



## Lesson Plan

# Habitat Explorers: Pond Life

## Summary

1. Subject(s): Pond Habitats
2. Objectives: Students will observe different organisms that utilize ponds as their habitat. We will discuss the different biotic and abiotic factors in these ecosystems. We will also identify various macroinvertebrates and amphibians in their various stages of their life cycles.

## Key Vocabulary

- Habitat - place or environment where a plant or animal naturally or normally lives and grows
- Amphibian - cold-blooded vertebrates (such as frogs, toads, or salamanders) intermediate in many characters between fish and reptiles and having gilled aquatic larvae and air-breathing adults. Unlike reptiles, most amphibians possess a smooth, moist skin and lay their shell-less eggs in water or wet places.
- Life Cycle - developmental change in the form or structure of an animal (such as a butterfly or a frog) occurring subsequent to birth or hatching
- Macroinvertebrate - invertebrate macroorganisms (such as a crayfish or stonefly)
- Water Quality - chemical, physical, biological, and radiological characteristics of water. The health of the water can impact organisms found.

## Activities that you can do at home or in your backyard:

- Sound mapping, coloring sheets. Wetlands sounds video, additional resources



## Sound Mapping

Sound Mapping is an engaging activity focused on using your sense of hearing. While the sun is setting, listen for any crepuscular (active at dawn and dusk) or nocturnal wildlife. You do not have to live near a body of water to listen to wildlife. Some sounds you might hear include: frogs, birds such as owls, insects like cicadas, & mammals such as a flying squirrel. You may also hear urban sounds such as cars or airplanes.

### Counting Sounds:

Sit or stand in a spot in your back yard or inside by an open window. Close your eyes and “open your ears.” For every sound you hear, hold up a finger. Stress the importance of remaining silent during this activity. After a couple of minutes open your eyes and then discuss the different sounds they heard.

### Sound Mapping:

Sound Mapping is an engaging activity focused on using your sense of hearing. To play, use a piece of paper with an ‘X’ marked in the center, and with the date and time in the corner. The paper is a sound map and the X represents where you are sitting. When you hear a sound, make a mark on the paper to represent the sound. Your mark can be a simple design, such as a few wavy lines representing a gust of wind, or a musical note indicating a singing bird. Making simple marks keeps the focus on listening rather than on drawing. If you are unsure of the source of the sound, draw a question mark. The location of the mark should indicate the direction and distance of the sound from your seat. Close your eyes while listening. To help increase hearing ability, you can make “fox” ears by cupping your hands behind your ears. This hand position will create a greater surface area to capture sounds. Then cup the hands in front of the ears (palms facing backwards) to hear the sounds from behind them more easily. Listen for urban sounds and sounds of nature. This activity can be done daily or weekly, compare your maps as you go!

After you have shared your maps, ask these questions:

What sounds were the most familiar to you? What sound had you never heard before? Do you know what made the sound?

What sound did you like best? Why?

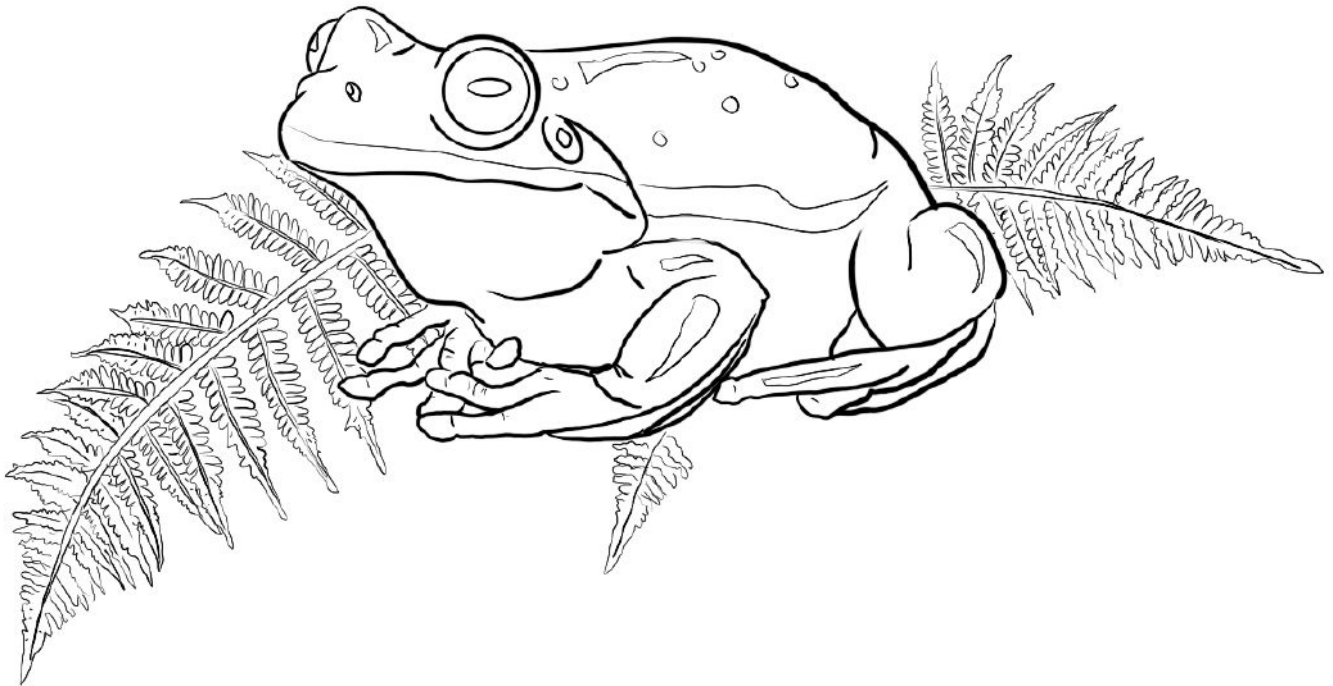
How do animals use their sense of hearing? How does the shape of an ear impact hearing?

What animals do you think have really good hearing?



## Coloring Sheet

This is the Green Tree Frog, *Hyla cinerea*. Green tree frogs are native to the Southeast and use marshes, ponds, lakes and streams for habitat. They are insectivores and primarily eat mosquitos, flies and crickets.





Green Tree Frog, *Hyla cinerea*



Spring Peeper, *Pseudacris crucifer*



## Additional Resources

- Paper Frog Puppet: <https://www.youtube.com/watch?v=IABIs8yL-Ts>
- Macroinvertebrate Key - Stroud Water Research Center:  
<https://stroudcenter.org/macros/key/>
- FrogWatch USA Certification: <https://www.aza.org/frogwatch>
- Alabama Water Watch: [Water quality Monitoring](#)