Learning A–Z	level W	Multi-level	Q T W
Grade	4	Word Count	1,330
Lexile	1080L	Nonfiction • Informational	

Refer to the Focus Question on page 2 of this title to guide discussion and support additional learning connected to the text.

Puffins are unusual and fascinating birds that have captured people's imaginations. Nicknamed "clowns of the sea," these skillful birds are well known for their unmistakably distinct appearance. Students will enjoy detailed photographs that support the text. The book can also be used to teach students about asking and answering questions and discerning fact or opinion. The book is also available for levels Q and T.

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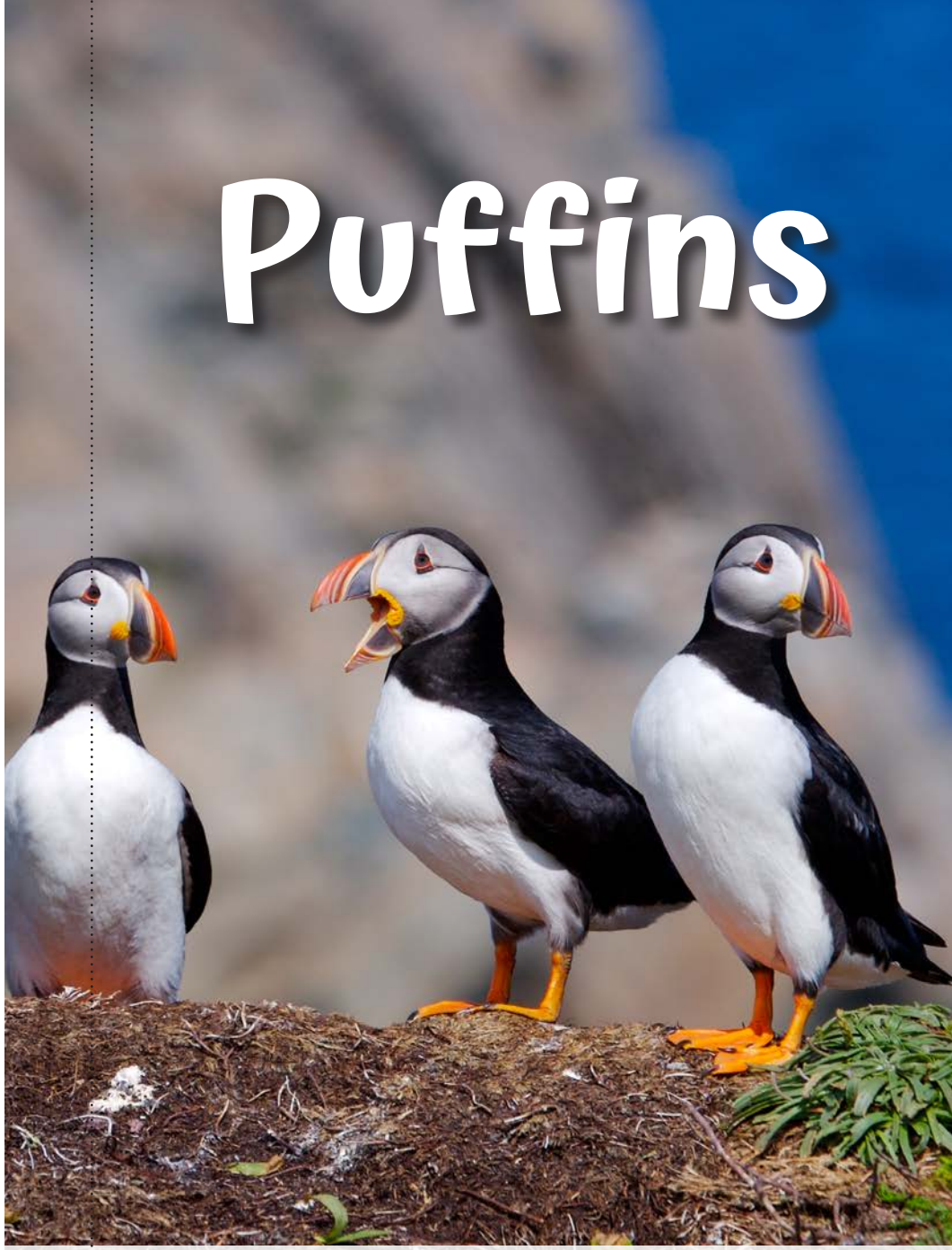
Puffins



Written by Kira Freed

Glossary

antics *(n.)* page 4
playful, silly, outrageous, or foolish behavior

breeding *(n.)* page 6
a time of the year when animals season of a particular species reproduce

burrow *(n.)* page 11
a hole dug in the ground by an animal for use as a home

climate change *(n.)* page 13
the long-term, lasting changes in Earth's weather patterns or the weather patterns of a region

coastal *(adj.)* page 6
having to do with the coast of a sea or ocean

colonies *(n.)* page 6
groups of animals that live together

demeanor *(n.)* page 4
the way or manner in which a person behaves

fledges *(v.)* page 11
grows flight feathers; matures until able to fly and leave the nest

gait *(n.)* page 4
the manner in which a person or other animal walks or runs

incubating *(v.)* page 11
keeping an egg at a constant temperature until it hatches

plumage *(n.)* page 4
the feathers on a bird's body

tufted *(adj.)* page 9
having a cluster of strands such as feathers, hair, or grass that grow close together

Puffins

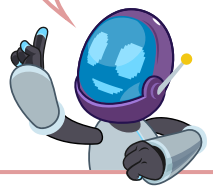
Above: A horned puffin is sometimes called a "sea parrot" owing to its colorful bill.

Cover: A colony of Atlantic puffins nests on Bird Island, just offshore from Newfoundland and Labrador, Canada.

Written by Kira Freed

Focus Question

How does the appearance of each species of puffin change during its breeding season? Why do these changes occur?



Words to Know

antics	demeanor
breeding season	fledges
burrow	gait
climate change	incubating
coastal	plumage
colonies	tufted

Connections

Writing

Is it important to protect puffins? Take a stand. In a letter to your local newspaper, describe your position, including details from the book.

Science

Pick one of the puffin types to research. Make a poster showing its habitat accurately. Include interesting facts about the puffin.

An Atlantic puffin stands outside its den on a coastal cliff in Iceland.

Seeing Puffins

To see puffins in the wild, keep in mind that they're out at sea for a good part of each year. They're only on land during the breeding season. They'll mainly be found on remote cliffs and islands, but it's worth the effort if you can get there. Choose a place that allows wildlife viewing, and be careful not to disturb nesting birds.

People may hike many miles to see puffins and only catch a faraway glimpse of one or two. You may have an easier time seeing them on a boat tour, and you'll likely be able to observe them from a closer distance. Tour operators know the best places to find puffins, and they'll share many details regarding the habits of these birds. Wherever you go to see puffins, be sure to bring binoculars and a camera. These pint-sized clowns are guaranteed to amuse and fascinate.

Meet a Puffin Expert

Wildlife scientist and puffin expert Dr. Stephen Kress first became interested in nature in fourth grade. He saw that spreading suburbs near his home were wiping out natural habitats. As he learned more about nature, he decided to pursue a career in wildlife.

In the early 1970s, Dr. Kress visited Eastern Egg Rock, a small island off the coast of Maine. Atlantic puffins had lived there one hundred years earlier. Dr. Kress wondered if it might be possible to bring them back. He founded Project Puffin and used imaginative techniques—including "thinking like a puffin"—to bring these seabirds back to Eastern Egg Rock. As of 2014, the island had 148 breeding pairs.

Project Puffin is sponsored by the National Audubon Society, which works to protect birds, other wildlife, and their habitats. To learn more about Project Puffin, visit the program's website: http://projectpuffin.audubon.org/.

A horned puffin attempts to land on a rock in the Alaska Maritime National Wildlife Refuge.

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Due to their amusing and colorful appearance, puffins have earned the nickname "clowns of the sea."

Sea Clowns

If you've ever seen a puffin, you're unlikely to forget the experience. Even if you haven't, you probably know what these appealing birds look like. Their appearance is unmistakably distinct with their plump bodies, black and white **plumage**, and vibrantly colorful beaks. They are also recognizable by their upright posture and seemingly determined **gait**. Their unusual **antics** and playful **demeanor** make these sturdy little birds irresistible to people.

Protecting Puffins

Humans have hunted puffins for centuries for their meat, eggs, and feathers. In some locations, these seabirds are still hunted. They now face other dangers as well, one of the most serious of which is a reduced number of food fish. Humans are overfishing species of fish that puffins typically eat—in other words, catching many more fish than can be replaced through reproduction. Warmer sea temperatures due to **climate change** are also reducing cold-water fish that are puffins' main food source. Some species of fish that are now abundant are too big for chicks to eat. Others are less nutritious. Both situations limit the available food for puffins.

In addition, puffins get caught in fishing nets, and they are also harmed by pollution. Many of their nesting sites have been disturbed by humans. Another serious threat is other predators, including gulls, eagles, rats, and foxes.

In regions where puffins live, people are working to address the problems so these amazing seabirds can continue to be part of our world. They are unique members of Earth's natural community. They are also important indicators of the health of our oceans. When the oceans are healthy, puffins thrive.

Some sources incorrectly report that puffin parents abandon their chicks at some point; in truth, the chicks leave on their own when they are ready. Puffins are fully mature around the age of five and can live for twenty years or more.

Small fish such as sand eels, herring, and hake are the preferred food of all species of puffins. The type of fish varies from one puffin colony to another, depending on location and time of year. In winter, when fewer fish are available, puffins also eat squid, crustaceans, and marine worms.

Adult puffins eat while underwater. They also collect fish to bring to their chicks. Puffins are known for their fish-stacking abilities and can carry fifteen or more fish in their beak at a time. Their rough tongue and the backward-pointing spines on the roof of their mouth help them hold the fish.

Puffins can "stack" dozens of fish at a time.

Meet the Puffins

Puffins, like other seabirds, spend most of their lives on the open ocean. They belong to the auk, or *Alcidae*, family, whose members are known for their diving abilities. As skillful swimmers, they're perfectly adapted to ocean life. Using their wings as flippers and their feet to steer, they zoom through the water with speed and grace. They can dive 100 feet (30 m) or more and stay underwater for approximately half a minute while searching for fish.

You might think that puffins' impressive swimming prowess would come at the expense of flying skills. That's a common myth regarding these birds, but in actuality they are superb fliers, and they also walk with ease over rocks and other surfaces.

When puffins fly, they flap their wings as fast as 400 beats per minute.

Puffins swim as if they're flying underwater.

One of the largest Atlantic puffin colonies is in the Labrador Sea, near Canada.

From mid-spring through summer, puffins live in nesting **colonies** on islands and **coastal** cliffs in the North Atlantic and North Pacific Oceans. They sport substantial, colorful beaks, areas of bright white plumage, and various feathery ornaments during the **breeding season** to attract a mate. Additionally, their webbed feet become bright orange. The rest of the year, while these birds are far out at sea, they wear mostly black, white, and gray versions of their breeding costumes. While at sea, they ride the ocean waves with other puffins in large groups referred to as "rafts."

The four species of puffins each have features that differentiate them. Adult male and female puffins of each species look alike, though the males may be a bit larger. Juveniles resemble adults in non-breeding plumage.

Do You Know?

The scientific name for the Atlantic puffin is *Fratercula arctica*, which is Latin for "little brother of the north."

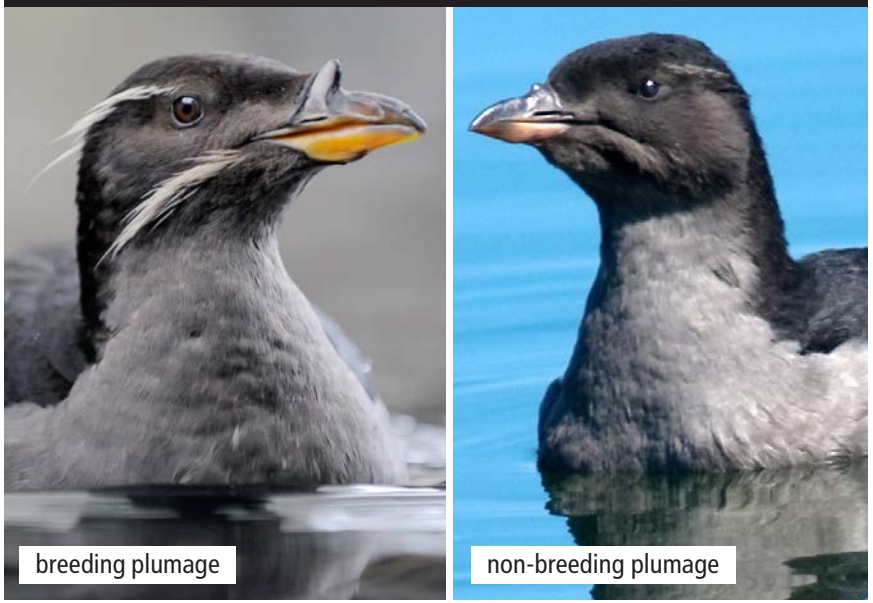
Puffin Habits

Puffins usually return from the sea in late March or early April. During the breeding season, they often live in colonies as large as several thousand birds. They usually stay with the same mate and return to the same nesting sites year after year. Once they return, each pair prepares a **burrow** that is about 3 to 6 feet (1 to 2 m) deep where the female lays a single egg. Tufted and European Atlantic puffins, along with rhinoceros auklets, usually dig burrows in soft soil. In contrast, horned and North American Atlantic puffins often nest in rock crevices on coastal cliffs.

A newly hatched puffin is called a *puffling!*

Parents take turns **incubating** the egg, and both of them feed the chick until it **fledges** in one to two months. It is thought that the word *puffin* comes from the word *puff*, meaning "swollen." A puffin chick resembles a little round "puffball" because it is covered with thick down feathers.

Rhinoceros Auklet



Adult rhinoceros auklets average 13.8 to 15 inches (35 to 38 cm) tall.

Rhinoceros auklets are a lesser-known species of puffin. Their beak and plumage look dramatically different from the other three types of puffins. For this reason, they are sometimes classified as close cousins instead of an actual puffin species.

"Rhinos" live along the Pacific coast of North America as well as the coast of Asia near Japan. During the breeding season, their thin yellow-orange bill has a short vertical "horn" at the base of the upper portion (hence their name). Rhino plumage is mainly brown—dark on the back and paler on the chest and belly. Two narrow stripes of white feathers adorn each side of their head.

Atlantic Puffin

Adult Atlantic puffins are 10 to 12.5 inches (25 to 32 cm) tall.

Atlantic puffins live on both sides of the North Atlantic Ocean, with 60 percent living along the coast of Iceland during the breeding season. They're the smallest of the puffins and the most modest in appearance, even when "dressed up." Their beak—bright orange at the tip—has a blue-gray section surrounded by a line of yellow. Orange legs and a white face, chest, and belly stand out prominently against their black back and upper wing feathers.

Horned Puffin

Adult horned puffins average 15 inches (38 cm) tall.

Horned puffins inhabit the waters of the North Pacific Ocean, mainly south of the Arctic Circle. During the breeding season, they look similar to Atlantic puffins at first glance, with their white face and underside. However, a telltale feature is a spike of black "eyelashes" over each eye, giving the impression that horned puffins are wearing exotic makeup. They also have a black line extending from behind each eye to the back of their head. Another identifying characteristic is the large yellow area at the base of their beak, in contrast to the blue-gray of Atlantic puffins.

Tufted Puffin

Adult tufted puffins average 15 inches (38 cm) tall.

Tufted puffins have the largest geographical range of the puffin species. They live on both sides of the North Pacific Ocean as far north as Alaska and as far south as Japan and central California. Unlike Atlantic and horned puffins, tufted puffins have a black chest and belly. In winter, they're black with large red-orange beaks, but the summer breeding season introduces striking changes. They develop a white facial mask, an olive-yellow beak section, and long, feathery golden plumes above their eyes. Orange feet and eye rings complete their summer look.