

ADVISORY 1, UNITS 1-2, LESSON 6 CELLS AND BODY SYSTEMS

Summary

- In this lesson, students will read "Bringing Nature Into Focus" (pp. 70-77) to recognize that a rain forest is a living, breathing system and how changes to that system can affect organisms that live there.

Science Background

Rain forests are ecosystems found in tropical climates near the Equator. They cover six percent of Earth's land surface and produce 40 percent of its oxygen. They are also home to an astounding array of organisms, many of which can be found nowhere else on Earth.

Like the human body, a rain forest is a group of parts that interact in a way that allows the overall system to function. But rather than bones, muscles, and nerves, a rain forest consists of plants, animals, weather, landscape, and other factors that create a unique bubble of life in the jungle.

In many places, that bubble of life is in jeopardy. Human activities such as logging, farming, and other types of development are destroying rain forests and threatening the survival of plants and animals that live there. Often, as National Geographic Young Explorer Gabby Salazar discovered, the people involved aren't even aware of the diversity that is being forsaken in the name of progress.

To raise awareness, Salazar shares her images. She introduces people to the plants and animals living in their back yards. Photography, she has found, is one of the most effective ways to get people engaged in science and conservation.

ENGAGE

Encourage students to flip through the articles and turn and talk with a partner to discuss what they see. Invite students to ask questions or share what they already know about rain forests.

EXPLORE

Instruct students to read the headline and deck on pages 70-71 of their Readers. Point out to students that the headline is a reference to taking photographs. Brainstorm a list of things you could photograph in a rain forest. Challenge students to explain how those photos could be used to "change the world."

EXPLAIN

Point out to students that rain forests are extremely diverse ecosystems. But like all systems, each of the parts must be working properly for the overall system to function. **Ask:** *What was destroying the rain forest that Gabby Salazar explored in Borneo? (logging, farming, and mining) What was problem in Peru? (People built a highway.)* Have students turn and talk as they review the article for details about how each of these human activities impacted the overall ecosystems in the areas where they occurred. Then have students to identify solutions people tried. Encourage students to discuss ways improving parts of an ecosystem could help protect and conserve it as a whole.

ELABORATE

Invite students to explore The Great Nature Project (www.nationalgeographic.org/projects/great-nature-project/), a National Geographic collaboration with iNaturalist. Students can visit the archived project or take and share photos of plants, animals, and fungi in their own area to keep the project going.

EVALUATE

Have students complete the **Content Assessment** for this lesson. Encourage them to share and compare their results in small groups.

CONTENT ASSESSMENT: Cells and Body Systems, Lesson 5

Use this organizer to record and analyze information from the article.

	Borneo	Peru
What is the ecosystem like?		
What are its key parts?		
How did human activities affect those parts?		
What are people doing to fix the affected parts?		
Do you think the solution will work? Why or why not?		