Ranger Report
About Animal Adaptation
About animal adaptation:

An animal will change to become better suited to its environment. The change could be large or small and in most cases, occurs over time. Species have adapted to the tropical rainforest and most are not found anywhere else on earth.

Tropical rainforests are almost perfect for animal survival. It is always warm, and there are no season changes that cause food shortages. There is never a shortage of water even during the dry seasons. And, the animals can cool off under the trees and use the trees to protect themselves from the rain.

While receiving over eighty inches of rain a year, animals that live in the rainforest must adapt to life in this wet ecosystem. Mammals that live in the tropical rainforest will have coats with sleek fur. Their coat will repel the water. Additionally, they don’t need their coats to keep them warm since the temperature is warm or hot all year long.

Tropical Rainforest: Animal Adaptations


Because there are so many creatures living in the rainforest, there is a great deal of competition for food, sunlight and space. Animals have developed special features in order to survive. This is called adaptation.
Some animals became very specialized. This means that they adapted to eating a specific plant or animal that few others eat. For example, parrots and toucans eat nuts, and developed big strong beaks to crack open the hard nuts.

Leafcutter ants climb tall trees and cut small pieces of leaves which they carry back to their nest. The leaf pieces they carry are about 50 times their weight. The ants bury the leaf pieces and the combination of the leaves and the ants' saliva encourages the growth of a fungus, which is the only food these ants eat.

There are relationships between animals and plants that benefit both. Some trees depend on animals to spread the seeds of their fruit to distant parts of the forest. Birds and mammals, such as bats, eat the fruits and travel some distance before the seeds pass through their digestive systems in another part of the forest.

One problem with specialization is if one species becomes extinct, the other is in danger too unless it can adapt in time. One example is that of the dodo and the calvaria tree. The dodo, a flightless bird of Mauritius, became extinct in 1681. Today there are just 13 calvaria trees left on the island, each over 300 years old, and nearly at the end of their life. Scientists realized that the seeds had to pass through a dodo's digestive system before they could germinate (begin to grow).
It seemed that the tree species would also become extinct, but scientists tried domestic turkeys and have successfully managed to germinate some seeds.

Many rainforest animals use camouflage to 'disappear' in the rainforest. This grasshopper is transparent and very hard to spot on a leaf.

Stick insects are perfect examples of this. There are some butterflies whose wings look like leaves. Camouflage is of course useful for predators too, so that they can catch prey that hasn't seen them. The boa constrictor is an example of a camouflaged predator.

The three-toed sloth uses camouflage and amazing slowness to escape predators. Green algae grows in the sloth's fur, which helps camouflage it in the forest canopy. Sloths are among the slowest moving animals of all (inside too, as it takes about a month to digest food). They hang from branches in the canopy, and are so still that predators such as jaguars don't see them.

Some animals are poisonous, and use bright colors to warn predators to leave them alone. There are several species of brightly colored poison arrow frogs. Native Central and South American tribes used to wipe the ends of their arrows onto the frog's skin to make their arrows deadly poisonous.
DID YOU KNOW FACTS:

- Only the smarter and stronger animals who successfully adapt to the environmental conditions, survive (Rule: survival of the fittest).

- Natural colors (green, blue, brown, yellow) and designs (stripes, dots), etc. help animals hide from the predators.

- Nocturnal animals succeed in avoiding high temperatures of the day and reducing competition for food by being active at night.

- Forest jaguar's stocky and muscled, smaller size (than those in open areas) are a result of its millennia long adaptation to its environment. Forests have smaller number of large herbivorous preys. The smaller size of jaguar is also suitable for living in the trees.

- Toucans’ adaptations such as big bills to eat, perfect claws to stand on the trees (two claws in the front and two in the back), correct color to blend into the surroundings have helped them survive.

- Spider monkeys live in the upper canopy layers of rainforests, preferring undisturbed habitat, almost never coming to the ground. Their long limbs and strong tail are good examples of rainforest biome adaptations. They swing through the rainforest canopy and hang suspended by their tails. The powerful prehensile tail plays the role of a fifth arm and is often used for balance or just hanging out.

- Many tropical rainforest animals have a diet that includes a large amount of fruit which is available year round.
TEST YOUR KNOWLEDGE

1. True or false: Nocturnal animals succeed in avoiding low temperatures of the day.

2. How have animals adapted in order to survive?
   
   A - Eat fruits that are plentiful year round
   B - Camouflage
   C - Bright colors to warn predators they are poisonous
   D - All of the above

3. True or false: Toucans have adapted by having very plain bills so not to attract attention.

4. True or false: Some insects have adapted to look like plants.

ANSWERS:

1. False
2. D
3. False
4. True