



## Second Grade

### Amazon Rainforest Conservation, Brazil

#### National Standards for Second 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

###### Standard 3 Level 1 Grade K-2

1. Identifies the similarities and differences between persons, places, things and events using concrete criteria.

##### **Mathematics**

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

###### Level 1 Grade K-2

1. Draws pictures to represent problems.
2. 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

2. 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
3. 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.



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**Lesson 2: Independence and Conservation**

**Concept**

Things change in all environments. The impact of one loss or disturbance may not be visible until the rate of change and impact on diversity threatens the habitat of a particular species so much that their food source, shelter, health or safety disappears. What is the critical threshold?

**Essential Question**

Does it all collapse when one block is pulled out?

**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 Brazil 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 Story** - The Rainforest Alliance has developed an original story for use with this unit, available in English, Spanish and Portuguese. The story is available to download and print or can be viewed on-screen.

**Brothers of the Rainforest**

- **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.
  - Heliconia
  - Amazonian Tapir
  - Kapok Tree
  - Leafcutter Ant
  - Amazon River Dolphin
- **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 found in our homes and supermarkets that either originated in tropical forests or are currently produced there.
- **IMAFLORA** - Check out this online resource for more information about the Rainforest Alliance’s partner group in Brazil: <http://www.rainforest-alliance.org/programs/aar/brazil.html>
- **Profiles in Sustainability** – Visit <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.
- **Venn Diagram Template** – Print out a photocopy-ready Venn diagram for use in this unit.
- **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 what they need to live within their present environment and what might happen if those things were absent.

#### **Materials**

- Art/drawing supplies
- Large drawing paper or posterboard (one for each student or group of students)
- Old magazines; other sources of pictures

#### **Procedure**

1. Students draw pictures of themselves in the middle of a page. Using magazines or other sources of pictures, they attach pictures of the things that they need to survive (food, shelter, transportation, friends, clothes, etc.).
2. Ask students to write a ‘What if?’ story that places them in the rainforest where they have to find food, shelter, safety, transportation, etc. How will it be different than what they describe in their pictures of home? What might they eat? Where might they live? How would they make themselves safe? How would they have to move through the forest (would their bicycles work there)?

## **Step 2 – LITERATURE/DISCUSSION (Give Expert Information Book; Ask Questions)**

### **Challenge**

Students realize that it is difficult to change environments without making important adaptations. They understand that keeping all the important ingredients to survival intact and working well is important to the survival of all species.

### **Materials**

- Book: **The Salamander Room** by Anne Mazer

### **Procedure**

1. Read the book **The Salamander Room**, by Anne Mazer. Discuss the reasons that the salamander couldn't live with the boy, including their different needs for food, climate and habitat.

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

### **Challenge**

Students will understand 'tipping points' in an environment.

### **Materials**

- Jenga or similar block-stacking game (one set per group of students)
- White label stickers or small rainforest photos (for Jenga blocks)
- Glue

### **Procedure**

1. Ask students to compare the boy's experiment with the salamander to a game of **Jenga™**.
2. Have students glue pictures of the different aspects of the rainforest that they used in their previous activity on the Jenga pieces, or label them with words like hot temperatures, humidity, tall trees, vines, tapirs, snakes, insects, etc.
3. Construct a rainforest tower of labeled Jenga blocks. Taking out one at a time, make guesses about how many will have to be pulled out to make the tower fall. Ask the following questions: How do the parts rely on each other? What happens when one part is removed? Why can some pieces be removed without causing problems?
4. To play Jenga with students, start with the wooden blocks stacked as a tight tower. Ask students to remove pieces from the bottom of the tower and stack them on top. Keep stacking until the tower collapses. Discuss the game with the class. Ask students: Why can't we keep building higher? How is the system different at the beginning? What is the benefit of the original structure?

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

#### **Challenge**

Students understand that a system needs all of its parts to work effectively.

#### **Materials**

- Labeled Jenga pieces from Step 3A
- Glue

#### **Procedure**

1. Using the Jenga blocks, construct the perfect, most effective tower that represents a working rainforest. Glue the blocks together so they can't be removed.

### **Step 4 – PRESENT (Edit Work/Students Orally Present Projects)**

Students present their different Rainforest towers to the rest of the class and ask if anyone can identify a missing piece.

#### **LESSON 2 ASSESSMENT RESULTS:**

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. Student constructs a chart that illustrates what he/she needs to survive...food, shelter, transportation, friends, clothes, etc.			
2. Student writes a 'What if?' story that shows how their food, shelter, transportation, clothes, etc. will change if they move to the Brazilian rainforest.			
3. Student plays a Jenga type game to determine the tipping point of change that might occur in an environment when things necessary for survival disappear.			
4. Student constructs a tower of illustrated Jenga type blocks that illustrates the most balanced rainforest environment.			