

Rainforest Cafe®

WELCOME TO
CHA CHA'S
CLASS

$2+5=7$

LESSONS PLANS



GRADES 3-4

ACTIVITY

INTRODUCTION TO RAINFORESTS

TIME ESTIMATION:
10 MINUTES

MATERIALS

- blank drawing paper
- pencils, markers, colored pencils, etc.

INTRODUCTION

Before learning more about rainforests and without any prompts or guidelines, have the students take a few minutes to draw a picture of a rainforest. When they are finished, ask the students to share their drawings and/or hang them up in the classroom. Are there similarities? Differences?

After finishing your rainforest curriculum, have the students draw the rainforest again. Allow more time for the second drawing or it may be taken home as an assignment. Have the students compare their first and second drawings. What are the differences?

- More diverse plants and animals?
- A structured layer of shrubs, undergrowth, trees, and canopies?
- Indigenous people?
- Deforestation?
- Weather?

ACTIVITY
LAYERS OF THE RAINFOREST**TIME ESTIMATION:**
20-30 MINUTES**SUMMARY**

This lesson introduces students to the layers of the rainforest and the animals that live there. The interactive activity will help students visualize the different layers using props to create a model rainforest.

OBJECTIVES**STUDENTS WILL:**

- identify the different layers of the rainforest;
- learn the characteristics of each layer, including what types of plants and animals live there.

MATERIALS**RAINFOREST LAYER PROPS:**

- Forest Floor - A baggie or clear container/jar filled with dead, dried leaves and dirt.
- Understory - Two large, flat tropical leaves (artificial).
- Canopy - Brightly colored tropical flowers and fruit (artificial).
- Emergent - Longer branches with small leaves (artificial).

INTRODUCTION

Rainforests are diverse ecosystems made up of different “layers” from the ground all the way up to the tallest tree. Each layer has its own unique plants, animals, and characteristics.

INSTRUCTIONS

As you introduce and discuss each rainforest layer, call a volunteer to the front, give them the props that represent that layer, and ask them to “be the rainforest”. Start with the forest floor.

INSTRUCTIONS (continued)

1. Forest Floor - The forest floor is the lowest layer of the rainforest and it is a dark, damp, hot place. This layer receives very little sunlight and is covered with huge, sprawling tree roots and a dense layer of soil and dead leaves. The forest floor is home to small insects such as leaf cutter ants, colorful amphibians such as poison dart frogs, and the rainforest's largest animals such as tapirs, anteaters, anacondas, and jaguars. In Asian rainforests, you'll find tigers and even Asian elephants. In African rainforests, leopards, gorillas, and pygmy hippos are among the largest animals found on the forest floor.

(Ask a volunteer to hold the container of dead leaves and lay on the floor.)

2. Understory - The layer just above the forest floor is the understory, which consists of leafy bushes, small trees, saplings (young trees), and vines. The plants here tend to have very large leaves. This helps them capture as much sunlight as possible since this is still a dark part of the rainforest. Look through the leaves and branches and you'll see more leaf cutter ants, boa constrictors, jaguars or leopards, and colorful butterflies.

(Ask a volunteer to hold one large, flat tropical leaf in each hand and sit next to or behind the student representing the forest floor. Be sure to hold the leaves over the forest floor to make sure it is nice and dark!)

3. Canopy - The canopy layer is high up in the trees, 100-150 feet from the ground! This is the layer with the most branches and leaves and more species of plants and animals than anywhere else in the rainforest. The canopy layer receives a lot of sunlight, so there is plenty of vegetation, flowers, and fruit. Here you'll find tree frogs, monkeys, sloths, iguanas, orangutans, and colorful birds such as toucans and macaws. This also happens to be the noisiest layer of the rainforest!

(Ask one to three volunteers to hold various brightly colored tropical flowers and fruit and kneel around the student representing the understory. If they'd like to make rainforest animal noises for a few seconds, let them! The canopy is a noisy place!)

4. Emergent - The emergent layer is formed by the tallest trees that break through the canopy layer. These trees reach over 150 feet tall (that's almost four full-size school buses end to end!) and can top up to 230 feet tall! This layer is sunny, breezy, very hot, and lacks shelter from predators and the elements. The only animals you'll find up here are birds such as the harpy eagle and macaws and the occasional brave monkey.

(Ask a volunteer to hold one long branch with small leaves in each hand and stand behind the other students. Be sure to gently wave the branches to represent the wind!)

OPTIONAL FOLLOW-UP ACTIVITY

Divide the class into four groups - one for each layer of the rainforest. Give them some time to do further research on their assigned layer, taking notes on the types of plants and animals found there. Then choose a wall in the classroom or hallway (or scale down to a whiteboard or poster boards) and have each group construct a model of their rainforest layer (preferably in order from left to right or top to bottom) using craft supplies such as construction paper, tissue paper, popsicle sticks, pipe cleaners, etc.

LESSON PLAN GRAPHING THE RAINFOREST

TIME ESTIMATION:
30-45 MINUTES
(NOT INCLUDING TIME ALLOWED FOR RESEARCH)

SUMMARY

Students will create different types of graphs and charts to represent the data they collect from researching rainforests.

OBJECTIVES

STUDENTS WILL:

- understand that data is information that can be used to understand or solve problems;
- research and collect data about rainforests;
- learn how to represent data using graphs and charts.

MATERIALS

- blank paper
- graphing paper
- writing utensils
- markers or colored pencils

INTRODUCTION

Data is everywhere, including in the rainforest! Data is a collection of facts, such as numbers, words, measurements, observations or even just descriptions of things. Scientists have been studying and collecting data from rainforests around the world for decades. They study the plants, the animals, the rivers, the people, the weather, the climate, and more! So how do scientists make sense of all of that information?

A lot of the time, they use graphs and charts! Graphs and charts are used to represent data in a visual way so that it is easier to understand. There are many different types of graphs and charts such as line graphs, bar graphs, pie charts, and pictographs; each with different uses depending on the type data you have and what you want to show.

Put your researching and graphing skills to the test by using different types of graphs to represent rainforest statistics!

INSTRUCTIONS

1. Before collecting data, begin with a question. What do you want to know? Beginning your research with a question will help you focus your efforts and collect only relevant information. It is absolutely ok to change your question throughout the research process as you learn new, exciting facts!

EXAMPLES OF RESEARCH QUESTIONS:

- How large are different rainforests around the world?
- How much does it rain in different rainforests around the world?
- Which rainforest has the most species of birds (or insects, large mammals, frogs, etc.)?
- What causes rainforest deforestation?

2. Now it's time to research! Use reliable resources (library, encyclopedias, government or organization websites, knowledgeable experts, etc.) to collect information to help answer your question. Be sure to take good notes and to site your sources! One of our favorite online resources for rainforest information is www.rainforest-alliance.org.

3. After you have collected your data, choose the best way to represent it visually. Here is a brief overview of common graphs and charts:

- Line Graphs - Shows how the value of something changes over time. Example: The population of wild orangutans between 1970 and 2019.
- Bar Graphs - Compares data from a single category. Example: The size of each major tropical rainforest in square miles.
- Scatter Plot - Shows the relationship between two data series. Example: Number of trees versus number of bird species.
- Pie Chart - Illustrates the percentage breakdown of a small number of data points (five or less). Example: Common causes of rainforest deforestation (agriculture, logging, ranching, infrastructure, and wildfires).

4. Share your findings with the class and display your graph for everyone to see!

CRAFT ACTIVITY

RAINFOREST PARROTS

TIME ESTIMATION:
20 MINUTES

SUMMARY

Students will display fun rainforest facts on colorful parrots hanging in the classroom.

MATERIALS

- parrot coloring page (attached)
- markers, crayons, and/or colored pencils
- scissors
- craft feathers
- glue
- single hole punch
- yarn or twine

INSTRUCTIONS

1. Distribute a blank coloring page to each student.
2. Have the students color and decorate their parrot however they like.
 - a. If they'd like to create realistic parrots, have the students reference photos from a book or online resource. Some of our favorite parrot species are blue and gold macaws, red fronted macaws, green winged macaws, and hyacinth macaws!
3. Cut out the parrot.
4. Write an interesting fact about parrots or rainforests on the back.
5. Use craft feathers and glue to decorate the wings and tail.
6. Use a single hole punch and yarn/string to suspend the parrots from the ceiling.

GRADE LEVEL: 3-4

Rainforest Cafe

COLOR ME!



ACTIVITY

RAINFOREST SCAVENGER HUNT

TIME ESTIMATION:
20 MINUTES

SUMMARY

Students will complete a scavenger hunt at home or in the classroom to see how many rainforest products they come into contact with each day.

MATERIALS

- scavenger hunt list (next page)
- writing utensil

INSTRUCTIONS

1. Distribute a scavenger hunt list to each student.
 - a. For an interesting twist, print the list of items on a blank sheet of paper or read them out loud and have the students write them down on a blank page in a notebook. Do not tell the students how these items are related.
2. Instruct the students to walk through their homes or classroom and check items off the list as they find them.
3. Discuss the student's findings as a class.
 - a. You could list the items on a whiteboard and record numbers or tallies for every student that found that item.
 - b. What items surprised them the most?
 - c. Discuss sustainable options that help protect rainforests such as reusable bags, palm oil free products, etc.

SCAVENGER HUNT

- black pepper
- cayenne
- cinnamon
- cloves
- ginger
- nutmeg
- paprika
- sesame seeds
- turmeric
- vanilla
- avocado
- banana
- coconut
- coconut oil
- grapefruit
- guava
- lemon
- lime
- mango
- papaya
- passion fruit
- pineapple
- plantains
- tangerine
- brazil nuts
- cashews
- chocolate
- cola
- cucumbers
- macadamia nuts
- okra
- peanuts
- sugar cane
- tea
- coffee
- sweet potatoes
- palm oil (snack foods, baked goods)
- bamboo
- wood furniture, doors, floors, paneling, cabinets, carvings, toys, bowls (balsa, mahogany, rosewood, sandalwood, teak)
- wicker furniture
- jute (rope, rugs, burlap)
- bug spray
- perfume
- cough drops
- paint
- chewing gum
- golf balls
- rubber rain boots
- sleeping bags
- athletic shoes
- deodorant
- toothbrush
- mouthwash
- tissues
- stamps
- envelopes
- jeans
- mattress
- soap
- fishing line
- printer ink
- tires
- rubber balls
- house plants (orchids, philodendron, begonias, fiddle leaf fig, bromeliads)