

Save the Rainforest

Salvar la Selva Tropical



An Educator's Guide

Welcome to the show!

Amazing, endangered animals of the Amazon Rainforest show us why we need to protect them. Inspired by the book The Great Kapok Tree by Lynn Cherry. With over 15 colorful puppets in a lush jungle setting, puppeteer and storyteller Katie Adams evokes the delicate balance of the Rainforest ecology. This bi-lingual show features puppets, shadow puppets, and indigenous music with a message of animal and nature conservation. 45 minutes. *Puppets and set built by Frank Lakus*

Purpose of the show

The main purpose of *Save the Rainforest* is to introduce students to the amazing and complex world of the tropical rain forest and the destruction the outside world can have on it. Through this puppet show, I hope students will develop an understanding, appreciation and sense of commitment for this ecosystem and will continue to investigate, and educate themselves about the amazing rainforests of the world.

This program is presented as part of the Artists-in-the-Schools Program, which is funded and jointly sponsored by the Hillsborough County Public Schools and the Arts Council of Hillsborough County.

Before the show

Synopsis of the Show Story

For grades K thru 2 Read through the show synopsis and describe the show to your class.

For grades 3 to 5 Read the show synopsis out loud with your class

In this puppet show the audience takes an Eco Tour with tour guide Katie Adams to explore and see how the Amazon Rainforest works. As the show begins, the audience sees colorful scenery that evokes the Amazon Rainforest. Indigenous music takes us to South America. A red-eyed tree frog appears and hops across the set. A toucan flutters by.

Our tour guide Katie Adams welcomes everybody and points out different things: the Kapok tree, the fresh air, and the levels of the Rainforest. The interconnectedness of the ecosystem is shown with the ants and their relationship to the tree. Katie explains how the rainforest is in danger from deforestation.

Soon larger animals start to appear to amaze and beguile us: Toucan and Amazon Whip Snakes. Katie talks about some of the animals and some of the animals speak directly to the audience. A caterpillar comes back repeatedly, getting larger with every visit, and then going off to make its chrysalis.

Suddenly we hear the sound of a chainsaw and watch in horror as a tree is cut and falls to the ground. Lightning and thunder bring a rainstorm, which chases away the chain saws. With the rain more animals come out: iguana, frogs, dragonfly. Katie talks about how the rainforest makes rain for other parts of the world. More animals appear: Macaw Parrot, Giant Anteater, Three Toed Sloth.

Night falls and the Jaguar appears. The animals gather to hear the Spirit of the Ancient Ones – the people who have lived in the rainforest for thousands of years. The spirit talks about the importance of protecting the rainforest.

The dawn arrives, and with the dawn, a surprise. The butterflies have hatched out of their chrysalises, showing the cycle of life. Katie ends the Eco-tour by talking with the kids about what *they* can do to help save the rainforest. After the show Katie is available to answer questions about the Rainforest and about the puppet theater.

What to look for with the puppet theater

Solo puppeteer Katie Adams uses a variety of puppet styles to animate the various animal characters presented in this show, including rod puppets, hand puppets, shadow puppets and a shadow projection. A life-size jungle setting permits Katie to bring to life the realistically sized puppets portraying the residents of the rainforest. Dramatic theatrical lighting sets the mood, especially during a nighttime sequence that features traditional shadow puppets and a unique projected puppet. *Ask you students to look for these features of puppet theater.*

Colorful scenery that evokes the dense plant life of the Amazon Rainforest.

Shadow puppets that are used to show focused theatrical images like the tree falling.

Theatrical lighting effects that create the twilight, night and dawn.

Each puppet has a different construction style to match the action of the animal it portrays.

Each animal has its own signature music track that suggests its personality.

Florida Standards connected to the Performance

Science: SC.2.L.17.1 - Compare and contrast the basic needs that all living things, including humans, have for survival.

Language Arts: LAFS.K12.SL.1.2 – Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Theater: TH.2.C.1.2 – Respond to a play by drawing and/or writing about a favorite aspect of it.

Spanish: WL.K12.IL.9.1 – Use the target language to participate in different activities for personal enjoyment and enrichment

Music: MU.3.H.1.1 – Compare indigenous instruments of specified cultures

Theater Etiquette

This is a reflective exercise for your students. Read this section to them with discussion.

The Role of the Audience

- You are the audience - an important part of the performance. You help the performers by pretending and participating with them.
- Seeing a live show is not like watching TV or a movie. The performers are in the same room with you, and can see and hear you, the audience, and interact! What are some other differences? (No commercials, no eating, no lying down or running around...)
- Enter the performance space quietly and listen. Who might be giving instructions?
- The performers need you to watch and listen quietly. Talking to friends disturbs the performers and other members of the audience.
- Your job is to pretend along with the performers. They like it when you laugh if something is funny. They also like to hear you clap at the end of a performance when they bow.
- After the bows the audience stays seated. Who might give instructions on how to leave?

Florida Standards for Theater Etiquette

TH.K.S.1.1-Demonstrate appropriate audience behavior at a live performance.

TH.1.S.1.1-Exhibit appropriate audience etiquette and response.

TH.2.S.1.1-Exhibit the behavior necessary to establish audience etiquette, response, and constructive criticism.

TH.3.S.1.1-Demonstrate effective audience etiquette and constructive criticism for a live performance.

TH.4.S.1.1.-Exhibit proper audience etiquette, give constructive criticism, and defend personal responses.

TH.5.S.1.1-Describe the difference in responsibilities between being an audience member at live or recorded performances.



About Rainforests

Familiarize students with the rainforest in regards to its climate, plants, animals and geographical locations around the world.

What is a Rainforest?

Rainforests are very dense, warm, and wet forests. They are havens for millions of plants and animals. Rainforests are extremely important to the ecology of the Earth. The plants of the rainforest generate much of the earth's oxygen. These plants are also very important to people in other ways; they are used in new drugs that fight disease and illness.

Strata of the Rainforest

Different animals and plants live in different layers of the rainforest. Scientists divide the rainforest into strata (zones) based on the living environment. Starting at the top of the tree the strata are:

EMERGENTS: Giant trees that are much higher than the average canopy height. They house many birds and insects

CANOPY: The upper parts of the trees. This leafy environment is full of life in a tropical rainforest and includes: insects, birds, reptiles, mammals, and more.

UNDERSTORY: A dark, cool environment under the leaves but over the ground.

FOREST FLOOR: Teeming with life, especially insects. The largest animals in the rainforest generally live here.

Animals of the Rainforest

Millions of insects, reptiles, amphibians, birds and mammals call the rainforest home. Insects are the most numerous animals in rainforests. Tropical rainforests have a greater diversity of plants and animals than temperate rainforests or any other biome.

Rainforest animals in this show include: caterpillars/butterflies, Toucan, Amazon Whip Snake, Green Iguana, Red Eyed Tree Frog, Dragonfly, Scarlet Macaw Parrot, Giant Anteater, Three Toed Sloth, and Jaguar.

Where are Rainforests?

Tropical Rainforests are found in a belt around the equator of the Earth. There are tropical rainforests found across South America, Central America, Africa, Southeast Asia, and Australian and its nearby islands.

Temperate rainforests are found along the Pacific coast of the USA and Canada, in New Zealand, Tasmania, Chile, Ireland, Scotland, and Norway.

Rainfall and Temperature

It is almost always raining in a rainforest. Rainforests get over 80 inches of rain a year, and it is evenly spread through out the year. The temperature in a rainforest never freezes and never gets very hot. The range of temperature in a tropical rainforest is usually between 75 and 80 degrees Fahrenheit. Temperate rainforests rarely freeze or get over 80 degrees.

People Living in Rainforests

There are many indigenous groups of people living in the tropical rainforests who have lived there for thousands of years, like the Yanomamo Tribe of the Amazon Rainforests of Brazil and Southern Venezuela. These tribes get their food, clothing, and housing mainly from materials they obtain in the forest. These "forest people" are mostly hunter-gatherers; they get their food by hunting for meat and fishing, and gathering edible plants like starchy roots and fruits. Most indigenous populations are declining because of diseases and loss of their lands.

The Importance of Rainforests

Tropical rainforests cover about 7% of the Earth's surface and are VERY important to the Earth's ecosystem. Rainforests recycle and clean water. Tropical rainforests trees and plants also remove carbon dioxide from the atmosphere, and breath out fresh oxygen. This helps reduce the harmful green house effect, which traps heat inside the earth's atmosphere. Some of the foods that originally came from the rainforests around the world include cashew nuts, Brazil nuts, Macadamia nuts, bananas, plantains, pineapple, cucumber, cocoa (chocolate), coffee, tea, avocados, papaya, guava, mango, cassava, tapioca, yams, sweet potatoes, okra, cinnamon, vanilla, nutmeg, mace, ginger, cayenne pepper, cloves, oranges, grapefruit, lemons, limes, passion fruit, peanuts, rice, sugar cane, and coconuts (mostly from coastal areas).

What can We do?

Plants, animals, and people indigenous to the rainforest are disappearing because of deforestation Rainforests are being destroyed to make room to grow crops, raise cattle and to sell the wood from trees. If this continues, rainforests will disappear forever. How do our actions impact the rainforest, and ultimately, our own lives? There are many things being done, such as opening national parks, to save this ecosystem. By recognizing that our actions affect the rainforests, we can help to conserve them. **Three things you can do:**

1. Recycle – Recycling helps to conserve resources found in the rainforests.
2. When buying fruits, flowers and other products from rainforest regions, be sure they come from sustainable companies. These are companies that preserve and keep the rainforest alive, instead of destroying it to get their products.
3. Read about the rainforests and learn more.

Language Arts Activities: Reading

Read and discuss *The Great Kapok Tree* by Lynne Cherry, Copyright 1990 by Lynn Cherry, published by the Trumpet Club, New York, NY

Read and discuss non-fiction literature about Rainforests. One suggestion:

Rainforest by Penelope Arlon and Tory Gordon-Harris, a Scholastic Discover More book, 2013, Scholastic, Inc.

After the show

Rainforest Vocabulary

Adaptation: A characteristic or behavior that helps an animal or plant survive in its changing environment.

Biodiversity: Many different kinds of living things.

Camouflage: Any color, shape, or pattern adaptation that allows an animal to blend in with its surroundings.

Canopy: The layer of the Tropical rainforest below the emergent layer and above the understory: it traps most of the sunlight and water and is able to support the majority of rainforest life.

Conservation: The wise use of natural resources, saving them not only for now, but also for the future.

Deforestation: Destruction of a forest.

Ecosystem: An area or environment of any size where living and nonliving things interact with one another.

Emergent: The uppermost layer in a tropical rainforest characterized by tall trees.

Food Web: A series of interconnecting food chains that represent the feeding relationships of organisms within an ecosystem.

Forest Floor: The bottom layer in a tropical rainforest to where plant and animal matter falls.

Habitat: The place where a plant or animal lives containing the four necessary elements for survival: food, water, shelter, and space.

Humidity: A measure of the amount of moisture in the air expressed as a percentage.

Indigenous: A plant, animal or person existing naturally to a region; a native species.

Natural resources: Materials such as trees, coal, water, and soil that occur in nature and are used by humans.

Precipitation: Moisture condensed in the form of rain, snow, sleet, or hail.

Transpiration: The process in which gases and water are lost by plants through tiny holes in the leaves.

Understory: The dark, still, and humid tropical rainforest layer beneath the canopy and above the forest floor.

Language Arts Activities: Reading

Use a Venn Diagram to compare and contrast the book and the performance.

Use the *Great Kapok Tree* book from the activity above.

LAFS.K12.R.3.7 - Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

LAFS.K12.R.3.7 - Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

LAFS.5.RL.1.3 - Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

Discuss as a class whether the books and the performance are persuasive and how.

LAFS.K12.R.3.8 - Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

LAFS.K12.R.2.6 - Assess how point of view or purpose shapes the content and style of a text

Language Arts Activities: Writing

Create a “Story Vine” plot chart to identify different elements of story structure including setting, characters, plot, problem, climax and resolution. Directions: Cut a spiral out of brown paper. Write the story elements on green leaves and attach them to the vine. Attach a string to the center of the vine with tape. Lift up the vine using the string, and tie it to a pencil or attach it to the wall or ceiling.

LAFS.1.R.1.3 - Describe characters, settings, and major events in a story, using key details.

Read *Jaguar in the Rainforest* by Joanne Ryder. Use the style of this book to create additional stories about the animals of the rainforest. Stories can be made individually, in groups, as a class, or as shared writing. (ex. - create a book entitled Sloth in the Rainforest)

LAFS.2.W.1.3 - Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

LAFS.4.RL.1.3 - Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character’s thoughts, words, or actions).

Science Activities

Body of Knowledge: Life Science

Big Idea: Interdependence -

A. Plants and animals, including humans, interact with and depend upon each other and their environment to satisfy their basic needs.

B. Both human activities and natural events can have major impacts on the environment.

C. Energy flows from the sun through producers to consumers.

Create and discuss energy pyramids and food webs using animals found in the rainforest ecosystems.

SC.4.L.17.2 - Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.

Create an ecosystem, and a watercycle – make a Terrarium. Terrariums are wonderful projects: they're easy to plant, easy to care for and they look wonderful. They also recycle their moisture, so they rarely need to be watered, requiring almost no attention. Often, a closed terrarium can be left for a month or more between watering.

Discussing the water cycle is a great introduction for this project. What are clouds? What are they made of? What is rain? What does the sky look like when it rains? Why does it rain? Where does the rain go after it falls? What happens to puddles after it rains? These questions will start a discussion about evaporation, condensation, and precipitation. Discuss each of these things as you put your terrarium together. (You may want to check out the [animated diagram of the water cycle](#) from the [US Environmental Protection Agency](#).)

Any clear container can be made into a terrarium; just make sure that your container is watertight. Choose something large enough to accommodate the plants, and has a cover, lid, or door to keep the moisture from escaping. An aquarium makes an excellent terrarium, especially if you want to keep it around after your discussion of the water cycle has ended. For a more temporary terrarium, use a 2 liter soda bottle, peanut butter jar, or any clear plastic container.

Many plants do well in terrariums, and it is best to choose the ones that will fit the size of the container. Slower growing plants require less trimming, and are less likely to take over. If you are willing to pay more attention to them, you can experiment with more aggressive plants. They require more frequent trimming, but will allow you to have more variety in your terrarium.

Some plants suitable for terrariums are:

Pilea (Aluminum Plant)

Fittonia (Nerve Plant)

Ardisia

Podocarpus (Buddhist Pine)

Aeschynanthus (Lipstick Plant)

Baby Tears (Very aggressive grower!)

Very small ferns

Miniature African Violets

Coffee Plant

Creeping Charlie

Boxus (Boxwood)

Wandering Jew (Aggressive Grower)

Creeping Fig (Aggressive Grower)

Moss

Planting Instructions:

Place a 1/2 inch layer of small gravel in bottom.

You may choose to sprinkle activated charcoal on top of the gravel, but this is optional. It will help to filter the water as it drains through the layers.

Test your potting soil before using it by squeezing a handful. If it clumps easily, add some Perlite or Vermiculite to help with drainage. These can usually be found in garden shops.

Add a 2-inch layer of potting soil, or possibly a little more depending on the size of your container and the size of the plants you intend to use.

Add your plants, again taking into account the size of the space you have to work with inside the terrarium. Be careful not to overplant - you need to leave plenty of room for your plants to grow. Push the soil aside, place a plant in the depression, and gently replace the soil around the roots of each plant. Water lightly. Close the lid.

Care: Neglect it! Water lightly only when the soil is dry. You should only need to water, at the most, every couple of weeks, depending on conditions. Be very careful not to over-water! Place in a bright area, but not in direct sunlight. You should have enough light to read by. When plant gets as big as you want, pinch off the newest growth to encourage bushier growth.

Do not fertilize. As the nutrients found in the potting soil get used up, the plant's growth will slow, helping to keep the plant from overgrowing the terrarium. Over time the soil can be "refreshed" by scraping off the top layer of soil, and adding some fresh potting soil. This will add a small amount of nutrient, and will spruce up the look of your terrarium as well.

Small rocks, moss and dried twigs make good decorations and add to the look of a micro-world of plant life. A terrarium can also be an ideal place to observe insects, but you will want to return them to the outside world after a few hours so they can survive in their natural habitat.

When your terrariums are finished, discuss the following: We only watered the soil in our terrariums once; how did the water get on the lid? Take your lid off the terrarium and feel the soil. Why is the soil still wet? Do you think that any water has evaporated from the soil? Why? If water evaporated, where did the evaporated water go? Did it ever rain in your terrarium? How do you know? Where did the rain come from? Is there anything in your terrarium that reminds you of a cloud or cloud drops?"

You may want to make a connection between the water cycle in the terrarium and in the real world with a discussion using the following: "If the terrarium is a model of the real world, what do you see outside that reminds you of the plant in our terrarium? What reminds you of the soil in our terrarium? What reminds you of the small water droplets on the lid? The soil in our terrarium stays moist, the ground outside never dries out completely. Why? What keeps it moist? Water collects on the lid of the terrarium, water also collects in the sky as clouds, where does the water in the clouds come from?"

You can also make connections between the mini- ecosystem in the terrarium and the rainforest by asking: " is this terrarium an ecosystem? How so? What makes an ecosystem work?"

Keep your terrarium after the lesson is over and enjoy it for many months to come! From www.teachnet.com

SC.2.L.17.2 - Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.



Puppet Theater Activities

Students create a play using animals from a different ecosystem, following the same theme and story pattern as *The Great Kapok Tree*. For example, students may use a local ecosystem of a pond that is being filled-in to build a housing development. The pond animals would speak to a construction worker, trying to persuade the worker not to take away their habitat.

TH.1.F.1.1 - Pretend to be an animal or person living in an imagined place.

TH.2.H.1.1 - Read and dramatize stories with similar themes to show developing knowledge of, and respect for, cultural differences.

TH.3.F.1.1 - Create and/or collect appropriate props and costumes and use them to help tell a story.

TH.4.F.1.2 - Create sound and lighting effects to suggest the mood of a story.

TH.5.H.3.4 - Act out a character learned about in another content area.

Shadow Puppets

The shadow puppets in this show are made from posterboard and cereal boxes spray-painted black. The control rods (sticks) are made from metal coat hangers. **Make your own shadow puppets and use them to put on the play in the activity above.**

- You need a 75watt (or higher) light bulb in a clamp-on light socket. When you get ready to do the shadow puppets you need to be able to darken the room as much as possible.
- For the shadow screen you can use a white sheet or shower curtain liner stretched in a door way or between two chairs. (Or in a picture frame.) Use masking tape or duct tape to attach. (Duct tape leaves more of a residue.)
- For the shadows use black posterboard or black construction paper, or spray-painted cardboard. (That way you can recycle your cereal boxes.)
- Draw the shapes you want and then cut them out with small sharp scissors. Hole punches of various shapes can help to cut out interior shapes.
- For puppets that have moving parts, use a hole punch in both parts right where they will attach and fasten with paper fasteners.
- To add colors you can tape in cellophane candy wrappers, colored plastic wrap, or tracing paper colored with colored pencils or crayons
- Make rods with straws, bamboo skewers, or other thin sticks. Tape them on with masking tape
- For preschool and kindergarten, use manila folders, draw with a heavy black outline and color in with crayons. Use one rod, the puppet will not need to have moving parts. The black outline will help define the shape of the puppet no matter how the puppet is cut out. The colors on the manila folder will show up when the shadow is pressed to the screen.

Great resource for shadow puppets:

Worlds of Shadow; Teaching with Shadow Puppetry. David Wisniewski and Donna Wisniewski, 1997, Teacher Ideas Press, Englewood, CO

Bibliography / Discography

The Great Kapok Tree by Lynn Cherry, Copyright 1990 by Lynn Cherry, published by the Trumpet Club, Harcourt, Brace & Co. New York, NY

Rainforest by Penelope Arlon and Tory Gordon-Harris, a Scholastic Discover More book, 2013, Scholastic, Inc.

Jaguar in the Rainforest by Joanne Ryder, A "Just for a Day Book" copyright 1996, Morrow Junior Books, New York

Worlds of Shadow; Teaching with Shadow Puppetry. David Wisniewski and Donna Wisniewski, 1997, Teacher Ideas Press, Englewood, CO

How to make a terrarium from www.teachnet.com

Flight of the Condor, Aedo Enterprises, Inc. 1999

Spirit of the Incas, Proper/ BIEM-MCPS. 1997

Nature Selects, Eclipse Music Group, Inc. 1998

About the Artist

Katie Adams is a puppeteer and storyteller who loves to perform for children and family audiences. In 2000, Katie started her own company, Make-Believe Theater dedicated to entertaining, inspiring and enlightening young audiences. Katie tours to schools, libraries, theaters, museums and festivals.

Recent performance highlights include the National Festival of the Puppeteers of America, the Smithsonian Discovery Theater, the Great Arizona Puppet Theater, Mahaffey Theater for Performing Arts, and the Kravis Center. **Check out her web site at www.katieadamstheater.com.**

