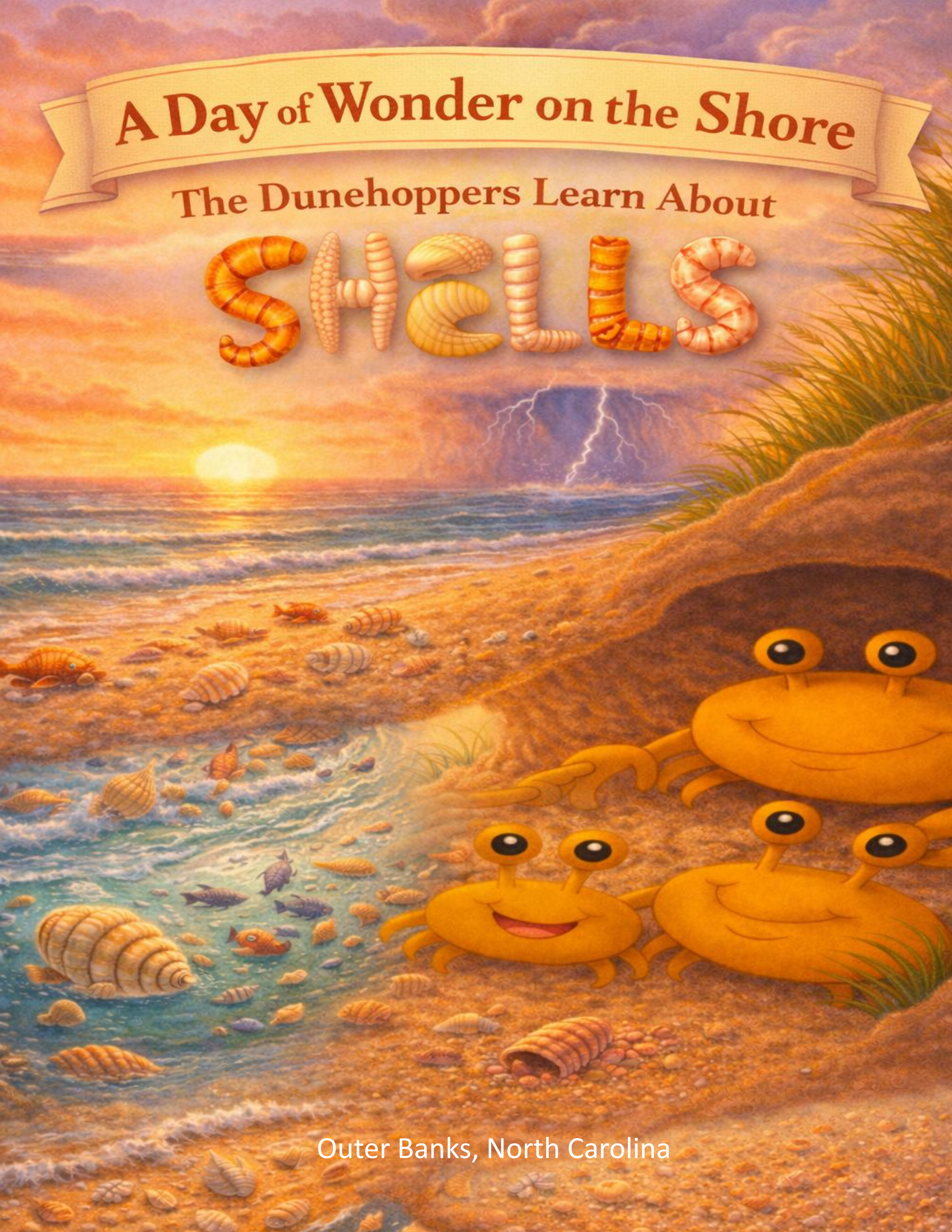
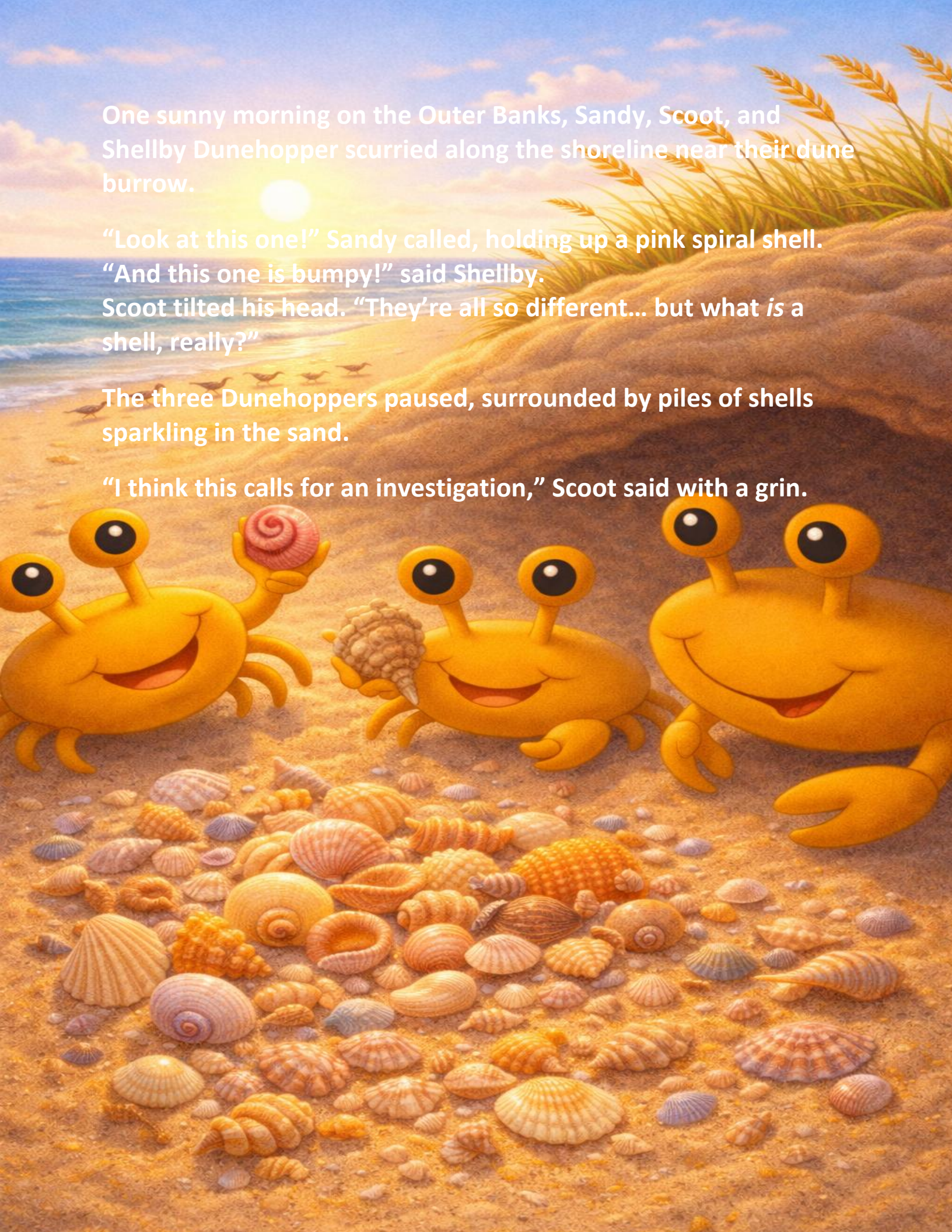

A Day of Wonder on the Shore
The Dunehoppers Learn About
SHELLS
Outer Banks, North Carolina

Forward

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.



One sunny morning on the Outer Banks, Sandy, Scoot, and Shellby Dunehopper scurried along the shoreline near their dune burrow.

“Look at this one!” Sandy called, holding up a pink spiral shell.
“And this one is bumpy!” said Shellby.
Scoot tilted his head. “They’re all so different… but what *is* a shell, really?”

The three Dunehoppers paused, surrounded by piles of shells sparkling in the sand.

“I think this calls for an investigation,” Scoot said with a grin.

What *Is* a Shell?

Back at their cozy burrow, Scoot opened his computer and began researching.

“Whoa,” he said. “Shells aren’t just beach decorations. “Shells are homes made by ocean animals called mollusks.”

Some shell-making animals include:

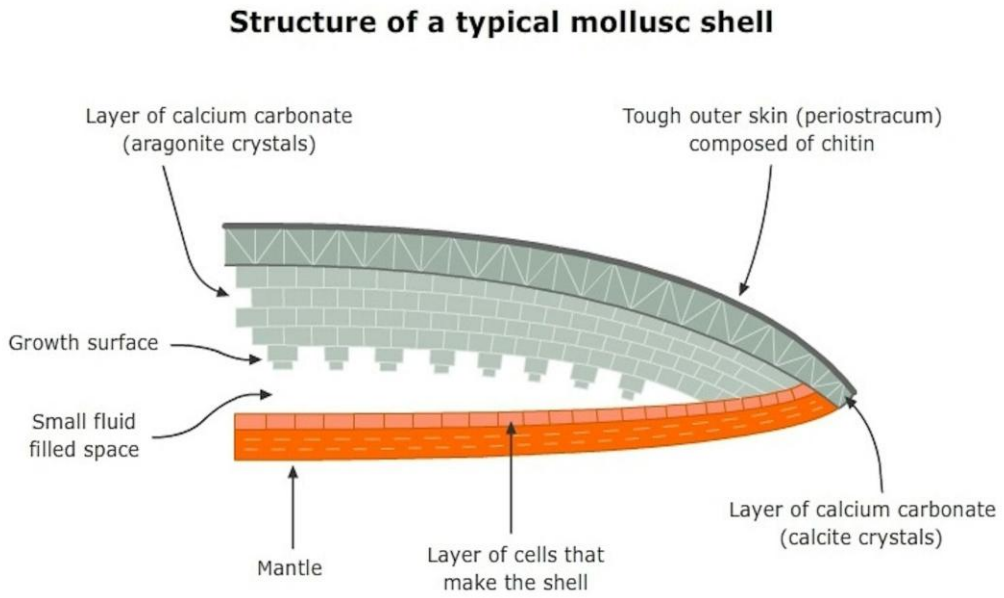
- Clams
- Oysters
- Snails
- Whelks
- Scallops

These animals are born alive—and they start growing their shells right away!

He explained that most shells are made of a strong mineral called calcium carbonate, the same material found in chalk and limestone. Shells protect soft-bodied sea animals like clams, snails, and oysters.

Scoot pointed to the diagram of Shell Layers on his screen.

Shell Layers



How are Shells Formed?

Sandy leaned closer. “But do animals *find* their shells… or *make* them?”

Scoot looked on his computer and found out that shells are grown, not found!

Here’s what the Dunehoppers learned:

- When a mollusk is born, it starts with a tiny shell
- A special body part called the mantle pulls minerals from seawater
- The mantle adds layers little by little, like building with bricks
- As the animal grows, the shell grows too

“That explains the lines!” Sandy said.

“Exactly,” Scoot nodded. “Shell lines are like tree rings—they show how the shell grew over time.”

Shellby gasped. “So shells are built like armor!”

Why Are Shells Different Colors and Shapes?

Shellby held up two shells side by side. “Why don’t they all look the same?”

Scoot smiled. “Because every shell tells a story.”

Shells can be different because of:

- The kind of animal that made them
- The water they lived in
- The food they ate
- Their home—sand, rocks, mud, or waves

Some shells are smooth. Some are bumpy. Some are bright, and some are plain.

“Each one is special,” Sandy said softly. “Just like us.”

Just then, Sandy spotted a beautiful shell by the shore. “I think that is a Scotch Bonnet.” That is North Carolina’s state shell. I will leave it on the sand as I’m not sure if it is alive.”

How Do Shells Get on the Beach?

The Dunehoppers imagined the journey shells take before reaching their feet.

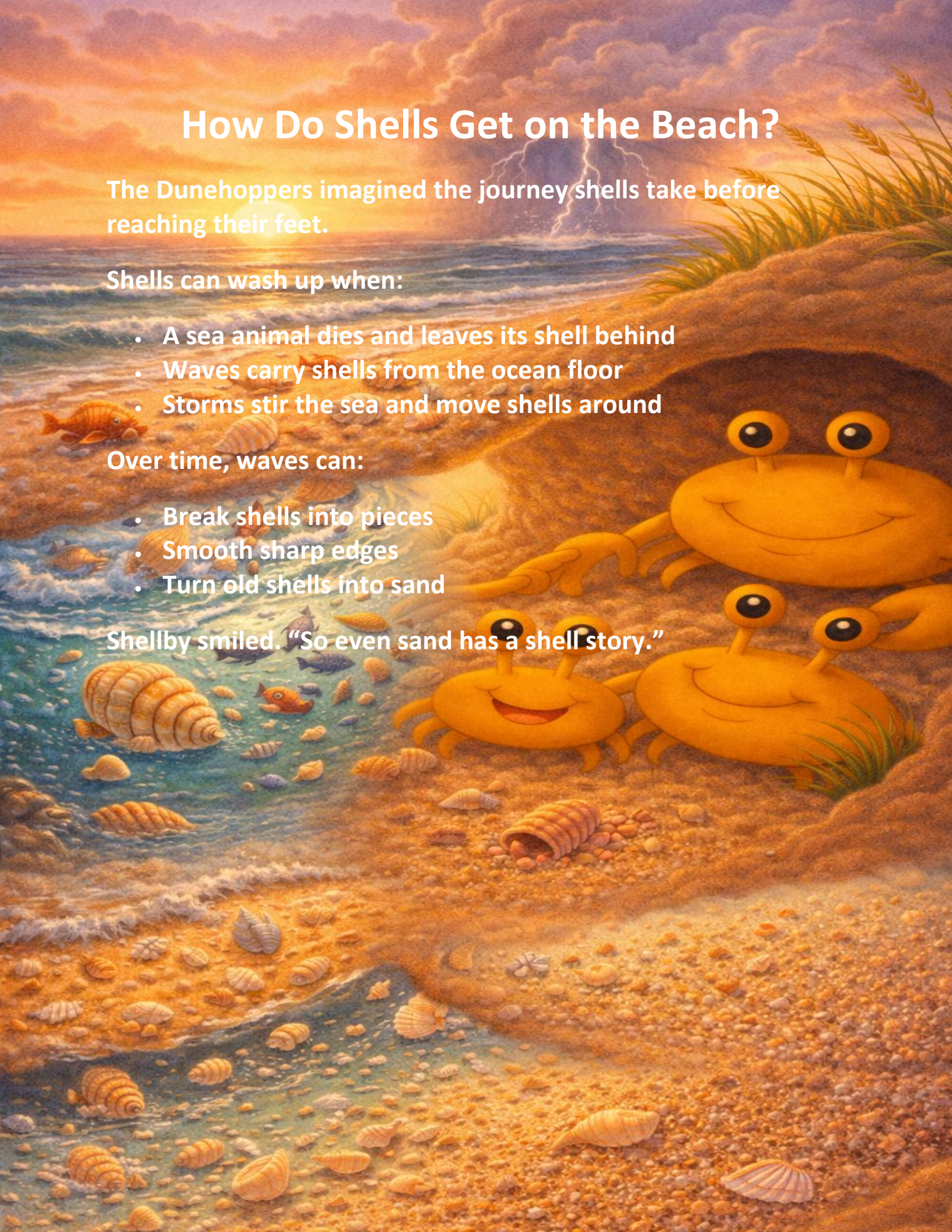
Shells can wash up when:

- A sea animal dies and leaves its shell behind
- Waves carry shells from the ocean floor
- Storms stir the sea and move shells around

Over time, waves can:

- Break shells into pieces
- Smooth sharp edges
- Turn old shells into sand

Shellby smiled. “So even sand has a shell story.”



Shell Sharing Surprise!

Scoot suddenly laughed. “Did you know some animals don’t make shells at all?”

“Like hermit crabs!” Sandy said.

Hermit crabs borrow empty shells to protect their soft bodies and move into bigger ones as they grow.

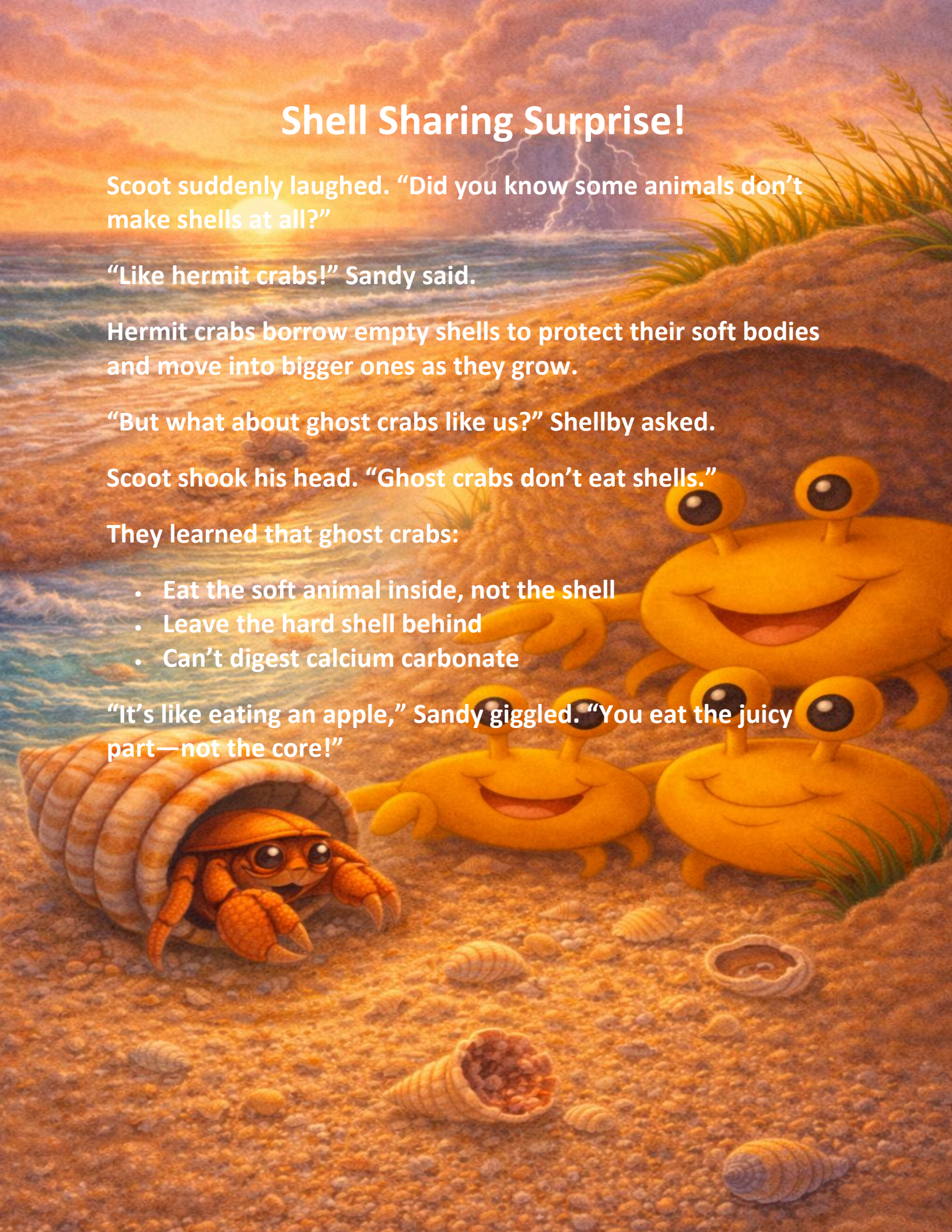
“But what about ghost crabs like us?” Shellby asked.

Scoot shook his head. “Ghost crabs don’t eat shells.”

They learned that ghost crabs:

- Eat the soft animal inside, not the shell
- Leave the hard shell behind
- Can’t digest calcium carbonate

“It’s like eating an apple,” Sandy giggled. “You eat the juicy part—not the core!”



A Shell-Filled Ending

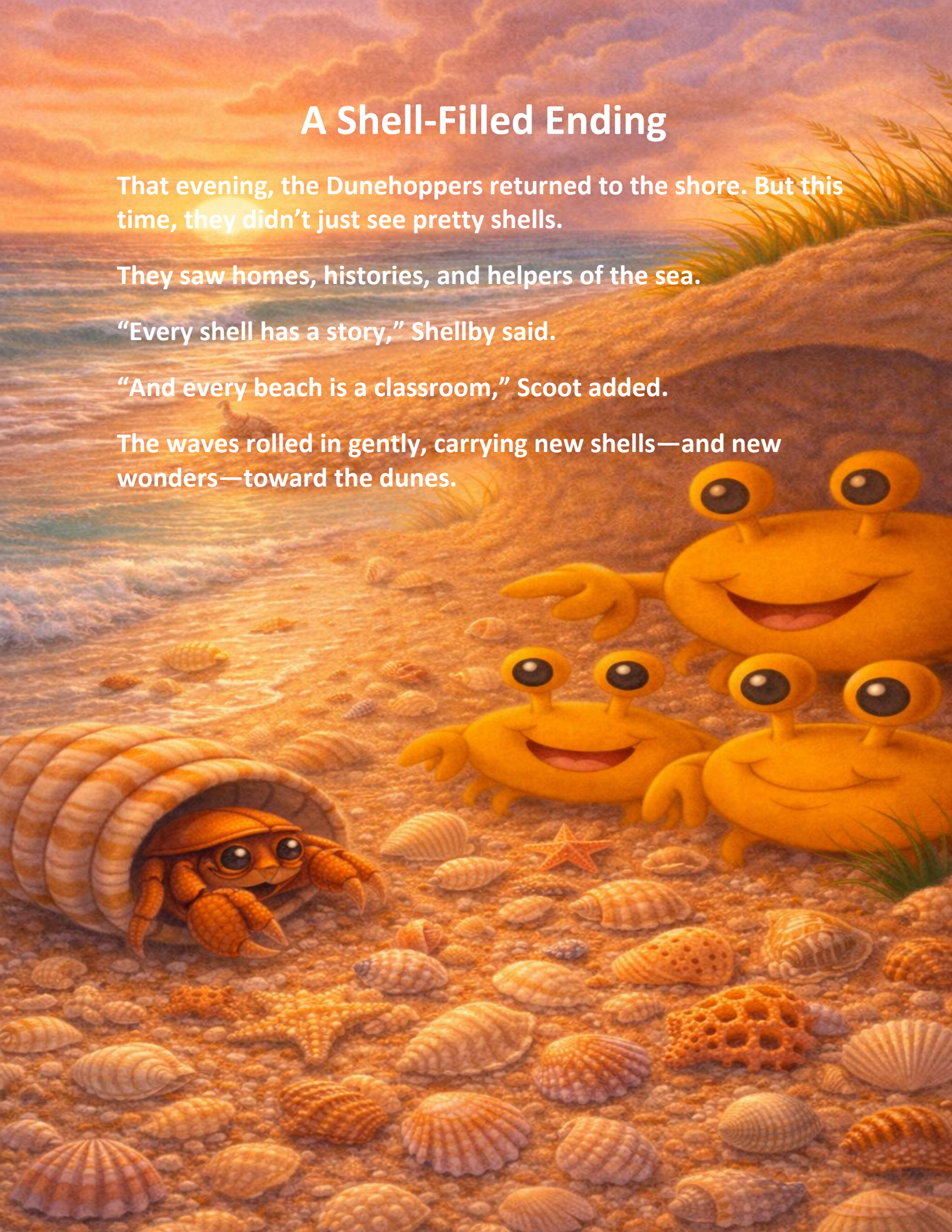
That evening, the Dunehoppers returned to the shore. But this time, they didn’t just see pretty shells.

They saw homes, histories, and helpers of the sea.

“Every shell has a story,” Shellby said.

“And every beach is a classroom,” Scoot added.

The waves rolled in gently, carrying new shells—and new wonders—toward the dunes.

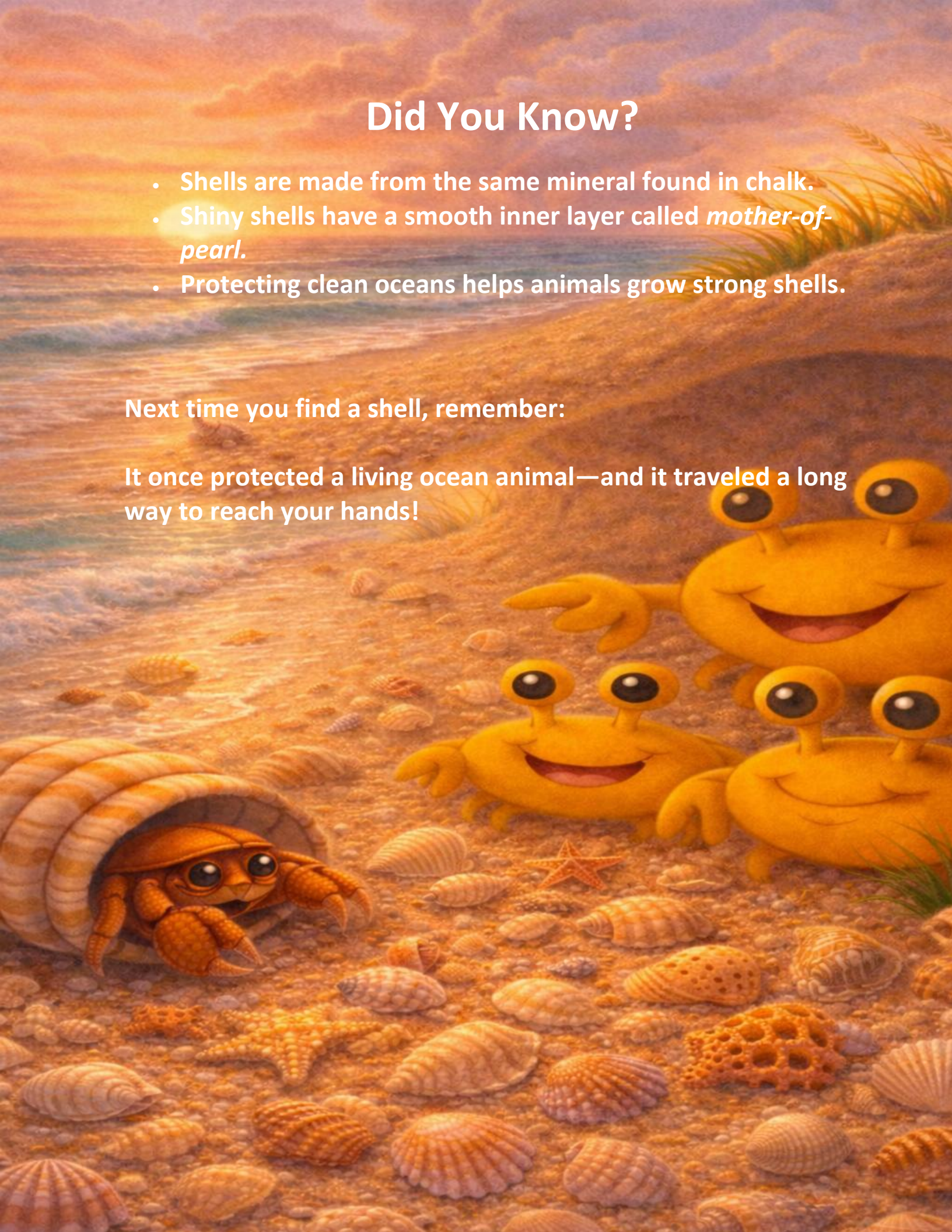


Did You Know?

- **Shells are made from the same mineral found in chalk.**
- **Shiny shells have a smooth inner layer called *mother-of-pearl.***
- **Protecting clean oceans helps animals grow strong shells.**

Next time you find a shell, remember:

It once protected a living ocean animal—and it traveled a long way to reach your hands!



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