

Suggested levels for Guided Reading, DRA™, Lexile®, and Reading Recovery™ are provided in the Pearson Scott Foresman Leveling Guide.

Science

Science

Earth Science

Our Disappearing Rain Forest

Genre	Comprehension Skills and Strategy	Text Features
Expository nonfiction	<ul style="list-style-type: none">• Generalize• Fact and Opinion• Text Structure	<ul style="list-style-type: none">• Glossary• Heads• Map• Captions

Scott Foresman Reading Street 4.3.5



scottforesman.com



by Alma Ransford





Our Disappearing Rain Forest



by **Alma Ransford**



Editorial Offices: Glenview, Illinois • Parsippany, New Jersey • New York, New York
Sales Offices: Parsippany, New Jersey • Duluth, Georgia • Glenview, Illinois
Coppell, Texas • Ontario, California • Mesa, Arizona





Every effort has been made to secure permission and provide appropriate credit for photographic material. The publisher deeply regrets any omission and pledges to correct errors called to its attention in subsequent editions.

Unless otherwise acknowledged, all photographs are the property of Scott Foresman, a division of Pearson Education.

Photo locators denoted as follows: Top (T), Center (C), Bottom (B), Left (L), Right (R), Background (Bkgd)

Cover: ©Galen Rowell/Corbis; 1 ©Yann Arthus-Bertrand/Corbis; 3 (T) ©ML Sinibaldi/Corbis, (BR) ©Pam Gardner/Frank Lane Picture Agency/Corbis; 5 (CR) ©Staffan Widstrand/Corbis, (B) ©Craig Tuttle/Corbis; 6–7 (B) ©Robert Holmes/Corbis; 7 (CR) ©Darrell Gulin/Corbis, (C) ©Stuart Westmorland/Corbis; 8 ©Charles O’Rear/Corbis; 9 (T) ©Patrick Siccoli/Corbis Sygma, (TRC) ©Joe McDonald/Corbis, (BLC) ©Kevin Schafer/Corbis, (TLC) ©Michael & Patricia Fogden/Corbis; 10 ©Yann Arthus-Bertrand/Corbis; 11 ©Gunter Marx Photography/Corbis; 12 (T) ©Genevieve Leaper/ECOScene/Corbis, (BR) ©Galen Rowell/Corbis; 13 ©Martin Rogers/Corbis; 15 ©Collart Herve/Corbis Sygma; 17 (T) ©Daniel Aguilar/Reuters/Corbis, (B) ©Daniel Morel/Corbis; 18 (BL) ©Hal Horwitz/Corbis, (BR) ©Gary Braasch/Corbis; 19 (TR) ©Neiss James/Corbis Sygma, (Bkgd) ©Wolfgang Kaehler/Corbis

ISBN: 0-328-13455-4

Copyright © Pearson Education, Inc.

All Rights Reserved. Printed in the United States of America. This publication is protected by Copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form by any means, electronic, mechanical, photocopying, recording, or likewise. For information regarding permission(s), write to: Permissions Department, Scott Foresman, 1900 East Lake Avenue, Glenview, Illinois 60025.

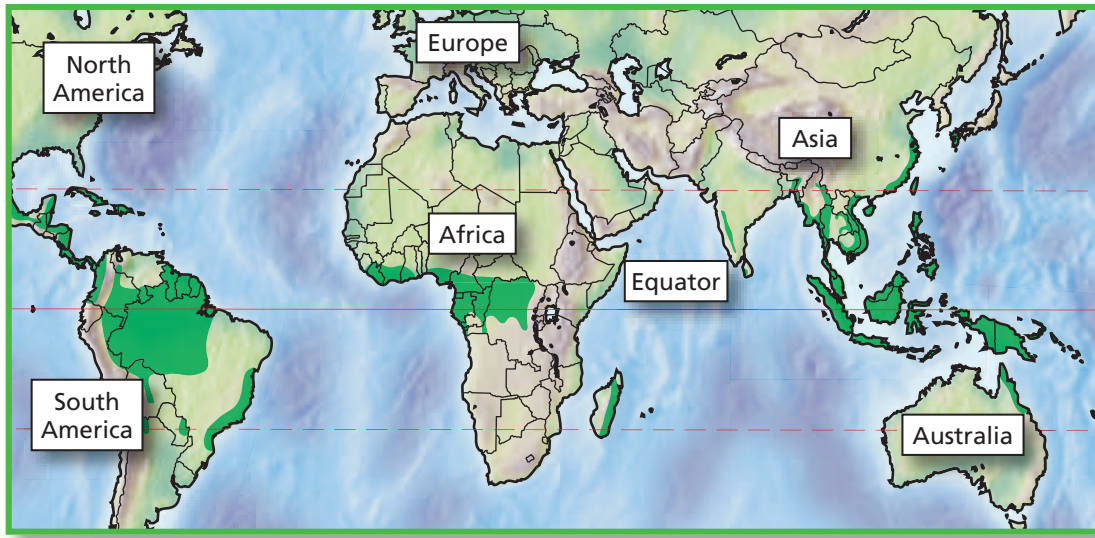
2 3 4 5 6 7 8 9 10 VOG1 14 13 12 11 10 09 08 07 06 05



What Exactly Is a Rain Forest?

There are many kinds of forests. Think of ones where you live, or at a park you may have visited. What is it that makes them **wondrous**? What sets them apart? Sometimes, it’s the weather. Tropical rain forests are warm, wet, and full of living things. Everywhere you look, you can find flying birds or see where snakes have **slithered** on the ground. Strange flowers fill the air with their **fragrant** scents.





Where in the World Are the Rain Forests?

Take a look at a map or globe. Rain forests are found as far north as Canada. But we're looking at tropical rain forests. Tropical rain forests are located between 22 degrees north and 22 degrees south of the equator. This area is called "the tropics." This means the rain forests stay a steamy 75°F–80°F all year! Look at the map. Can you find Asia, Africa, Australia, and South America?

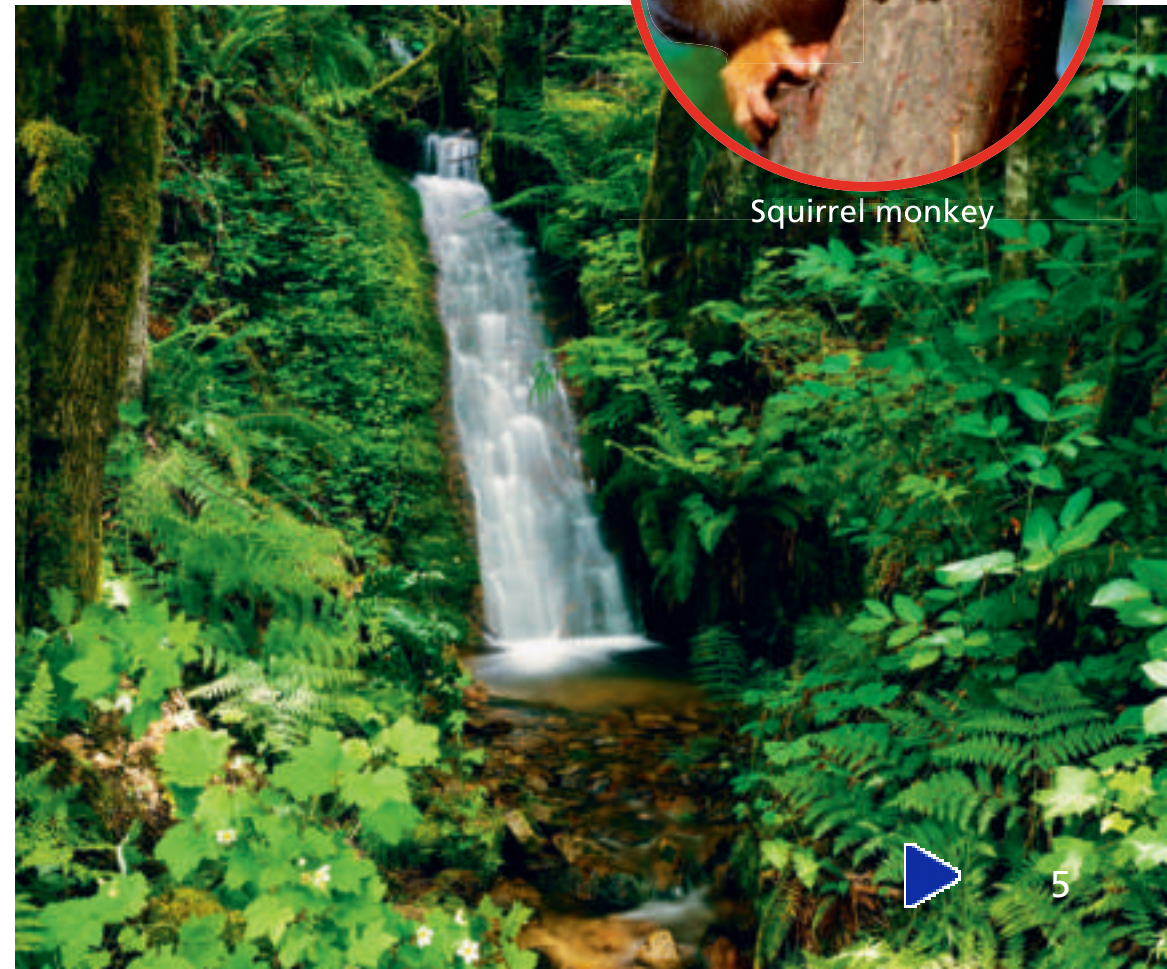


Home Sweet Home

Parts of these places are home to tropical rain forests. This area covers just two percent of the world's land surface, but it's home to more than *half* of the wildlife on Earth! The largest rain forest in the world—the one you've probably heard of—is known as the Amazon rain forest. It is in South America. It stretches into parts of eight different countries and covers two million square miles.



Squirrel monkey

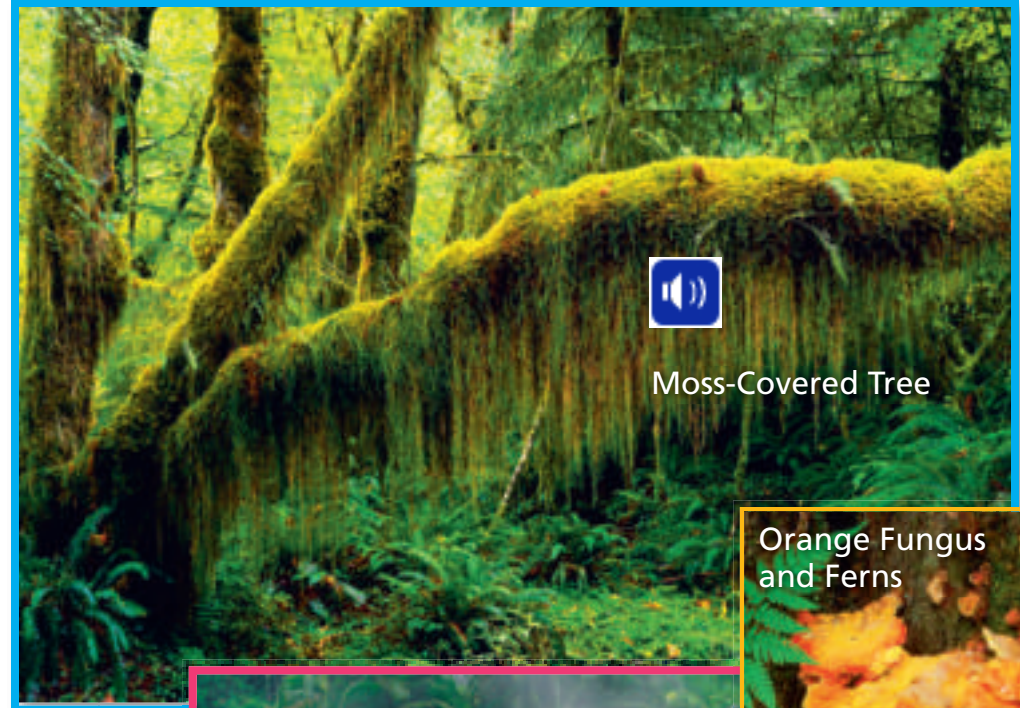




The Rain Forest Is Like a Layer Cake

Think of a cake with four different layers. A rain forest is like that. The *emergent layer* is at the top. Here, the trees are more than 225 feet tall, with thick branches that **dangle** down, shading the vegetation below from sun and rain. Below this layer is the **canopy**, which is thick with shorter trees and vines. They hold fragrant flowering plants, called *epiphytes*, on their branches. The next level is the *understory*, which has smaller saplings and shrubs. At the bottom, you'll find the dark *forest floor*. There are only a few plants down here because there's so little light.

Rain forests are home to 30 million species of animals and plants. That's half the Earth's animals and two-thirds of its plants! A huge variety of plants grow in any rain forest, and there are still many plants and animals yet to be discovered. But many of these plants and animals are becoming threatened, and some are in danger of disappearing forever.



Moss-Covered Tree



Orange Fungus and Ferns





How's the Weather?

Whether it's sunny or cold, you can bet rain forests have something to do with our weather. Trees in the rain forest act like large sponges. They draw water from the forest floor and send it back into the air as mists or clouds. This recycling of water helps to supply lakes and rivers all over the Earth. This water cycle helps to prevent droughts and disease.

Take a deep breath. Trees absorb the carbon dioxide we exhale and turn it into oxygen we need to breathe. Rain forests also help keep the soil in place. The roots of trees act like anchors, keeping topsoil from sliding down mountainsides.

They Call the Rain Forest Home

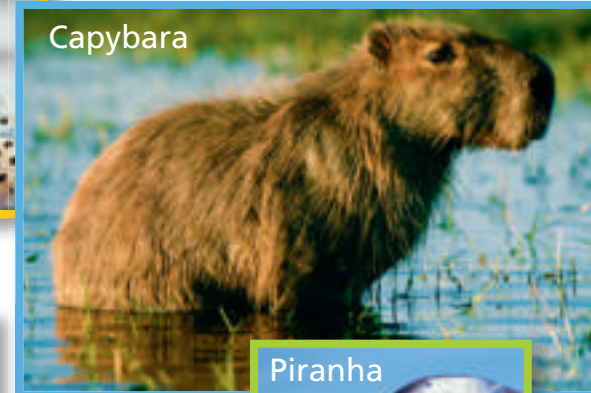
The Amazon rain forest is home to more species than anyone imagines, including parrots, jaguars, monkeys, and piranhas. The Amazon itself holds 20 percent of the Earth's freshwater supply.



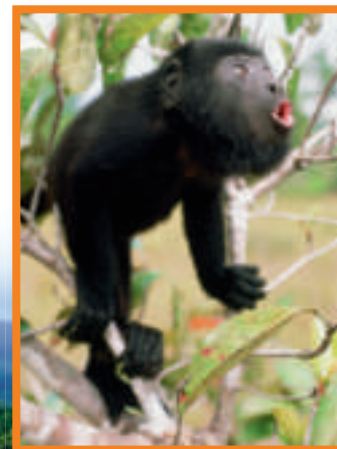
Lear's Macaw



Jaguar



Capybara



Black Howler Monkey



Piranha





Cutting down rain forest



The Rain Forest Air Is Our Air

When rain forests are cut down, there's more carbon dioxide in the air. How much carbon dioxide is too much? The amount of carbon dioxide has increased in the past 150 years. Many scientists believe that this increase in carbon dioxide has made the Earth's overall temperature warmer and the weather more extreme in many places.



Deforestation in Canada



Disappearing Forests

Our rain forests are important. Deforestation—the removal of trees from their ecosystem—is a serious problem all over the world today. But it's not just rain forests that have been lost. Canada is home to 10 percent of the world's forests, including evergreen and pines. Yet every year, Canada cuts down millions of trees.





Erosion in the mountains

More People, More Problems

The rain forests of Central and South America are probably the hardest-hit. This is because there are many people and not enough work or food to go around. For example, beef cattle can be raised on cleared land. The beef is cheap to raise and can be shipped to North America, China, and Russia for a good profit. Yet for every pound of beef, 200 square feet of forest must be cleared. Since the early 1980s, Costa Rica has lost some of its forests to cattle ranches.

How Do Forests Die?

“Forest death” happens in the mountains when trees are cut down and not replaced. Without trees, soil erodes. Flowers disappear. And since there’s no **pollen** from the flowers, birds and bees can’t **pollinate** the flowers, so they disappear too. When there are no trees holding soil in place, deadly avalanches and mudslides can happen. Many forests have been cut down since 1960. There has been more and more flooding. Also, there are so many people that farmers are forced to move further up into these mountains, where even more erosion and landslides occur.



A cattle ranch in Costa Rica





Save Our Soil!

When rain forests are cut down, the soil suffers. The grass dies off from lack of water, and the ranch land may turn to desert. This forces farmers to move on. They need more land to farm, and they must destroy more rain forests to get it.

Another cause of rain forest destruction is logging. Mahogany and teak trees, native to rain forests, are valuable woods for furniture making. Other trees are cut down to make charcoal, an inexpensive source of fuel. When too many trees are destroyed, the forests have trouble staying healthy.

Fruits and vegetables now grow in areas that used to be home to rain forests. Bananas, palm oil, pineapples, sugar cane, tea, and coffee are just some of the crops that grow well in tropical areas. Forests are cut down to make way for these crops because they can make money for farmers. Yet the soil eventually becomes poor, so farmers must move on and clear more forests.



Chemicals pollute the water.



Keeping Ourselves and the Rain Forest Healthy

Mining, oil production, and dam building have also ruined rain forests. Poisonous chemicals that are used in gold and copper mining find their way into rivers and pollute the water. They poison the fish, which poison the birds that eat them. For example, mercury is used to mine gold in the Amazon. But mercury is also a poison to the creatures of the rain forest.

Deforestation seems to make the temperatures around the world rise. Due to rising temperatures, animals and plants may die out or become extinct. Sea levels may rise. Flooding may increase.





The Danger of Losing Our Rain Forest

What can happen to deforested areas? Here are a few examples. In 2001, a deadly earthquake in the Central American nation of El Salvador caused mudslides that killed at least 1,000 people. Would these mudslides have occurred if a nearby **dappled**-green rain forest hadn't been cleared away? Many experts don't think so.

In September 2004, violent tropical storms and hurricanes caused deadly floods in the Caribbean nation of Haiti. Disaster workers and others blamed the deaths of more than 1,000 people on mudslides and not enough topsoil. Why wasn't there enough topsoil? Because the rain forests had been cleared—often to make charcoal. In 1950, about 25 percent of Haiti was covered in green forests. Today, barely 1 percent of the country is forested.



Top right: In 2004, deadly floods in Haiti caused people to flee their homes.

Bottom right: When the rain forests are cleared, topsoil is lost.





Problems and Solutions

Today in the South American nation of Brazil, people are fighting over the building of a highway. This road would connect the state of Mato Grosso to a port on the Amazon River. Farmers are eager to pave a 435-mile stretch of road to save money and time in getting their products to market. Local governments and residents are happy about the road. They hope it will bring new supplies and services. Environmentalists aren't so happy, however. Road-building may be one of the Amazon's worst enemies because it means that more forests will be lost. The solution? Environmentalists and local officials will have to work together to find an answer.



Let's Save the Rain Forest!

Working together is the only way to save the rain forests. Each of us can help. Farmers can begin to grow coffee, chocolate, and bananas in a way that is safe for the environment. Paper comes from rain forest trees, and we can save trees by using less paper and reusing paper instead of throwing it away. A group called The Rain Forest Alliance has a program called Adopt a Rain Forest to help slow down deforestation. This will mean slithering snakes and nesting birds will still be able to call the rain forests home.



The wide Napo River flows between banks covered with dense rain forest.





Glossary

canopy *n.* the upper layer, or roof, of the forest made up of the tops of trees.

dangle *v.* to hang or to cause to hang loosely.

dappled *adj.* spotted.

fragrant *adj.* sweet- or pleasant-smelling.

pollen *n.* powderlike materials from flowers that allow for fertilization.

pollinate *v.* to fertilize by transferring pollen.

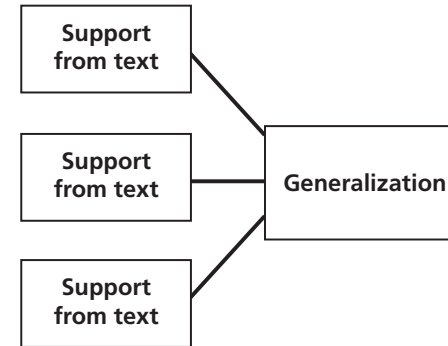
slithered *v.* moved along by gliding.

wondrous *adj.* wonderful.



Reader Response

1. In a graphic organizer like the one below, write three different kinds of problems that result in rain forest damage. Then make a generalization about all three problems.



2. This text can be divided into three basic parts: Part one is found on pages 3–9, part two is found on pages 10–17, and part three is found on pages 18–19. Give each part a title and describe it in your own words.
3. Look at the vocabulary words *pollen* and *pollinate*. Explain the spelling change that occurs when you add the suffix *-ate* to *pollen*.
4. How did the explanation of the layers of the rain forest on page 6 help you understand what the rain forest looks like and how it can be damaged?

