

Meet the Amphibians!

Metamorphic, ectothermic, and ecological indicators! What kind of animal has these terms in common? That's right, amphibians: toads, frogs, salamanders, and newts! Meet FCMoD's amphibians, and become a herpetologist in your own backyard!

What are Amphibians?

Amphibians are characterized as **ectothermic** (cold-blooded) vertebrates. They require water or moist environments to survive and for laying eggs. The skin on amphibians is very thin and permeable, so liquids and gases are absorbed through their skin, allowing them to breath underwater! Some small frogs and salamanders don't even have lungs and rely only on this adaptation to breathe through their skin!

Almost all amphibians go through the process of **metamorphosis**. Adult females lay their eggs and once the larvae hatch, they have gills and resemble fish. Through metamorphosis they grow four legs and air breathing lungs!

At FCMoD we care for a variety of amphibians. Check out a few of their individual life histories!

Australian White's Tree Frog (*Litoria caerulea*)

Habitat: As their name suggests, these frogs live in Australia, but are also found in Indonesia and New Guinea. In the wild they prefer semi-dry forests, where they thrive in tree canopies. They are adapted to thrive in habitats near and away from water. They make use of rainfall that collects on leaves to keep themselves moist.

Female or Male? The museum houses 3 females and 1 male frog. The male will have a distinct grey throat or vocal sac, and females will have a white vocal sac. Males will also be smaller in size compared to the females.



Tiger Salamander (*Ambystoma tigrinum*)

Habitat: These salamanders are native to Central and North America. They are typically found in brooks, ponds, and under rocks.

Characteristics: From head to tail, this species can grow to a length of 14 inches long and is the largest terrestrial salamander species. They are also nocturnal, so they are active at night when they hunt for food.

Diet: Salamanders are carnivores and predators. They feed on worms, insects, and even small fish and frogs.

Fun Facts: The Tiger Salamander is Colorado's recognized state amphibian.



Threats from Water Pollution

Amphibians play an important role in their wild ecosystems, but they – and their water-based habitats – become threatened due to water toxicity and pollution. Because frogs, toads and salamanders spend most of their time in or around water environments, they will come into contact with any toxic chemicals in the water or abnormal rising temperatures.

Amphibians are like sponges! They absorb and breathe in whatever is in the water. Due to their easy susceptibility to unhealthy water conditions, they are a great **indicator species** for an ecosystem; they can be used to infer conditions in a particular habitat. If there is clean, fresh water, frogs and toads are going to be healthy. If there is trash, chemical waste like **pesticides** or oil spillage, or food processing waste in the water, the animals breathe in these bad, unhealthy things and are at high risk of dying.

You can help amphibians in the wild by remembering a few things:

1. If you see a frog or toad, try not to touch it without gloves or clean hands (no hand sanitizer), as you could expose them to germs and chemicals.
2. Always remember to dispose of your trash properly; if you see trash in a natural area or in a body of water, set an example for others in your community by cleaning it up!
3. Buy and eat organic food. This reduces the use of harmful pesticides and insecticides that can leak into water sources, and don't use pesticides on your own yard or garden.
4. If you have a pet amphibian, protect them from noise and disturbance from other pets in your house.
5. Share with others about what you learned about amphibians, and all the ways we can protect them!
6. Remember that if you take care of the earth, the earth will take care of you and all the wildlife too!

Observations in the Backyard!

Whether it is in your backyard, neighborhood or at a Natural Area, animals can be observed just about anywhere! **Herpetologists** are scientists who study amphibians, as well as reptiles. They study and observe these animals in the wild to learn about their behaviors and identify their role within the ecosystem. Be a backyard herpetologist and observe animals similar to the museum’s amphibians and record what you discover!

Supplies:

- Writing utensil
- Paper
- Computer and internet access (optional)

Instructions:

1. If you created an observational journal, write down your animal observations in the “explore your world” section. If not, create your own observational chart, using the provided guiding questions.
2. Head out to your backyard or take a walk to a natural area with a water source to explore amphibians and their habitats.
3. Check out [FrogWatch USA](#) to learn about the frogs and toads native to Colorado and listen to their unique croaks and calls!

Guiding Questions:

<p>Location and Habitat</p> <p><i>Where did you see this animal? What does its habitat look like?</i></p>	<p>Physical Characteristics</p> <p><i>What does this animal look like? Is it small or large? Furry or Scaly?</i></p>	<p>Diet</p> <p><i>Did you see the animal eat? If so, what did it eat? If not, what do you think it eats, and why?</i></p>
<p>Locomotion</p> <p><i>How did the animal move? Does it walk, fly or swim? How many legs did it have? Is it fast or slow?</i></p>	<p>Vocalization</p> <p><i>Did the animal make any noises? What did they sound like? Why do you think they made those noises?</i></p>	<p>Other Behaviors</p> <p><i>What was the animal doing when you observed it? Did it hang around other animals? What types of adaptations does the animal have?</i></p>