

# Temperate Forest or Tropical Rainforest?

*Please use this checklist to confirm that all of the parts of this station are in this bag both when it is unpacked before the OSF Science Night AND when it is re-packed after your event.*

- Table sign, laminated
- Explanation /What to Do sheet, laminated
- Answer Sheet, laminated
- 20 cards, laminated with Velcro on the back  
(10 green Rainforest cards, 10 orange Temperate Forest cards) The answer (a letter that matches the plant or animal on the poster) is on the back of each card.

You will need to set up the Passport Question the Red-eyed Vireo at this station. It can be found in the PASSPORT bag.

The "Temperate or Tropical" poster and a wooden easel should also be placed at this station. Twenty pieces of Velcro are attached to this poster, one at each picture.

## **What you will need to provide for this activity station:**

- Tape to attach table sign

## TEMPERATE FOREST OR TROPICAL RAINFOREST?

### Explanation/Background:

Tropical rainforests are quite different from Georgia's temperate forests, both are very important for the overall biodiversity of the world. Here is some information about rainforests:

- Rainforests are located in tropical climates throughout the world. They can be found in temperate climates also, such as in the Pacific Northwest of the United States.
- Rainforests have high rainfall. By conserving water beneath their dense canopy and under their groundcover, they contribute to the water cycle. This is why clearing rainforests can lead to desertification (when areas change from habitable land to desert).
- Rainforests have dense canopies that reduce sunlight. Therefore many plants must devise strategies to get sunlight energy. Some ways in which plants capture light include growing away from the ground soil, by growing on trees (epiphytes), climbing trees (vines), or increasing the size of their leaves (forest floor plants).
- Rainforests have shallow and relatively infertile soils. One result of infertile soils is that tall trees need extra support such as buttresses. The nutrients that enrich the soil and support the lush growth depend on the efficient work of bacteria, fungi and small invertebrates to recycle nutrients from all the dead plants and animals. If the rainforest is cleared, the soil is too poor for crops and erodes easily.
- Rainforests have more species of plants and animals than temperate areas. However, the species may have smaller and more localized populations, meaning they are more likely to become endangered or extinct as the rainforests are cut down.



### What You Will Do:

Identify differences between Georgia temperate forests and tropical rainforests and recognize common characteristics of both forests.

### What You Need:

- Poster with 20 pictures of Georgia and Ecuadorian forest characteristics, plants, species, etc. (Velcro will be on poster at each picture.)
- Cards with descriptions of plant or animal found in a temperate forest or tropical rainforest on front and Velcro on the back
- Area on table for cards
- Easel on which to display poster

**What To Do:**

1. Place the poster on the easel on the table or on the floor if necessary for students to be able to reach it.
2. Participants are to examine the pictures and try to differentiate between the two forests.
3. Participants will then examine the cards with written descriptions of plants and animals from the two forests and match the cards to the appropriate picture with Velcro.
4. If more than one participant is present, they should be encouraged to match only a few cards instead of all twenty.
5. After participants have finished, facilitator should remove cards from the poster and place them back in the basket.

## TEMPERATE FORESTS

*The following descriptions will be written on individual cards, one description per card.*

A White-tailed deer are native to temperate North American forests. Its loss of habitat and predators has resulted in over-population. You would not find deer in a tropical rainforest. Animals often need a particular kind of habitat to live.

D Epiphytes grow in Georgia forests as well as in tropical forests. This Spanish moss is often found in the southern part of Georgia.

E In a temperate forest, hardwood trees are bare in the winter. Rainforest trees shed their leaves all year long.

F This Loblolly Pine is a medium-sized tree that often has clumps of needles on its trunk and has a broad, rounded crown of horizontal branches. Pines are conifers, meaning they stay green year-round and do not lose their leaves. Coniferous forests are common to temperate and more northern climates.

L In the fall, leaf litter covers the floor of Georgia hardwood forests. This leaf litter will be recycled by small invertebrates, fungi, and bacteria. The nutrients in the litter will enrich the forest soil. This recycling is particularly important in rainforests because the soil is usually very poor.

M The Gopher Tortoise is Georgia's State reptile. They live in burrows in Longleaf Pine forests of South Georgia.

N Georgia hardwood tree leaves change color in the Fall. In the rainforest, leaves remain green year round.

Q This stream is in a Georgia forest, but there are streams and ponds in rainforests too. The forests protect the streams from soil erosion and help keep the water clean.

R This squirrel is native to Georgia forests. There are other species of squirrels found in rainforests that look quite similar to the squirrels in Georgia forests. It is not uncommon to find animals from the same families or even genera in these different forests.

T Like many migratory birds, this brilliant yellow Prothonotary Warbler lives in North America and migrates to South American rainforests for the winter.

## TROPICAL RAINFORESTS

*The following descriptions will be written on individual cards, one description per card.*

**B** Vines hang all over the rainforest. They are examples of how plants may climb up tree trunks in search of more sunlight. Vines can also be found in Georgia forests.

**C** Like many migratory birds, this bright red Summer Tanager lives in North America and migrates to South American rainforests for the winter.

**G** The tall trees of the rainforest often have giant buttresses to support them. One reason they need such support is that rainforests have very shallow soil.

**H** The leaves of these ground plants have to grow big to capture as much sun as possible. Leaves are important in absorbing carbon dioxide and replenishing oxygen in the air. Because of this, they are very important in slowing down global warming.

**I** Butterflies like this Swallowtail might be seen on a rainforest path, particularly if there is some sunlight. Other species of swallowtails can be found in Georgia. It is not uncommon to find animals from the same families or genera in different forests.

**J** Leaf-cutting ants like these are common to North and South American rainforests (some are in Texas and Louisiana, too). These and other invertebrates help the soil by aerating it (tunneling). They also help to recycle plant matter.

**K** Most monkeys are rainforest animals. Temperate climates are too cold for them to live in.

**O** Bromeliads are common rainforest epiphytes. Epiphytes, sometimes called air plants, grow on other plants that give them physical support but not nutrients. In the rainforest, these plants commonly grow on trees so they are able to capture more sunlight.

**P** The rainforest canopy is high and dense. It cuts out sunlight all year long. It is home to many animals, some of which are still undiscovered.

**S** Rainforests have amazing biodiversity. There are more species of plants per acre in these forests than in any other areas of the world.