

# Frogs are our Friends

## **Materials**

- frog stages cards
- life cycle poster
- frog face template
- crayons
- scissors
- glue

## **Objectives**

- Describe the four stages of the frog lifecycle
- Describe the proper habitat for Alaska frogs.
- List at least three ways frogs are beneficial to us.
- List at least three things we can do to protect the habitat of frogs.

## **Suggested grade levels**

K-2

## **Duration**

1.5 hours indoors or out



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Alaska Division of Agriculture, the National

Agriculture in the Classroom Consortium and USDA. For information, visit [www.agclassroom.org/ak](http://www.agclassroom.org/ak)

## **Introduction**

Frogs are critical environmental indicators around the world. While there are only two species of frogs in Alaska, they remain important to our ecosystems.

## **Background for Teachers and Older Students**

Frogs are a type of small animal belonging to a group called “vertebrates”(animals with backbones), known as amphibians. This means they live part of their life on water and part on land. Amphibians are cold-blooded animals which means that their body temperature is the same as the temperature around them. Their skin absorbs water into their body, so they do not have to drink water to survive. They also breathe oxygen through their skin. Frogs have strong hind legs which enable them to leap great distances. Frogs can be found almost anywhere except Antarctica. Most frogs, however, are found in tropical regions. Two species of frogs are known in Alaska. These are the spotted frog, and the wood frog. The spotted frog is rarely seen far from the water while the wood frog is frequently found away from water and in diverse habitats. The spotted frog is an extremely aquatic frog. The skin is smooth, moist, and brown in color. A distinctive characteristic is the salmon red coloring on the undersurface of the legs and stomach. Adults may reach a length of 3 to 4 inches. The wood frog is the most common frog in Alaska. Adults may grow to about 3 inches. This smooth-skinned frog is generally light brown or gray in color and has many pattern variations. A dark eye mask is usually evident, and undersurface color is uniformly cream white. A light stripe down the back is often present.

More information on Alaska frogs and toads can be found at <http://www.adfg.state.ak.us/pubs/notebook/amphibia/amphib.php> .

## **Activity**

*After a brief introduction of the above information, discuss and show the picture of the lifecycle of a frog:*

Egg – Tadpole – Froglet – Adult Frog

## ***Merry Metamorphosis Activity***

1. Students huddle together as an egg mass.
2. Group begins to separate as eggs hatch.
3. Each student moves about alone with feet together and hands at their side.
4. Legs start to grow – students now shake both legs and begin moving with legs apart, hands still at their sides.
5. Front legs appear – students wiggle arms from elbows down, upper arms still touching sides.
6. With big eyes bulging out and now breathing with lungs, students gather at edge of pond.
7. Metamorphosis is complete! The little froglets hop out of the pond.

**Alaska Content Standards**

Language Arts B1, C1-3  
Science C2 and C3  
Arts A1 and A3

**Terms to Define**

Habitat  
Metamorphosis  
Hibernate  
Environmental indicator  
Amphibian



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Give each student a copy of the Frog Life Cycle Sequencing Cards to cut and practice putting in order. The cards are included in a pdf file.

Remind students metamorphosis is the change that takes place inside and outside of an animal or insect. These changes happen to prepare it for a change in where and how it lives. Metamorphosis allows larvae and adults to live in different places and eat different things, so that they don't compete with each other for living space, shelter, or food.

**Habitat**

The habitat for frogs is different from that of tadpoles or eggs. Alaskan adult frogs spend a great deal of time on land, but water can never be far away. They are usually found in grassy places along rivers and streams. In the winter they hibernate - usually under dead vegetation. Frogs eat lots and lots of insects – around 4,800 per year!

**Play Moving Meals (similar to Red Light, Green Light)**

Assign two students to be frogs and position them at one end of the “pond.” The other students are mosquitoes and other insects that have to fly across the pond without getting eaten by the adult frogs.

**Benefits of Frogs**

Have students brainstorm reasons they think frogs are useful such as...

1. Frogs eat lots of pesky insects!
2. Frogs are a good environmental indicator (they help us to know if the condition of our land and water are good.)
3. Frogs provide food for other animals. (Birds, snakes, herons etc...)

**Ways We Can Help Frogs**

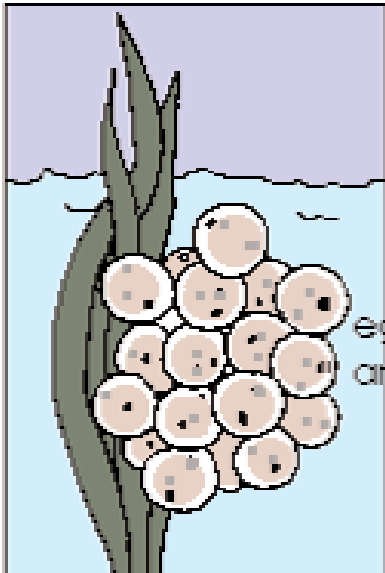
Discuss ways the students can “look out” for frogs. Make a list on the board of ways we help frogs and ways we harm frogs. Have students cut out frog pieces and glue together to make a frog face. Have students write suggestions about helping our frogs in the mouths. Here are some ideas:

1. Don't litter. And if you see litter, pick it up!
2. Keep our waters clean. Don't litter, even liquids, in our waters either.
3. Try not to use pesticides – especially liquid on our lawns and gardens, and minimize the use of fertilizers.
4. Keep their habitat as undisturbed as possible. (Protect the wetlands.)

**Websites & Other Activities**

Amphibians — <http://www.richmond.edu/~ed344/97/vertebrates/amphibians.html>  
 Funnies — One Liners <http://www.teleport.com/~dstroy/jokes/liners.html>  
 Frog Groups — <http://www.teleport.com/~dstroy/weird/general/many.html>  
 Froggy Pictures — <http://frog.simplenet.com/froggy/pictures.shtml>  
 Silly Frog Pictures — <http://frog.simplenet.com/froggy/silly-1.shtml>  
 Frog Lesson — [www.sf.adfg.state.ak.us/region1/amphib/anatomy.cfm](http://www.sf.adfg.state.ak.us/region1/amphib/anatomy.cfm)  
 Life Cycles Lesson — [www.teachersdomain.org/resources/tdc02/sci/life/cyc/lp\\_lifecycle/index.html](http://www.teachersdomain.org/resources/tdc02/sci/life/cyc/lp_lifecycle/index.html)

# LIFE-CYCLE OF THE FROG



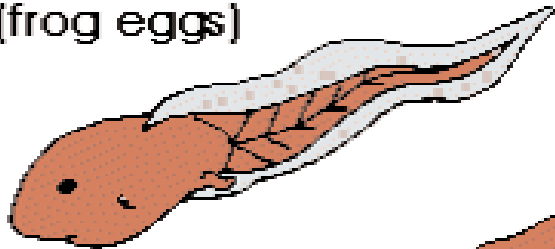
**frog spawn  
(frog eggs)**

eggs are laid in the water  
and are covered with jelly

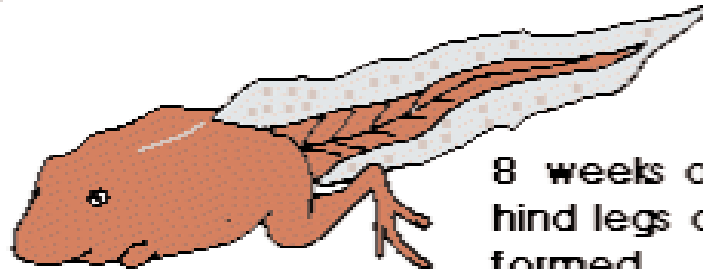
**newly hatched  
tadpoles**



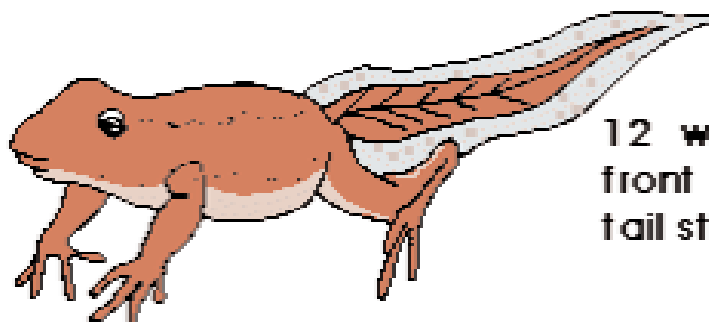
**a week old  
tadpole**



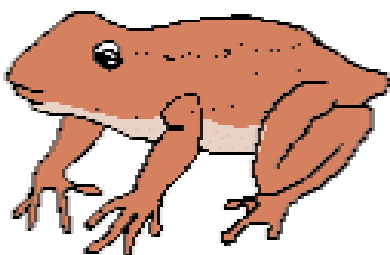
**6 weeks old :  
external gills  
disappears**



**8 weeks old :  
hind legs are  
formed**



**12 weeks old :  
front legs are formed  
tail start to shrink**



**the tail is almost gone**

when the tails disappears, the frog  
will then hop out of the water on to the land

