



Ribbit

Frogs, Toads, Salamanders and Newts

What is an amphibian?

An amphibian is a cold-blooded vertebrate animal of a class that includes frogs, toads, newts, and salamanders. They have an aquatic gill-breathing larval stage followed by a terrestrial lung-breathing adult stage. Most amphibians undergo metamorphosis with some interesting exceptions.



Kinds of amphibians:

- Anura or Salientia -- frogs and toads
- Urodela or Caudata -- newts, salamanders, mudpuppies, etc.
- Gymnophiona -- caecilians



Common amphibians



- Frogs
- Toads
- Newts
- Salamanders

Salamanders



Salamanders are amphibians that look like lizards, with slender bodies, blunt snouts, short limbs projecting at right angles to the body, and the presence of a tail in both larvae and adults. Salamanders rarely have more than four toes on their front legs and five on their rear legs, but some species have fewer digits and others lack hind limbs. Since they have permeable skin, they have habitats in or near water or other cool, damp places. Some salamander species are fully aquatic throughout their lives, some take to the water intermittently, and others are entirely terrestrial as adults. They can regenerate lost limbs as well as other damaged parts of their bodies. They generally lay eggs in water.

Newts



A newt is a salamander in the subfamily Pleurodelinae. The terrestrial juvenile phase is called an eft. Newts are semiaquatic. The skin of the newt is rougher and not as slimy as other salamanders. Newts have webbed feet and their tails are rounder, flatter and paddle-like. Newts have a shorter life-span.

Frogs



A **frog** is a tailless short bodied amphibian. An adult frog has a stout body, protruding eyes, glandular skin, with secretions ranging from distasteful to toxic. Their skin varies in color from camouflage to bright warning. Adult frogs live in fresh water and on dry land and some species are adapted for living underground or in trees.

Toads



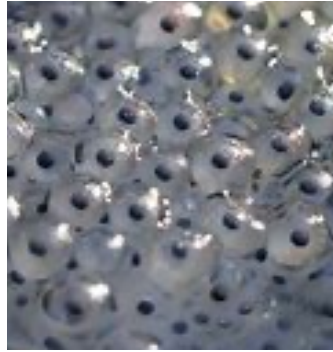
Toad is a common, not scientific terminology, name for certain frogs of the family Bufonidae, with dry, leathery skin, short legs, and large bumps.

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.





Metamorphosis

Frogs begin as a gelatinous (jelly covered) mass of eggs—frog spawn. The jelly protects the eggs. Then they hatch as tadpoles with gills and a tail, but no limbs. The tadpoles, at first suck on the jelly to feed. They are herbivores and then carnivores. 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.

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—toad spawn. 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.



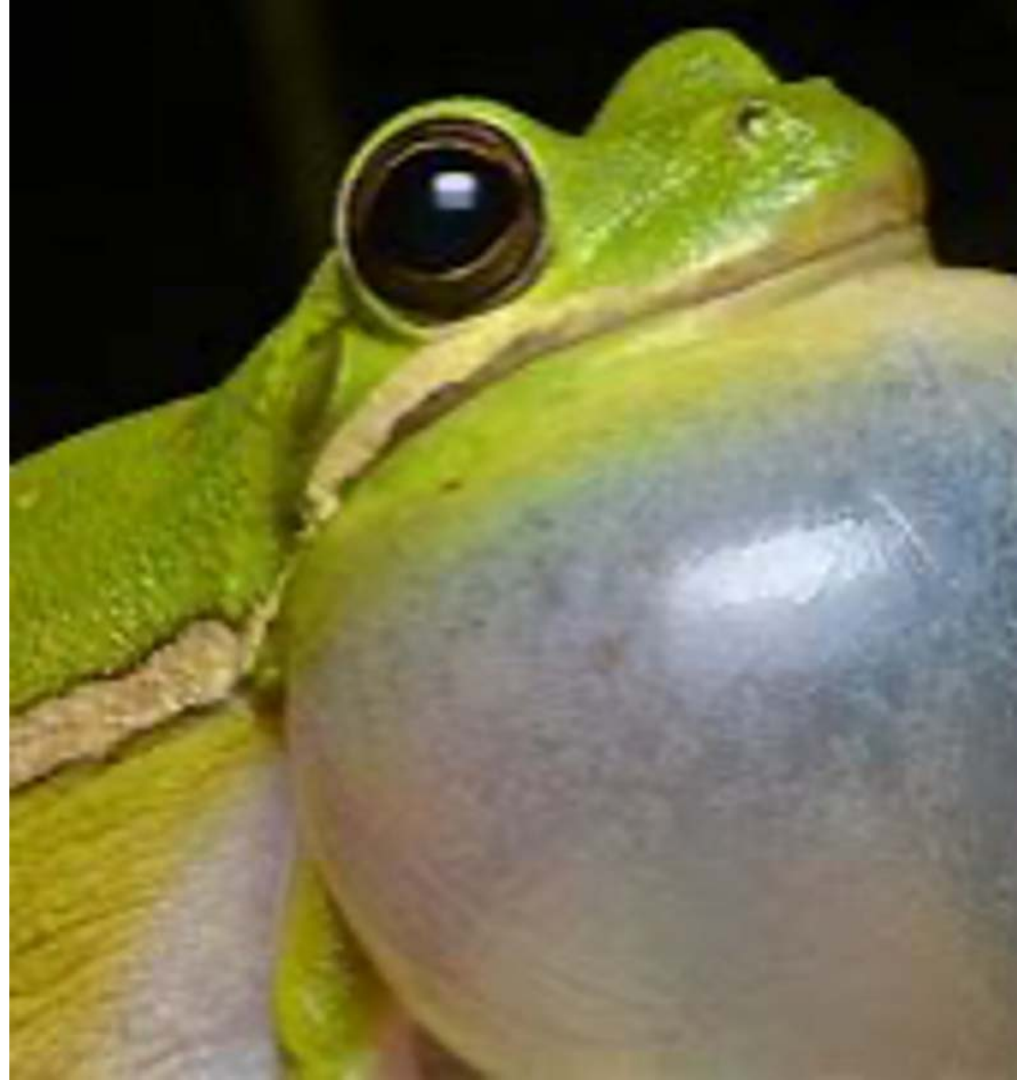
How do frogs make croaking sounds?

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



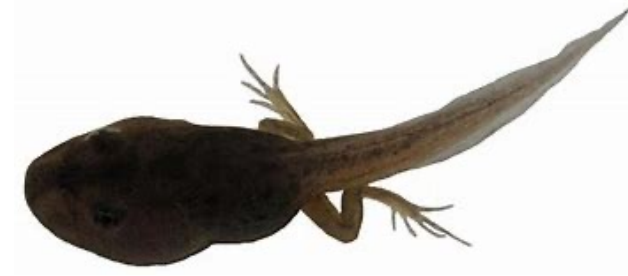
You can be finger frogs!

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)

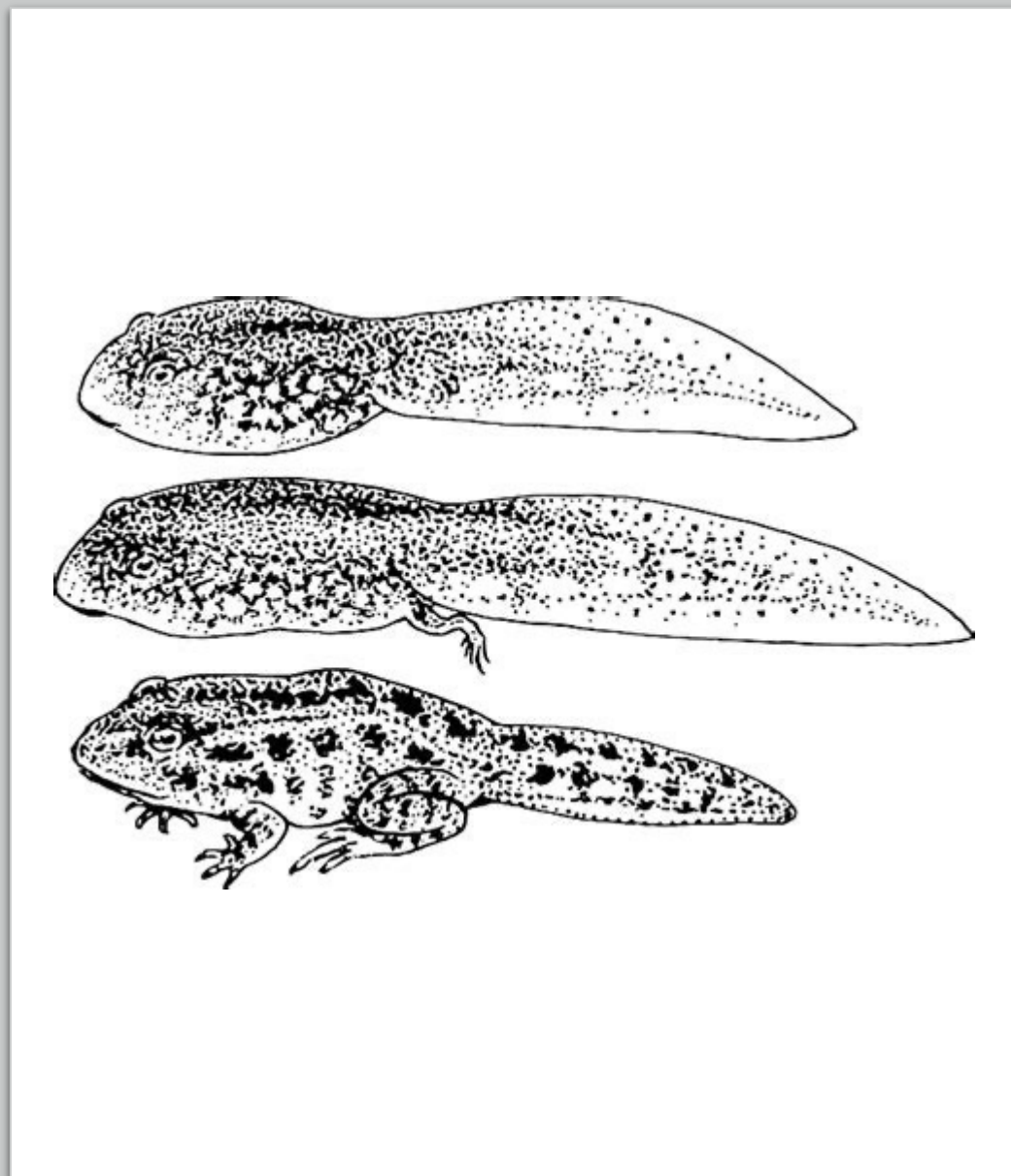
Now we have a frog! (jumping)

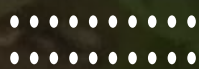
Based on Growing Up WILD



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

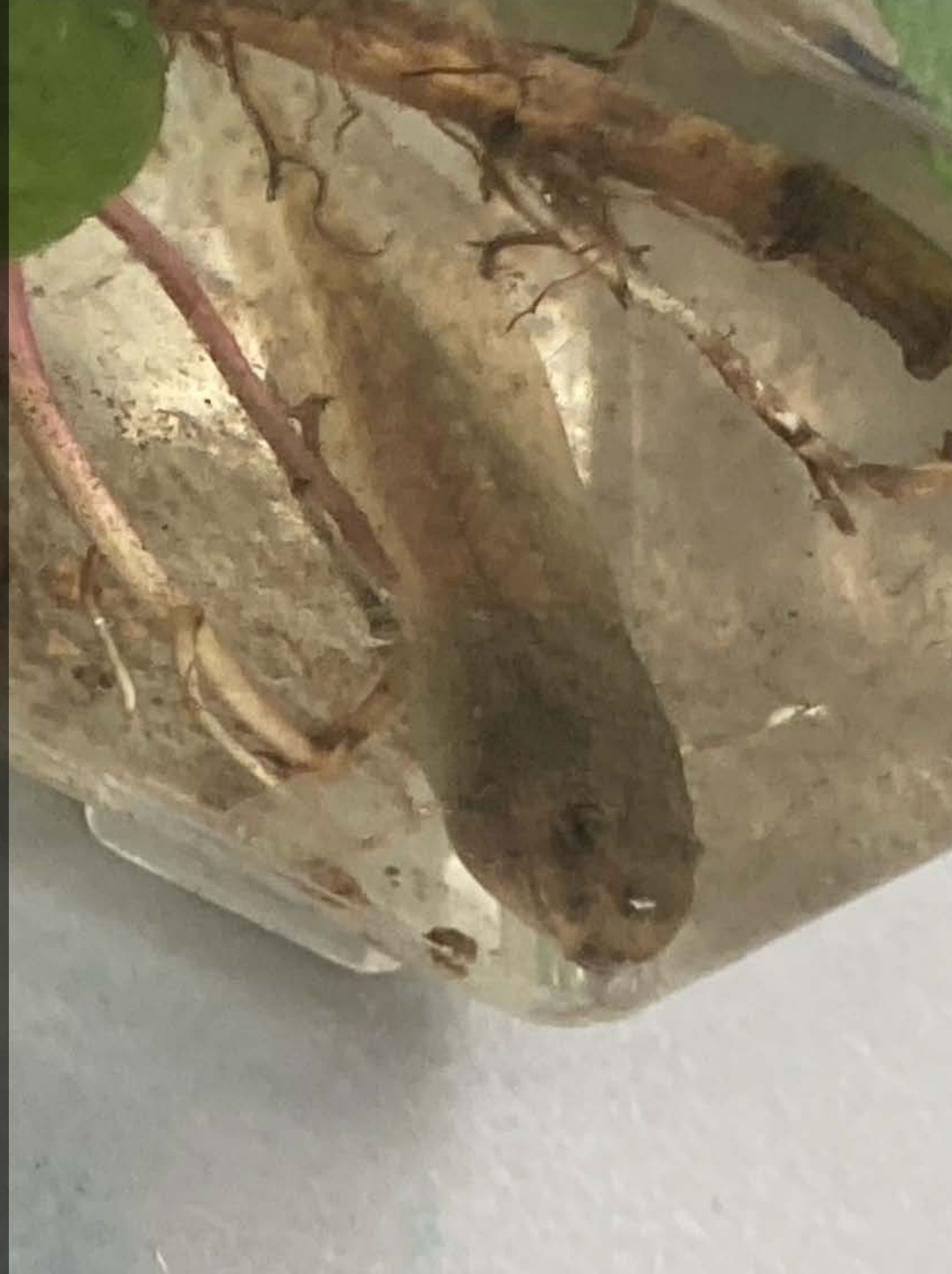
Watch the tadpole, (hands together prayer position)
Does he change, does he change?
(pointing to head)
Now, he has two feet (2 fingers);
Then he has four feet (4 fingers).
Lose his tail. (all gone motion)
Now a frog (jumping motion)!





- 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!"





Frogs and Toads

And other amphibians



A frog has a fat body

Slimy and shorty



While a toad's just another name

For a frog dry and warty!



Froggies

Growth and metamorphosis



Here are the
eggs

tadpole slimy and
pale—





tadpole
grows legs-

froglet loses its tail!



A salamander
looks like a
lizard

And it doesn't have a wart



While a newt
is just a
salamander

With webbed feet and tail
short.

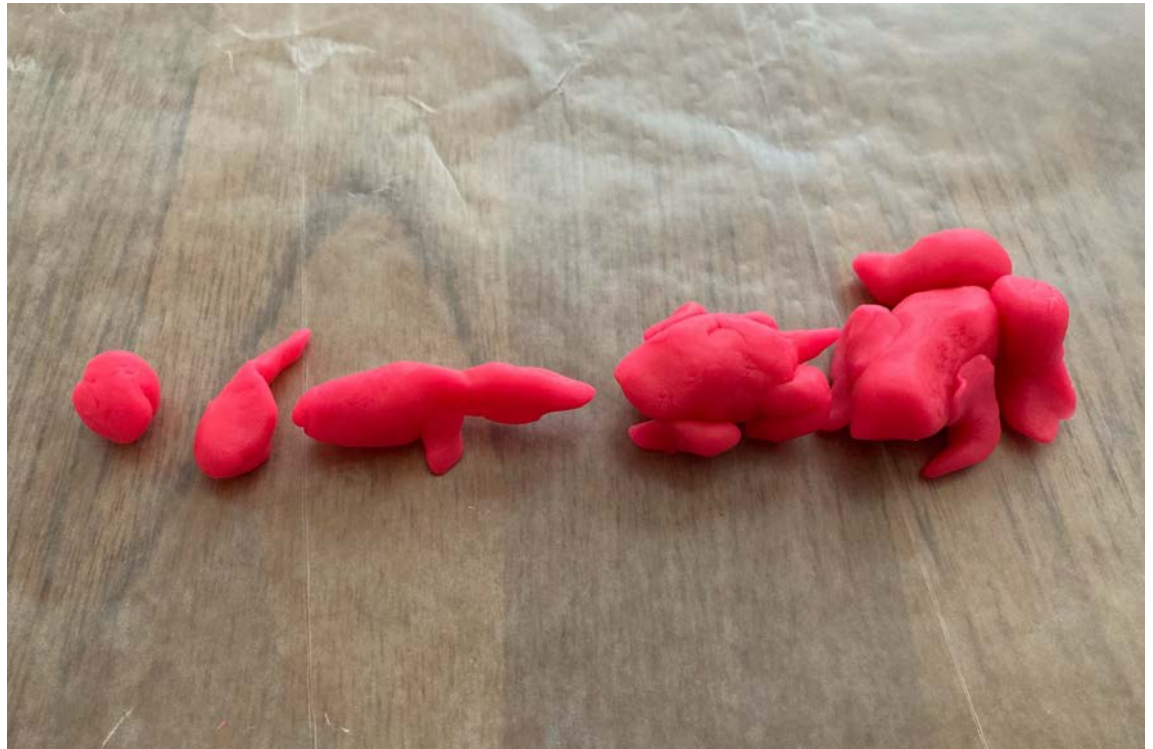




- https://www.bing.com/images/search?view=detailV2&ccid=Jnv2rIQN&id=39365BB37214AD22F8FA8FC80E1D82E6585D60CC&thid=OIP.Jnv2rIQN6eR34dirSnXdowHaFj&mediaurl=https%3a%2f%2fcdn-assets.alltrails.com%2fuploads%2fphoto%2fimage%2f21812822%2fextra_large_88c33df179ee47a30cc0de1e021093e2.jpg&cdnurl=https%3a%2f%2fth.bing.com%2fth%2fid%2fR.267bf6ac840de9e477e1d8ab4a75dda3%3frik%3dzGBdWOaCHQ7Ijw%26pid%3dImgRaw%26r%3d0&exp=1536&expw=2048&q=Hardberger+Park+wetland&simid=607998689029470347&FORM=IRPRST&ck=64B9047D15B6EA7755FBC93B03DDDB2F&selectedIndex=4

Where are the best places to look for amphibians in the park?

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



Art for little hands--

You can make a tadpole out of play dough and frog eggs out of Googly Eyes!!

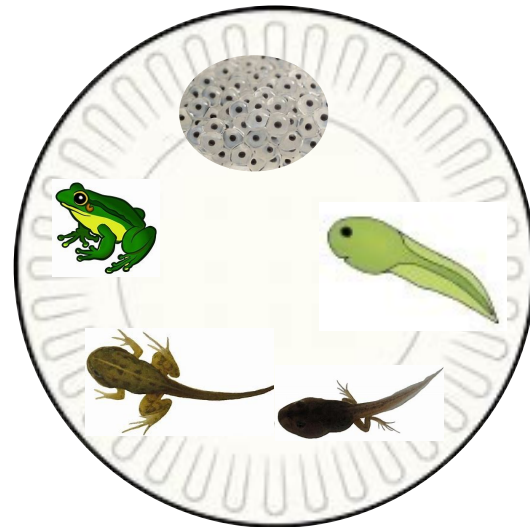


You can make a frog life cycle plate!

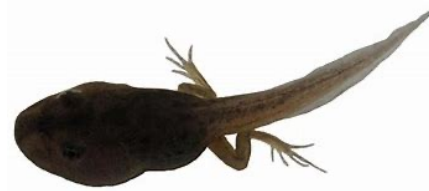
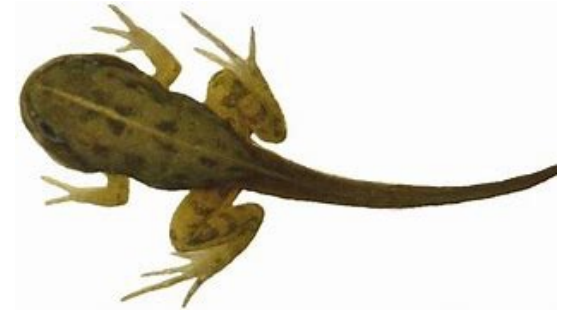
Get a paper plate.



Glue the life cycle pictures on the plate.



Frog life cycle pictures for the Frog Life Cycle Plate



Making frog life cycle art!



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!



Be a Frog Culinary Creator!

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



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

What other ways could you make a frog
or tadpole?



You can
learn
about
frogs!

<https://www.youtube.com/watch?v=nB5qEsmrZ24>



There are lots of frog books!

Books comparing other amphibians and books about metamorphosis.....

