

Sarah Machol
Deborah McLelland

Title: Layers of the Rainforest

Abstract: This lesson allows students to make connections between their ecosystem and other ecosystems such as the rainforest. Students also discover the importance of adaptation in the environment and how adaptation is necessary for survival in different ecosystems. Students use critical thinking and inference skills in order to place animals and insects in the different strata of the rainforest based on diet, body modification, and prior knowledge.

Grade Level: 2nd

Materials:

Poster board

Sponges and paintbrushes or vegetables!

Brown, green, white paint

Rainforest literature such as [The Great Kapok Tree](#)

Animals of the rainforest cards at Enchanted Learning site:

(<http://www.EnchantedLearning.com/subjects/rainforest/index.shtml>)

ILO's:

Demonstrate a positive learning attitude

Understand and use basic concepts and skills

Communicate clearly in oral, artistic, written, and nonverbal form

Core Standards:

Second Grade Content Standard III:

Students will develop an understanding of their environment.

Objective 1: investigate relationships between plants and animals and how living things change during their lives.

a. Observe and describe relationships between plants and animals.

Background Information:

A rainforest is a dense, warm, and wet forest area near the equator. They are havens for millions of plants and animals. Rainforests are extremely important in the ecology of the Earth since the plants of the rainforest generate much of the Earth's oxygen. An incredible number of animals live in rainforests. Millions of insects, reptiles, amphibians, birds, and mammals call them home. Insects are the most numerous animals in rainforests. Rainforests get over 80 inches of rain each year. The temperature in a rainforest never freezes and never gets very hot. The temperature stays between 75 and 80 degrees Fahrenheit. The soil of a rainforests is only about 3-4 inches thick and is ancient. Thick clay lies underneath the soil. Tropical rain forests help regulate the earth's environment in several ways. For example, tropical trees help control the amount of rainwater that reaches the ground. These trees absorb an enormous quantity of rain. In a

process called transpiration, much of this water evaporates from the trees' leaf pores and reenters the atmosphere as vapor. Eventually, the vapor condenses into water and falls to the earth again as rain. Transpiration may account for as much as half of the rainfall in some rain forests. By regulating rainfall, rain forest trees keep floods and droughts from becoming too severe. The dense rain forest vegetation also reduces soil erosion. Rainforest plants serve as a resource for medicinal ingredients in many groundbreaking medications

Rain forests help control temperatures in their own regions and in other parts of the world. Rain forest trees absorb light and heat. This absorption keeps tropical climates from becoming too hot or too cold. The forests also take in and store massive amounts of carbon dioxide, preventing the build-up of this gas in the atmosphere. Scientists believe the accumulation of carbon dioxide and other gases in the atmosphere increases temperatures around the world. By absorbing carbon dioxide, tropical rain forests may help keep worldwide temperatures from becoming too warm. (*Enchanted Learning Website* <http://www.EnchantedLearning.com/subjects/rainforest/index.shtml>)

Terminology:

Tropical rain forest - an environment that receives high rainfall, consistent temperature, and is dominated by tall trees. A rainforest is an ecosystem.

Strata – Layers of the rainforest

Emergent

Canopy

Understory

Forest Floor

See definitions below

Ecosystem- all the organisms living in a place as an interdependent and separate unit.

The Strata (Levels) of the Rainforest:

The consistently wet, warm weather and ample sunlight give plant life everything it needs to thrive. Trees have the resources to grow to tremendous heights, and they live for hundreds, even thousands, of years. These giants, which reach 60 to 150 ft (18 to 46 m) in the air, form the basic structure of the rainforest. Their top branches spread wide in order to capture maximum sunlight. This creates a thick **canopy** level at the top of the forest, with thinner greenery levels underneath. Some large trees, called **emergents**, grow so tall (up to 250 ft / 76 m) that they even tower over the canopy layer. As you go lower, down into the rainforest, you find less and less greenery. The forest floor is made up of moss, fungi, and decaying plant matter that has fallen from the upper layers. The reason for this decrease in greenery is very simple: The overabundance of plants gathering sunlight at the top of the forest blocks most sunlight from reaching the bottom of the forest. The lowest levels of the rainforest are extremely dark, making it difficult for robust plants to thrive. As little as 1 percent of the light shining onto the forest reaches the lowest levels.

Canopy - the upper parts of most of the trees (about 65 to 130 feet or 20 to 40 m tall).

This leafy environment is full of life: insects, arachnids, many birds, some mammals, etc.

Emergent - the tops of the tallest trees, which are much higher than the average trees (the canopy).

Forest floor - the ground - it is teeming with animal life, especially insects and arachnids, plus large animals (like anacondas and jaguars).

Understory - a dark, cool environment that is under the leaves but over the ground. Most of the understory of a rainforest has so little light that plant growth is limited. There are short, leafy, mostly non-flowering shrubs, small trees, ferns, and vines (lianas) that have adapted to filtered light and poor soil.

Invitation to Learn

- Read the book The Great Kapok Tree, talk about the importance of the rainforest: the rainforest is the lungs of the Earth, they filter most of the world's carbon dioxide and create oxygen, which all of us need in order to live. Rainforests also support many species of animals and plants that depend on each other to live.
- Prior Knowledge Assessment: What is a food chain? Why do we depend on animals and plants to live? Can you think of any examples in our desert ecosystem?

*Tiny brine shrimp swim through the Great Salt Lake → birds eat the brine shrimp → carnivores such as coyotes or eagles and hawks eat the birds

*Rain flows to rivers → plants grow in the rivers → fish eat the plants → we catch the fish and eat them

Procedures:

Group Demonstration

- Gather the students in a circle or half circle on the floor to talk about the levels of the rainforest canopy
- Starting at the bottom of the poster board, using a potato or a sponge, paint a brown layer across the bottom and discuss properties of the forest floor - it is dark, damp, full of many dead leaves and vines, spongy, etc.
- Then using cauliflower dipped in brownish/green paint, paint the understory layer above the forest floor while discussing what you would see in the understory - many vines, dense vegetation, not much light, etc.
- Next use a stalk of broccoli dipped in green to illustrate the canopy layer. Its specifics include many green leaves and branches, the most leaves - much of the rain is stopped by the thick foliage, etc.
- Lastly, using a stalk of celery dipped in green, paint a few very tall trees for the emergent layer pointing out that not many trees get to this layer because it takes so long for them to grow. This layer is very sunny because it is the very top!
- Hang the poster of the rainforest ecosystem on the chalkboard and talk to the students about the different types of plants, insects, and animals found in the rainforest and what they need to live. Use the monkey as an example. What do they eat? What do their bodies tell us about where they would live (long limbs and tail, climbs trees)?

Small Group Activity

- Split the students into small groups of 3-4 students. Give them 5-10 rainforest animal cards
(Found at: <http://www.EnchantedLearning.com/subjects/rainforest/index.shtml>)

Also give the groups heading cards that say “emergent, canopy, understory, and forest floor.”

Walk the groups through the activity:

1. Brainstorm on the board the attributes of each strata of the rainforest, emergent, canopy, understory, and forest floor and write the attributes on the board. Ask each group to line their cards up horizontally on the floor.
2. Ask the groups to decide where they think the animals or insects on their cards live in the rainforest and why? They should talk about the food they eat and the features of their bodies that would give clues about where they live. Would a panther have the body to live in the canopy, in the highest parts of the trees? Or would a monkey be better suited to this area?
3. Then place the animal card under the correct rainforest strata heading.

Canopy	Emergent	Understory	Forest Floor
Monkey	Panther	Insects	Rodents
Birds			

- Once each group finishes, share the findings of the groups. As a class, place the different rainforest animals on the strata poster board you created at the beginning of the activity. As you place each animal on the board, talk about that animal’s place in the rainforest food chain. Who would eat the insects? Who eats the birds? Does the animal’s home in the strata layer effect what that animal eats for food? Can a carnivorous cat eat a bird that flies over the canopy? Why or why not?

Closure:

So how did we decide which animals fit into the strata of the rainforest? We made guesses about what an animals eats, what its body looks like and is able to do, and how that animals fits into the rainforest food chain. Can we examine the same attributes of animals in our desert ecosystem?

So why study the rainforest? What does it have to do with our environment? In journals or on a piece of paper, ask the students to write about why the rainforest is important.

How do the animals fit together to make the rainforest work? What does the rainforest do for the Earth? What would happen if the rainforests were destroyed, would it affect the people in Utah?

After students finish writing, ask them to share their thoughts with the group.

Assessment: The flash cards and headings provide a visual assessment of understanding for the small group. Bringing findings to a whole group scenario also allows for informal assessment of group understanding through their discussion of the rainforest and animal adaptations. Journaling provides reflection time for students and also provides and written assessment of individual student understanding.

Optional Rubric for Activity

<p>★★★ Student actively participated in whole class and small group activities and discussion. Student made meaningful connections to the rainforest during journaling and discussion. Student attempted to use new vocabulary in writing and discussion.</p>

★★ Student gave some effort to whole class and small group activities or hesitated to participate in discussion. Student made little or no connections to the rainforest during journaling and discussion. Student made little attempt to use new vocabulary during writing and discussion

★ Student rarely participated during whole class, group, or individual activity. Student made no effort to use new vocabulary during activity or reflection.

Accommodations: Visual displays of animals and the strata of the rainforest provide visual and contextual cues for ELL students. Small groups will provide additional support for students with learning disabilities. Students who struggle with writing can draw or verbally discuss their thoughts with the teacher or a partner.

Extensions:

- Study the impact humans have on the rainforest, why is the rainforest disappearing?
- Start a campaign within the school to save the rainforest
- Visit a local zoo in order to study rainforest animals
- Go on a scavenger hunt at home to find items that originated from the rainforest (chocolate, mangoes, coffee, tea, medicine, etc.) in order to illustrate the importance of the rainforest

References:

Rainforest Lesson Links

http://www.teach-nology.com/teachers/lesson_plans/science/biology/rain/

Enchanted Learning: Rainforest Animals and Information

<http://www.EnchantedLearning.com/subjects/rainforest/index.shtml>

Rainforest Action Network

<http://www.ran.org/>

Rainforest Alliance

<http://www.rainforest-alliance.org/>

Review of The Great Kapok Tree:

“This lushly illustrated book is a plea for the rainforests of the earth. The green foliage of the equatorial jungle covers the pages and hides some of the creatures who become spokesmen for the forest. Two men approach a huge kapok tree and the larger man commands the smaller one to cut it down and then departs. Cutting a kapok tree of that size is no easy task and the man soon tires and falls asleep at the base of the tree. One by one the animals approach him and whisper reasons for letting the tree live into his ear as he sleeps. Wakening he sees the creatures, including a human child, clustered around him. They fall silent, letting his own senses do the communicating now, and he drops his ax and walks away.”

Sarah Machol
Deborah McLelland
Spring 2005

Title: I'm Singin' in the Rainforest!

Abstract: This lesson, through the study of rain forests, expands students' global awareness of the environment and the importance of thinking globally and acting locally. Students will experiment with terrariums to develop an understanding of the relationship between rain forests, the water cycle, and their daily lives. They will demonstrate through oral and written expression, 1) how rain forests, though hundreds and some thousands of miles away, affect life here in Utah, 2) how actions/events on one part of the planet affect the whole planet, and 3) some specific things that can be done locally to protect the local and global environment, including the rainforest.

Grade : 2nd

Utah State Core Curriculum Standards : Standard III: Students will develop an understanding of their environment. Language Arts Curriculum Standards: Standard VII: Comprehension: Students understand, interpret, and analyze narrative and informational grade level text. Objective 1: Identify purpose of text: a) Identify purpose for reading: b) Identify author's purpose. Objective 2: Apply strategies to comprehend text: a) Relate prior knowledge to make connections to text (e.g., text to text, text to self, text to world). Standard VIII: Writing: Students write daily to communicate effectively for a variety of purposes and audiences: Writing-Students write daily to communicate effectively for a variety of purposes and audiences. Objective 1: Prepare to write by gathering and organizing information and ideas: c) Identify audience, purpose, and form for writing. Mathematics Curriculum Standards: Standard IV: Students will understand and use measurement tools and techniques: Objective 2: Use appropriate techniques and tools to determine measurements: Measure length using inches and feet...

Instructional Time : 2-3 class periods

Materials:

- Small plastic bags
- Teaspoon
- Water
- Rubber bands
- 2 covered containers per group (can use liter size clear plastic pop bottles – need to keep lids)
- gravel
- charcoal
- sand
- compost or potting soil
- various tropical plants
- various desert plants

Technology: Internet, various software programs

Terminology: Introduced as we approach it in the lesson. Students will discover the meaning through observation and discussion and then verify the meaning through glossaries and dictionaries. A page with this terminology and definitions will be included in their lab notebooks. An excellent online rainforest glossary can be found at <http://www.enchantedlearning.com/subjects/rainforest/glossary/>

- **Terrarium:** A small enclosure or closed container in which selected living plants and sometimes small land animals, such as turtles and lizards, are kept and observed.
- **Rainforests:** very dense, relatively warm, wet forests. They are havens for millions of plants and animals.
- **Ecosystem:** the interrelationships between all of the living things in an area
- **Recycle:** To extract and reuse (useful substances found in waste, to use again, especially to reprocess: *recycle aluminum cans; recycle old jokes.*, To recondition and adapt to a new use or function:
- **Biodiversity:** the abundance of different plant and animal species found in an environment.
- **Biome :** a complex community of plants and animals in a region and a climate. The Earth has many different environments, varying in temperature, moisture, light, and many other factors. Each of these habitats has distinct life forms living in it, forming complex communities of interdependent organisms. Some land biomes include tundra, taiga, temperate deciduous forest, desert, chaparral, tropical rainforest, temperate rainforest, etc. Some water biomes include coral reefs, temperate ponds, intertidal zones, etc.
- **Decomposition:** the decay or breakdown of things into more basic elements. For example, after a plant dies, it decomposes into organic nutrients.
- **Deforestation:** the loss of forests. Deforestation has many causes, including man's cutting down trees, forest fires, severe drought, disease, volcanic eruptions, changes in sea level, changes in the Earth's temperature, etc.
- **Water cycle:** (also known as the hydrologic cycle) is the journey water takes as it circulates from the land to the sky and back again.
- **Evaporate:** the process in which liquid water becomes water vapor (a gas). Water vaporizes from the surfaces of oceans and lakes, from the surface of the land, and from melts in snow fields.
- **Water vapor:** water that has evaporated into a gas
- **Condensation:** the process in which water vapor (a gas) in the air turns into liquid water. Condensing water forms clouds in the sky. Water drops that form on the outside of a glass of icy water are condensed water.
- **Precipitation:** the process in which water (in the form of rain, snow, sleet, or hail) falls from clouds in the sky.
- **Transpiration:** the process in which some water within plants evaporates into the atmosphere. Water is first absorbed by the plant's roots, then later exits by evaporating through pores in the plant.

Intended Learning Outcomes: Students will engage in the basic processes of scientific inquiry, (observing, classifying, communicating, measuring, predicting, inferring) and the integrated processes of science, (identifying and controlling variables, formulating and testing hypotheses, interpreting data, defining operationally, experimenting, constructing models) to better understand their need for, and dependence on, the rainforest.

Specifically, students will:

- Conduct an experiment comparing the rainforest ecosystem with a desert ecosystem recording questions and observations in science lab notebooks
- Expand their vocabulary on the subject of environment
- Express their understanding of the importance of the rainforest ecosystem to the planet and to them personally orally and in writing
- Take real-life action to preserve the rainforest – to think globally and act locally

Background Information:

A rainforest is an environment that receives high rainfall and is overshadowed by a dense populous of tall trees. There are two types of rain forests, temperate rain forests like those found in the Pacific Northwest and tropical rain forests like those found near the equator. When people talk of the rain forest most of the time they are referring to the tropical type.

Tropical rainforests are the most diverse ecosystem on Earth, and also the oldest. Today, tropical rainforests cover only 6 percent of the Earth's ground surface. They are found mostly in Africa, Australia, Asia and Central and South America. They receive from 160 to 400 inches of rain per year. There is no “dry” season in the rain forest because the rainfall, amount of sunlight and amount of heat is consistent throughout the year. Because of this, the weather in these regions is fairly constant. The temperature rarely falls below 60 degrees F (16 degrees C).

Rain forests are critical to all life on Earth. They are often referred to as the “lungs of the planet” because they play an important role in sustaining all life on the planet by regulating the global climate and the water cycle, absorbing carbon dioxide from the atmosphere, and providing us with medicines, food, and more. They do this by redistributing solar radiation from the equator to temperate zones. This warms temperate zones while cooling the tropics. They also cause large amounts of water to evaporate into the atmosphere which generates clouds which reflect sunlight back into outer space, which, in turn, cools the tropical regions.

Other reasons the rainforest is special include:

- They are home to half of the Earth's plant and animal species.
- They are winter homes to many birds that breed in temperate latitudes.
- They are considered by many to be some of the most beautiful wildernesses on our planet.

- They are home to tribal cultures that have lived there successfully in the forests for thousands of years.
- They are a potential source of medicinal plants that may benefit everyone on Earth.
- As already mentioned, they help maintain global rain and weather patterns. Much of the water that evaporates from the trees returns in the form of rainfall. Removal of the forest can change the natural rainfall patterns.

Just as the lungs are critical to the body, the rain forests are critical to the planet. And, just like weak or sick lungs can affect the body and make it sick, destruction of the rain forests can make the planet sick. Destruction of the rainforest is called deforestation.

Tropical rainforests are being destroyed at an alarming rate. Some scientists estimate we are losing an area of rainforest the size of Pennsylvania each year. If this destruction, known as deforestation, continues at this rate we may lose rainforests altogether within the next one hundred years.

There are several reasons for deforestation:

- As human populations increase in tropical regions, people move away from the overcrowded cities into the forest areas where they practice small-scale farming
- Commercial agricultural projects may require conversion of large plots of rainforest land and may cause more permanent damage
- Logging of forests for firewood, charcoal, building materials, and other wood products is another cause of deforestation
- The conversion of rainforest to pasture land for cattle ranching has led to the destruction of millions of acres of forest
- Mining for gold, bauxite from which aluminum is made, and other minerals can lead to the drastic destruction of the land
 - Once the land is scarred by mining efforts it is left vulnerable to massive erosion.
- Other events and issues such as natural disasters, war, the construction of dams, and poverty in developing countries also contribute to the destruction of tropical rainforests.

What We Can Do

- Write a letter to President Bush: Urge him to revamp our national energy strategy and support an international agreement to protect the world's climate by reducing greenhouse gas emissions. George W. Bush, President of the United States. The White House 1600 Pennsylvania Ave., N.W. Washington, D.C. 20500.
- Reduce automobile usage: take public transportation, ride a bike, or walk when possible.
- Save energy
- Plant trees
- Recycle

Invitation to Learn: Prior to class have two large terrariums prepared with soil and planted with a mixture of large and small plants. One terrarium will simulate a desert ecosystem and the other will simulate a rainforest ecosystem. The terrariums are displayed as the students enter the classroom. Students brainstorm which of the various biomes the terrariums could represent and make predictions about if and how the two may be connected.

Explain how the terrarium works: Plants will not suffocate in a closed container because they can use the same air over and over again. In daylight, plants take in carbon dioxide and give off oxygen. Using carbon dioxide and light, plants produce food. At all times plants use food and oxygen to produce energy, which turns into carbon dioxide again.

Water is also recycled in a terrarium. This happens as plants take water from the soil and then release it through their leaves as water vapor. In a closed container, this vapor turns into water droplets. The water drips back into the soil to be used all over again. Explain that the water is evaporating from the soil and being transpired by the leaves; it normally condenses into clouds and then falls back as rain

Prior Knowledge Assessment: In the introductory lesson students learned the definition of a rainforest and the four layers of the rainforest. They will be asked to demonstrate their prior knowledge of these four layers. They will also demonstrate their prior knowledge of the water cycle.

In cooperative learning groups: students are asked to describe/draw and label the four layers of the rainforest terrarium. In those same learning groups students will create the water cycle in a bag and be able to explain it.

Water Cycle in a Bag:

1. Put two teaspoons of water in a small plastic bag.
2. Blow air in and seal the bag with a heavy rubber band.
3. Place the bag in a sunny window.

What do you see?

1. The sun provides the energy to make the water cycle work.
2. Heat from the sun *evaporates* water from surfaces including lakes, rivers, and oceans, putting *water vapor* into the air.
3. As the water vapor cools, it *condenses* forming tiny droplets in clouds.
4. The clouds meet cold air and the water falls down to the Earth's surface as *precipitation* – rain, sleet, or snow.
5. Some of the precipitation soaks into the soil. This water is either used by plant or stays as a layer of underground water called *groundwater*.

Procedures:

- Ask students why the water cycle is important

- Explain that the rainforest is very important to the water cycle and the oxygen cycle of the whole planet
- Ask students to suggest/infer why that is so
 - Discuss how the rain forest helps the whole Earth's ecosystem as it continues to function as a closed environment. Use the air in the bottle to simulate the Earth's atmosphere. The plants change carbon dioxide into oxygen and the Amazon Rain Forest sends the fresh air out to the whole world.
- Explain that we are going to experiment with our own individual terrariums to learn about the water cycle in a rain forest and a desert
- Give groups the materials they need to make the terrariums
- Model and oversee the creation of terrariums:
 - If using plastic pop bottles begin by rinsing them
 - Cut the top third of the bottle off – set aside
 - Fill the bottom with gravel and then a layer of soil or compost for the rainforest terrarium – for the desert terrarium put sand mixed with soil on top of the gravel
 - you can discuss how the forest floor is like a big compost heap with new vegetation falling from above and rotting to make soil (providing nutrients for the trees!)
 - Arrange the tropical plants in the soil, the desert plants in the sand
 - Add water: 1/2 cup to the rainforest soil, 1/4 cup to the desert
 - Cover tightly (may need to tape the top back on)
 - Do not open again. The water and oxygen cycles are at work.
 - Observe daily. Make notes in lab notebook
 - Take measurements of the plant growth from the outside. Record information in lab notebooks along with questions and inferences.
- Search websites for more information to answer questions.
 - Possible questions: How does the water cycle in the rainforest affect the desert? Why does it matter if I recycle in Utah?
 - Personal connection: Utah has been in a drought for the past 4 years. What are the implications of more/less rainforest?
- Discussion: What is happening in the desert terrarium? The rainforest terrarium? Students brainstorm verbally and in picture form what is happening in the processes happening in the terrariums.
- Explain: Clarify the stages of the water cycle by labeling them on the outside of the terrarium. (Can use sticky notes with labels or use a sharpie: precipitation, evaporation, condensation, accumulation, and transpiration.)

Adaptations and Modifications for Special Learning Needs: The entire mini-unit is done by way of group work. This dynamic provides support for students with disabilities. The activities are hands-on with a lot of visuals to provide contextual as well as visual cues for ELL students.

Assessment: Students will continue to work in their cooperative learning groups to create a final project. The project will include: 1) reporting their experimental findings in a

poster with pictures and/or graphs with written explanation, 2) a narrative report on why the rainforest is important to them even though they live in Utah thousands of miles away (can be supplemented with drawings and/or pictures), and 3) things they can do locally to help preserve this important resource (can be represented in written and/or pictorial or some other art form).

Assessment Criteria: Poster: Criteria will include understanding of the scientific process and clear explanation of what happened in the terrarium. Report: Must demonstrate that considerable thought has gone into understanding why the rainforest matters to Utah. Can-Do List: Must reflect things they can personally affect and a plan of action. Overall Component: Must be a demonstration of best efforts. (Students will help generate rubrics for each of the 4 areas.)

Extensions: A comprehensive unit on the rainforest could easily, and probably should, take 4-6 weeks. Other things to include:

- Make the room look like a rainforest
 - Create the four layers of the rainforest, the animals, the vegetation, the insects, etc.
- Do a presentation for the rest of the school and for parents on the importance of the rainforest and encourage everyone to be more serious about recycling.

Resources:

Students Sites:

Dr. Blythe's Rainforest: www.rainforesteducation.com

Earth Watch Institute: www.earthwatch.org/index.html

Student and Teacher Sites:

Passport to the Rainforest: www.passporttoknowledge.com

How Stuff Works: www.howstuffworks.com/rainforest.htm

Rainforest Action Network: www.ran.org

Terrarium Gardens and the Water Cycle:
<http://www.chariho.k12.ri.us/faculty/dmmor/scifair02/sf022.html>

Vivaria Projects: <http://www.vivaria.nl/home/intro.html>

Earth Observatory: NASA:
earthobservatory.nasa.gov/Library/Deforestation/deforestation_4.html

PBS: Explore Features: <http://www.pbs.org/>

Amazon Interactive: <http://www.eduweb.com/amazon.html>

Encarta Encyclopedia Online: <http://www.encyclopedia.com>

Merriam Webster Online: <http://www.m-w.com>

MBG Net: Biomes of the World: <http://mbgnet.mobot.org/sets/rforest/index.htm>

Zoom Rainforests: www.zoomdinosaurs.com/subjects/rainforest

Where Do We Live – Habitats:

<http://www.teachnetlab.org/miami/2001/concepcion/index.html>

Raintree: Help with school reports: <http://rain-tree.com/schoolreports.htm>

World Rainforest Information Portal: <http://www.rainforestweb.org/>

Enchanted Learning: <http://www.enchantedlearning.com/subjects/rainforest/glossary/>

Teacher Resources:

Lesson Plans Page.com

<http://www.lessonplanspage.com/SSScienceRainForestPeopleAnimalsLife34.htm>

Teacher Developed Lessons: Earthwatch.org:

<http://www.earthwatch.org/ed/pm/lessons.html>

Can Teach: www.canteach.ca

Amazon Rainforest a Thematic Unit:

<http://center.dordt.edu/266.543units/leopards/index.html>

University of Nebraska – Lincoln: Nebraska Earth Systems Education Network:

<http://nesen.unl.edu/lessons/envirchange/rainforesthsp.asp>

Houghton Mifflin Science Discovery Works: <http://eduplace.com/science/dw/index.html>

University of Richmond Web based projects:

<http://oncampus.richmond.edu/academics/education/projects/>