

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

Summary

- In this lesson, students will read "Swarm!" (pp. 12-19) to learn how variations in physical and behavioral traits help different types of animals survive in groups.

Science Background

Animals have different types of traits that help them survive in the wild. These traits may be inherited from parents or learned.

Some traits are physical, or part of the animal's body. These traits are inherited. That's why offspring look like their parents. Others traits are behavioral, or how an animal acts. Behavioral traits can be inherited or learned. All traits have one common goal: to help the animal survive.

One trait some animals have is swarm behavior. Swarm behavior is what scientists call it when a large number of animals of the same type come together and move together.

Animals swarm for different reasons. Army ants swarm so they can build bridges over obstacles with their bodies. Birds flock and fish form schools to avoid predators. Locusts swarm because they're hungry. But they're not exactly working together. When locusts swarm, they are trying to catch and eat each other!

Regardless of why animals swarm, this behavior allows groups of animals to survive by accomplishing things that no individual animal could have done on its own.

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 animals that move together in groups.

EXPLORE

Instruct students to examine the photo, headline, and deck on pages 12-13 of their Readers. Poll the class to see how many students think they could accurately count the number of birds in this photo. Brainstorm ideas about why so many birds would join together in this way.

EXPLAIN

Remind students that swarm behavior occurs when a large group of animals of the same kind gets together and moves together in one large mass.
Ask: *How do these animals know how to behave?* (They are responding to stimuli, or signals, from the environment such as smells, light, or pressure. Their nerve cells send messages to the brain and the brain reacts.) Encourage students to turn and talk as they review the article for details that explain how each type of animal swarms. Challenge students to explain why different animals swarm and explain how the reason for the swarm impacts the behavior of individuals within the larger group.

ELABORATE

Invite students to watch the National Geographic video "Iain Couzin: Lessons from a Cannibal Plague" (<https://www.nationalgeographic.org/media/iain-couzin-lessons-cannibal-plague/>) Use the accompanying strategies to help students understand how large groups of organisms come to consensus through decision-making.

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: Swarm Behavior

Pick three animals from the article. Tell how and why they swarm.

1.	2.	3.

Explain how all animal swarms are alike. Give examples to show how they can be different.

Alike	Different

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