



2nd Grade – Primate Seed Dispersers

Teacher Guide

Goal: Students will be able to explain the role of primate seed dispersers in rainforest habitats.

GSE Connections: S2L1C: Construct an explanation of an animal’s role in dispersing seeds or in the pollination of plants.

Background Information: Gorillas, orangutans and lemurs are all primates that live in rainforest ecosystems in different parts of the world. Gorillas live in dense forests of central Africa and are classified as *herbivores*, eating primarily plant material. Orangutans are found in the tropical rainforests of Borneo and Sumatra and are considered *frugivores*, eating fruits that grow in the tall trees. Lemurs are found in the rainforests of Madagascar and are classified as *omnivores*, eating plants, fruits and insects. While all three primates live in different rainforest ecosystems, they all share the same important responsibility of dispersing seeds throughout the forest. As they move through the forest, gorillas, orangutans and lemurs consume plant material, including seeds. These seeds are passed through the digestive system and delivered into the forest as fertilized seed-packets in feces. These fertilized seed-packets are dropped throughout the forest as animals move and migrate to different locations, thus allowing seeds to be dispersed away from their parent plant. This creates less competition with the established parent plant and allows the species of plant to spread to other areas of the forest.



Vocabulary	
Herbivore - an animal that feeds on plants	Frugivore - an animal that feeds on fruit
Omnivore - an animal that feeds on both plants and animals	Seed Dispersal - the movement of seeds away from the parent plant

Activity: At Zoo Atlanta, students can observe gorillas, orangutans and lemurs, often eating a variety of foods provided in their habitats. Provide each student with a Student Explore Sheet. With your students, visit each of the animal habitats with your students and ask them to make observations about the animals: where do they spend their time (on the ground or high up), are they eating and what are they eating, what behaviors are they displaying, what do they think their wild habitat is like? Spend a few minutes researching the signage in the area to learn more about where they are from and what they eat. Ask students to think about the role that all three primates play in their ecosystem, specifically the ways they help plants and other animals of the forest. Once students have a good understanding of the role that gorillas, orangutans and lemurs play in the forest ecosystem, ask them to think about what could happen if these animals disappeared from the wild. Help students to make connections to animals as seed dispersers and the important role that they play.



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Student Explore Sheet

Student Review:

PLANTS: Use the boxes below to fill in the 4 Basic Needs of Plants		ANIMALS: Use the boxes below to fill in the 4 Basic Needs of Animals	

Visit the following animals in the Zoo, make observations, and answer the following questions:

	Where is my wild home?	What is my wild habitat like?	What do I eat?
Lemur			
Gorilla			
Orangutan			

Using the information that you discovered about gorillas, orangutans and lemurs, answer the following questions:

Gorillas, orangutans and lemurs all live in what type of habitat: _____

Gorillas, orangutans and lemurs like to eat _____.

As gorillas, orangutans and lemurs eat plants, they disperse seeds into the forest. Why is this important for the forest and for other animals?

What do you think would happen if these animals were to disappear from the forest?