

The Life Cycle of a Frog (BP)

Science or Nature Source

Materials Needed:

Green felt underlay for land, blue felt underlay for pond, frog life cycle pieces.

Take out green underlay and place it on the floor.

Hmm, I wonder what this could be. It's green. It could be grass...

Take out blue pond piece and place it on the floor. Smooth it out as you say:

This piece is blue. It could be sky.....

Lay blue piece to your right on top of green piece.

That's all we have to get ready.

It is springtime at a pond.

Place eggs with orange centers to the furthest right (your right) on the pond.

A jellylike cluster of eggs floats among the waterweeds at the pond's surface. These eggs are the beginning of frogs. This floating clump of eggs is called frogspawn. Frogs lay their eggs in water or wet places. Otherwise, the eggs could dry up and die.

These eggs do not have shells. They are inside jellylike coverings. As they float, the jelly lets the sun's warmth come through to the eggs inside. Not all the eggs will survive.

Most of the time the large and slimy mass of eggs is too slippery and too big to be eaten. This is nature's way of protecting them. But creatures living in or near the pond will eat some of the smaller clusters of eggs.

Place the eggs with dark embryos formed inside to the left (from your point of view) of the first eggs.

The dark centers of the eggs slowly grow into frog embryos. The embryos grow until they look like small tadpoles. Tadpoles are frog babies. As they grow, they feed off their own egg yolks.

Place tiny brown tadpoles to left of previous piece.

The tadpoles grow until they are big enough to break free into the water. It can take from three days to three weeks for this to happen, depending on what kind of frogs they will become.

One by one the tadpoles hatch from their eggs. They each have a head, tail and body. The tadpoles wiggle their tails to swim. The tadpoles breathe by getting air from the water through

feathery outside gills. As they swim, they eat very small plants that stick to larger water plants. These tiny plants are called algae.

One week later the tadpoles look different. They are bigger. Their gills begin to shrink. A flap of skin slowly grows over them. The tadpoles' mouths become hard with tiny teeth in their upper jaws.

Place big brown tadpole to left of previous piece.

Now the tadpoles are one month old. Their outside gills have disappeared. New gills inside the tadpoles take oxygen from the water. Their tails are wider for stronger swimming. Something wonderful begins to happen. At the base of their tails bulges appear. This is where their hind frog legs are growing.

Place tadpole, with hind legs only, to left of previous piece.

At two months old the tadpoles dart about the pond as they eat. They are still vegetarians. Vegetarians only eat plant life. The tadpoles get bigger. Now they have hind legs. Behind their heads bulges appear where their front legs are growing.

Their tails become smaller. The tadpoles' gills inside their bodies are gone. They have grown lungs to use for breathing. Now and then, they wiggle to the surface to breathe in air.

Place tadpole with front and hind legs and tail to left of previous piece.

The tadpoles are about three months old. Again, they look different. They have front legs. Their tails are even smaller. They have shed their tadpole skin and lips. At last, they have the wide mouths of frogs.

The tadpoles become tiny frogs. They climb out of the pond and onto the land. Their tails will become smaller and smaller until they finally disappear. The tiny frogs begin to eat insects and worms. They aren't vegetarians any more.

Frogs are amphibians. The word amphibian comes from a Greek word that means "two lives." An amphibian can live on land or in the water.

Frogs are cold-blooded. That means their inside body temperatures are about the same as the outside temperature. During the next few years, the tiny frogs will grow to be mature frogs. They will have a long, sticky tongue to catch insects.

Place adult frog and insect near mouth to left of previous piece.

Then they will be able to make their own frog spawn and there will be new baby frogs. Frogs have been around for a very long time. There were frogs on Earth even before the Dinosaurs lived.

Wondering Questions:

I wonder if you have ever seen frog's eggs in a pond or puddle?

I wonder how the egg knows how to become a tadpole?

I wonder if you have ever seen a tadpole?

I wonder how the tadpole knows how to swim?

I wonder how the tadpole knows how to breathe in the water?

I wonder how the tadpole knows how to eat the algae?

I wonder how the tadpole knows how to become a frog?

I wonder how the tadpole feels when it begins to grow hind legs...lose its tail?

I wonder if you have ever seen a frog?

I wonder how the frog knows how to breathe the air?

I wonder how the frog knows how to hop?

I wonder how a frog knows that it's supposed to eat insects?

I wonder if you have ever felt yourself growing?

I wonder if the Spirit of Love and Mystery that some people call God helps the tadpole to grow into a frog?

Name all parts as you put them away.