



**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  
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**Lesson 2: Protecting the Critical Habitat of the Manatee and the  
Loggerhead Turtle**

**Concept**

Regardless of the natural surroundings or the day-to-day conditions in any given place, plants and animals rely on their environment to provide them with the raw materials they need for life and the conditions to live safely and without stress. To protect manatees and loggerheads, we need to protect their homes.

**Essential Question**

What do manatees and loggerhead turtles have in common with you and your neighborhood?

**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 Resources 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](http://www.rainforest-alliance.org/programs/aar/belize.html)  
[www.tidebelize.org](http://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 will identify the characteristics of the manatee and the loggerhead turtle and give evidence of similarities and differences between these species and humans. Students will describe the kinds of homes (and play spaces) each species needs to survive (example: manatee needs clean and deep water).

### **Materials**

- Maps of schoolyard from Lesson 1, Step 1
- Species profiles (provided on the Rainforest Alliance Learning Site)
- Story: **Manny the Manatee**, an original Rainforest Alliance story
- Map that includes coastal ecosystem of Belize

### **Procedure**

1. Students will identify places where they feel most comfortable, safe and healthy on the map of their schoolyard/playspace.
2. Students are acquainted with the manatee and the loggerhead turtle using the species profiles from the Rainforest Alliance.
3. Students will be acquainted with a map of the coastal ecosystem of Belize and the river system discussed in **Manny the Manatee**, a Rainforest Alliance story.

4. Discuss with students what is different in this landscape as compared to their own neighborhoods.

### **Step 2 - LITERATURE/DISCUSS (Give Expert Information Book; Ask Questions)**

#### **Challenge**

Students learn about the Belize environment through a story and hear about changes in land practices that may threaten the comfort, safety and health like those that are faced by the manatee and loggerhead turtle in Belize.

#### **Materials**

Story: **Manny the Manatee**, an original Rainforest Alliance story

#### **Procedure**

1. Students listen to **Manny the Manatee and the Mystery of the Murky Water**.
2. Students discuss the changes in Manny's environment that make life uncomfortable.
3. Students discuss things that have changed in their own neighborhoods that may have changed the way that they play or walk to school or threatened their comfort and safety in these places.

### **Step 3A - PRACTICE (Math and Learning Centers)**

#### **Challenge**

Students understand the landscape that Manny lives in by looking at maps that scale sequentially closer to the coastal ecosystem from a map that includes North America.

#### **Materials**

- Maps of world, Central America and Belize

#### **Procedure**

1. Place the sequentially scaled maps on the floor in a random order and have students order them so that they begin to focus on the coastal Belize area.
2. The last map in the sequence should be one that contains Manny's home.

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

#### **Challenge**

Students will create a map similar to their schoolyard map that represents the area where the manatee and loggerhead turtles live.

#### **Materials**

- Paper, pencils

**Procedure**

1. On another roughly outlined map, students draw their conception of the place where the manatee and loggerhead live, based on what they know about the animals from different resources like the slideshow, book and species profile.

**Step 4 – PRESENT****Challenge**

To connect their own sense of place with the place where the manatee and turtle live.

**Materials**

- Map of Belize from Step 3B

**Procedure**

1. Students will describe to others what they think the manatee and the loggerhead need to be comfortable, healthy and safe. They will use the Belize map they have created as reference.

**LESSON 2 ASSESSMENT RUBRIC:**

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

<b>Assessment Guidelines</b>	<b>3 = P (Proficient)</b>	<b>2 = S (Satisfactory)</b>	<b>1 = NW (Needs Work)</b>
1. Through the comparison of the schoolyard and coastal Belize, student compares and contrasts the habitats of humans, the manatee and the loggerhead turtle based on characteristics that provide comfort, health and safety.			
2. Student identifies aspects of each environment that have changed over the last five years that discuss which changes caused threats to health, comfort and safety.			
3. Student identifies the distance between the rainforest and their North American home. Student locates coastal Belize on a map and understands the physical relationship between his/her home and the home of the loggerhead turtle.			
4. Student identifies the differences between North America and Belize according to their locations on the globe.			