

The Tropical Rainforest: Nature's Hothouse

Educational Handout

The canopy is almost a solid layer of leaves - only 2% of the sunlight reaches the forest floor.

Many people still rely on the rainforest for their way of life.



About 50% of the medicines we use today are derived from rainforest plants.

One acre of rainforest may contain 300 species of trees, 600 plant species and 17,000 insect species.



How much have you learned?

1. Name one animal that plays an important role in seed dispersal?
2. Why do trees make fruit?
3. What two environmental factors do you need to grow a tropical rainforest?
4. What's the most plentiful insect in a tropical rainforest?
5. From which animals do the South American Indians get the poison for their darts?
6. Are there more meat eaters or more plant eaters in a rainforest?
7. What is the longest river in the world?
8. What are two ways you can help save rainforests?
9. Why are mosquitoes the most dangerous animals in a rainforest?
10. What are the four main layers of a tropical rainforest?
11. If you dropped a banana peel in your backyard and one in the rainforest which one will decompose faster?
12. Name two animals that you saw today that have prehensile tails?
13. If you were an Indian living in the rainforest and your job was to provide food for the village what weapon would be the most efficient: a blowgun or shotgun? Why?
14. Name one method a snake might use in the rainforest to escape predators?
15. If you were an animal living in the rainforest which animal would you be? Why?

True or False

1. Some modern medicines are derived from rainforest plants.
2. You can grow a tropical rainforest anywhere.
3. There are many insects still undiscovered in the Amazon Basin.
4. There are no tribes that rely on the rainforest for their survival.
5. Fruit bats act as pollinators.
6. There are no rainforests in the United States.
7. The largest tropical rainforest is located in Africa.
8. I can find products from the rainforest in my local grocery store.
9. All plants and animals are independent; they do not rely on one another for survival.
10. Poison dart frogs are the decomposers of the rainforest.
11. The soil of a tropical rainforest is rich in nutrients.
12. Some rainforests get more than 400 inches of rain in one year.

Answers to page 1

1. Macaws, Kinkajous, primates, fruit bats, tortoises, anything that eats fruit.
2. To bribe animals into spreading their seeds.
3. Water and heat.
4. Ants.
5. From poison dart frogs.
6. Plant eaters.
7. Amazon.
8.
 - Don't buy lumber made from rainforest trees such as teak and mahogany.
 - Visit rainforests if you can. Tourist dollars coming into a country can persuade a government to protect these areas for economic reasons.
 - Make contributions or donations to conservation organizations.
 - Purchase products from the rainforest that promote the preservation of the rainforest, such as Brazil nuts - they can only be harvested from mature trees which can only grow in viable rainforests.
 - Don't buy wild caught exotic pets, this encourages people to rape wild populations which weaken a species gene pool and its numbers.
9. Mosquitos spread diseases such as yellow fever and malaria. They are responsible for killing more humans than any other animal on Earth.
10. The Forest Floor, the Understory, Canopy and Emergent Layer.
11. The banana peel in the rainforest will decompose faster because the heat and humidity speed up the rotting process.
12. Boa Constrictor, Eyelash Viper, Kinkajou and Green Tree Python.
13. A blowgun would be much more efficient. A shotgun is loud and would scare away wildlife. It would also rust in the humid rainforest.
14. Camouflage, warning colors, by vibrating the tail, a bluff.

Answers to page 2

1. True - Quinine which is used to treat malaria is just one example. Chemicals from rainforest plants are used to treat medical conditions such as - cardiac, respiratory and blood pressure disorders, rainforest derived chemicals are also used in painkillers, muscle relaxers and anesthetics.
2. False - You need heat and water to grow a tropical rainforest.
3. True - Scientists fear that many species will become extinct before they can be discovered.
4. False - Many tribes live in the tropical rainforests of Central and South America and depend on them for their survival.
5. True - Fruit bats are considered pollinators as well as bees, butterflies, and hummingbirds.
6. False - The United States contains a temperate rainforest.
7. False - The Amazon Basin contains the largest tropical rainforest 2.5 million square miles.
8. True - Products like coconut, brazil nuts, coffee, cocoa and pineapple are all from the rainforest.
9. False - Many plants and animals interact with one another either directly or indirectly and are dependent on one another for their survival. For example poison dart frogs are safe from predators because their bright colors convey their toxic nature. It is the food that poison dart frogs consume that make them toxic. When taken out of the wild and kept in captivity they lose their toxicity.
10. False - They eat insects not plants. Millipedes are decomposers they consume plant matter on the forest floor.
11. False - Unlike a temperate rainforest tropical forest soil is barren of nutrients, they receive so much rain that important nutrients get washed away.
12. True - The temperate rainforests of the Northwest can exceed 400 inches a year.

Down

1. Largest venomous snake in the world. (two words)
2. Rainforest mammal with a prehensile tail.
3. Insect whose name means a thousand legs.
4. Colorful tree dwelling snake named for prominent facial feature. (two words)
5. Mammal that spends it's entire life upside down. (two words)

Across

1. This viper has the longest fangs of any snake, a good example of camouflage. (two words)
2. Beautiful small constrictor. (two words) All the colors of....
3. An arachnid.
4. An amphibian named after a fruit. (two words)
5. The native Indians need this animal to aid their hunt. (three words)
6. An amphibian big enough to eat mice. (two words)
7. Insects people love to hate.

The crossword puzzle grid consists of the following numbered squares:

- Down 1:** 1 square at the top right.
- Across 1:** 11 squares, starting from the 4th square of Down 1.
- Down 2:** 3 squares, starting from the 8th square of Across 1.
- Across 2:** 8 squares, starting from the 4th square of Down 2.
- Down 3:** 10 squares, starting from the 4th square of Across 2.
- Across 3:** 10 squares, starting from the 4th square of Down 3.
- Down 4:** 10 squares, starting from the 4th square of Across 3.
- Across 4:** 11 squares, starting from the 4th square of Down 4.
- Down 5:** 10 squares, starting from the 4th square of Across 4.
- Across 5:** 11 squares, starting from the 4th square of Down 5.
- Down 6:** 10 squares, starting from the 4th square of Across 5.
- Across 6:** 10 squares, starting from the 4th square of Down 6.
- Down 7:** 10 squares, starting from the 4th square of Across 6.

- Across
1. Gaboon Viper
 2. Rainbow Boa
 3. Tarantula
 4. Tomato Frog
 5. Poison dart Frog
 6. Marine Toad
 7. Cockroaches
- Down
1. King Cobra
 2. Kinjajou
 3. Millipede
 4. Eyelash Viper
 5. Fruit Bat