lay their eggs in long strands and frogs lay their eggs in a cluster that resembles a bunch of grapes.



Toads also undergo metamorphosis....

Males and females mate (amplexus) in the water, and swim to find a place to fertilize and deposit the eggs in long slimy strands. The jelly surrounding the eggs swells so the eggs float in the warmer water by the surface.

The eggs hatch and the tadpoles grow longer developing a body and tail.

Like frogs, toads go through stages from tadpole to toadlet to toad, gradually losing aquatic features (gills) and developing terrestrial features (lungs) and limbs.



How do frogs make croaking sounds?

Frogs close their nostrils and send air back and forth across their vocal cords and into a vocal sac, which is the part you see puffing up. There are 3 kinds of vocal sacs: single median throat sac, paired throat sacs, and paired lateral sacs.

Frogs make many different croaking sounds: clicking, choral, barking, trill, chirp, chuckle, whine, “jug-a-rum”, “wrenk”, “bonk”.

In general, male frogs croak at night to attract females.

<https://txmn.org/alamo/amphibians/>





Toads croak, mainly to attract a mate and warn off other males, but female toads can also make sounds.

The loudness of the croak provides information about the size of the toad, in a crowded pond area.

Frogs can have different numbers and kinds of air sacs.

Where do frogs live,
when are they active,
and are they social or
solitary?

Frogs live on all the continents, except Antarctica, and in all sorts of environments, so long as there is fresh water nearby, and in general they live in aquatic habitats.

Generally, frogs are active at night when they can't be seen.

And frogs “hang out” in groups called armies, colonies or knots.

Frogs are carnivores as adults, herbivores as tadpoles.



Toads prefer moist open fields and grasslands.

Toads are mainly nocturnal.

They are mainly solitary except when breeding.

They are mainly carnivores as adults, herbivores as tadpoles.



Frogs are omnivores.
They eat, plants,
animals and insects.

Frogs eat insects, snails, worms, algae,
macroinvertebrates, fish, and even small
birds, mice and other frogs.



Frogs and toads around San Antonio:

Blanchard's Crocket Frog

Balcones Barking Frog

Western Narrow-mouthed Toad

Spotted Chorus Frog

Cope's Gray Treefrog

Green Treefrog

Rio Grande Leopard Frog

Southern Leopard Frog

American Bullfrog

Rio Grande Chirping Frog

Gulf Coast Frog



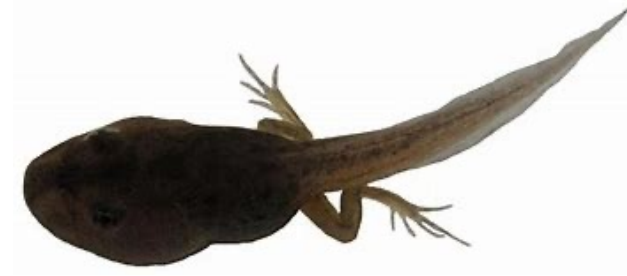
You can be finger frogs!

Here is the egg (fist)



so slimy and pale—

tadpole grows legs-- (touch legs)



frog loses its tail (all gone sign moving hands apart)!



You can sing the Frog
song to the tune of
Farmer in the Dell.

The frog lays her eggs. The frog lays
her eggs—hands making eggs
Hi ho the derrio,
A tadpole hatches out. (opening
hands)
The tadpole grows back legs (touching
rear and legs)
The tadpole's tails is gone (wiggling
rear)
The tadpole's mouth grows bigger and
(opening mouth wide)
Now we have a frog! (jumping)

Based on Growing Up WILD



You can sing the song to the tune of *Frere Jacques*.

Watch the tadpole, (hands together prayer position)

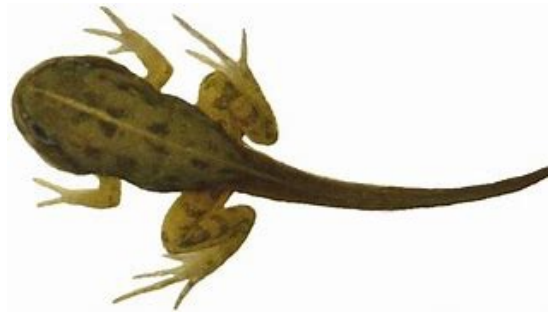
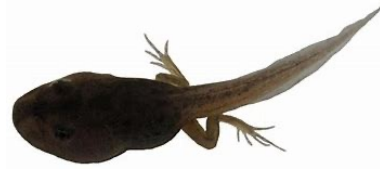
Watch the tadpole.

Lose his tail, lose his tail. (all gone separating hands)

Next, he has two feet (2 fingers);

Then he has four feet (4 fingers).

Now a frog! Now a frog (jumping motion)!





You can sing the song to the tune of *I'm a Little Teapot*.

I'm a froggy froggy (hands making big eyes),
Slimy green.

Began as a tadpole (hands prayer position),
As you have seen.

I grow some legs (touching legs)
And tail disappears, (all gone,
hands separating)

And now I'm a frog– (hands jumping)

Let's give some cheers!
"Ribbit! Ribbit! Ribbit!"

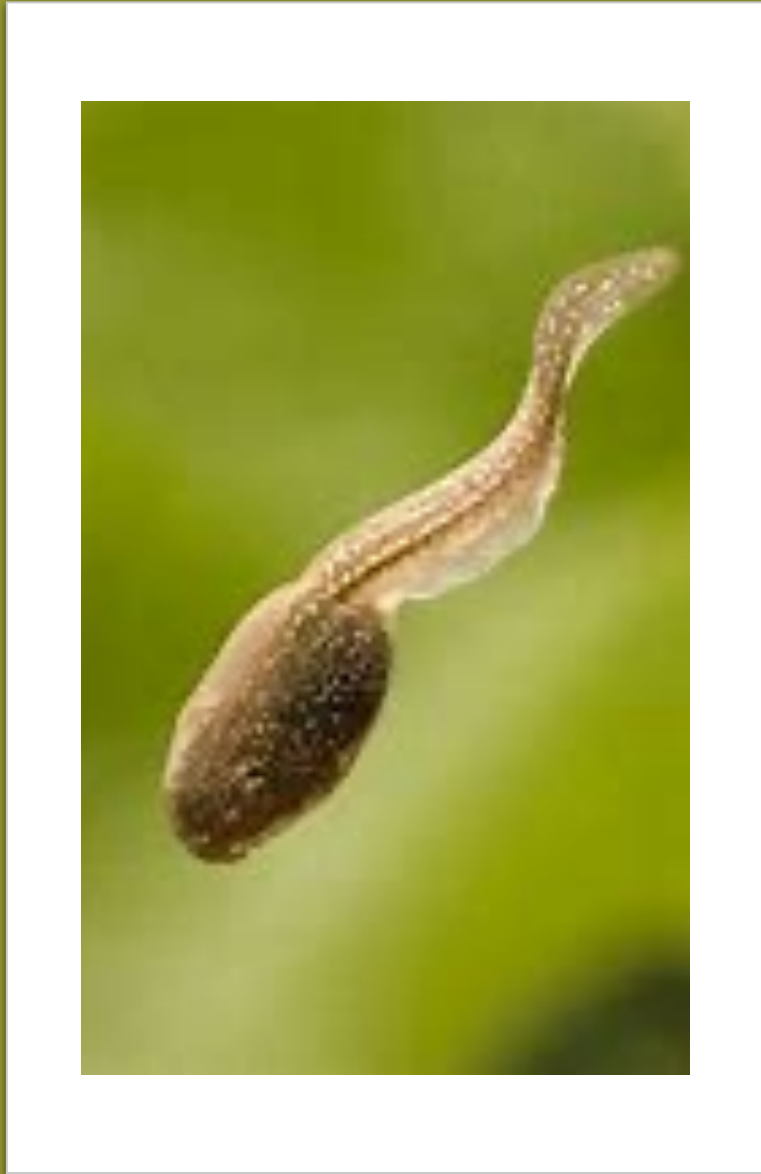


Froggies

Growth and metamorphosis



Here are
the eggs



tadpole
slimy and
pale—



tadpole
grows legs-



froglet
loses its
tail!

You can play Frog Hide-and-Seek!

Here are some frogs for hiding around your house—where do you think frogs would like to hide? Remember, they need to be close to water!

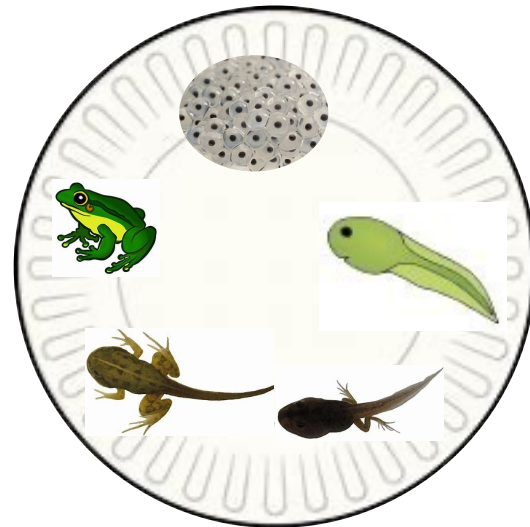


You can make a frog life cycle plate!

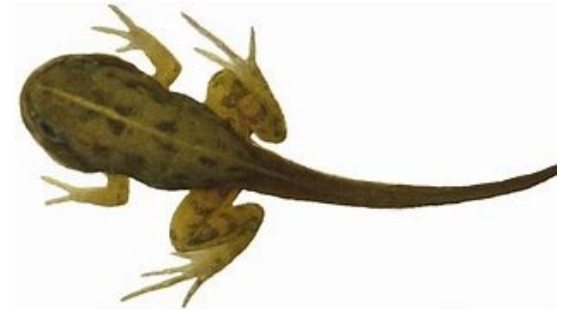
Get a paper plate.



Glue the life cycle pictures on the plate.



Frog life cycle pictures for the Frog Life Cycle Plate



You can make an underwater tadpole, froglet and eggs picture!

Here is your underwater environment.



Here are your tadpoles, froglets, and eggs, to glue on!





Making frog life cycle art! You can take play dough or clay and use it to make frog metamorphosis from egg to frog!

Be a Frog Culinary Creator!

How many ways can you make a frog using vegetables and fruits?

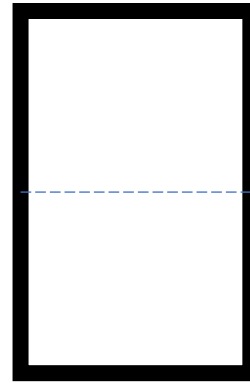
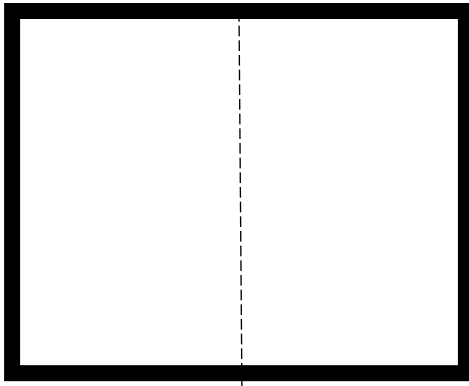


What other ways could you make a frog or tadpole?



You can make a mini-book!

- Fold the paper in half
- Then in half again.





Frog and Toad Books

I Love Frogs by Amanda Miller and Sandra Mayer

Tadpole to Frog by Steve Parker

Frogs, Toads, Lizards and Salamanders by Nancy Winslow
Parker and Joan Richards Wright

From Tadpole to Frog by Wendy Pfeffer

Frogs and Toads by Maria angels Julivert

