

ADVISORY 2, UNITS 3-4, LESSON 5 TRAITS, BEHAVIORS, AND REPRODUCTION

Summary

- In this lesson, students will read "Orchids: Flowers of the Forest" (pp. 94-101) to learn about orchids how they attract different types of pollinators.

Science Background

Recognized for their variety and beauty, orchids are one of the most ancient flowering plants found on Earth. They are also the largest family of plants, with more than 25,000 species. They mostly grow in moist tropical areas.

There are two main types of orchids. Terrestrial orchids grow in loose soils on the forest floor. They get nutrients from decomposing leaves and twigs. Epiphytic orchids grow on trees. They have a spongy covering around their roots. It absorbs the nutrients, moisture, and air they need to survive.

Orchids are nothing if not diverse. Blooms can be as big as your hand or small enough to fit on a pinhead. Flowers may be shaped like a running man or a flying duck. Orchids blossoms often mimic the shape of pollinators they want to attract. And the blooms come in every color except for blue and black.

Despite this variety, most orchid flowers have the same basic parts. The three outermost flower parts are sepals. Inside the sepals lie two petals and a lip. The lip is a specialized petal designed to attract specific pollinators. The column, which combines the flower's male and female parts, is in the middle.

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 orchids.

EXPLORE

Instruct students to examine the photos on pages 94-95 of their Readers. Invite students to describe the three orchids they see. Brainstorm ideas about what makes orchids so special.

EXPLAIN

After reading, point out to students that while orchids come in every shape, size, and color, they all have the same basic parts. **Ask:** *What are those parts called?* (sepal, petal, column, lip) Have students turn and talk as they discuss what each part does. Challenge students to explain how the lip helps orchids attract pollinators. (It is usually very colorful or has a special shape to attract insects for pollination.) Then have students review the "Look-Alikes" feature on pages 100-101 with a partner. Encourage partners to identify the parts of each orchid. Challenge them to identify the type of pollinator each orchid might be trying to attract.

ELABORATE

Invite students to read the National Geographic article "How to Photograph an Orchid" (<https://www.nationalgeographic.com/photography/photo-tips/2017/photographing-orchid-flowers/>). Encourage students to use what they learned to create a picture story about the flowers in your neighborhood. Challenge students to capture some images of the flowers with their pollinators.

EVALUATE

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

Name _____

Date _____

CONTENT ASSESSMENT: Orchids and Their Pollinators

Draw an orchid and label its parts. Describe its shape, size, and color. Explain how the orchid's parts work together to help it attract a specific pollinator.

Draw and Label	Describe		
	Shape		
	Size		
	Color		
		Explain	