

# HERP HUNTER'S EXHIBIT GUIDE

Learn about the amphibians and reptiles on exhibit as you tour the Museum grounds.

## OBJECTIVES

Students will:

- Answer the questions in their Herp Hunters guide.
- Learn about the reptiles and amphibians of the Sonoran Desert.

## SUPPLIES NEEDED

One copy of the Herp Hunter's Guide (student version) per student

## GETTING STARTED

As you tour the Desert Museum with your students, ask them the following questions at the corresponding exhibit. (See your self-guided visit tour map for exhibit locations.) Encourage students to read signs, make careful observations, and discuss their answers.

## QUESTIONS

### LIZARD ENCLOSURE

**Locate and identify any lizards you can find.**

*Answers will vary*

**Describe what they are doing. How is this affecting their body temperature?**

*Answers will vary depending upon the temperature. Lizards basking in the sun are warming their bodies; those in the shade are cooling down.*

**If you can't find any lizards, explain why.**

*It's either too hot or too cold, and lizards are in rock crevices, shelters, or burrows.*

### REPTILE, AMPHIBIAN AND INVERTEBRATE BUILDING

**Study the amphibian reproduction diorama. How is the respiratory system of a tadpole different from that of a frog? Name some predators of tadpoles or froglets.**

*Tadpoles have gills and obtain oxygen from the water, where as frogs have lungs and breathe air.*

*Tadpoles and froglets have a high mortality rate and are preyed upon by garter snakes, bullfrogs, and the larva of predatory diving beetles, dragonflies, and giant waterbugs.*

**How are the life cycles of the spadefoot toad and leopard frog similar and different?**

*During mating, the male fertilizes the eggs as the female lays them. The eggs hatch into tadpoles, which undergo metamorphosis before developing into adults. It takes several months for the leopard frog to go from egg to adult, where as it takes the spadefoots less than two weeks. Spadefoot toads are adapted to life in and around temporary pools, as thus, they must mature quicker before the pools dry. Leopard frogs are found in permanent waters.*

**Which snakes give birth to live young?**

*Rattlesnakes*

**Which snakes may eat other snakes?**

*Kingsnakes eat other snakes including small rattlesnakes.*

## EARTH SCIENCES

**The first vertebrate animal found on land was an amphibian. Find the oldest fossil of an amphibian in this exhibit.**

*The oldest amphibian fossil is that of an ancient salamander. The first amphibians appeared about 400 million years ago.*

**Find the fossilized skeleton of the mesosaurus. When was this mesosaurus alive? How did this fossil help scientists prove that South America and Africa were once attached?**

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The mesosaurus lived about 270 million years ago. Fossils of this creature were found in South America and Africa. Since this creature couldn't swim across the ocean, scientists use this and other evidence to deduce that both continents were attached during this time.

## DESERT GRASSLANDS

**Find and name Arizona's only endangered snake. Why is it endangered?**

Desert-grassland massasauga. The destruction and degradation of grasslands due to agricultural expansion (which has eliminated some populations and threatens others), overgrazing, and other development activities, are the primary threats to these snakes. Mortality on roads and illegal collection are other contributing factors.

**What is unique about the nose and defense strategies of the Mexican hognose snake?**

At the tip of its nose, it has one specially adapted scale, shaped like a trowel with which it digs food (mainly toads and lizards) out of loose soil. When threatened by predators, this snake can flatten its head and neck while hissing and striking with either its head or tail. If that doesn't work, it will flop on its back and shake violently, sometimes covering itself with dirt, vomit, excrement, musk, or blood, then lies limp.

**Move the model of a rattlesnake's rattle. Describe how it works.**

The rattle is made up of keratin (like your fingernails) and the segments

loosely interlock. When vibrated, their clashing creates sound.

## LIFE ON THE ROCKS

**How long does it take for leopard frogs to mature? What other amphibian preys on their eggs?**

1 year; Non-native bullfrogs

**Describe Gila monster skin.**

Each of the Gila monsters bumpy scales contains an osteoderm or small bony plate. This is a feature common among dinosaurs.

**Which snake in this exhibit is considered the best climber?**

The Coachwhip snake. It is equally at home on the ground or in a high tree.

## DESERT TORTOISE

**What are some threats to the desert tortoise?**

Threats include off road vehicles, road construction, housing and mining developments, livestock grazing, collecting for pets, raven predation on young hatchlings, malnutrition, respiratory diseases possibly introduced by people releasing captives, and habitat destruction.

## LIFE UNDERGROUND

**Which reptile has elliptical pupils? Why are they useful?**

The western banded gecko. They help increase night vision.

**Which snake feeds on bats?**

Sonoran Lyre snake

