

Layer Logic (K-8)

In order to study the rainforest, scientists divide it up into four layers. Each layer has its own characteristics, listed below. You may also want to visit the following websites for more information on rainforest layers:

http://www.pbs.org/tal/costa_rica/layers.html

<http://www.pbs.org/journeytoamazonia/>

<http://www.zoomschool.com/subjects/rainforest/Strata.shtml>

- I. Forest Floor
 - From 0-7 feet above ground
 - No wind (the air is very still)
 - Only 2% of rainfall reaches the forest floor
 - Only 1% of sunlight reaches the forest floor
 - Cooler, more constant temperatures
 - High humidity
 - Animals: insects (beetles, mantids, flies, butterflies, bees, grasshoppers, ants, wasps, termites, mosquitoes, cockroaches), anoles, frogs, caiman, anacondas, tapirs, jaguars, anteaters
 - The forest floor is often open and passable

- II. Understory
 - From 7-60 feet above ground
 - Very little wind or rain
 - Very little sunlight
 - Cooler, more constant temperatures
 - Higher humidity
 - Animals: ocelots, bats, insects, some reptiles
 - The only layer where cocoa beans can grow

- III. Canopy
 - From 60-150 feet above ground
 - More wind and movement
 - Receives 100% of rainfall towards the top of the canopy, but only 5% reaches the lower canopy
 - Receives 100% available sunlight towards the top of the canopy, but only 5% reaches the lower canopy
 - More variations in temperature between the upper and lower levels of the canopy
 - Less humid than lower rainforest levels

- Animals: toucans, hawks, owls, pigeons, hummingbirds, parrots, macaws, sloths, primates, kinkajou, anteaters, iguanas, moths, emerald tree boas, butterflies

IV. Emergent Layer

- 150 or more feet above ground
- strong winds and heavy rains
- bright tropical sunlight (receives 100% of sunlight)
- high temperatures
- less humid due to high rate of evaporation
- animals: nighthawks, swifts, harpy eagles, geckos, macaws, primates

Materials

Large sheet of paper

Markers, crayons, colored pencils, etc

Tape

Procedure

Take the sheet of paper and tape it to a wall or backboard.

Divide the paper into four sections by drawing four parallel horizontal lines.

Each section represents a different layer of the rainforest.

Have each student participate by first drawing trees and plants, and then each adding an animal to the mural.

Observations/ Questions for Discussion

Which layer has the most animals in it?

What animal did you draw?

Would you ever find your animal in any different layers, other than the one you drew?

What would happen to the animals in one layer if animals in a different layer disappeared?