

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

### Summary

- In this lesson, students will read "Swim With Seahorses" (pp. 78-85) to learn about seahorse reproduction and how these unique fish grow and survive in the ocean.

### Science Background

A seahorse is a fish. Like most fish, it has a backbone, breathes through gills, and uses fins to move through water.

Unlike most animals, it is the male seahorse that gives birth. A female seahorse places up to 2,000 eggs inside a pouch on the male's abdomen. The eggs grow there for two to four weeks.

As the eggs develop, the father barely moves. After the eggs hatch, the babies stay in his pouch to grow and develop a little more. Then the father gives birth at night when fewer predators are awake to attack the newborns.

Life is dangerous for the baby seahorses, or fry, in the open ocean. Unlike adult seahorses, they cannot change colors to blend in with their environment. But they are nearly see-through, which makes them hard to spot.

The odds of a fry growing into an adult are slim. Only one out of every 1,000 will make it. But if they do, they will develop unique adaptations that help them survive. Seahorse tails can wrap around things to hold them in place. They flutter a tiny fin on their backs to swim through the water. And their eyes, neck, and snout help them spot and grab prey.

### 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 seahorses.

### EXPLORE

Instruct students to examine the photo and read the text on pages 78-79 of their Readers. **Ask:** *Why is "odd" a good word to use when describing a seahorse?* Invite students to share their ideas.

### EXPLAIN

After reading, point out to students that seahorses are truly unique animals. They look different most other fish, and they reproduce different from most other animals. **Ask:** *What is odd about the way seahorses reproduce?* (The male gives birth to the babies.) Have students turn and talk as they review the article for details that explain how seahorses reproduce. Encourage them to discuss reasons why so few newborn fry survive. Then have students make a list of an adult seahorse's body parts. Challenge students to explain how each body part helps adult seahorses survive in the open ocean.

### ELABORATE

With most animals, it's the mother who gives birth to the young. And with some species, mothers go above and beyond to care for their babies—even before they're born. Introduce students to some of these over-achieving mothers as they read the National Geographic article "These Long-Suffering Animal Mothers Deserve a Day Too" (<https://news.nationalgeographic.com/2015/05/150507-mothers-day-animals-long-pregnancy-octopus-elephant-science/>). Encourage students to conduct research to find more examples of animal parents that go to extremes to take care of their babies.

### EVALUATE

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

**CONTENT ASSESSMENT: Seahorse Reproduction**

Make a checkmark to show if you think each sentence is true or false.

Use information from the article to explain each of your answers.

Sentence	True	False	Explanation
1.  Seahorse fathers lay eggs.			
2.  Male seahorses carry babies on their backs.			
3.  Seahorse fathers give birth right after the eggs hatch.			
4.  The safest time for a seahorse to give birth is at night.			
5.  After a baby seahorse is born, there is little chance that it will grow to become an adult.			