



From Polliwog to Frog

Audience/ Group Setting

Event setting or classroom setting— this is a simple, tabletop craft activity that could be set-up either for individuals or groups. This craft is appropriate for children (or families with children) aged 5-10.

Goal

To recognize the change in appearance of frogs as they change during metamorphosis from a tadpole to a frog.

Objectives

By the end of this activity, participants will be able to:

- To create a model of a frog undergoing metamorphosis.
- To use the model to communicate the sequence of metamorphosis in a frog.

Big Idea/ Main Message

Metamorphosis is something that happens in all amphibians (a defining characteristic).

Conservation Action/ Behavior Addressed

Be a responsible pet owner.

Discourage your canine and feline family members from pestering wildlife, especially amphibians and birds. Curious cats and digging dogs cause a lot of stress for frightened amphibians. If you or your pet encounters an amphibian, study, look, listen, and then leave it where it is.

Background Information

Frog eggs are soft and jelly-coated and they need a moist environment to keep them from drying out. Most frogs lay their eggs in the water, where they will then develop into tadpoles or polliwogs. This stage of a frog's life is more like a fish than a terrestrial animal that lives on land. Tadpoles eat algae and use their strong tails to swim in the water. Tadpoles also have gills, which they use to breathe the oxygen out of the water. The name "tadpole" comes from the words meaning "toad head," while the word "polliwog" comes from the words that mean "head" and "to wiggle." These names are perfect for frogs in this stage of their life because they look like a big head with a wiggling tail.

Over time, the tadpole will grow back legs and then front legs. Its tail will shrink and it will develop lungs to breathe gaseous oxygen on land. Its digestive system will also change to become better suited to eat other animals instead of plants. Even though the frog is now closer to being able to live on land, it will still have lots of growing to do before it reaches its adult size.

Materials needed

- Copies of the Polliwog-Frog craft page (1 per visitor)

- Crayons or markers
- Scissors
- Brass fasteners (3 per visitor)
- Pictures of frogs as tadpoles and adults

Staff

This activity could be supervised by a volunteer or staff person, but with instructions, could also run on its own.

Length of Activity

15-20 minutes

Set up

- Ahead of time: Gather materials. Create an instructions sign if there is not going to be a volunteer or staff person to supervise the activity.
- Day of: Prepare the event or table setting.

Procedures

1. As visitors approach the activity, discuss how they will make a model of how a frog changes during its lifespan or during the early stages of its life. This is called *metamorphosis*.
2. Provide each visitor with a copy of the craft sheet. Ask the visitor to color in the frog body parts and cut out the pieces.
3. Have the visitor push a brass fastener through each of the circle/holes towards the front of the body piece and then up through the hole/circle on each front (smaller) leg. Have the visitor fold down the two sides of the fastener. Then, have the visitor attach the back legs and tail in the same manner, matching up the holes/circles towards the back of the body.
4. Next, have the visitor fold the tail under the body.
5. Have the visitor make their craft into polliwogs/tadpoles by extending out the tail and turning the legs in so they are under the body.
6. Now, with the aid of the craft, and using the pictures of the frog life cycle or pictures of the frogs at different stages of their life, review the stages of metamorphosis with the visitor.



Sample Craft

Activity Extensions/Modif

Classroom Use Modification:

For a classroom or camp setting, you would follow the instructions above for the whole group of students/visitors. Once you have completed the craft with the group, you can have the students follow along with the poem below to reenact the frog life cycle with their craft.

Polliwog to Frog Poem:

One day a little polliwog wished
It could be a jumping frog
(Show polliwog with tail out and all legs hidden)

In the spring guess what grew?
Back leg number one and back leg number two.
(Pull out each back leg)

Its tail became short and something more...
(Fold tail under body)

It grew front legs, number three and four.
(Pull out front legs)

It splashed in the water.
It sat on a log.
For it had become a jumping frog!
(Have the frog jump)

National Science Education Standards

This activity is aligned to the K-8 Life Science Content Standards.

- Structure & Function in living systems
- Regulations & Behavior
- Diversity & Adaptations of organisms
- Form & Function
- Reproduction & Heredity
- Change, Constancy & Measurement
- Systems, Order & Organization

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