Field Trip Orientation

An amazing array of plants and animals live in the damp rainforests of the world. We’ll explore this unique environment using our collection of tropical plants in the Conservatory. A rainforest puppet show and mural activity, a plant discovery hunt, and other hands-on activities will help children explore the world of tropical rainforests, plant adaptations and conservation.

A Field Trip for Grades 1-5
The State Botanical Garden of Georgia
University of Georgia
Revised 12/07
# Really Remarkable Rainforests
## Pre and Post Field Study Packet

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### Pre Field Study Activities

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Really Remarkable Rainforests!
Welcome, Orientation, and Ground Rules:

Welcome! We are looking forward to your field trip at the State Botanical Garden of Georgia. When you arrive please go to the Visitor Center; a field trip instructor will be at the entrance to greet you. You may give payment for the field trip to the instructor at that time. He or she will have a receipt for you. Check to make sure the amount on the receipt matches that of your check. Often the number of students changes between the time of registration and the actual date of the field trip.

The instructor can direct you to the restrooms in the Visitor Center, and when everyone is ready to get started, you will be led to the Children's Classroom.

Once everyone is seated, and instructor will welcome the students and orient them to the Botanical Garden with a short introduction.

Review the rules for the field trip experience:

1. When in the Visitor Center, do not pick a plant or flower without permission from your guide or teacher. This includes grabbing at leaves as you walk by them. If instructed, touch the plants gently to feel the texture or to smell scents.

2. Stay on the pathways, unless otherwise instructed by your guide or teacher. There are many tiny plants that are put on the edges so you can see them, but they can also be easily hurt by a misplaced shoe.

3. Listen carefully to your guide’s directions and information. There are several beautiful gardens to explore, but if you get lost it will be no fun for you, your teachers, or your classmates.

To enhance your learner’s experience during their field study, we hope you will be able to complete some of the pre and post trip activities listed in this packet. This will help them to absorb the information given in the field trip.

Most of all, enjoy your field trip at the State Botanical Garden of Georgia!
Pre and Post Field Study Packet

Really Remarkable Rainforests
A Field Study for First – Fifth Grade Students

Overview:

The tropical rainforests of the world are considered "hot spots" of plant and animal diversity. One square meter of rainforest houses more plant and animal species than anywhere else on the planet! Plant and animal products from the rainforest have become important to humans and can be found in most kitchens, medicine cabinets, and households.

Tropical rainforests face pressure from encroaching development, deforestation, erosion, and global warming. Degradation of rainforests has led to a high rate of species extinction. According to E.O. Wilson, 74 species are lost each day in the tropics alone.

In this field trip, students will explore this unique environment using the collection of over 150 tropical plants in the Botanical Garden Conservatory. Through an interactive puppet show and several observation activities, students will explore the many wonders of the rainforest and learn how humans depend on and affect the tropical rainforest ecosystem.

The program introduces the following concepts:

Tropical rainforests consist of four main layers: the soil, the understory, the canopy, and the emergence.

Plants and animals have special adaptations that allow them to survive in their environment.

Tropical rainforests provide gifts, such as foods, medicines, and building materials that make our lives better.

Tropical rainforests provide clean air for the whole world.

Tropical rainforests, and the plants and animals that live in them, are threatened by extinction.

<table>
<thead>
<tr>
<th>Time Allotment:</th>
<th>1 ½ - 2 hours</th>
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<tr>
<td>Location:</td>
<td>Indoors at the Botanical Garden Conservatory</td>
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Field Study Outline:

The outline below describes activities for the Really Remarkable Rainforest Field Study. Grade level and numbers of visiting group may determine which activities are available.

Goal:
To introduce students to the numerous ways in which humans use the rainforest and to increase awareness about the large numbers of rainforest plants and animals that are threatened by extinction.

In the Classroom:

- The field trip begins with a brief introduction to the botanical garden and rainforests. Children can be asked to find different rainforest environments on a globe and to discuss what they know about the rainforest.
- An interactive Puppet Show will be presented. A puppet character named Dr. Arrow will take students on a journey through the layers of the rainforest where he will meet resident plants and animals. After each layer, students will affix pictures of plants and animals found in that layer onto the mural.

In the Conservatory:

- In small groups students will be led through three or four of the following eight activities:
  - Dr Arrow’s Plant Hunt
  - Sniff the Rainforest
  - Rainforest Shopping Trip
  - Adaptation Hunt
  - Learning About Leaves
  - I Spy with my Rainforest Eye
  - Discovering Microscopes (in the classroom)

- The field study will conclude with the activity called Rainforest Web of Life. This activity helps students visualize the interconnected nature of all plants, animals, and people in the rainforest.
REALLY REMARKABLE RAINFOREST FIELD TRIP
GEORGIA PERFORMANCE STANDARDS

SCIENCE
S1CS3 Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities.
   a. Use ordinary hand tools and instruments to construct, measure, and look at objects.

S2CS3 Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities.
   a. Use ordinary hand tools and instruments to construct, measure, and look at objects.

S3CS2 Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.
   a. Add, subtract, multiply, and divide whole numbers mentally, on paper, and with a calculator.
   b. Use commonly encountered fractions – halves, thirds, and fourths (but not sixths, sevenths, and so on) – in scientific calculations.

S3CS3 Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities utilizing safe laboratory procedures.
   b. Use computers, cameras, and recording devices for capturing information.
   c. Identify and practice accepted safety procedures in manipulating science materials and equipment.

S3CS4 Students will use ideas of system, model, change, and scale in exploring scientific and technological matters.

S3CS8 Students will understand important features of the process of scientific inquiry.
   Students will apply the following to inquiry learning practices:
   a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.
   c. Scientists use technology to increase their power to observe things and to measure and compare things accurately.

S3L1 Students will investigate the habitats of different organisms and the dependence of organisms on their habitat.
   d. Explain what will happen to an organism if the habitat is changed.

S3L2 Students will recognize the effects of pollution and humans on the environment.
   a. Explain the effects of pollution (such as littering) to the habitats of plants and animals.
   b. Identify ways to protect the environment.
      1. Conservation of resources
      2 Recycling of materials

S4CS2 Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.
   a. Add, subtract, multiply, and divide whole numbers mentally, on paper, and with a calculator.
   b. Use fractions and decimals, and translate between decimals and commonly encountered fractions – halves, thirds, fourths, fifths, tenths, and hundredths
(but not sixths, sevenths, and so on) – in scientific calculations.

**S4CS3** Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities utilizing safe laboratory procedures.

**S4CS3** Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities utilizing safe laboratory procedures.

- a. Choose appropriate common materials for making simple mechanical constructions and repairing things.
- b. Measure and mix dry and liquid materials in prescribed amounts, exercising reasonable safety.
- c. Use computers, cameras, and recording devices for capturing information.
- d. Identify and practice accepted safety procedures in manipulating science materials and equipment.

**S4CS5d.**

**S4CS8** Students will understand important features of the process of scientific inquiry.

Students will apply the following to inquiry learning practices:

- a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.
- c. Scientists use technology to increase their power to observe things and to

**S4L1** Students will describe the roles of organisms and the flow of energy within an ecosystem.

- a. Identify the roles of producers, consumers, and decomposers in a community.
- b. Demonstrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers.
- c. Predict how changes in the environment would affect a community (ecosystem) of organisms.
- d. Predict effects on a population if some of the plants or animals in the community are scarce or if there are too many.

**S4L2** Students will identify factors that affect the survival or extinction of organisms such as adaptation, variation of behaviors (hibernation), and external features (camouflage and protection).

- a. Identify external features of organisms that allow them to survive or reproduce better than organisms that do not have these features (for example: camouflage, use of hibernation, protection, etc.).
- b. Identify factors that may have led to the extinction of some organisms.

**S5CS2** Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

- a. Add, subtract, multiply, and divide whole numbers mentally, on paper, and with a calculator.
- b. Use fractions and decimals, and translate between decimals and commonly encountered fractions – halves, thirds, fourths, fifths, tenths, and hundredths (but not sixths, sevenths, and so on) – in scientific calculations.

**S5CS3** Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities.
a. Choose appropriate common materials for making simple mechanical constructions and repairing things.
b. Measure and mix dry and liquid materials in prescribed amounts, exercising reasonable safety.
c. Use computers, cameras, and recording devices for capturing information.
d. Identify and practice accepted safety procedures in manipulating science materials and equipment.

**S5CS8** Students will understand important features of the process of scientific inquiry.
Students will apply the following to inquiry learning practices:

a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.
b. Scientists use technology to increase their power to observe things and to measure and compare things accurately.

c. **S5P1** Students will verify that an object is the sum of its parts.
b. Investigate how common items have parts that are too small to be seen without magnification.

**LANGUAGE ARTS**

**ELA1LSV1** The student uses oral and visual strategies to communicate. The student
b. Recalls information presented orally.
c. Responds appropriately to orally presented questions.

**ELA2LSV1** The student uses oral and visual strategies to communicate. The student
a. Interprets information presented and seeks clarification when needed.
d. Listens to and views a variety of media to acquire information.

**ELA3LSV1** The student uses oral and visual strategies to communicate. The student
d. Listens to and views a variety of media to acquire information.

**ELA4LSV1** The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student
c. Responds to questions with appropriate information.

**ELA4LSV2** The student listens to and views various forms of text and media in order to gather and share information, persuade others, and express and understand ideas.
When responding to visual and oral texts and media (e.g., television, radio, film productions, and electronic media), the student:
c. Judges the extent to which the media provides a source of entertainment as well as a source of information.

**ELA5LSV1** The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student
c. Responds to questions with appropriate information.
f. Displays appropriate turn-taking behaviors.
j. Volunteers contributions and responds when directly solicited by teacher or discussion leader.
Really Remarkable Rainforests Field Study

An amazing array of plants and animals live in the humid rainforests of the world. In this field study we will explore this unique environment using the Botanical Garden’s collection of tropical plants in the Visitor Center. A rainforest puppet show and mural activity, a plant discovery hunt, and other hands-on activities will help children explore the world of rainforests, plant adaptations and conservation.

Pre Field Study Activities

- Color pictures of rainforest animals, fungi, and plants that will be used in the puppet show / mural activity. The name of each organism is also given in Spanish. (See enclosed pictures)

- Color rainforest areas on a world map. (Map included)

- Read Walk in the Rainforest by Kristin Joy Pratt. Children will "meet" a number of plants and animals that live in the rainforest.

Optional

- Read the story, The Great Kapok Tree, by Lynne Cherry. Follow up activity: Name animals from the rainforest.

- Read Shel Silverstein’s book, The Giving Tree. Follow up activity: If trees really had feelings, how would the last mahogany tree of the rainforest feel about its life? Have the students draw the tree and write a story about it.
Keel-billed Toucan

Tucan Pico Iris

tucan=toucan

This social bird lives in small flocks. They are poor flyers and prefer to jump from tree to tree. Because Toucans swallow fruit whole and then regurgitate the seeds, they are important seed dispersers in the rainforest.

Home range: Lowland rainforests of South America
Diet: Mostly fruit but also bird eggs, insects, and tree frogs.
Picture Color: Main body = Black
Chest = Yellow with red border
Beak = Light green with an orange spot
Feet = Blue
Poison Dart Frog
*Rana=frog*

These small frogs lay their eggs in water which collects in the leaf-cups of bromeliad plants. This family of frogs is unusual because parents take care of their tadpoles. The poison on their skin prevents predators from eating them. Their bright coloration warns predators that they are poisonous. Because native South Americans use the frog poison to make their darts toxic for hunting, these frogs are called Poison Dart Frogs.

**Home range**: Rainforests of Central and South America

**Diet**: Insects

**Picture Color**: Body = Red; Legs = Black  
or  Body = Blue with black spots on back  
or  Body = Orange-yellow; Legs = Green
The name of this butterfly comes from the island of Trinidad because postal workers there wear uniforms with similar coloration. Butterflies are poisonous because of their diet of passion vines as caterpillars. The bright colors of this butterfly warn potential predators that they are toxic.

**Home range:** Central America to Brazil  
**Diet:** Caterpillars eat passion vines; Butterflies eat flower nectar  
**Picture Color:** Body = Black  
Upper Wing Markings = Red and Black with White  
Lower Wing Markings = Red and Yellow
The term liana is used for many different kinds of plants which grow as woody vines. They can grow up to 800 feet long and get as thick as a person’s leg. They are rooted in the ground but grow up into the canopy so their leaves can absorb sunlight and moisture. Lianas provide bridges between the canopy layers with many animals using them as paths to cross the rainforest.

**Home range:** Rainforests all over the world

**Picture Color:** Vine = Brown and Green
Leaf = Green
The flying frog does not technically fly. It leaps from branches and glides holding its limbs out. Each foot acts as a small parachute. It steers through the air using its rear limbs. Some flying frogs can fly 12 meters (almost 39.5 feet) over wide gaps.

**Home range:** Rainforests of Southeast Asia and Central America

**Diet:** Insects

**Picture Color:**
- Body = Green
- Feet = Yellow
- Snout = Yellow
The Hercules Beetle is the largest beetle in the world. It can grow up to eight inches in length. The males have huge sword-shaped horns growing from their thorax and extending forward over their head. The front of their head also has a horn pointing forward and curving upward. The females do not have horns.

**Home range:** Rainforests of Central and South America  
**Diet:** Tree sap  
**Picture Color:** Body and Head = Olive green with dark spots
Bromeliads are very common plants in the canopy. They are epiphytes growing on the branches of trees. They collect and store water from rainfall in their cup-like centers. Some large species can hold 18 pints (36 cups) of water. These bromeliads provide drinking water for monkeys, a place for insects and amphibians to lay eggs, and a home for Cichlid fish.

**Home range:** Rainforests of Central and South America  
**Picture Color:** Leaves = Green  
Flower = Pink/purple
Spider monkeys were given their common name because of their long spindly limbs. They are usually found in the highest level of the canopy. They use their prehensile (able to hold and grasp) tails to maneuver through the rainforest. The numbers of spider monkeys are decreasing due to habitat loss and forest fragmentation. They are among the most intelligent of the New World monkeys.

**Home range:** Rainforests of Central and South America  
**Diet:** Fruit and nuts  
**Picture Color:** Head and Body = Brown
This type of orchid is an epiphyte growing on the bark and branches of other trees in the rainforest. Many of the orchids grown as houseplants are Cattleyas. They are also used by florists in corsages.

**Home range:** Rainforests of Central and South America  
**Picture Color:** Leaves = Dark green  
Flowers = Lavender with pink

**Cattleya Orchid**  
**Orquidea=orchid**
These ants use their sharp mandibles (jaws) to cut leaves from plants. The ants carry the leaves on their backs to their underground nest. A leafcutter ant can carry almost ten times its own weight. It is equivalent to a 200-pound person carrying a 2000-pound car on their back. In the nest, the leaf pieces are chewed into a pulp. The ants eat the fungus that grows on the decomposing pulp.

**Home range:** Rainforests of Central and South America  
**Diet:** Fungus growing on leaf pulp  
**Picture Color:** Leaf = Green  
Ant = Brown
Fungi are very important decomposers and recyclers in an ecosystem. They break down dead trees and animals making nutrients available to plants. Fungi help rainforests grow on very poor soil. The mushrooms, toadstools, shelf fungi, and puffballs we recognize are the fruiting bodies or reproductive organs of fungi.

**Home range**: Puffball forming fungi can be found in many different parts of the world.

**Picture Color**: Puffball = Red
Shelf or Bracket Fungi
Hongo=fungi

Fungi which produce shelf or bracket shaped fruiting bodies are called Shelf or Bracket Fungi. They are mainly found growing on trees and logs. Like all other fungi, they are decomposers and part of the nutrient cycle. Some shelf/bracket fungi form a microhabitat providing a place for small creatures, such as spiders, mites, and insects, to live.

**Home range:** Shelf/bracket forming fungi can be found in many different parts of the world.

**Picture Color:** Branch = Brown
Shelf Fungi = Brown and white
The male of this species has bright emerald green tail feathers which are three feet long. Its feathers have been used in headdresses worn by tribal chiefs. The birds were never killed by ancient Mayas and Aztecs because they were considered sacred. In the near future, the Resplendent Quetzal may become threatened with extinction.

**Home range:** Cloud Forests of Mexico and Central America  
**Diet:** Many species of fruit, avocado being a favorite, insects and frogs.  
**Picture Color:** Feathers = Green  
Breast = Red/Purple
Sloths are mammals that move very slowly through the trees of the Rainforest. They are usually found hanging from trees even when sleeping. They move so slowly that algae grow on their coats giving them a green tinge. This helps camouflage them. Their main predators are jaguars, harpy eagles, and humans.

**Home range:** Rainforests of Central and South America
**Diet:** Leaves and fruit
**Picture Color:** Face = White
Coat = Brown/Gray/Green
Eyes = Brown
Jaguars are the largest and most powerful felines in the Western Hemisphere. They are carnivores at the top of the food chain and are not preyed upon by any other animals. They are excellent swimmers and climbers. They are solitary hunters that hide and wait for prey and then ambush it. The species has declined because of habitat loss and fragmentation, as well as being hunted by humans for their coats.

**Home range:** Rainforests of Mexico, Central and South America  
**Diet:** Deer, alligators, sloths, monkeys, fish  
**Picture Color:** Coat = Orange/yellow  
Nose = Brown  
Mouth = Pink  
Eyes = Yellow/green
Hummingbirds fly speedily from one flower to another, sipping nectar with their long beaks as they pollinate the flowers. These birds beat their wings so quickly that they seem to blur together. Hummingbirds have feathers that are brightly colored. They are small birds and are only 2 to 3.5 inches long.

**Home range:** Rainforests, most commonly South America  
**Diet:** Nectar from flowers  
**Picture Color:** Feathers = Red/yellow/purple  
Breast = Green  
Beak = Orange/brown
Emerald Tree Boa
Boa arboricola
*Culebra=snake*

This snake is nocturnal and lives in the canopy. It is camouflaged and looks like a vine. It spends its days coiled over a tree branch sleeping. At night it hangs down from its branch waiting for prey to move underneath it. It can live 2 months without eating.

**Home range:** Rainforests of South America
**Diet:** Typically small mammals, also reptiles and amphibians
**Picture Color:** Body = Green
                   Eyes = Green
Cecropia trees are easily recognized in the rainforest because of their large hand-shaped leaves. The fruit of the tree is eaten by birds, bats, and monkeys. The leaves are the favorite food of sloths. It is widely used in traditional medicine. Virtually all parts of the tree are used to treat ailments.

**Home range:** Rainforests of the West Indies, Central and South America

**Picture Color:**
- Trunk = Brown
- Leaves = Green
Mealy Parrot
Loro Verde
loro=parrot

Mealy Parrots are among the largest parrots in the Americas. They live in the canopy layer in pairs or groups of up to 20 birds. During the breeding season, they form larger groups which can contain several hundred birds. This species has declined due to loss of habitat and illegal cage-bird trade. Pet parrots should be bred in captivity and not wild collected.

**Home range:** Mexico, Central and South America  
**Diet:** Fruit, seeds, nuts, blossoms, leaf buds  
**Picture Color:** Head = Gray  
Body = Green
The dramatic *Rafflesia* flowers are the largest single flowers in the world. The leathery petals can reach over 90 cm (about 35.5 inches) across. *Rafflesia* is a parasite plant depending completely upon a vine that grows in the rainforest. It does not have any leaves and relies solely on the vine for food. It blooms for 5-7 days then turns into black slime. The flowers smell of decaying flesh and attract insects such as carrion flies.

**Home range:** Rainforests of southeastern Asia  
**Picture Color:** Flower = Red with yellow dots
Howler monkeys are the loudest land animals. Their calls can be heard up to three miles away. They are primarily found in the highest levels of the canopy. The number of howler monkeys is decreasing due to the loss and fragmentation of habitat.

**Home range:** Rainforests of Central and South America  
**Diet:** Mostly leaves, supplemented with fruit and maggots  
**Picture Color:**  
- Face = Black  
- Body = Brown to black
The Harpy Eagle is one of the largest and most powerful eagles in the world. They make whistling and clicking calls. Harpy Eagles mate for life. They build huge nests made of sticks and branches in emergent trees. They usually lay one or two eggs but only care for the first baby bird that hatches. Both parents care for their young.

**Home range:** Rainforests of Central and South America  
**Diet:** Sloths, monkeys, opossums, reptiles, rodents, birds  
**Picture Color:**  
- Head and Neck = Light Gray  
- Breast = White  
- Wings and Tail = Dark Gray  
- Feet = Yellow
These crabs live in the rainwater pools stored in the bases of bromeliad leaves. This crab’s entire life cycle is spent in the large bromeliads. Once a year, the females release larvae into a bromeliad pool. The mother improves the poor water quality, defends the larvae against predators and feeds them.

**Home range:** Native to Jamaica  
**Diet:** Millipedes and insects  
**Picture Color:** Head = Brown  
Body = Brown with red tipped pinchers
Pre Field Study Activity
Really Remarkable Rainforest
State Botanical Garden of Georgia

Map of the World
Areas of Tropical Rainforest
Highlighted in Red
Make Your Own Rainforest!

Essential Questions:
What animals live in a tropical rainforest?
What are the different layers of a tropical rainforest?

Background Information:

Procedure:
1. Divide group into smaller teams.
2. Pass out materials to each group – large white paper, post it notes, animal pictures, and crayons, pen, or pencils.
3. Ask the children to color in the rainforest animal and plant pictures.
4. Discuss the structure of tropical rainforests and the animals that live there. Books listed above can provide useful information.
5. Tell the students they are going to create their own rainforest. Pass out the Make Your Own Rainforest! worksheet and review it with them. Let them complete the tasks, using their colored pictures to complete their own rainforests.

Discussion/Assessment:
Why are there more layers in a rainforest than a temperate forest? What do the layers provide for the animals? What are some special characteristics or adaptations of rainforest animals? How do these adaptations help the animals live in their environment?
Make Your Own Rainforest!

Your class is going to create your own rainforest using a large sheet of paper, crayons, post-it notes, and colored pictures of rainforest animals and plants. Follow the instructions below:

1. Draw the soil, trees, plants, vines, and the sky on your paper. This should take no longer than 5-8 minutes.

2. Label the four rainforest layers: Soil, Understory, Canopy, and Emergence using the post-it notes.

3. Place the specified types of animals and plants in the four layers.

   **On or in the soil** (forest floor):
   - 2 fungi
   - 1 reptile or amphibian
   - 2 insects

   **In the understory**:
   - 2 mammals
   - 1 reptile
   - 1 insect
   - 3 plants

   **In the canopy**:
   - 2 mammals
   - 1 amphibian
   - 1 bird
   - 3 plants

   **In the emergence**:
   - 4 birds

4. When you have finished the rainforest have an instructor check your answers.
The students will have all these plants and animals on their rainforest mural when it is completed.

A. Soil Layer

- **Fungi** - Puffball Fungi, Shelf/Bracket Fungi
- **Reptiles/Amphibians** - Poison Dart Frog
- **Spider/Insect** - Leafcutter Ant, Hercules Beetle

B. Understory Layer

- **Insect** - Postman Butterfly
- **Mammal** - Sloth, Jaguar
- **Reptile** - Emerald Tree Boa
- **Plant** - Cattleya Orchid, Fern, Rafflesia

C. Canopy Layer

- **Mammal** - Howler Monkey, Spider Monkey
- **Amphibian** - Flying Frog
- **Bird** - Hummingbird
- **Plant** - Bromeliad, Cecropia Tree, Liana Vine

D. Emergence Layer

- **Bird** - Mealy Parrot, Keel-billed Toucan, Harpy Eagle, and Resplendent Quetzal
Make Your Own Rainforest!
Math Extension

How many of each animal, plant, or fungi are there on your rainforest picture?

- Birds
- Reptiles
- Mammals
- Amphibians
- Insects
- Plants
- Fungi (Mushrooms)
Make Your Own Rainforest!

Now that you have made your own rainforest, you can graph the number of plants and animals that live in each rainforest layer. Here are some examples.

![Graph of Number of Plants and Animals in each Rainforest Layer](image)

![Histogram of Class Number of Plants and Animals in each Rainforest Layer](image)

Data by Group
- Group 1
- Group 2
- Group 3
Make Your Own Rainforest!

**GRAPH**

Graph the number of mammals, birds, reptiles, amphibians, and plants.

<table>
<thead>
<tr>
<th># of Plants &amp; Animals</th>
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<td>7</td>
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<tr>
<td>6</td>
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<td>5</td>
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<td>4</td>
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<td>3</td>
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<tr>
<td>2</td>
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<tr>
<td>1</td>
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<tr>
<td>0</td>
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</table>

<table>
<thead>
<tr>
<th>Soil</th>
<th>Understory</th>
<th>Canopy</th>
<th>Emergence</th>
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**Rainforest Layer**
Post-Trip Activities: Additional Ideas

Research Project

• Assign students to four different groups. Each cooperative learning group can investigate a rainforest layer: 1)soil, 2)understory, 3)canopy, 4)emergent layer. Each student can research a bird, mammal, reptile, insect, or plant that belongs to that rainforest layer. Younger students can draw a picture and write an interesting fact. Older students can go further into diet and other details about their forest species.

Poster

• Why save the rainforests?
Discuss or have students research reasons why the rainforests should be saved. Then students can design posters advertising good reasons to save the rainforests.

<table>
<thead>
<tr>
<th>Background Information – Important Reasons for Preserving the Rainforests</th>
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<tbody>
<tr>
<td>1. Rainforest loss may greatly change weather patterns throughout the world.</td>
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<tr>
<td>2. The culture and traditions of the forest people will be lost with the disappearance of these forests.</td>
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<tr>
<td>3. Many important products, such as valuable medicines, come from the rainforest’s plants.</td>
</tr>
<tr>
<td>4. Many animals depend on rainforests for their survival. When forests are destroyed, habitats are lost, thus endangering the lives of many animal species.</td>
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<tr>
<td>5. Loss of forests creates problems for nearby regions, the most serious of which are soil erosion and water pollution.</td>
</tr>
<tr>
<td>6. Promote buying shade grown coffee at your school. The Education Department at the Botanical Garden can give you more information.</td>
</tr>
</tbody>
</table>

• What can we do to save the rainforests?
Discuss or have students research how they can help save the rainforests. Then let the students design a poster advertising things they can do to help save the rainforest.

References:


• Rainforest Action Network. [http://www.ran.org](http://www.ran.org) “7 Things You Can Do to Save the Rainforests”
• The Rainforest Information Center. [http://www.rainforestinfo.org.au](http://www.rainforestinfo.org.au)
• The Rainforest Alliance. [http://www.rainforest-alliance.org/](http://www.rainforest-alliance.org/)
• An Index to Rainforest Links. [http://rain-tree.com/links.htm](http://rain-tree.com/links.htm)