

Reptiles Alive! ^{LLC} presents:

Rainforests Alive!

Introduction:

Tropical rainforests are the most biologically diverse terrestrial ecosystems on our planet. More species of trees, plants, insects, reptiles, birds and other animals are found in tropical rainforests than any other place except, perhaps, tropical coral reefs. In this program, you will meet a variety of animals that live in tropical rainforests and learn how each animal is **adapted** to this **habitat**. We will also discover how the rainforest is divided into layers and learn how animals survive in these different layers. We will learn why tropical rainforests are important for animals and for all of us.

Animals you might meet in this program.

(8-11 animals in the 50-minute show; 5-7 animals in the 30-minute show)

For detailed information about each animal, visit our website: www.reptilesalive.com and click on “Animals”. You will find a picture album of our animals. Move your arrow over the pictures for the animal’s species name and click on the picture for more information.

1. Australian Carpet Python
2. Tokay Gecko
3. Prehensile Tail Skink
- 4.. Green Iguana
5. Madagascar Hissing Cockroaches
6. Giant Toad
7. Tegu Lizard
8. Amazon River Turtle
9. Honduran Milksnake
10. Boa Constrictor

What is a tropical rainforest?

Tropical rainforests are located near the **equator**, so they stay hot all year – there is no “winter” as temperate regions experience. Rainforests receive 85 inches or more of rain each year, but there may be a “dry” and “wet” season. High humidity, constant warmth, lots of sunshine, and loads of rain promote plant growth year round. Trees become enormous!

Scientists divide the rainforest into different levels:

The **emergent layer** is where the tallest trees (over 100 feet tall) break free of the canopy. In these towering tree tops live animals such as the majestic harpy eagle and the beautiful bird of paradise

The **canopy** is where most of the action in the rainforest is happening. This is where all the tree branches have grown together to form a habitat for animals such as: monkeys, macaws, iguanas, treefrogs, prehensile tail skinks, carpet pythons, and other interesting animals.

The **under story** is where all of the little trees are trying to grow and break through the branches above them. These trees may be very old even though they are small. You can find baby boa constrictors, geckos, and insects here.

The **forest floor** is at ground level. This is a very dark, twilight zone area – even in the day - because the branches and leaves above block out most of the light. In a mature rainforest, the forest floor is open and easy to walk through since plants have a hard time growing in such low light. The soil is very thin, but covered in a layer of decaying leaves that have fallen from above. Since the soil is very thin, the trees have big roots above ground called **buttress roots**. Animals such as giant toads, tegu lizards, and cockroaches are found here.

Running through the forest is the **river**. The biggest river in the world is the Amazon River, which is in the biggest tropical rainforest in the world – the Amazon Rainforest. (The Nile river is longer, but it does not carry as much water.) Periodically, the rivers will flood into the forest, and river animals like piranha fish, turtles, and caimans will swim through the trees.

Where are tropical rainforests?

Tropical rainforests are found near the equator in: Africa, Asia, Australia, Central America, and South America. They are also found on numerous tropical islands including: Madagascar, New Guinea, Puerto Rico, Hawaii and others. Temperate rainforests (rainforests that are cool and might even have “winter”) are located around the world including northwestern North America.

The largest tropical rainforest is the Amazon rainforest in South America.

Vocabulary words you might hear during the Rainforests Alive! Show:

- **Adaptation:** characteristics and behaviors that help an animal or plant survive
- **Amphibian:** ectothermic, vertebrate animals (frogs, salamanders & caecilians) that typically have moist, slimy skin, usually lay jelly-like eggs in water, and go through metamorphosis to become adults
- **Buttress Roots:** large, wide roots that anchor tall trees in the thin, tropical rainforest soil
- **Canopy:** the part of the forest where the tree branches have grown together
- **Carnivore:** an animal that eats other animals

- **Conservation:** protecting natural resources
- **Deforestation:** to clear a forest of all trees and vegetation
- **Decomposer:** animals that eat decomposing or rotting plants, animals, and animal wastes.
- **Dewlap:** a flap of skin under the chin of certain species of lizards (such as iguanas) used for communication.
- **Ectothermic:** (cold blooded) an animal that has a body temperature dependent on the temperature of the environment (reptiles and amphibians are ectothermic)
- **Emergent Layer:** the few very tall trees that stand out high above the canopy
- **Endothermic:** (warm blooded) an animal that has the ability to maintain its temperature above the temperature of the surrounding environment (mammals and birds are endothermic)
- **Forest Floor:** a dark area where very little growth occurs usually covered with fallen leaves, flowers and twigs.
- **Habitat:** a combination of climate, plants, geology and other factors combined to create an animal species' home.
- **Herbivore:** a plant-eating animal. Iguanas and tortoises are herbivores
- **Humid:** moist or damp air (Summer in our area is usually very humid)
- **Invertebrate:** an animal that does not have a backbone or spine
- **Natural Resources:** material supplied by nature
- **Niche:** the position or function of an organism in a community of plants and animals
- **Nocturnal:** animals that are active at night and sleep in the day
- **Photosynthesis:** the ability of plants and certain other organisms to create complex organic materials (including sugar) by using sunlight, water, carbon dioxide, and inorganic salts.
- **Poisonous:** an organism that contains a substance that can cause irritation, illness, or death if another organism handles or eats it. Most amphibians are poisonous.

- **Reptile:** ectothermic, vertebrate animals (snakes, lizards, crocodilians, turtles, tuataras) that have dry, scaly skin and lay eggs with a shell or give birth to live young.
- **Species:** groups of plants or animals that reproduce young like themselves
- **Territory:** an area within a larger environment that an individual protects from invasion from others of the same species. Iguanas will fight to protect their territory.
- **Tropics (tropical):** region of our planet lying between the Tropic of Cancer and the Tropic of Capricorn, 23-27 degrees north or south of the equator.
- **Under story:** the forest layer beneath the canopy that is very shady, so the plants and trees are usually very small.
- **Vertebrate:** an animal with a backbone or spine

Suggested Activities to Do Before or After the Rainforests Alive! Show:

Math: The two largest snakes in the world both live in the tropical rainforest. The Reticulated Python lives in the rainforests of South-East Asia and the Anaconda lives in the rivers of South America. Both of these snakes have been reported to reach 30 feet in length!!!! **Have your students measure 30 feet and find out:**

1. How many students standing in line does it take to reach 30 feet?
2. How many inches are in 30 feet?
3. How many meters are in 30 feet?
4. How many centimeters are in 30 feet?

Language/Reading/Speaking: This is a great activity to do after the show. Let the students know that they are going to be “Wildlife Educators,” just like the Wildlife Educator who came from Reptiles Alive. Go to the library and have the students pick out rainforest or animal books. Have each student pick a favorite animal that lives in the tropical rainforest. Now see if the student can find the answers to these questions and have them do a “show” about their animal. It’s even better if they have a picture or toy of the animal to show the class while they do their presentation.

1. What part of the world does this animal come from? (Asia, Africa, etc...)
2. What part of the rainforest does it live in?
3. What are the animal’s favorite foods?
4. How does it get its food?
5. How does it escape from its enemies?
6. How big does it get?
7. What makes this animal special/interesting/important?

Art: Let the students paint or draw their favorite animal from the Rainforests Alive! Show.

Have the students paint or draw the different layers of the rainforest and then draw some of the animals that live in the different layers. This is especially fun as a mural project. Play an audio recording of the tropical rainforest (you can get “mood” tapes/CDs of the tropical rainforests and most music/book stores) while the students are working on their art.

More Information:

The National Wildlife Federation has a FANTASTIC series of books for teachers called “Nature Scope.” Contact the NWF to purchase a copy of the Tropical Rainforest edition of this great series.

The National Zoo in Washington, DC and the National Aquarium in Baltimore, MD both have wonderful rainforest exhibits. Take a field trip or suggest to the students that they go with their family to see these beautiful and educational exhibits.

For general questions about the Rainforests Alive! Show presented by Reptiles Alive! LLC, please contact us at 703-560-0257.

We are happy to answer student questions through email – our email address is reptilesalive@gmail.com

You can also visit Reptiles Alive! LLC on the web at www.ReptilesAlive.com
Reptiles Alive! is the most popular traveling wildlife education organization based in the northern Virginia and Washington DC area. Our award winning live animal shows feature amazing animals and dynamic wildlife educators. Audiences of all ages agree that Reptiles Alive! is a fantastic experience.

Since 1996, Reptiles Alive! has performed thousands of animal shows at schools, birthdays, fairs, libraries, and special events. Each year, our reptiles are featured at venues including The Smithsonian, The Discovery Channel, Celebrate Fairfax, Virginia State Parks, and hundreds of school, park, and library systems.

Book your show now! Call Reptiles Alive! at 703-560-0257.

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