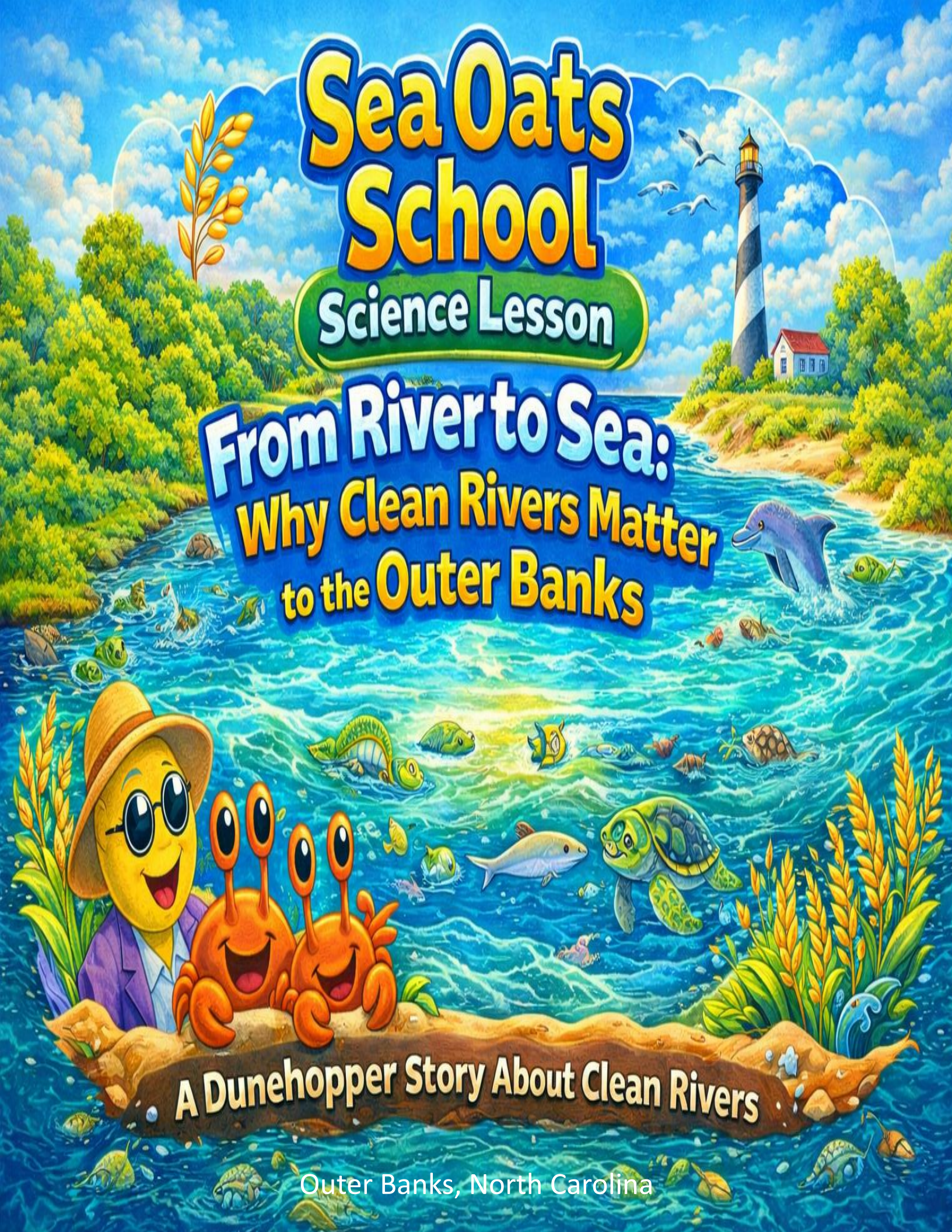
Sea Oats School
Science Lesson
From River to Sea:
Why Clean Rivers Matter to the Outer Banks
A Dunehopper Story About Clean Rivers
Outer Banks, North Carolina

Sea Oats School Science Lesson

From River to Sea: Why Clean Rivers Matter to the Outer Banks

A Dunehopper Story About Clean Rivers

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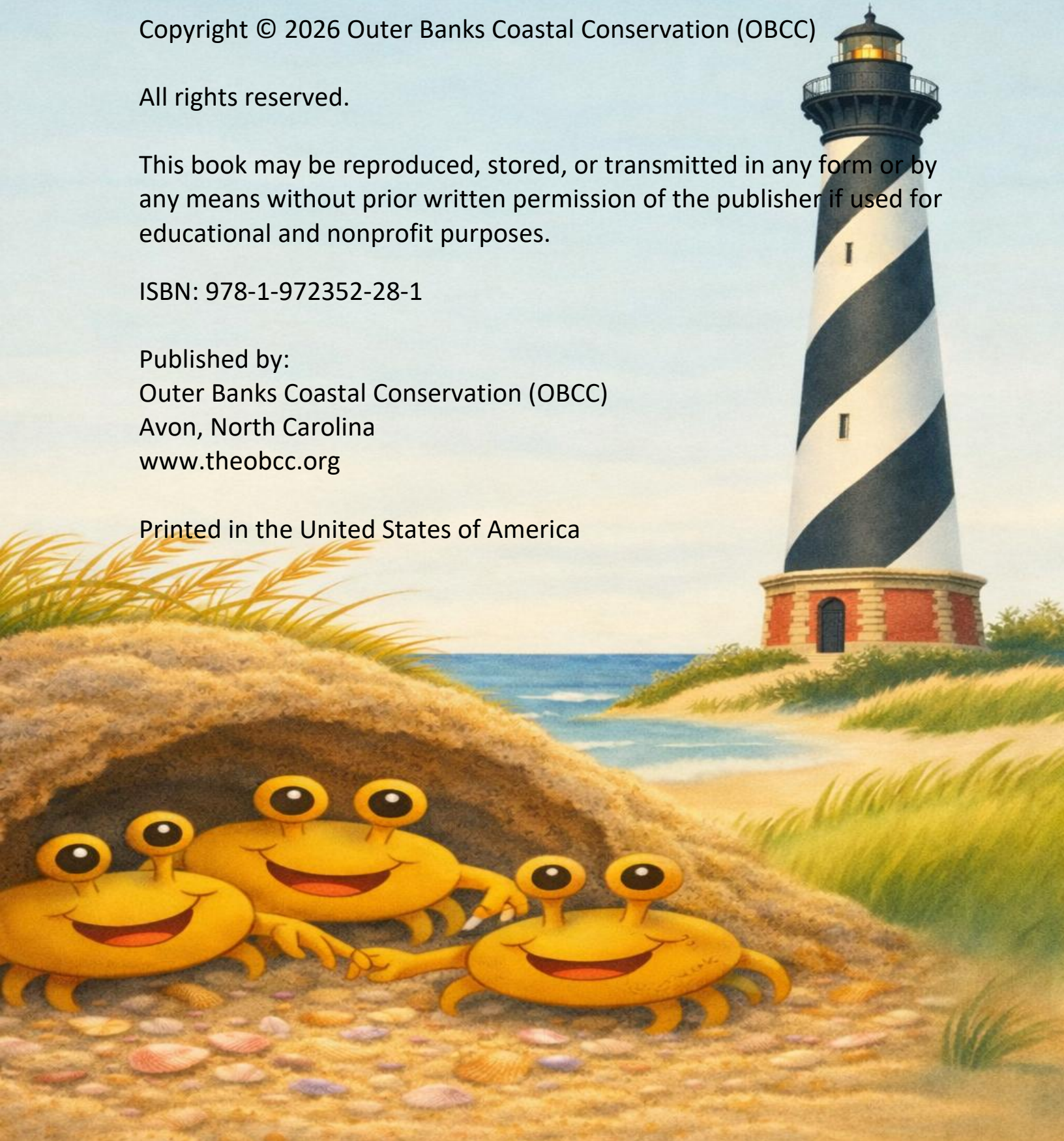


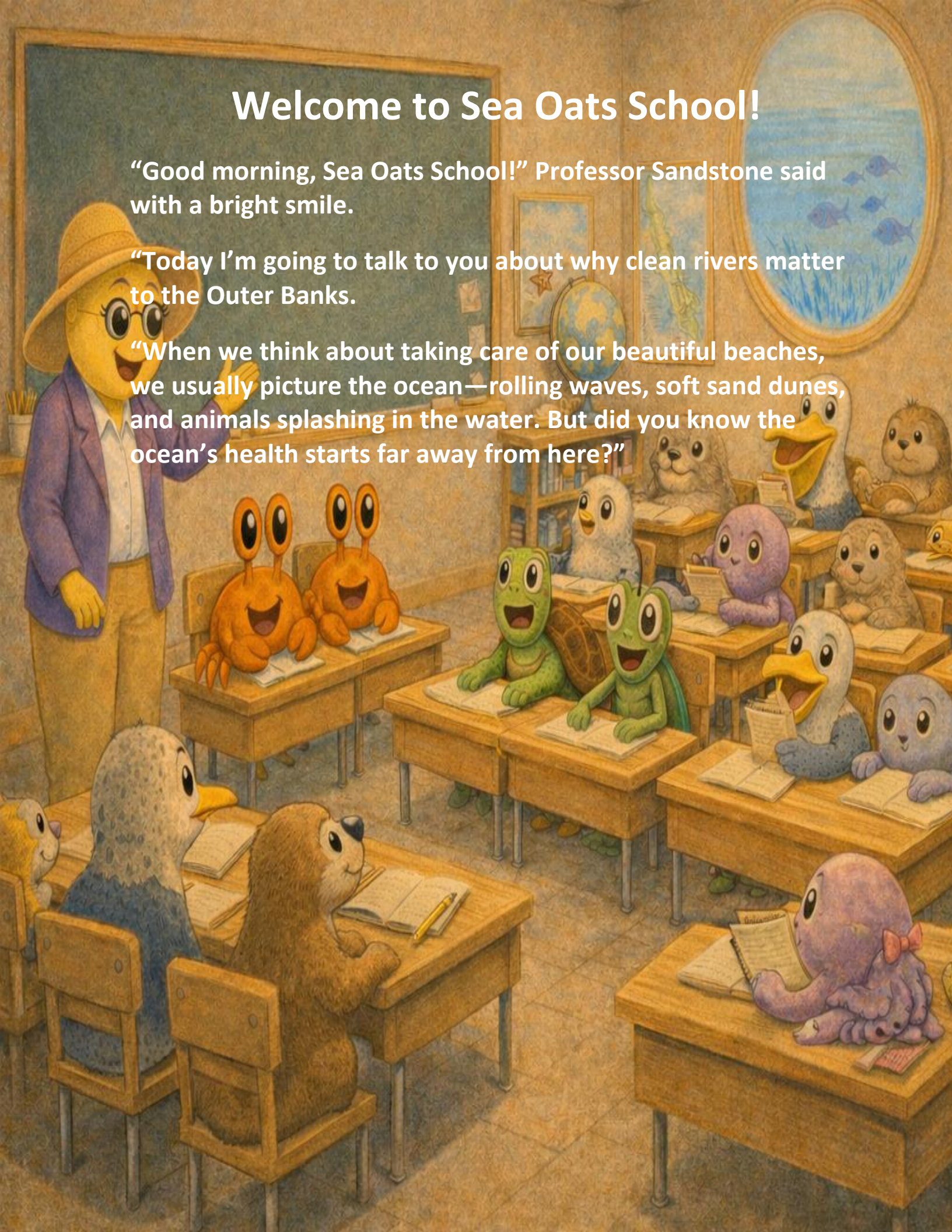
About This Book

This storybook was created by the Outer Banks Coastal Conservation (OBCC), a nonprofit organization whose mission is to foster environmental stewardship and a deeper connection to the Outer Banks of North Carolina through outreach, education, and conservation efforts.

We believe that small stories can spark big change. That is why we have made this book available as a free resource for parents, teachers, and community members.

To learn more, access additional resources at: www.theobcc.org.

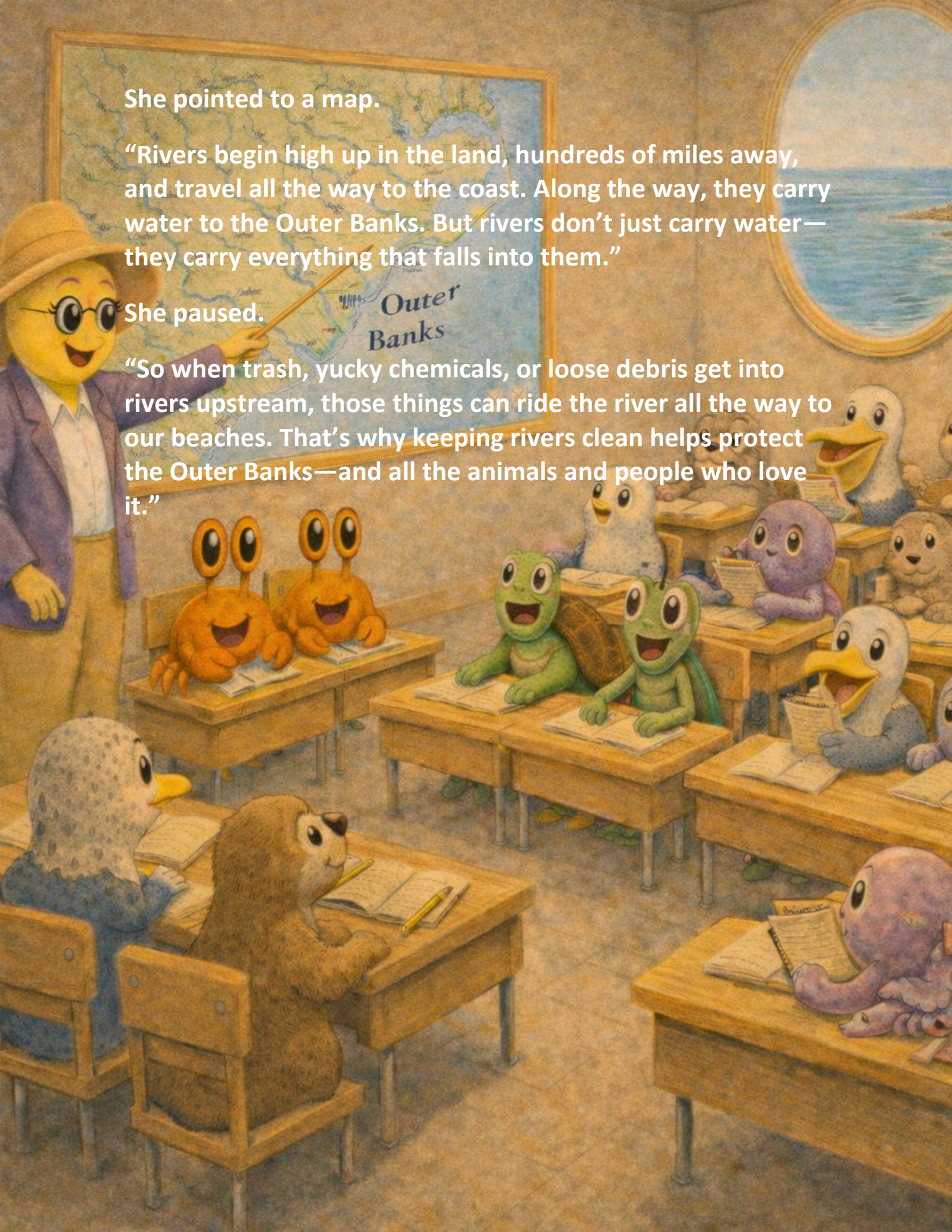
Welcome to Sea Oats School!



“Good morning, Sea Oats School!” Professor Sandstone said with a bright smile.

“Today I’m going to talk to you about why clean rivers matter to the Outer Banks.

“When we think about taking care of our beautiful beaches, we usually picture the ocean—rolling waves, soft sand dunes, and animals splashing in the water. But did you know the ocean’s health starts far away from here?”

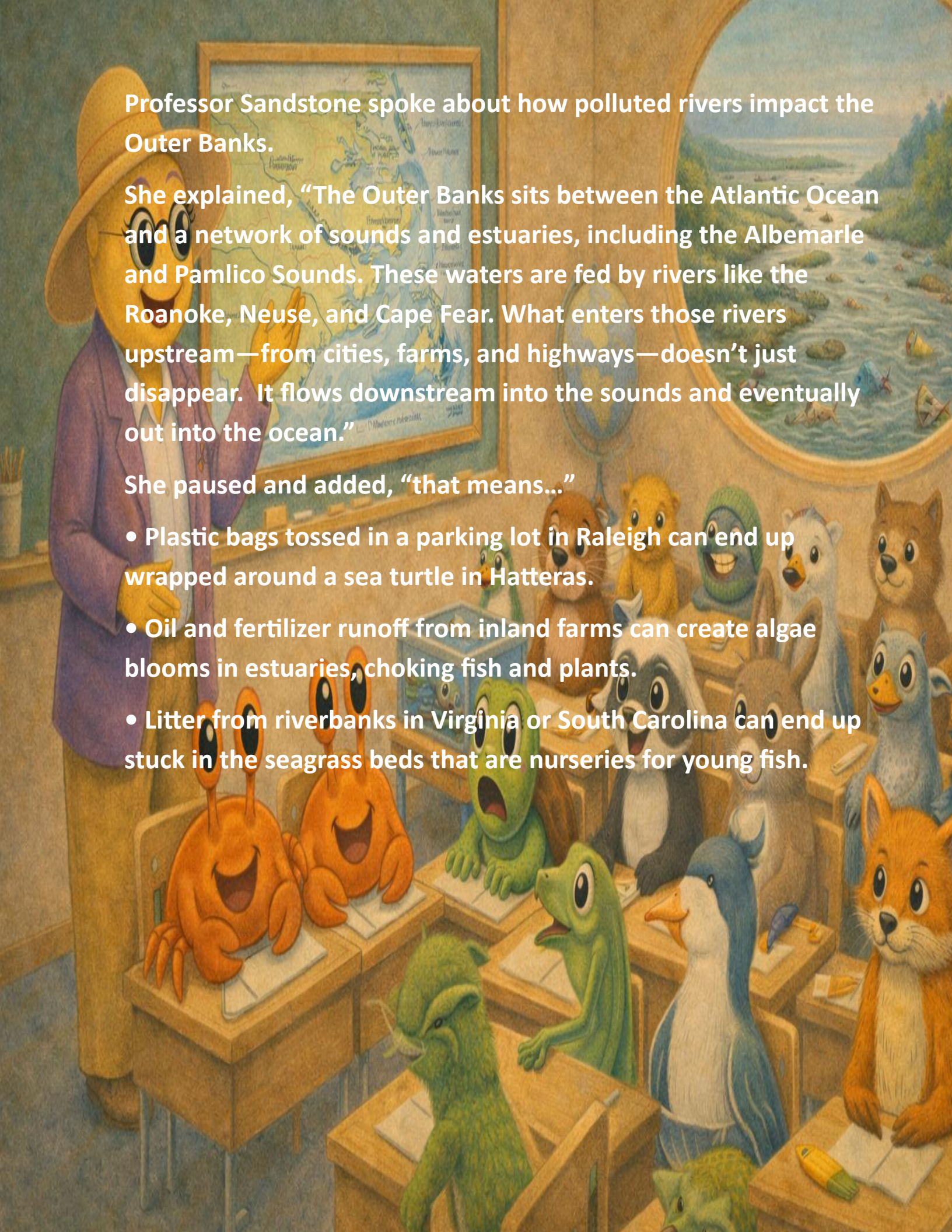


She pointed to a map.

“Rivers begin high up in the land, hundreds of miles away, and travel all the way to the coast. Along the way, they carry water to the Outer Banks. But rivers don’t just carry water—they carry everything that falls into them.”

She paused.

“So when trash, yucky chemicals, or loose debris get into rivers upstream, those things can ride the river all the way to our beaches. That’s why keeping rivers clean helps protect the Outer Banks—and all the animals and people who love it.”

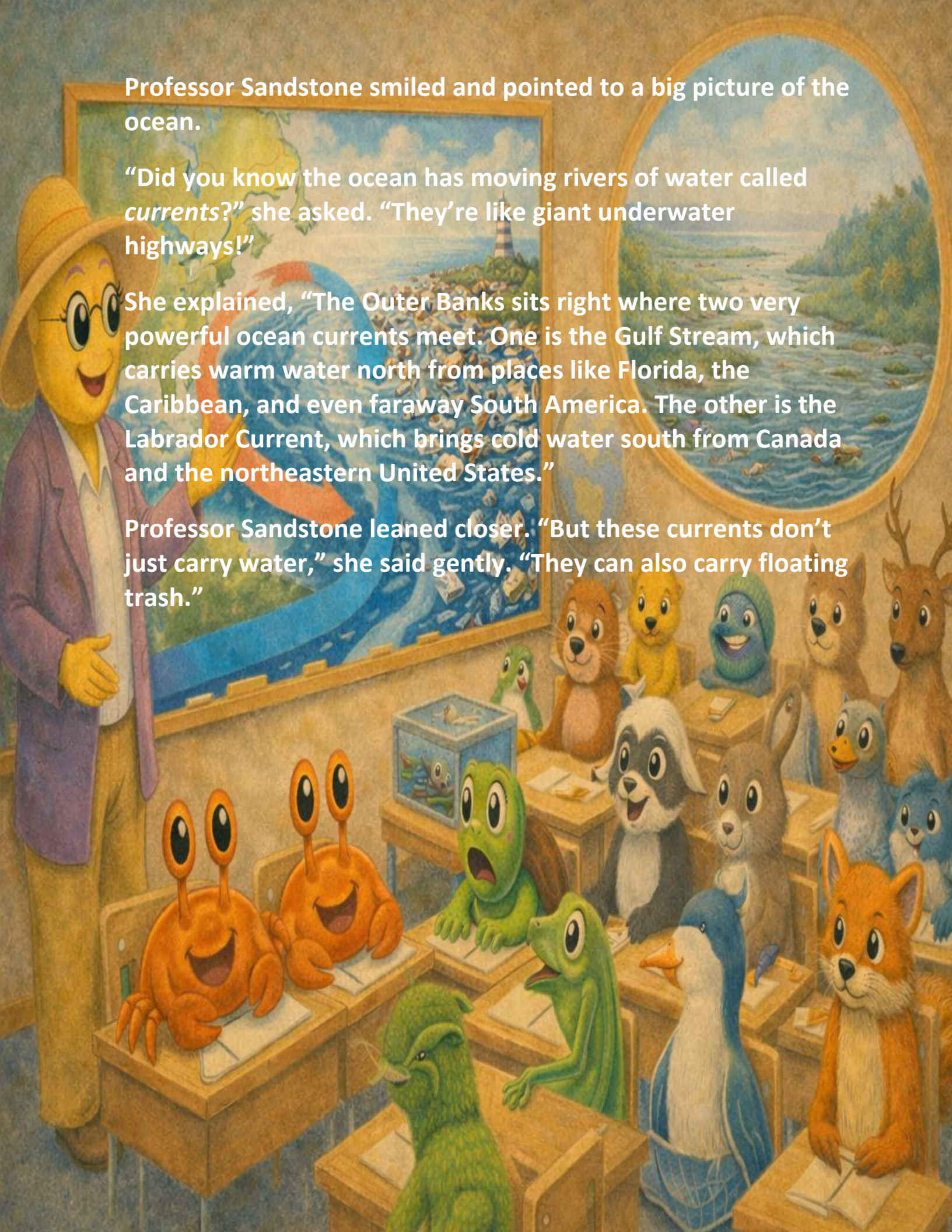


Professor Sandstone spoke about how polluted rivers impact the Outer Banks.

She explained, “The Outer Banks sits between the Atlantic Ocean and a network of sounds and estuaries, including the Albemarle and Pamlico Sounds. These waters are fed by rivers like the Roanoke, Neuse, and Cape Fear. What enters those rivers upstream—from cities, farms, and highways—doesn’t just disappear. It flows downstream into the sounds and eventually out into the ocean.”

She paused and added, “that means…”

- Plastic bags tossed in a parking lot in Raleigh can end up wrapped around a sea turtle in Hatteras.
- Oil and fertilizer runoff from inland farms can create algae blooms in estuaries, choking fish and plants.
- Litter from riverbanks in Virginia or South Carolina can end up stuck in the seagrass beds that are nurseries for young fish.

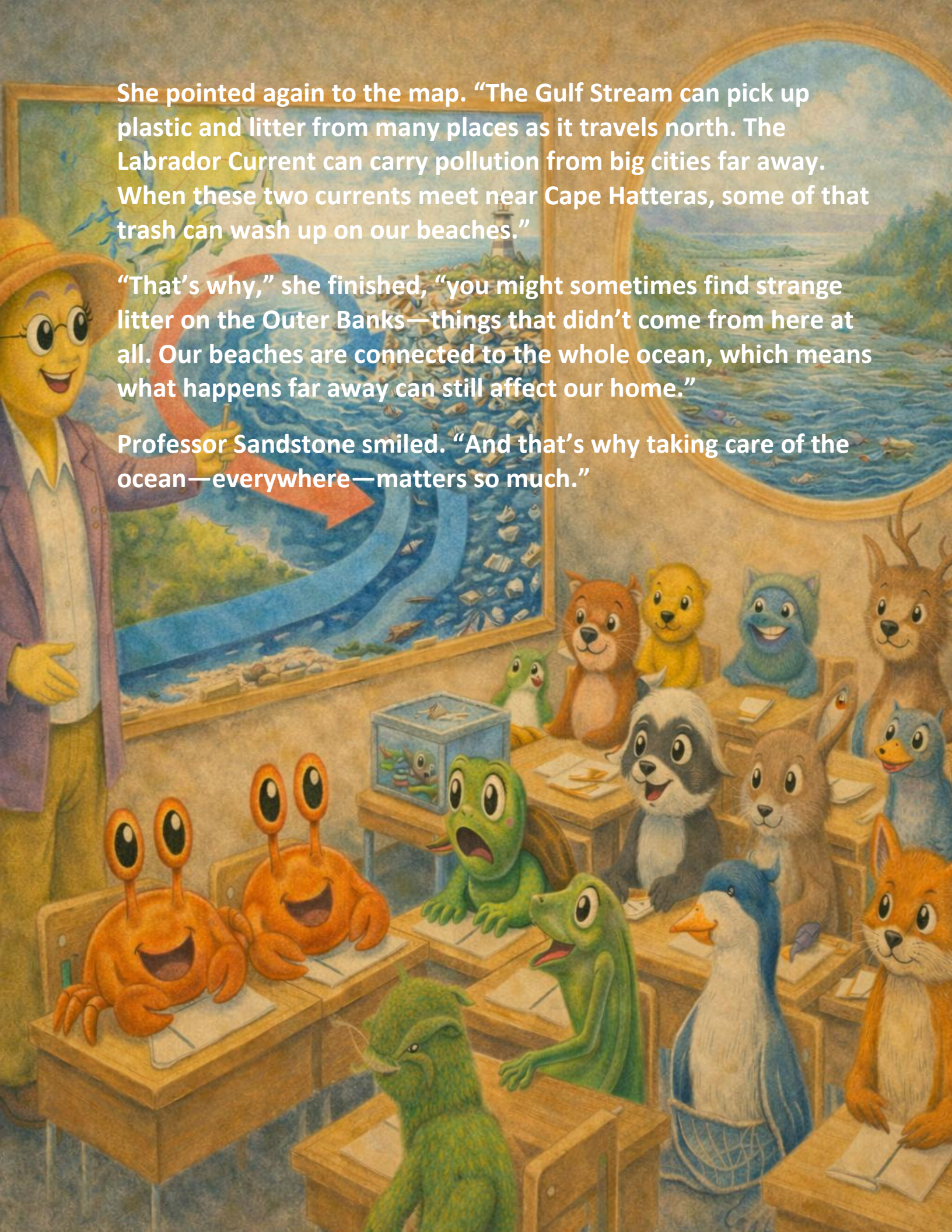


Professor Sandstone smiled and pointed to a big picture of the ocean.

"Did you know the ocean has moving rivers of water called *currents*?" she asked. "They're like giant underwater highways!"

She explained, "The Outer Banks sits right where two very powerful ocean currents meet. One is the Gulf Stream, which carries warm water north from places like Florida, the Caribbean, and even faraway South America. The other is the Labrador Current, which brings cold water south from Canada and the northeastern United States."

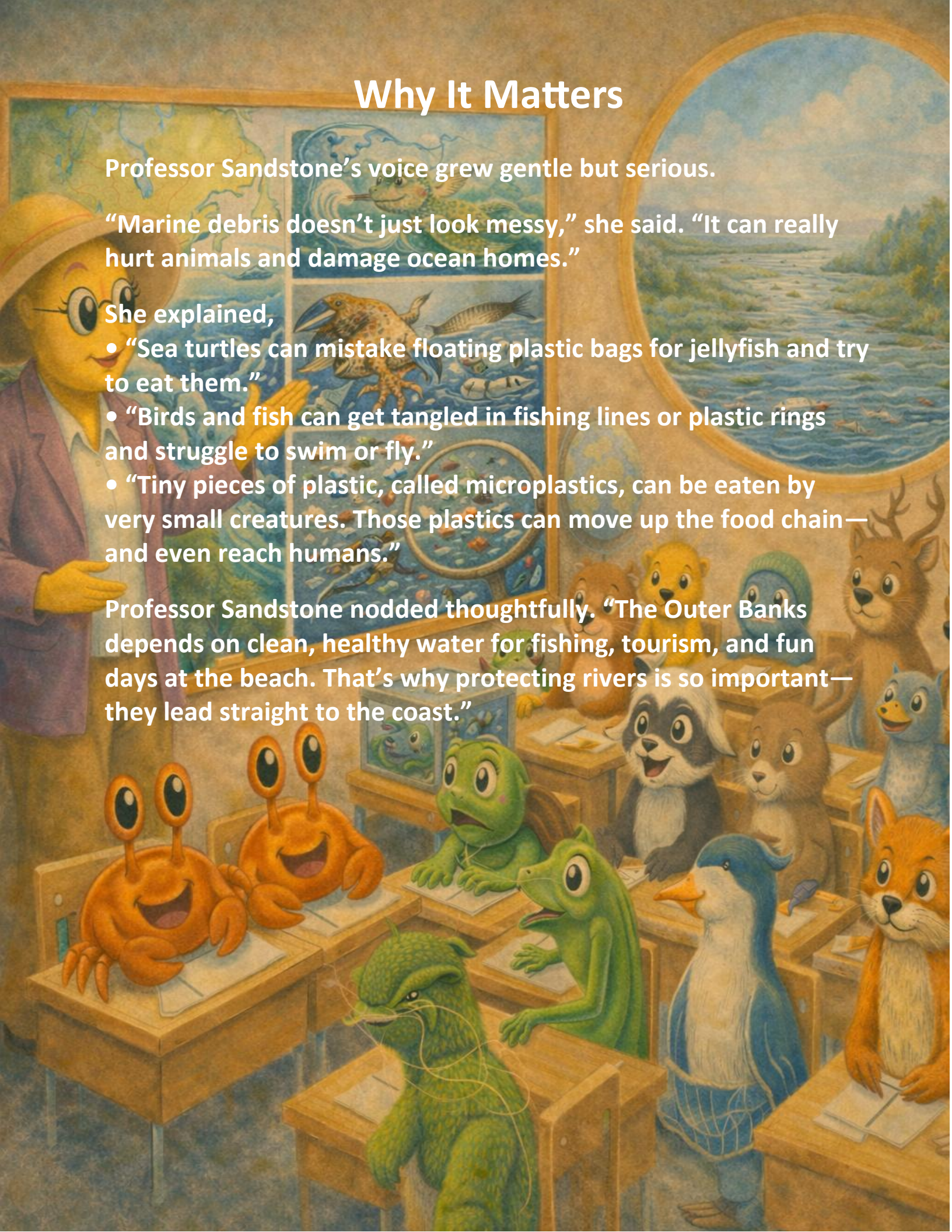
Professor Sandstone leaned closer. "But these currents don't just carry water," she said gently. "They can also carry floating trash."



She pointed again to the map. “The Gulf Stream can pick up plastic and litter from many places as it travels north. The Labrador Current can carry pollution from big cities far away. When these two currents meet near Cape Hatteras, some of that trash can wash up on our beaches.”

“That’s why,” she finished, “you might sometimes find strange litter on the Outer Banks—things that didn’t come from here at all. Our beaches are connected to the whole ocean, which means what happens far away can still affect our home.”

Professor Sandstone smiled. “And that’s why taking care of the ocean—everywhere—matters so much.”



Why It Matters

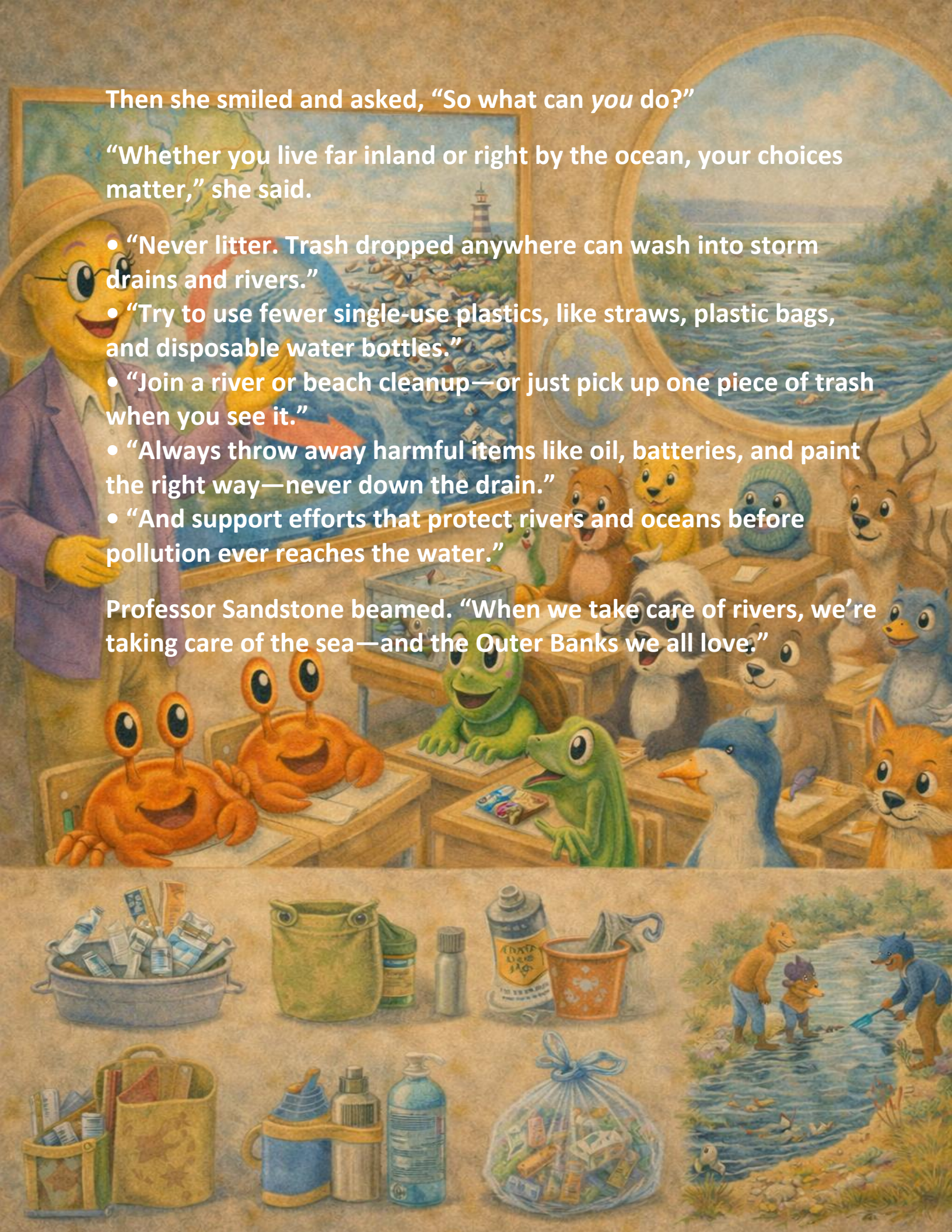
Professor Sandstone's voice grew gentle but serious.

"Marine debris doesn't just look messy," she said. "It can really hurt animals and damage ocean homes."

She explained,

- "Sea turtles can mistake floating plastic bags for jellyfish and try to eat them."
- "Birds and fish can get tangled in fishing lines or plastic rings and struggle to swim or fly."
- "Tiny pieces of plastic, called microplastics, can be eaten by very small creatures. Those plastics can move up the food chain—and even reach humans."

Professor Sandstone nodded thoughtfully. "The Outer Banks depends on clean, healthy water for fishing, tourism, and fun days at the beach. That's why protecting rivers is so important—they lead straight to the coast."

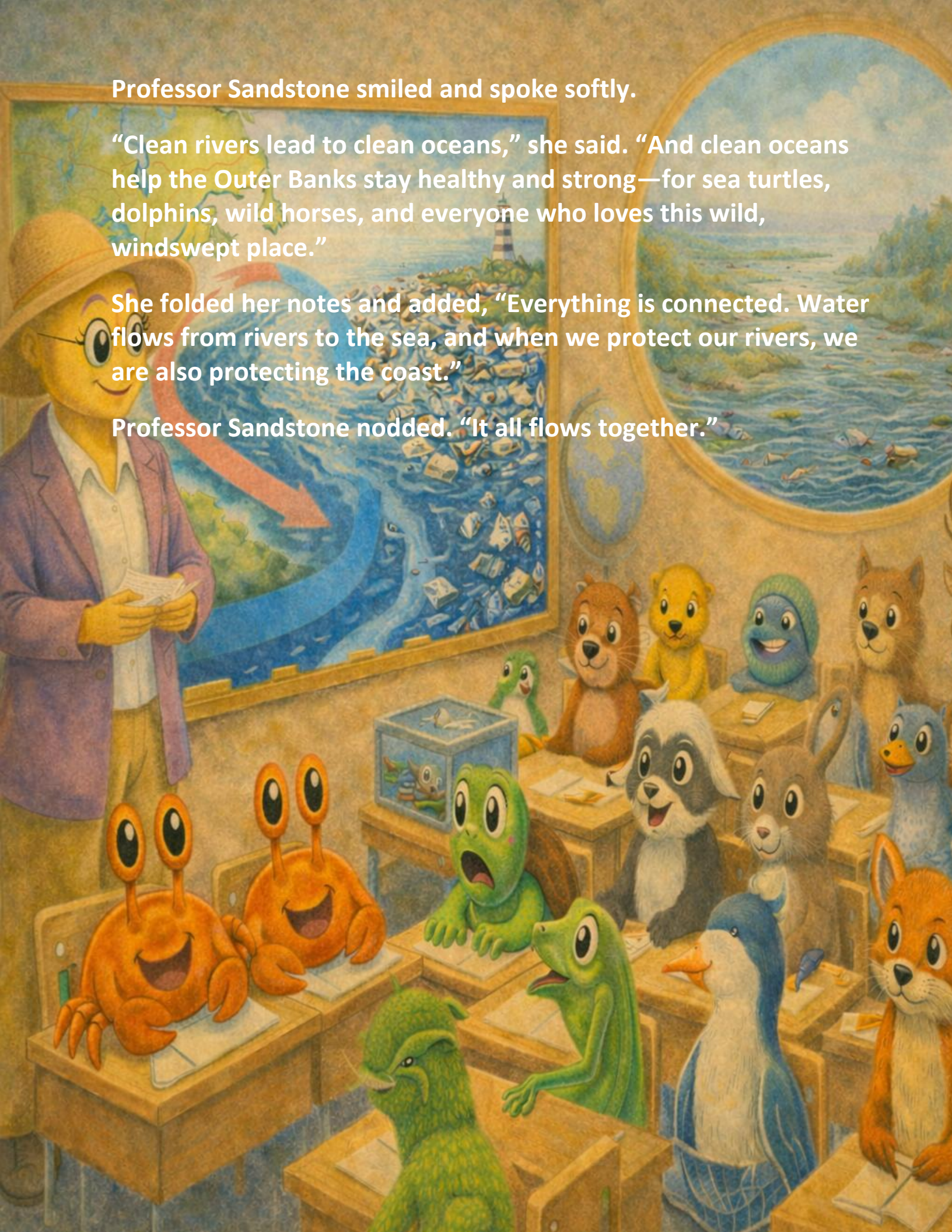


Then she smiled and asked, “So what can *you* do?”

“Whether you live far inland or right by the ocean, your choices matter,” she said.

- “Never litter. Trash dropped anywhere can wash into storm drains and rivers.”
- “Try to use fewer single-use plastics, like straws, plastic bags, and disposable water bottles.”
- “Join a river or beach cleanup—or just pick up one piece of trash when you see it.”
- “Always throw away harmful items like oil, batteries, and paint the right way—never down the drain.”
- “And support efforts that protect rivers and oceans before pollution ever reaches the water.”

Professor Sandstone beamed. “When we take care of rivers, we’re taking care of the sea—and the Outer Banks we all love.”



Professor Sandstone smiled and spoke softly.

“Clean rivers lead to clean oceans,” she said. “And clean oceans help the Outer Banks stay healthy and strong—for sea turtles, dolphins, wild horses, and everyone who loves this wild, windswept place.”

She folded her notes and added, “Everything is connected. Water flows from rivers to the sea, and when we protect our rivers, we are also protecting the coast.”

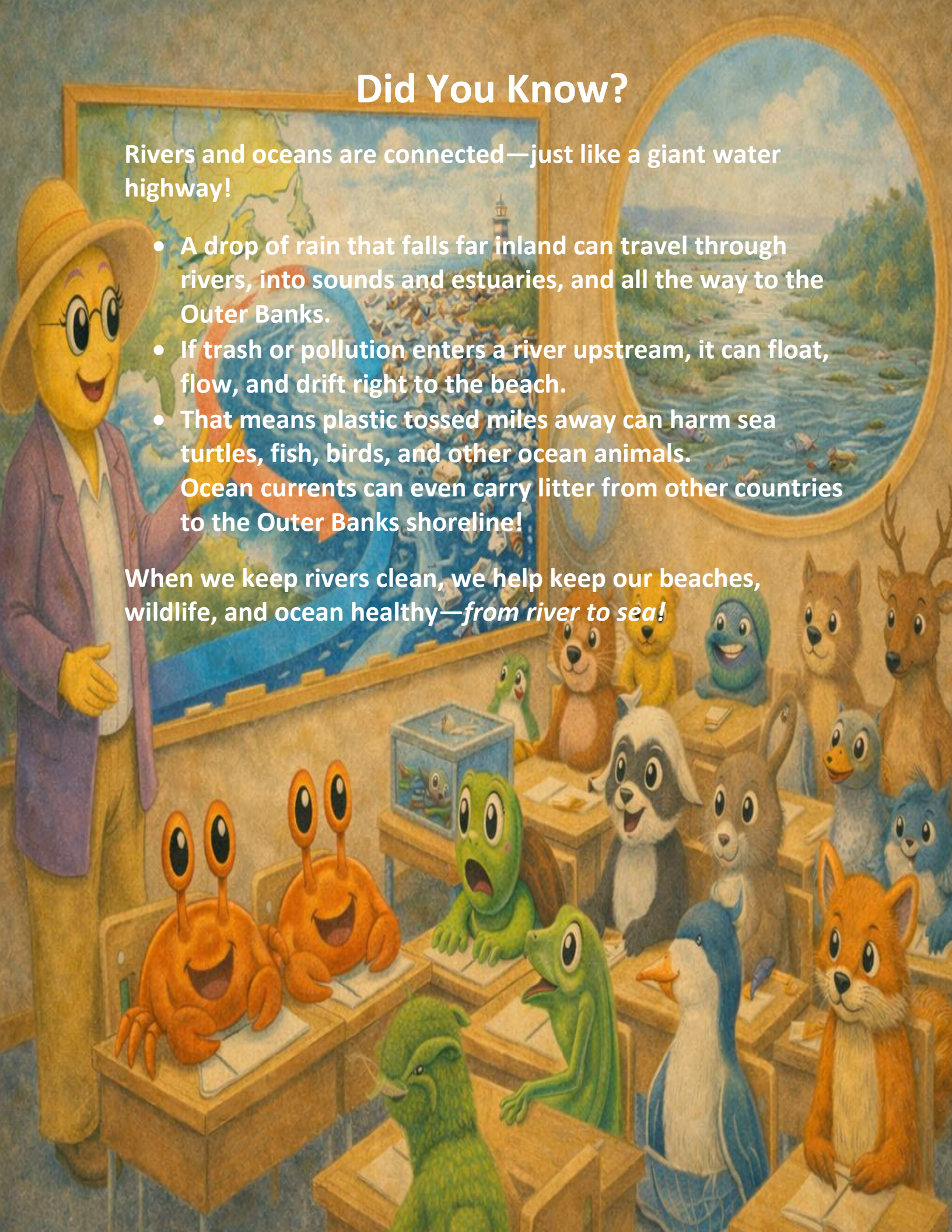
Professor Sandstone nodded. “It all flows together.”

Did You Know?

Rivers and oceans are connected—just like a giant water highway!

- **A drop of rain that falls far inland can travel through rivers, into sounds and estuaries, and all the way to the Outer Banks.**
- **If trash or pollution enters a river upstream, it can float, flow, and drift right to the beach.**
- **That means plastic tossed miles away can harm sea turtles, fish, birds, and other ocean animals.**
  Ocean currents can even carry litter from other countries to the Outer Banks shoreline!

When we keep rivers clean, we help keep our beaches, wildlife, and ocean healthy—*from river to sea!*



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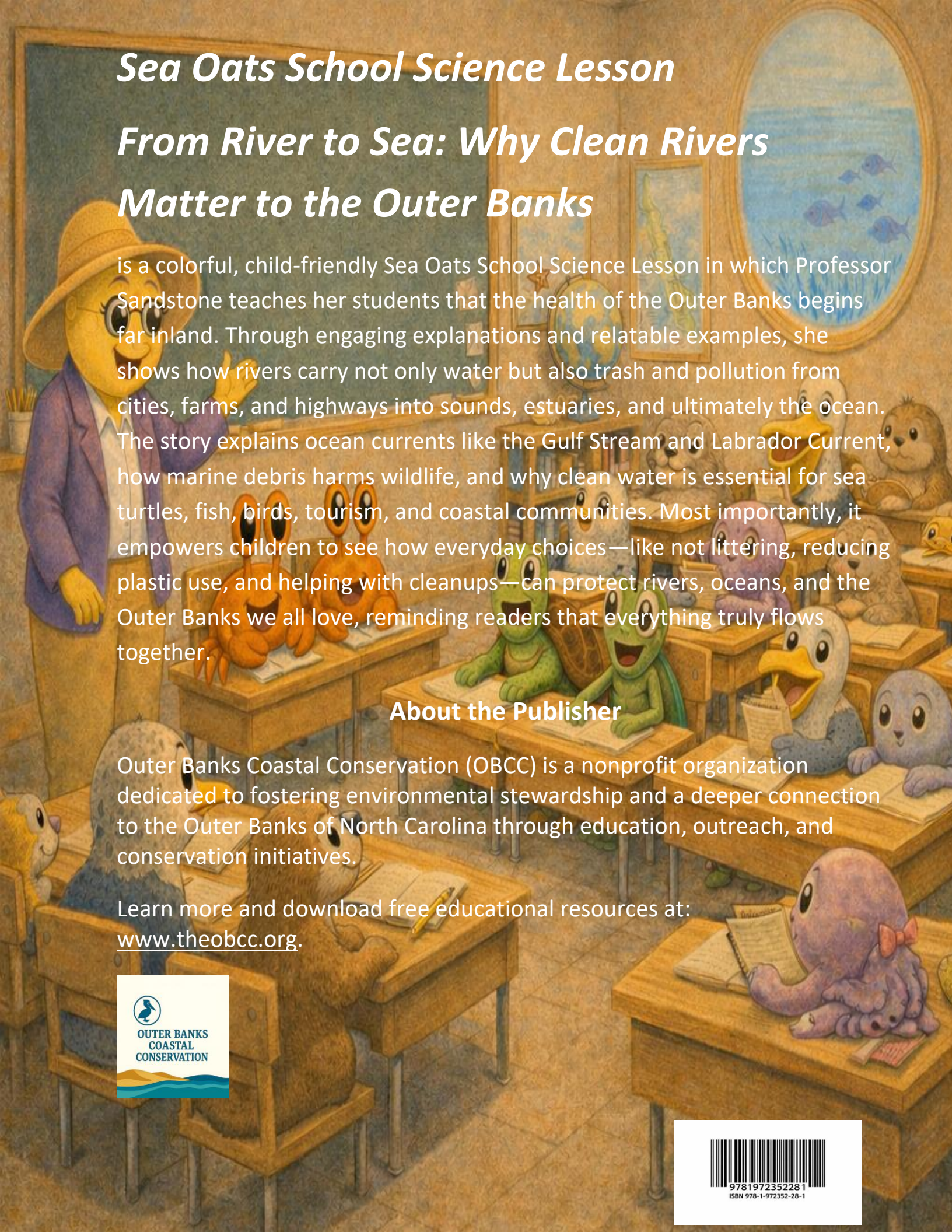

Sea Oats School Science Lesson

From River to Sea: Why Clean Rivers Matter to the Outer Banks

is a colorful, child-friendly Sea Oats School Science Lesson in which Professor Sandstone teaches her students that the health of the Outer Banks begins far inland. Through engaging explanations and relatable examples, she shows how rivers carry not only water but also trash and pollution from cities, farms, and highways into sounds, estuaries, and ultimately the ocean. The story explains ocean currents like the Gulf Stream and Labrador Current, how marine debris harms wildlife, and why clean water is essential for sea turtles, fish, birds, tourism, and coastal communities. Most importantly, it empowers children to see how everyday choices—like not littering, reducing plastic use, and helping with cleanups—can protect rivers, oceans, and the Outer Banks we all love, reminding readers that everything truly flows together.

About the Publisher

Outer Banks Coastal Conservation (OBCC) is a nonprofit organization dedicated to fostering environmental stewardship and a deeper connection to the Outer Banks of North Carolina through education, outreach, and conservation initiatives.

Learn more and download free educational resources at: www.theobcc.org.

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