



First Grade
Maya Mountain Marine Corridor, Belize
National Standards for First Grade Lessons

Writing

Standard 3 Level 1: K-2

1. Generates questions about topics of personal interest.
2. Uses a variety of sources to gather information.

Reading

Standard 7 Level 1 Grade K-2

1. Uses reading skills and strategies to understand a variety of informational texts.
4. Relates new information to prior knowledge and experiences.

Listening and Speaking

Standard 8 Level 1 Grade k-2

8. Listens and responds to a variety of media.

Thinking and Reasoning

Standard 1 Level 1 Grade K-2

Understands and applies the basic principles of presenting an argument.

Standard 5 Level 1 Grade K-2

Identifies simple problems and possible solutions

Mathematics

Standard 1 Uses a variety of strategies in the problem-solving

Level 1 Grade K-2

A) Draws pictures to represent problems.

B) 4. Makes organized lists or tables of information necessary for solving a problem.

Standard 3 Level 1 Grade K-2

3. Understand basic estimation strategies

Standard 4 Level 1 Grade K-2

1. Understand the basic Measures of length, width, height, weight, and temperature.

Life Sciences

Standard 6 Level 1 Grade K-2

1. Knows that plants and animals need certain resources for energy and growth
2. Know that living things are found almost everywhere in the world and that distinct environmental support the life of different types of plants and animals.

Standard 13 Level 1 Grade K-2

Understands that in science it is helpful to work with a team and share the findings with others.

Standard 12 Level 1 Grade K-2

1. Knows that learning can come from careful observations and simple experiments.

Standard 5 Level 1 Grade K-2

1. Knows the basic needs of plants and animals (air, water, nutrients, light or food, shelter)
2. Knows that plants and animals have features that help them live in different environments.

Standard 4 Level 1 Grade K-2

3. Knows that differences exist among individuals of the same kind of plant or animal.

Standard 7 Level 1 Grade K-2

2. Knows that there are similarities and differences in the appearance and behavior of plants and animals.



**First Grade
Maya Mountain Marine Corridor, Belize**

Lesson 4: Who Takes Care of the Maya Forest Corridor?

Concept

The work of conservationists is tireless. It demands a knowledge of the ecological dynamics and the relationship that humans have in each region. A ranger is responsible for balancing human use with the health of the environment.

Essential Question

Making sure animals and people are safe in their habitats is a big job. Who makes sure we are safe, healthy and comfortable?

Additional Resources

- **Resource Index** - Check out this page at <http://www.rainforest-alliance.org/programs/education/teachers/curriculum/resources/index.html> for additional supplemental materials that complement these dynamic units and to access many of the resources listed below.
- **Slideshow** – The Learning Site provides a slideshow and script about Belize that includes background information about the animals, people and landscape of this region. The slideshow can be downloaded for viewing in the classroom, printed out and read as a story, or viewed online with the students.
- **Unit-Specific Stories** - The Rainforest Alliance has developed two original stories for use with these units, available in English, Spanish and Portuguese. The stories are available to download and print or can be viewed on-screen.

**Manny Manatee and the Mystery of the Murky Water
My Dad the Ranger**

- **Species Profiles** – The species profiles, available to view on screen or download from the beginning of the unit or the Resource Index, include photos, habitat, foraging behavior, group relationships, threats and many more facts.
 - Ocellated Turkey
 - Jaguar
 - Howler Monkey
 - Manatee
 - Scarlet Macaw
- **Ranger Rick Article** - Download "*Rick and the Gang Visit Costa Rica and Go Bananas,*" a colorful article about bananas and coastal wildlife from the National Wildlife Federation's Ranger Rick magazine.

- **Rainforest Poster** – Download and print out this colorful two-page poster, which is available for you to use in explaining the layers of the rainforest, its products and the environmental threats facing many rainforests around the world.

Inside the Canopy – Structure and species of the rainforest

Status Report – What is happening to the rainforest

- **Rainforest Products** – Visit <http://www.rainforest-alliance.org/resources/forest-facts/lives.html> for a summary of products that we use in our everyday lives that originate in rainforests. Both teachers and students will find information on the products found in their homes and supermarkets that either originated in tropical forests or are currently produced there.
- **Profiles in Sustainability** – Click [here http://www.rainforest-alliance.org/programs/profiles/index.html](http://www.rainforest-alliance.org/programs/profiles/index.html) for case studies on companies who work closely with the Rainforest Alliance to ensure that their practices protect wildlife, workers and communities.
- **Toledo Institute for Development and the Environment (TIDE)** - Check out these online resources for more information about the Rainforest Alliance’s partner group in Belize:
www.rainforest-alliance.org/programs/aar/belize.html
www.tidebelize.org
- **Certificate of Accomplishment** – Print out colorful rainforest certificates for your students to commemorate their completion of these units.

Step 1 – CONNECT (The Concept to Prior Knowledge)

Challenge

Students identify the rules, laws, jobs and people who help them feel safe, keep them healthy and make them comfortable and happy. They identify the rules, laws, jobs and people who look after the livelihood of animals, particularly those in the Maya Forest Reserve.

Materials

- Paper, pencils
- Art supplies

Procedure

1. Students make a list of all the rules, laws, jobs and people who make their playground and school safe. They extend this list to include their homes.
2. Students identify changes that have been made to their playgrounds or homes to increase safety or comfort.
3. Students may draw a picture to show one incident/person who helps them feel safe in their neighborhood or play space.

Step 2 – LITERATURE/DISCUSS (Give Expert Information Book; Ask Questions)

Challenge

Students identify the people who are trying to keep the rainforest safe for the four focus species.

Materials

- Book: **The Great Kapok Tree** by Lynne Cherry
- Story: **My Dad the Ranger**, a Rainforest Alliance story

Procedure

1. Read **The Great Kapok Tree** by Lynne Cherry. Identify the threats to the animals and the rainforest that are identified in this book. Discuss the reasons that people might be cutting down trees in the rainforest.
2. Read **My Dad the Ranger**, a Rainforest Alliance story. Talk about the ways that the ranger is protecting the four species of focus. Discuss people in the lives of the students who provide safety and health. What do they do that is different than the ranger?
3. Visit <http://www.rainforest-alliance.org/programs/aar/belize.html> for a discussion of threats to the environmentally important Maya Mountain Marine Corridor and efforts to protect it. Give a short overview of Belize and the Maya rainforest: Belize's tropical rainforests are home to more than 220 tree species and 350 species of birds. Forest areas include the largest true subtropical rainforest in Belize, with a great diversity of rare and endangered plants, birds, insects and animals, including five species of wild cats. Cover information about what the Toledo Institute for Development and the Environment (TIDE) is doing to protect Belize's rainforests. Due to its tremendous natural diversity, the Toledo Institute for Development and the Environment (TIDE), with support from The Nature Conservancy and the Rainforest Alliance, is working to conserve the "Ridges to Reef" conservation corridor in Southern Belize. Visit <http://www.tidebelize.org/> for more information about TIDE's work.

Step 3A – PRACTICE (Math and Learning Centers)

Challenge

Students carry out a variety of interesting comparisons between the two environments: their neighborhoods and the Marine corridor. Students create a column graph that compares the threats to the safety of humans and animals within both environments.

Materials

- Paper, pencils

Procedure

1. Have students brainstorm the kinds of things that might threaten the integrity of their playground, school or home.
2. List those things in columns labeled respectively. Then list the things that might threaten the Maya Forest Marine Corridor (both the forest and the watershed).

3. Compare and contrast the sources of threats and the results of threats.

Step 3B – CREATE (Performance Tasks Related to Standard Indicators)

Challenge

Using the materials they have studied, students will translate what they know into a symbolic representation.

Materials

- Paper
- Art supplies

Procedure

1. Students will create a 3D model of the two environments in small groups. This might be in the form of a diorama or a flat cookie sheet sized model.
2. Students will talk about the ways the two environments are the same and what threats they face in the future to their safety, health and comfort.

Step 4 - PRESENT

Challenge

Students will write stories that use the two different 3D representations as a background for a personal exploration of the rainforest or of an exploration of their playground from the perspective of a jaguar, howler monkey, manatee or loggerhead turtle. The stories will highlight where animals feel safe, where they can get what they need to survive and whether they feel comfortable.

LESSON 4 ASSESSMENT RUBRIC:

Teacher observations of tasks with rubrics as listed below, as well as collected work samples.

Assessment Guidelines	3 = P (Proficient)	2 = S (Satisfactory)	1 = NW (Needs Work)
1. Student identifies what he/she needs to know to help keep watersheds healthy.			
2. Student names the different ways that people can protect environments making them safe and healthy.			
3. Student lists the threats to the health of the rainforest.			
4. Student creates a column graph that compares and contrasts the things that threaten both his/her own home environment and those of animals in the rainforest.			
5. Student identifies people or groups that are working to keep the rainforest in Belize safe for the four focus species.			
6. Student uses written narratives to describe the environment from the perspectives of a jaguar, monkey, manatee or loggerhead turtle highlighting what animals need to feel safe, healthy and comfortable.			