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Protecting an Ecosystem

The Rain Forest

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ABOUT STORYPATH

THE STORYPATH STRATEGY

Storypath offers both a structure for organizing the social studies curriculum and an instructional strategy for teaching. The structure is a familiar one: the story. The strategy is grounded in a belief that children learn best when they are active participants in their own learning, and places students' own efforts to understand at the center of the educational enterprise. Together, the structure and the teaching strategy ensure that students feel strongly motivated and have meaningful and memorable learning experiences.

Originally developed in Scotland during the 1960s, Storypath draws support from decades of experience with teachers and students. The approach has its roots in these beliefs about children and learning:

- The world is complex and presents many layers of information. Children know a good deal about how the world works and have a reservoir of knowledge that is often untapped in the classroom.
- When children build on that knowledge through activities such as questioning and researching, new understandings are acquired. Because children construct their own knowledge and understanding of their world, their learning is more meaningful and memorable.
- Problem solving is a natural and powerful human endeavor. When children are engaged in problem-solving, they take ownership for their learning.
- The story form integrates content and skills from many disciplines and provides a context for children to gain a deeper, more complex understanding of major concepts.

AN INQUIRY APPROACH

Questioning, by both teacher and students, is a key component of Storypath. Through the story structure and the discourse it creates, the teacher guides students in their search for meaning and understanding as they acquire new knowledge and skills. Your questions, and the discussions they engender, cause students to:

- ask their own questions and think critically about what they know;
- use their prior knowledge to make sense of new information;
- connect personally to important social studies concepts.

The story structure and inquiry guided by unit goals provide the framework for students to integrate skills and complex content through problems they encounter. As they do so, their understanding of important concepts is extended and key connections are made.

THE STORY STRUCTURE

For thousands of years, stories have helped us create order and make connections between events. Storypath’s narrative structure helps students understand concepts that they often find difficult to comprehend in the traditional social studies curriculum.

Each Storypath unit centers on a unique and engaging story that provides a concrete context for understanding the social science content. This story may be based on actual historical events, as developed in *Struggle for Independence*. Or the story might instead be based on typical community or business structures, as developed in *Families in Their Neighborhoods* or in *Understanding the Marketplace*. From all of these structures, students develop a meaningful context for developing understanding of the topic.

Typical structure of a Storypath unit

CREATING THE SETTING

Students create the setting by completing a frieze or mural of the place.

CREATING THE CHARACTERS

Students create characters for the story whose roles they will play during subsequent episodes.

BUILDING CONTEXT

Students are involved in activities such as reading, writing, and research to stimulate them to think more deeply about the people and the place they have created.

CRITICAL INCIDENTS

Characters confront problems typical of those faced by people of that time and place.

CONCLUDING EVENT

Students plan and participate in an activity that brings closure to the story.

PLANNING THE UNIT

PROTECTING AN ECOSYSTEM: THE RAIN FOREST

MAKE KEY DECISIONS

Make Space for the Storypath. You will need enough wall space for students to make the rain forest frieze and to display their characters and the various projects they complete during the unit. Sometimes teachers are tempted to put the frieze and characters in the hallway outside of the classroom. It is important, however, to display these items inside the classroom where students can easily refer to them throughout the Storypath.

Organize Students. In Episode 1, organize students into three groups—the canopy, the understory, and the forest floor—to construct the frieze. In Episode 2, students individually create characters who apply for jobs to work in the rain forest reserve. Then in Episode 3, students will work in pairs or small groups to make visual displays of rain forest habitats.

Arrange for the Debate. In Episode 4, you might invite two adults to participate in the debate as the moderator and the lumber company representative. Background information is provided on Teaching Master 11 and on TH pages 56–57 to assist the volunteers in preparing for the debate. If possible, arrange to hold the debate in a special room, such as the school district's board room or the school library.

CUSTOMIZE THE UNIT

Adapt the Unit. There will likely be many times in this unit when you will want to modify the curriculum to suit your own needs and follow the logical progression of the story. Alternative activities or special arrangements are suggested at various points during the unit to assist in adapting the unit to meet your unique needs.

Frequently, students will provide an unanticipated twist to the Storypath, or important learning opportunities will arise. The Storypath allows for the accommodation of those special circumstances.

Gather Resources. Throughout the unit you will want to have available a variety of resources about the rain forest. The Content Slide Sets serve as a good starting point but you will want students to read a range of texts both in books and on the Internet about the rain forest. See page 62 for suggested resources.

Use Current Events. Students role-play the scientists and discuss the rain forest from their own perspective. These are opportune times to help students connect their experiences to current events. International stories related to the rain forest are frequently in the news, and students can also apply what they've learned to local issues, such as the establishment of a wildlife sanctuary or a green belt in their own community. In fact, making these connections can serve as powerful learning experiences because students understand firsthand the transferability of their classroom experiences to the real world.

Don't be surprised if students make current event connections on their own. Teachers report that once students become immersed in this Storypath, they begin to pay more attention to nature programs on television and news reports about rain forests. Students with Internet access often use computers to discover valuable information, which they're eager to include in their rain forest projects.

Connect to Other Storypaths. Complementary Storypath units that integrate science and social studies include *Safari to Kenya*, *Protecting an Ecosystem: The Great Barrier Reef*, and *Creating a Constitution: The Space Colony*. For other Storypath topics go to www.teachstorypath.com.

INVOLVE OTHERS

Involve Families. Family members and other adults can serve as excellent resources for you and your students. Some family members may have special knowledge about the rain forest or may have visited rain forests—invite them to your classroom.

In Episode 5, students celebrate the preservation of the rain forest reserve. This is an ideal time to invite families. Students can write invitations to their celebration, and then provide family members with “guided tours” through their rain forest.

Involve the Community. Guest speakers invited to your classroom or field trips to nature conservatories, arboretums, and zoos with rain forest exhibits are all suitable activities for this Storypath. Those activities should be carefully timed, however, and should only happen when students are truly interested in observing natural environments or hearing what a speaker has to say. For example, it would be unwise to visit a rain forest exhibit at a zoo before students create their own rain forest frieze because students would simply replicate what they saw. A visit at the end of the unit allows students to knowledgeably compare and contrast the two settings, making the visit a more powerful learning experience.

Create a Learning Community. An open and supportive atmosphere is essential for students to engage in the discourse that is basic to the learning process of the Storypath approach. Students should understand the value of reflective discussions and the importance of collaborative work to deepen their understanding of complex ideas. Consequently, students should be expected to listen carefully and respond thoughtfully and respectfully to one another's ideas.

2

EPISODE

CREATING THE CHARACTERS THE RAIN FOREST RESERVE EMPLOYEES

INTRODUCING RAIN FOREST RESERVE JOB OPPORTUNITIES **page 21**

Students brainstorm a list of jobs for the reserve.

Materials Teaching Master 2, *Job Opportunities in the Amazon Basin Rain Forest*, TH p. 39
Portfolio 4, *Job Titles for a Rain Forest Reserve*, p. 8
Content Slide Sets 3 and 4

Grouping Whole class

Schedule Approximately 30 minutes

IMAGINING THEMSELVES AS RESERVE WORKERS **page 22**

Students create figures of themselves as employees of the reserve.

Materials Teaching Master 3, *Rain Forest Reserve Job Application*, TH p. 40
Portfolio 5, *Making Figures*, p. 10
Content Slide Set 3

For the characters:

- various skin colors of construction paper
- wallpaper or fabric scraps, paper doilies, ribbon, lace, buttons
- colored markers, crayons, colored chalk, glue, tape, scissors
- wool fiber or yarn for hair
- wire hangers, old shirts, blouses, ties, scarves

Grouping Students work independently

Schedule 2 hours

CONCLUDING EPISODE 2 **page 24**

Students introduce themselves as rain forest employees and reflect on their experiences.

Materials Portfolio 6, *Introductions*, p. 12

Grouping Independently (to practice the introductions);
whole class (during the presentations)

Schedule Approximately 1 1/2 hours

EPISODE OBJECTIVES



- **Social Skills** *Organize, plan, and make decisions while creating characters.*
- **Critical Thinking** *Organize ideas from class discussion in new ways to create unique characters.*
- **Civic Competence** *Recognize how citizens can take action to strengthen the “common good” of environmental preservation.*
- **Literacy** *Read and discuss a fictional job announcement.*
- **Literacy** *Organize information to write a job application.*
- **Literacy** *Present oral introductions to share information.*

JOB OPPORTUNITIES IN THE AMAZON BASIN RAIN FOREST

A RAIN FOREST RESERVE IS BEING ESTABLISHED.



The reserve will provide

- a healthy environment for plants and animals;
- a place for scientists to study the plants and animals;
- a place for people to visit to learn more about the rain forest.

BECOME PART OF THE TEAM!

APPLY TODAY!

Date _____

RAIN FOREST RESERVE JOB APPLICATION

Name: _____

Address: _____

Jobs for which you are applying:

First choice: _____

Second choice: _____

Educational experience: _____

Job experience: _____

People skills: _____

Why do you feel you are qualified for this job? _____

(Applicant's signature)



► The green you see on this map represents the Amazon Basin rain forest of South America. Parts of the forest are being destroyed daily.

Sixty percent of the Amazon Basin rain forest is in Brazil. In what other countries is the rain forest? (understanding visuals)





What is the structure of a rain forest?

Rain forests are made up of three layers. The top layer of tall trees is the canopy, which is bathed in sunlight and drenched by rain showers. The middle layer is called the understory. It extends from just below the canopy to just above the forest floor. It contains vines, small trees, and shrubs. The lowest layer is the forest floor, which is covered with dead leaves and rotting branches.

What are the three layers of the rain forest?
(main idea/supporting details)



A **light gap** occurs when a large tree falls down, and sunlight reaches the forest floor through a gap in the canopy. Young trees grow quickly to reach the canopy before the light is blocked out again by another tree.

Buttress roots are wide winglike structures at the bottom of a tree.

Tree trunks hold up the weight of the canopy. The typical tree is about 30 meters (100 feet) tall and has a smooth, straight trunk with no lower branches.

Continue to the next slide for more on the three layers of the rain forest.



JOB TITLES FOR A RAIN FOREST RESERVE

Read the job descriptions. Decide what jobs you might like to have in the rain forest reserve. Make a first and a second choice.

Scientists

Job Title	Job Description
Arachnologist	Studies spiders
Biologist	Studies living things
Botanist	Studies plants
Ecologist	Studies how living things react to their environments
Entomologist	Studies insects
Environmentalist	Studies the environment and pollution
Medical researcher	Studies plants and animals to find medicines to help humans
Ornithologist	Studies birds
Veterinarian	A doctor who treats animals
Zoologist	Studies animal life



JOB TITLES FOR A RAIN FOREST RESERVE (CONT.)

Other Staff Members

Job Title	Job Description
Advertiser	Promotes the reserve to the public
Artist	Makes drawings of plants and animals
Carpenter	Builds structures to support the work of the reserve, such as research areas, pathways through the reserve, and a visitor center
Educator	Prepares lessons to teach visitors about the reserve
Game warden	Protects wildlife habitats
Manager	Oversees the work of the reserve and coordinates the workers
Photographer	Photographs plants and animals as well as their habitats

First choice: _____

Second choice: _____



MAKING FIGURES

Follow the steps below to create a head-and-torso figure. Then you can decide what you will look like, including hair, facial expression, and clothing.

1. Make the face.

- On a sheet of construction paper, draw an oval about 9 inches long and 6 inches wide.
- Cut out the oval.

2. Make the eyes.

- Fold white paper in half so that you can cut out two eyes at once.
- Trim the eyes to make them the size and shape you want.
- Color the middle of each eye.
- Measure halfway down on the face and place the eyes there. Don't glue the eyes in place until you've made the nose and mouth.

3. Make the nose.

- Fold a scrap of paper in half and then cut out half a nose. You can use a scrap of paper leftover from making the face.
- Unfold the paper, and you'll have a whole nose.
- Place the nose, slightly folded, on the face. Don't glue the nose on yet.

4. Make the mouth.

- Draw a mouth and cut it out.
- Slightly fold the mouth the long way.
- Measure midway between the eyes and chin and place the mouth there.



MAKING FIGURES (CONT.)

5. Glue the face together and add other features.

- Once you have decided where the eyes, nose, and mouth should be on the face, glue them in place.
- Then add other features, such as eyelashes, eyebrows, and shading for cheeks.

6. Add hair and ears.

- Decide on the hair you want for your character. Use yarn, wool fiber, or curled construction paper. Add ears by cutting out shapes and gluing them to the sides of the face.

7. Make a torso.

- Add a neck and upper body to your character.
- Use construction paper, wallpaper scraps, or cardboard to make a shirt. Another option is to attach the head to a hanger using tape and hang a real shirt on your figure.

8. Make or draw an object that you will use on your job.

Assessment: Figure is carefully completed and includes details related to the job application.



INTRODUCTIONS

Part 1

Prepare an introduction for yourself using the guidelines below.

- Get into role as a rain forest reserve employee.
- Underline important information in your job application.
- Keep your introduction short and to the point.
- Speak clearly and confidently.
- Make eye contact with your audience.
- Practice your introduction with your group and make improvements as necessary.

Part 2

Give feedback to one of your group members on the practice introduction.

Student's name: _____

Criteria	Needs lots of work	Needs some work	Great
You were in role.			
Important information was shared.			
You told interesting details about yourself.			
The introduction was short and to the point.			
You spoke clearly and confidently.			
You made eye contact with your audience.			