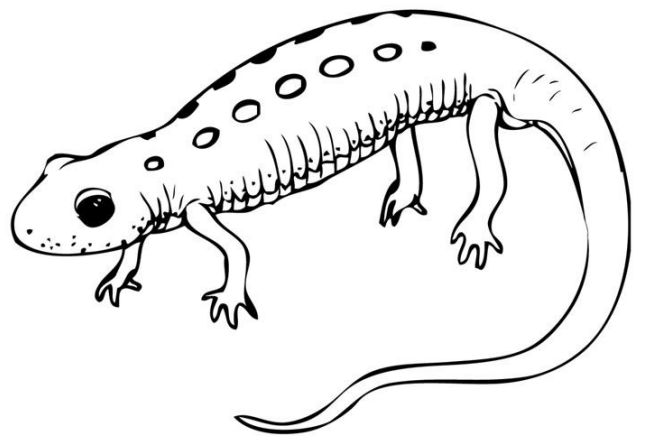
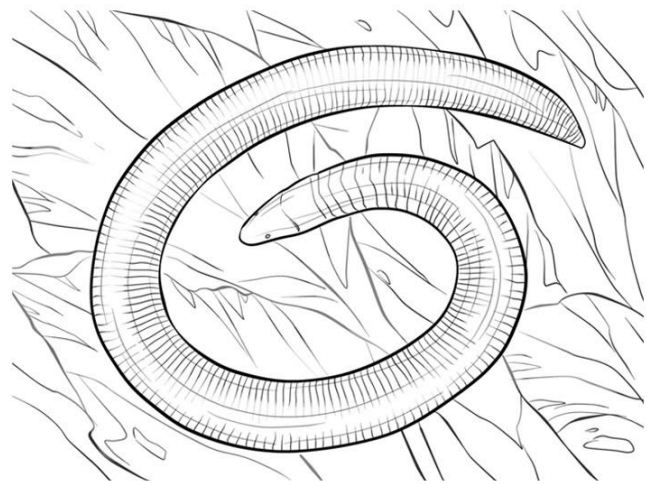
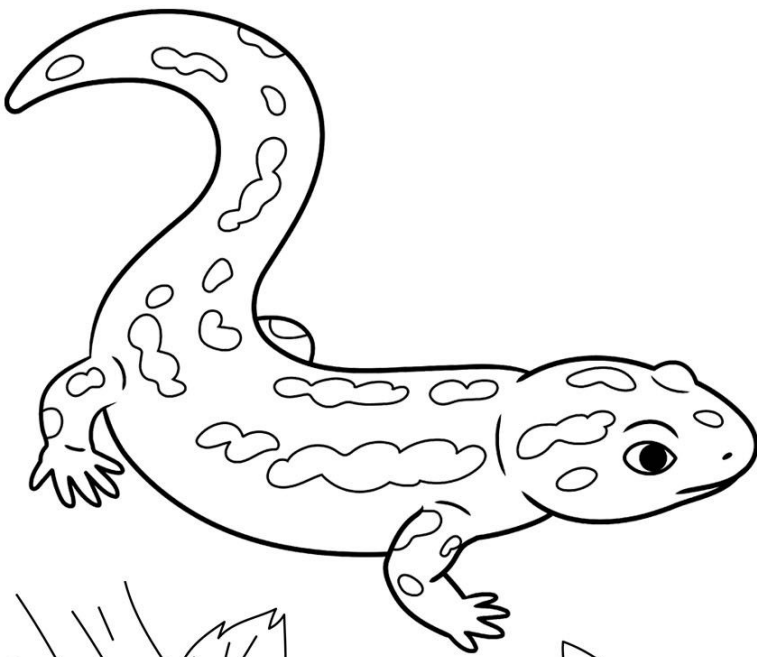


# Earth Stewards

## Field Notes

# Amphibians



Nature on the Brink - Inspiring the next generation of environmental stewards

[www.natureonthebrink.org](http://www.natureonthebrink.org)

# Introduction

Amphibians are fascinating cold-blooded animals that live a “double life,” spending part of their time in water and part on land. This group includes frogs, toads, salamanders, and newts—creatures known for their moist skin and jelly-like eggs. Most amphibians begin life as aquatic larvae with gills, then undergo an amazing transformation called metamorphosis to become air-breathing adults. Because their skin is sensitive to changes in the environment, amphibians are important indicators of ecosystem health. From the chorus of spring peepers on a rainy evening to the quiet movement of a salamander under a log, amphibians connect land and water in unique and essential ways.

**Fun Fact:** The word “amphibian” means “double life.”

## Field Information

Location: \_\_\_\_\_

Date: \_\_\_\_\_

Weather (☀ ☁ ☔ ☇): \_\_\_\_\_

Temperature: \_\_\_\_\_ °F

Habitat Type (circle one): Forest / Meadow / Pond / Schoolyard / Other: \_\_\_\_\_

What do you notice first about this environment?

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# Quick Facts

😊 Amphibians are cold-blooded (their body temperature changes with the environment).

😊 Most amphibians start life in water and later live on land.

😊 Baby frogs are called tadpoles.

😊 Amphibians lay soft, jelly-like eggs (not hard shells).

😊 They breathe through gills when young and lungs as adults.

😊 Many amphibians can also breathe through their skin.

😊 Their moist skin must stay damp to survive.

😊 Amphibians eat insects, worms, and small invertebrates.

😊 They are important indicators of environmental health.

😊 There are over 8,000 known amphibian species worldwide.

😊 Some frogs can freeze in winter and survive!

# What I Observed

Type of animal/bird/insect:

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What was the amphibian doing? (Circle or write)



Eating



Walking



Standing



Resting



With other amphibians



Other: \_\_\_\_\_

Any sounds or tracks?

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What do you think this animal eats or depends on in this habitat?

Notes:

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# Habitat & Range

Amphibians live in moist environments because their skin must stay damp to help them breathe and avoid drying out. Most species divide their lives between water and land, depending on their life stage.

## Water Habitats

Amphibians lay their jelly-like eggs in water, where the young (like tadpoles) develop.

Common aquatic habitats include:

-  Ponds
-  Lakes
-  Streams
-  Marshes
-  Wetlands

These areas provide protection, food, and the moisture amphibians need early in life.

## Land Habitats

After metamorphosis, many amphibians move onto land but stay close to water.

They are often found in:

-  Forest floors under logs and leaves
-  Grassy fields near ponds
-  Riverbanks
-  Gardens and backyards

They prefer cool, shaded, and humid places to keep their skin from drying out.

## Why Moisture Matters

Amphibians have thin, permeable skin, which allows them to absorb water and oxygen. Because of this, they are very sensitive to:

- Pollution
- Drought
- Habitat destruction

Healthy wetlands and forests are especially important for amphibian survival.



# Amphibian Vocabulary

**Amphibian** – A cold-blooded animal that lives part of its life in water and part on land.

**Cold-blooded (Ectothermic)** – An animal whose body temperature changes with the environment.

**Metamorphosis** – A major change in body form during development (like a tadpole turning into a frog).

**Tadpole (Larva)** – The early life stage of a frog or toad that lives in water and has gills and a tail.

**Gills** – Organs that help aquatic animals breathe underwater.

**Lungs** – Organs that help animals breathe air.

**Permeable Skin** – Skin that allows water and oxygen to pass through.

**Moisture** – Wetness or dampness needed for amphibians to survive.

**Habitat** – The natural home or environment where an animal lives.

**Wetland** – Land that is covered with water for part or all of the year.

**Camouflage** – Coloring or patterns that help an animal blend into its surroundings.

**Nocturnal** – Active at night.

**Predator** – An animal that hunts and eats other animals.

**Prey** – An animal that is hunted and eaten by another animal.

**Egg Mass (Spawn)** – A group of jelly-like amphibian eggs laid in water.

**Indicator Species** – A species that shows the health of an ecosystem because it is sensitive to environmental changes.

# From Bugs to Bites

🟠 Most tadpoles are herbivores or omnivores.

They eat:

- Algae
- Pond plants
- Decaying leaves
- Microscopic organisms
- Soft aquatic vegetation

Some larger tadpoles may eat:

- Tiny insects
- Other tadpoles

## 😬 Adult Frogs & Toads

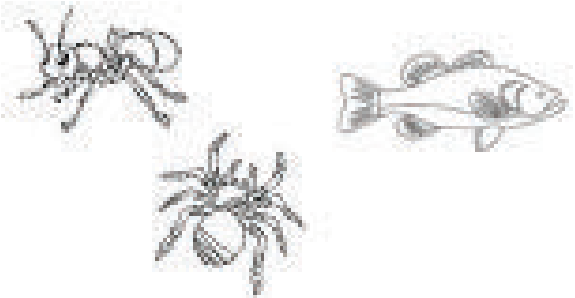
Most adult frogs and toads are carnivores.

They eat:

- Insects (flies, beetles, moths)
- Mosquitoes
- Ants
- Crickets
- Grasshoppers
- Worms
- Spiders
- Slugs
- Snails

Larger frogs (like the American Bullfrog) may also eat:

- Small fish
- Baby snakes
- Small birds
- Other frogs



## 🐸 Salamanders & Newts

Most salamanders are carnivores.

They eat:

- Worms
- Insects
- Larvae
- Small crustaceans
- Spiders
- Slugs

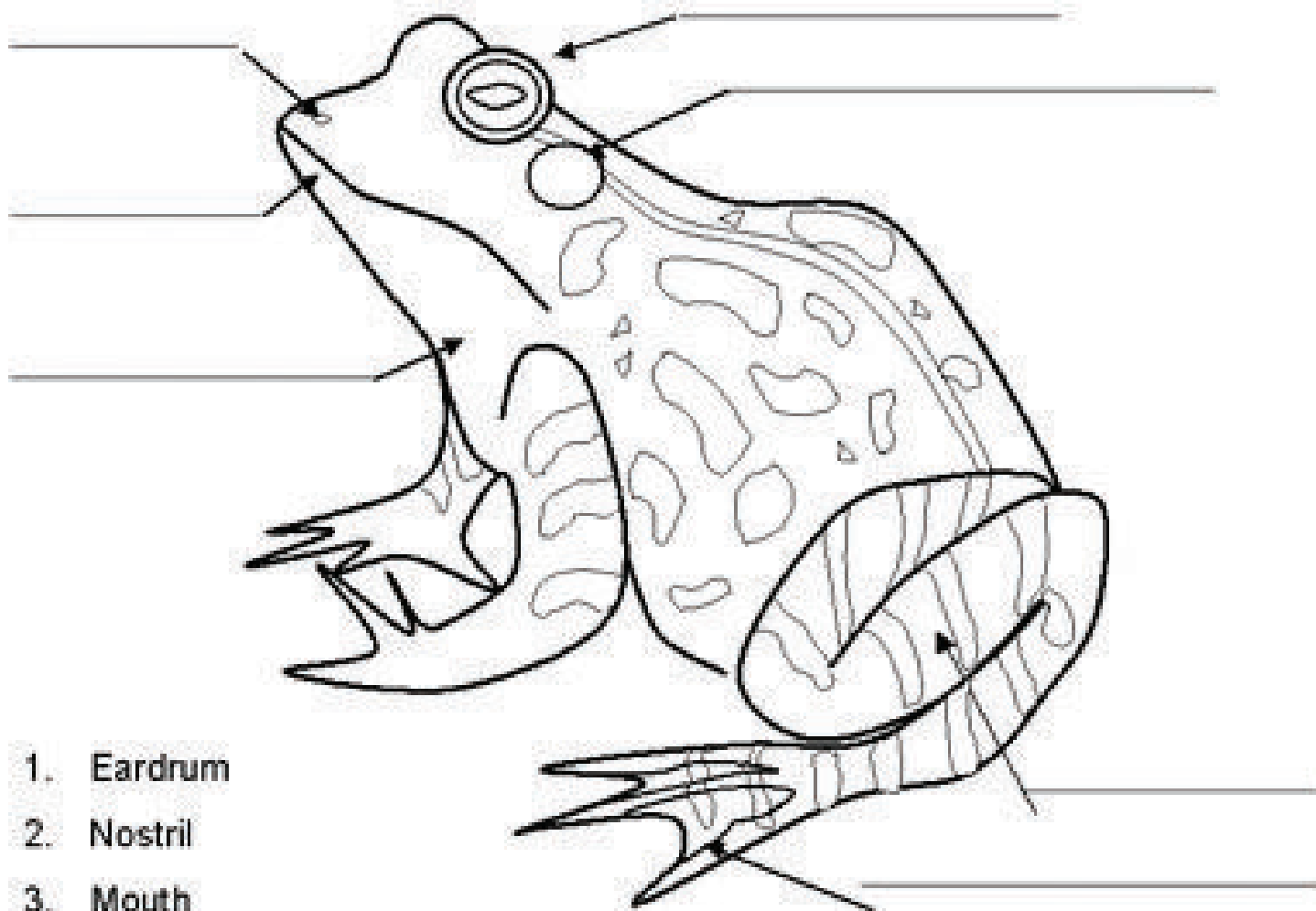
Aquatic salamanders may eat:

- Small fish
- Aquatic insects

For example, the Eastern Tiger Salamander hunts insects and small invertebrates.



# Amphibian Body Parts



1. Eardrum
2. Nostril
3. Mouth
4. Vocal sac
5. Webbed toes
6. Powerful legs
7. Eyes

**Describe one body feature:**

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# Busy in the Wetlands

Amphibians display a wide range of behaviors that help them survive, reproduce, and interact with their environment.




## 1. Movement

-  Frogs and toads hop or leap.
-  Salamanders and newts crawl or swim.
-  Many amphibians climb or burrow




## 2. Feeding

-  Most adult amphibians eat insects, worms, and small invertebrates
-  Tadpoles feed on algae or tiny organisms.
-  Frogs use sticky tongues to catch prey, while salamanders use quick strikes with their jaws.



## 3. Breeding Behavior

-  Amphibians lay jelly-like eggs in water or moist areas.
-  Many species gather in ponds or streams during breeding season.
-  Some frogs and salamanders guard their eggs, while others leave them to develop on their own.

## 4. Daily Activity Patterns

-  Many amphibians are nocturnal, meaning they are most active at night.
-  Some species are crepuscular, active at dawn and dusk.
-  During hot or dry conditions, amphibians may burrow or hide to conserve moisture.

## 5. Seasonal Behavior

-  Amphibians may hibernate in winter to survive cold temperatures.
-  In warmer seasons, they become active, feeding, breeding, and exploring habitats.

# Egg to Adult: How they Grow

Amphibians are known for their “double life,” because they live part of their life in water and part on land. Their life cycle has several distinct stages:

## 1. Egg Stage

😊 Female amphibians lay jelly-like eggs in water or damp areas.

😊 Eggs are often grouped together in clusters called spawn.

😊 The egg protects the developing embryo but must stay moist.

## 2. Larva Stage (Tadpoles)

🐸 The eggs hatch into larvae, commonly called tadpoles in frogs and toads.

🐸 Tadpoles live in water, have gills to breathe underwater, and a tail for swimming.

🐸 At this stage, most tadpoles eat plants and algae, although some may be omnivorous.

## 3. Metamorphosis

😊 Tadpoles gradually undergo metamorphosis, a major transformation.

😊 They grow legs, their gills are replaced by lungs, and their tail shrinks.

😊 This allows them to leave the water and start living on land.

## 4. Adult Stage

🐸 Fully developed amphibians are air-breathing and mostly carnivorous.



🐸 Adult frogs, toads, salamanders, and newts feed on insects, worms, and small invertebrates.

🐸 Adults return to water or moist areas to reproduce and continue the life cycle.

# Threats to Amphibians

Amphibians face serious dangers from humans and the environment:


## 1. Habitat Loss

-  Wetlands drained for farming or development
-  Forest destruction reducing moist shelter

## 2. Pollution

-  Pesticides and fertilizers
-  Contaminated water affecting eggs and skin



## 3. Earth Changes

-  Drought reduces breeding ponds
-  Temperature shifts affect hibernation and survival

## 4. Disease

-  Chytrid fungus (*Batrachochytrium dendrobatidis*)
-  Ranavirus

## 5. Invasive Species

-  Non-native fish eating eggs/tadpoles
-  Predatory plants or animals introduced to habitats

## 6. Over-Collection

-  Frogs collected for food, pets, or science

## Key Point

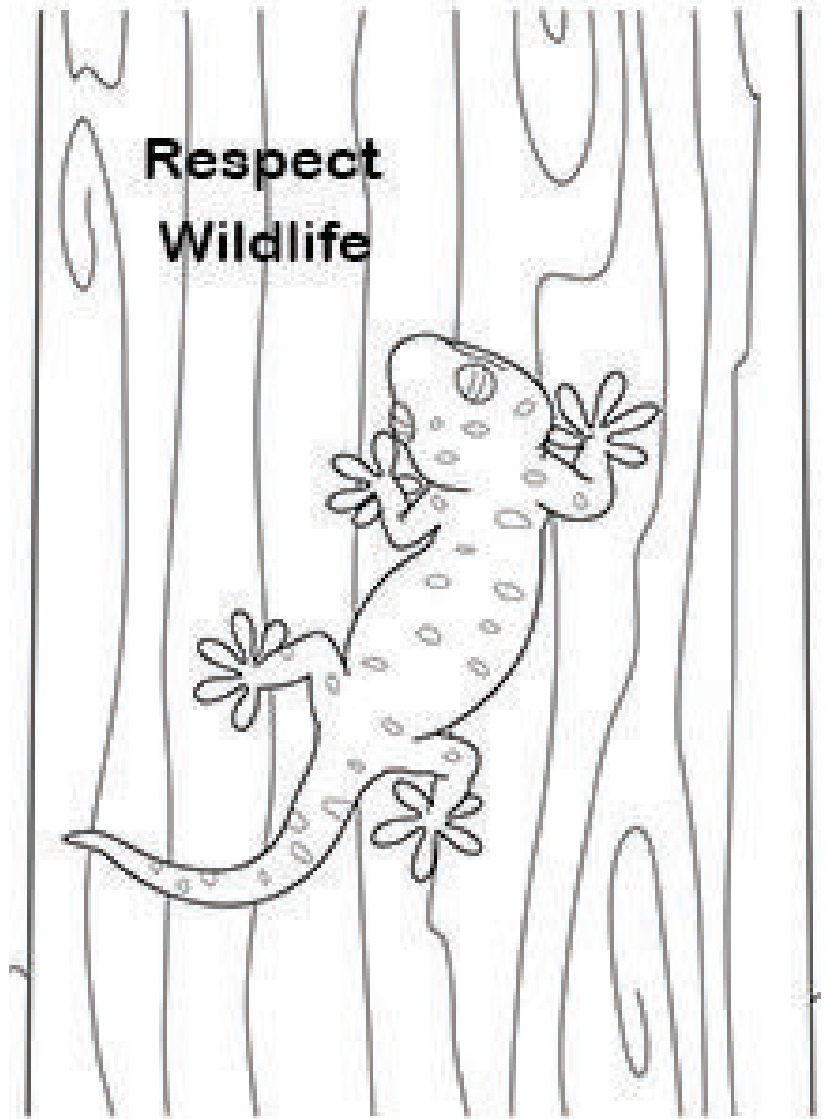
Amphibians are important indicators of environmental health, so protecting their habitats helps entire ecosystems.

# How You can Help

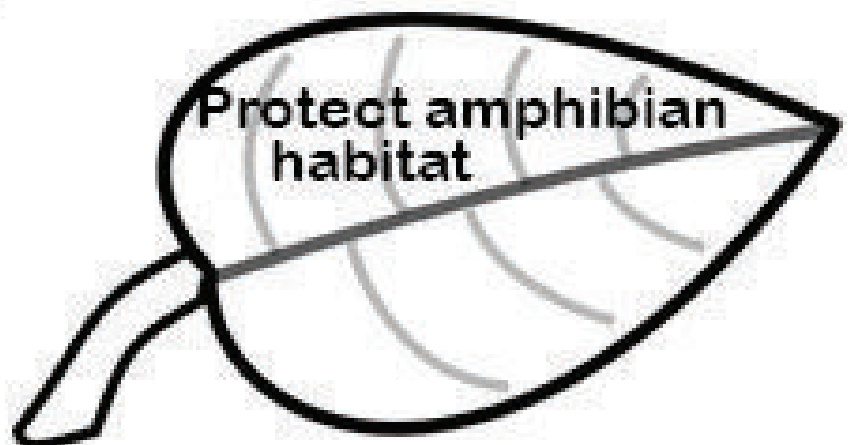
Volunteer



Respect  
Wildlife



Protect amphibian  
habitat



# Field Observations



Draw your favorite amphibian

Observations

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# Resources/Learn More

**Amphibian Survival Alliance (ASA)**

**Website: [www.amphibians.org](http://www.amphibians.org)**

**Amphibian Ark (AArk)**

**Website: [www.amphibianark.org](http://www.amphibianark.org)**

**IUCN Amphibian Specialist Group**

**Website: [www.iucn-amphibians.org](http://www.iucn-amphibians.org)**

**The Nature Conservancy – Amphibian & Wetlands Programs**

**Website: [www.nature.org](http://www.nature.org)**

**Save the Frogs!**

**Website: [www.savethefrogs.com](http://www.savethefrogs.com)**

# Reflection & Care



**Think Like a Field Biologist**

**What did you learn about amphibians?**

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**What is one thing you can do for amphibians?**

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**Observer Name:**

\_\_\_\_\_

**Date:** \_\_\_\_\_

**Location (Zoo, Reserve, Video, Book):**

\_\_\_\_\_

**Remember: Observe, Respect, and Protect the Natural World**