

# Nature Recycles

## How About You?



by Michelle Lord  
illustrated by Cathy Morrison

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From sea urchins in the Atlantic Ocean to bandicoots on the Australian savanna, animals recycle all over the world. Explore how different animals in different habitats use recycled material to build homes, protect themselves, and get food. This fascinating collection of animal facts will inspire them to take part in protecting and conserving the environment by recycling in their own way.

It's so much more than a picture book . . . this book is specifically designed to be both a fun-to-read story and a launch pad for discussions and learning. Whether read at home or in a classroom, we encourage adults to do the activities with the young children in their lives. Free online resources and support at [ArbordalePublishing.com](http://ArbordalePublishing.com) include:

- For Creative Minds as seen in the book (in English & Spanish):
  - Why Animals Recycle
  - Where in the World? A Map Activity
  - Reduce, Reuse, and Recycle: True or False?
- Teaching Activities (to do at home or school):
  - Reading Questions
  - Language Arts
  - Science
  - Math
  - Geography
  - Coloring Pages
- Interactive Quizzes: Reading Comprehension, For Creative Minds, and Math Word Problems
- English and Spanish Audiobooks
- Related Websites
- Aligned to State Standards (searchable database)
- Accelerated Reader and Reading Counts! Quizzes
- Lexile and Fountas & Pinnell Reading Levels

eBooks with Auto-Flip, Auto-Read, and selectable English and Spanish text and audio available for purchase online.

Thanks to Jaclyn Stallard, Manager of Education Programs at Project Learning Tree ([www.plt.org](http://www.plt.org)) for verifying the accuracy of the information in this book.

Award-winning author **Michelle Lord** started writing stories when she was in elementary school. In addition to *Nature Recycles* for Arbordale, her other books include *Tide Pool Trouble*, *A Song for Cambodia*, and the award-winning *Little Sap and Monsieur Rodin*. Michelle and her family recycle at their home in Texas. Check out her website at [michellelordwrites.com](http://michellelordwrites.com).

**Cathy Morrison** may have started her art career in animation but she soon fell in love illustrating children's books and has been doing so for 20 years. Some of the other titles she's illustrated include *Three Little Beavers* and *Animalogy: Animal Analogies* for Arbordale, as well as *Ignacio's Chair*, and the *Young Patriots Series* including *Alexander Hamilton*, *Young Statesman*, *Frederick Douglass*, *Young Defender of Human Rights*, and *Juliette Low, Girl Scout Founder*. She is a member of the Society of Children's Book Writers and Illustrators. Cathy works from home in a studio loft overlooking a beautiful view of the Mummy Range, on the northern side of Rocky Mountain National Park. Check out her blog at [cathymorrison.blogspot.com](http://cathymorrison.blogspot.com).



Michelle Lord

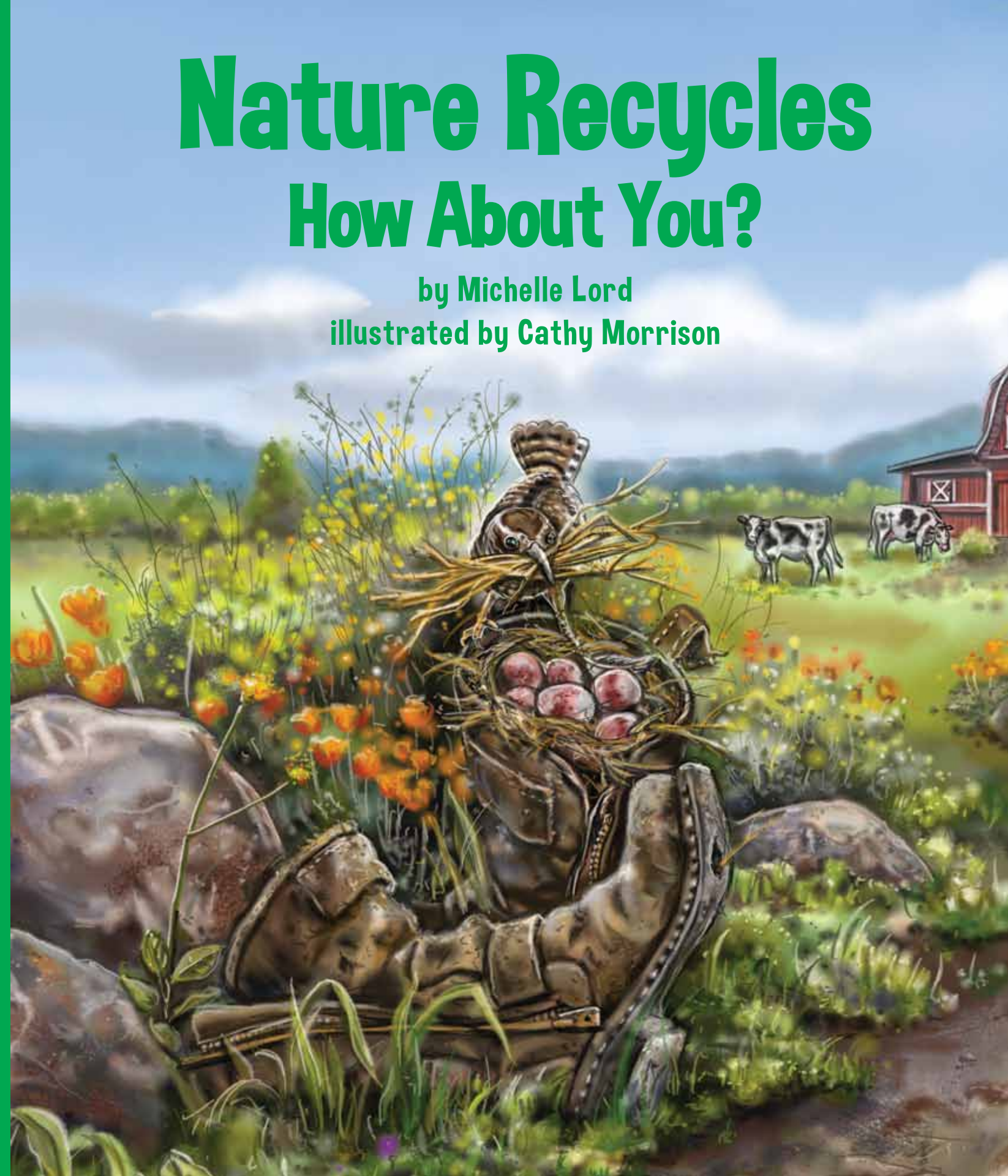


Cathy Morrison

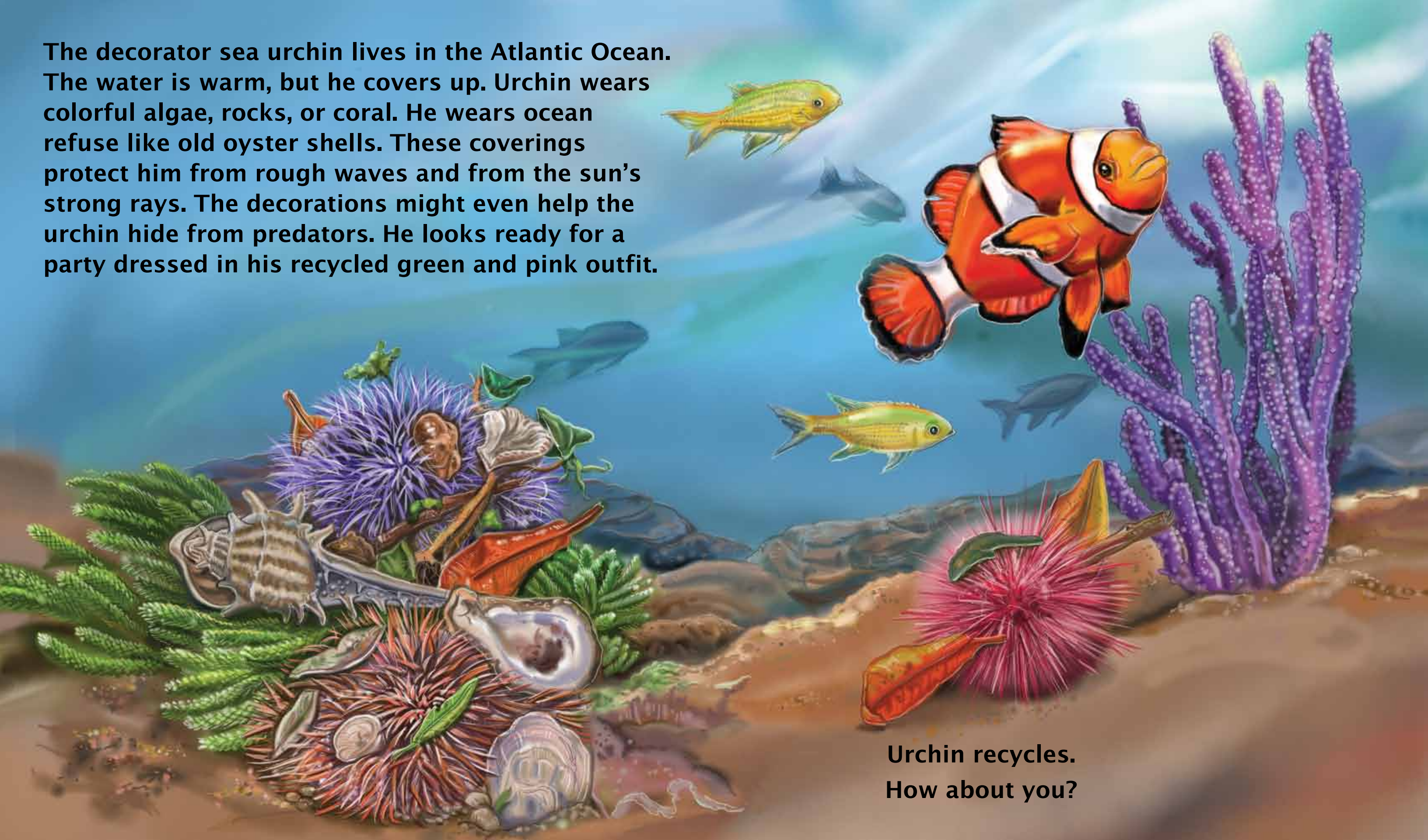
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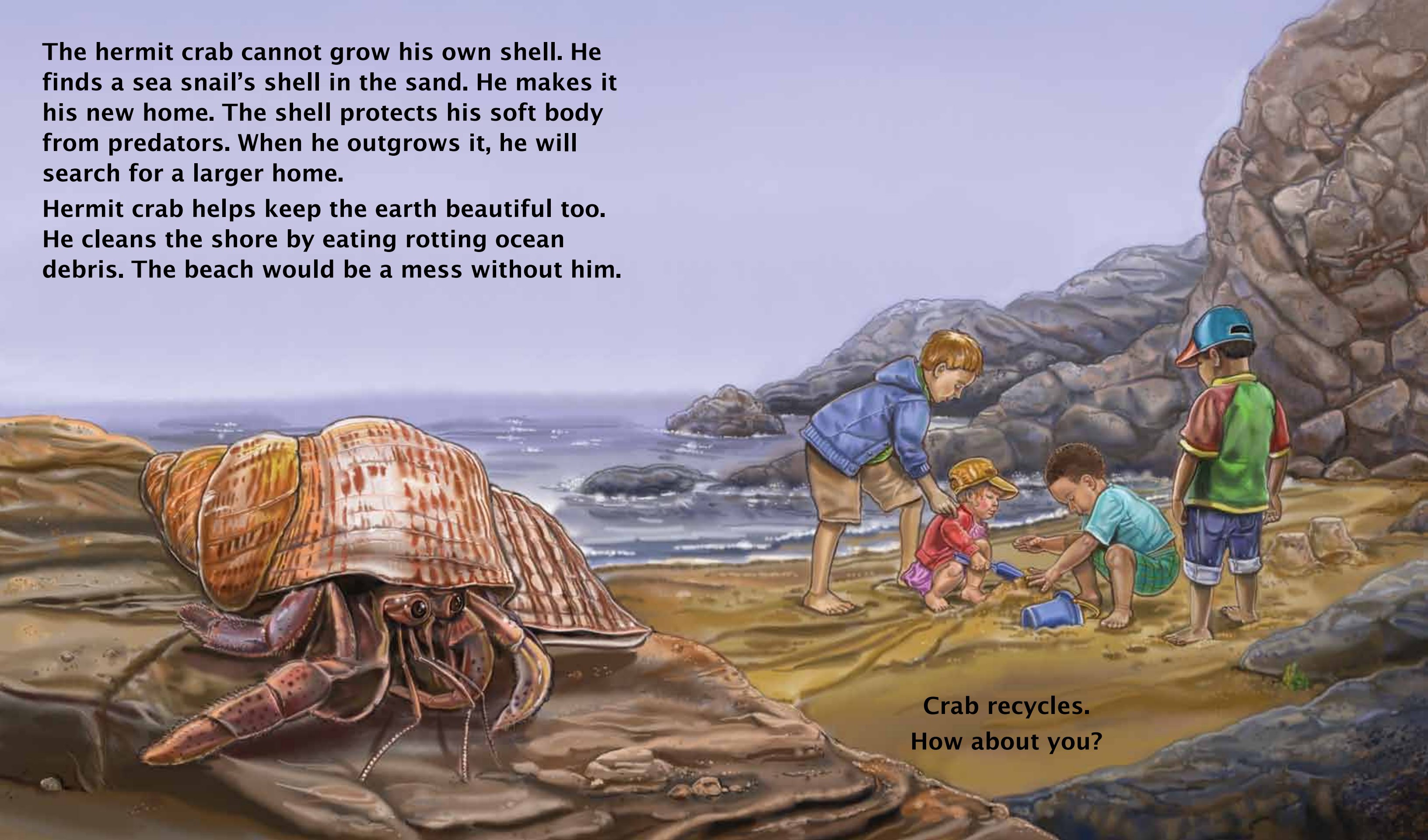
The decorator sea urchin lives in the Atlantic Ocean. The water is warm, but he covers up. Urchin wears colorful algae, rocks, or coral. He wears ocean refuse like old oyster shells. These coverings protect him from rough waves and from the sun's strong rays. The decorations might even help the urchin hide from predators. He looks ready for a party dressed in his recycled green and pink outfit.



Urchin recycles.  
How about you?

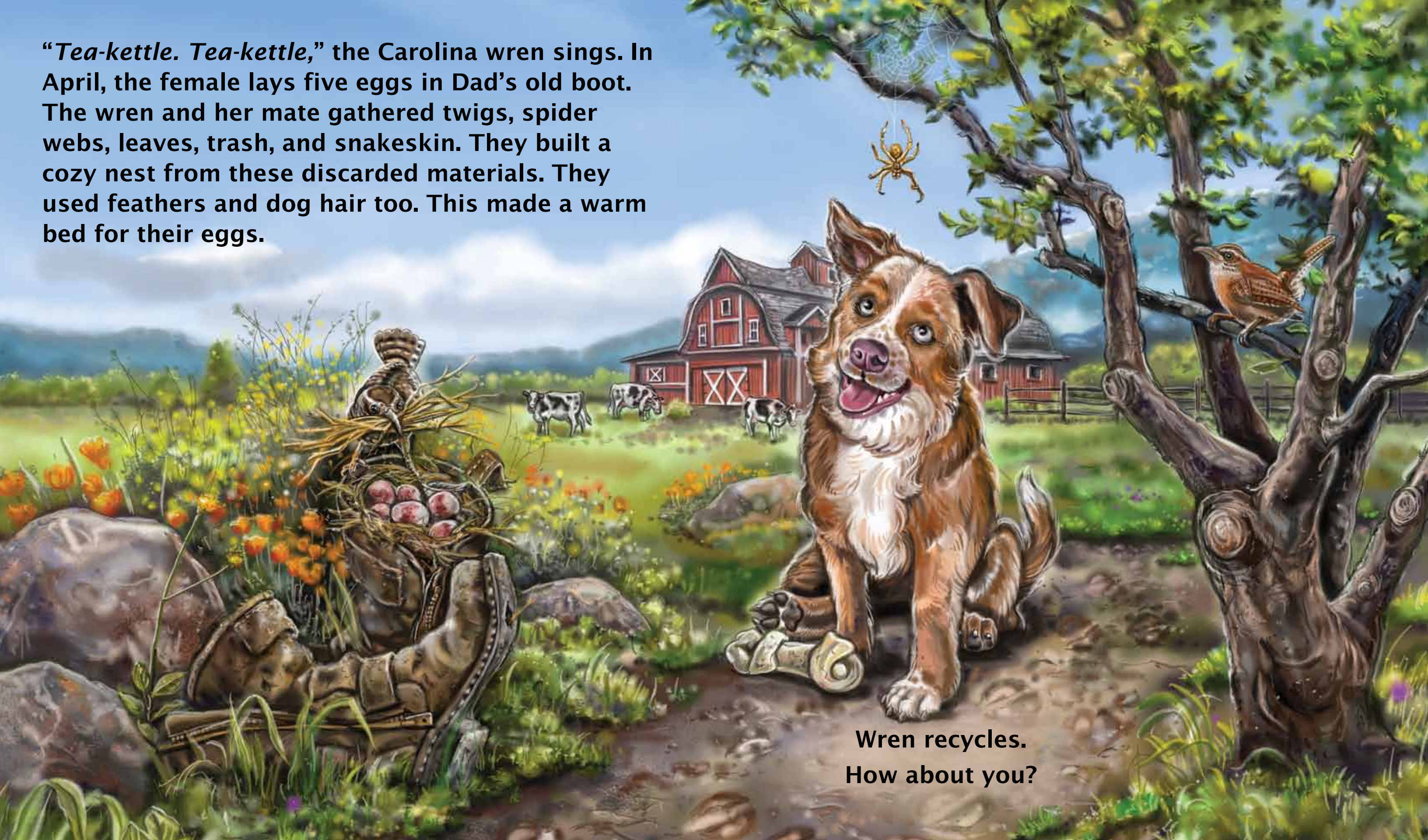
The hermit crab cannot grow his own shell. He finds a sea snail's shell in the sand. He makes it his new home. The shell protects his soft body from predators. When he outgrows it, he will search for a larger home.

Hermit crab helps keep the earth beautiful too. He cleans the shore by eating rotting ocean debris. The beach would be a mess without him.



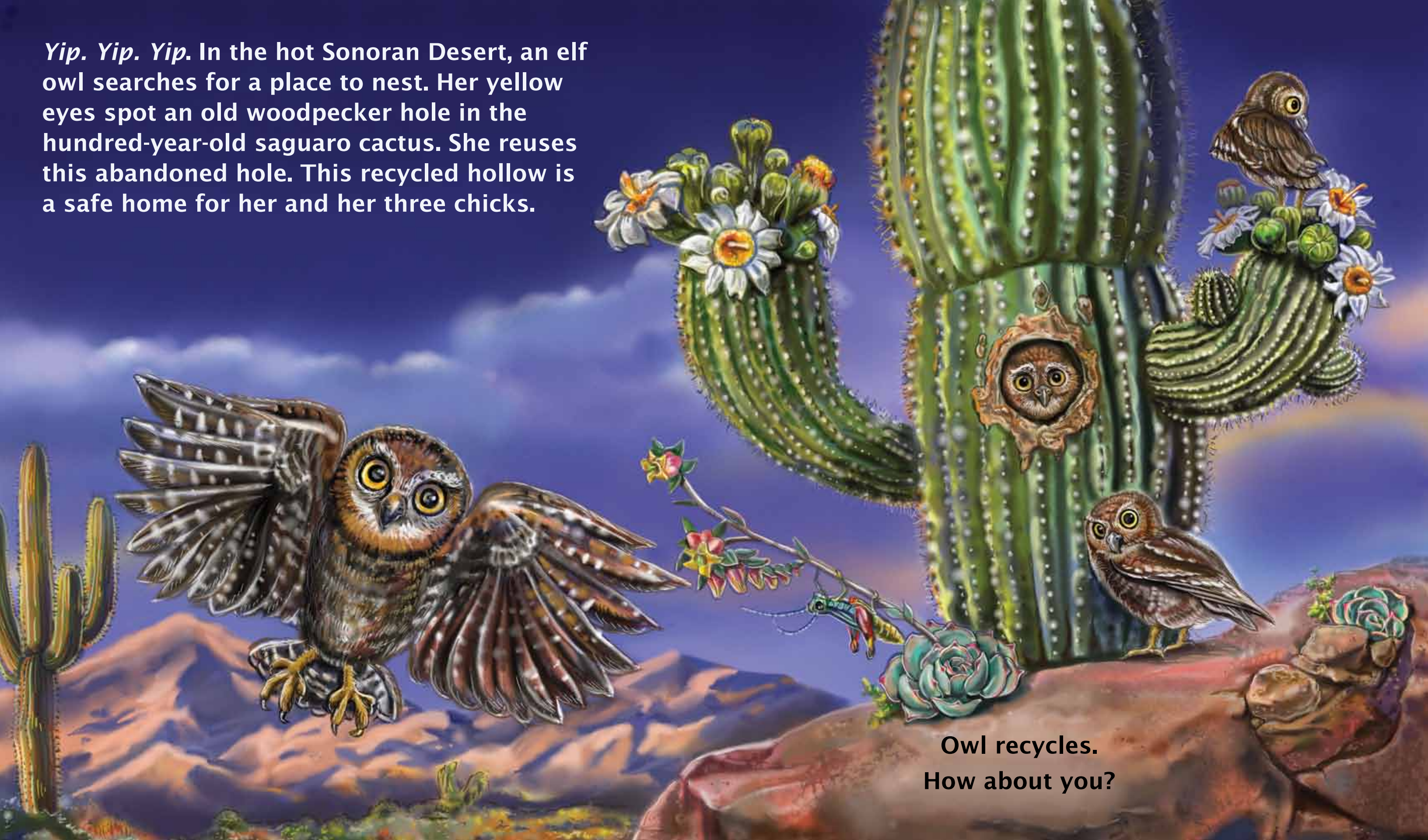
Crab recycles.  
How about you?

**“*Tea-kettle. Tea-kettle,*” the Carolina wren sings. In April, the female lays five eggs in Dad’s old boot. The wren and her mate gathered twigs, spider webs, leaves, trash, and snakeskin. They built a cozy nest from these discarded materials. They used feathers and dog hair too. This made a warm bed for their eggs.**



**Wren recycles.  
How about you?**

*Yip. Yip. Yip.* In the hot Sonoran Desert, an elf owl searches for a place to nest. Her yellow eyes spot an old woodpecker hole in the hundred-year-old saguaro cactus. She reuses this abandoned hole. This recycled hollow is a safe home for her and her three chicks.



**Owl recycles.  
How about you?**

## For Creative Minds

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### Why Animals Recycle

From the ocean floor to the dry desert, animals keep their habitats healthy by reducing, reusing, and recycling.

Some animals use plants or other items to build nests or shelter.

Other animals use bits and pieces of things to camouflage or protect themselves.

Some animals might even use items as tools to help them get food or make shelter.

Last, but not least, animals that eat dead plants and animals turn those things into nutrients for plants to grow, giving other animals food to eat.

Can you tell which animals recycle for nests or shelters, camouflage or protection, as tools, or as nutrients?



sea urchins



hermit crabs



Carolina wrens

Scientists think decorator urchins cover themselves with bits and pieces of shells or plants to protect themselves from the sun—like a sunscreen! The decorations may also protect them from other animals.

Hermit crabs have soft outer coverings (exoskeletons) so they reuse snail shells to protect themselves. When they outgrow one shell, they find a bigger one. They help keep our oceans clean by eating plants and animals that have died.

Both male and female Carolina wrens build nests using all kinds of recycled materials: tree bark, grass, leaves, hair, feathers, even plastic or string. They usually build the nests in tree holes but nests have been found in people's boots, old flowerpots, and even mailboxes!



elf owls



veined octopuses



woodpecker finches



dung beetles

Elf owls build their nests in abandoned woodpecker holes in trees and cacti.

Many octopuses use bottles or even cans as shelter. But the veined octopus carries pieces of clam or coconut shells. If scared, they'll tuck into the shell and pull it over them for protection.

Woodpecker finches use small twigs or cactus spines to pry insects (food) out of tree bark.

Dung beetles bury animal waste (feces) to lay their eggs. By digging, they loosen the soil and as the eggs hatch and eat the animal waste, they turn the waste into nutrients in the soil for plants to grow.

Termites recycle wood and plants into their nests. When they leave the nests, many other animals will move in and recycle the nest again!

Caddisfly larvae use plants, pebbles, sand, and even tiny shells to build protective shells for their pupae stage.

After dart frog tadpoles hatch, the fathers move the tadpoles to small wet "ponds" in nutshells, flower leaves, or even in old cans.

Asian elephants use their trunks to pull leaves off banana trees and fan themselves. They will also pick up sticks to scratch their backs.



termites



caddisfly larvae



dart frogs



Asian elephants

Possible answers: nests or shelter: Carolina wrens, elf owls, veined octopus, dung beetles, termites, caddisfly larvae; camouflage or protection: decorator urchins, hermit crabs, dart frogs; tools: veined octopus, woodpecker finches, Asian elephants; nutrients to soil: hermit crabs, dung beetles

## Where in the World? A Map Activity



### Find the animals on the map:

Decorator urchins live near the shore in shallow ocean water all over the world. Find the decorator urchin in the Pacific Ocean.

There are more than 500 different kinds of hermit crabs. A few live on land but most live in shallow ocean waters and estuaries. Find the hermit crab in the Atlantic Ocean.

Carolina wrens live in forests and areas with thick bushes in much of the eastern half of North America.

Elf owls are active at night and live in wooded and desert areas in Northern Mexico and the Southwest United States.

Veined octopuses live in sandy or muddy areas in the tropical waters around Australia and Indonesia.

Woodpecker finches live in wooded areas on the Galapagos Islands, in the Pacific Ocean off the coast of Ecuador, South America.

Dung beetles live in deserts, farmlands, forests, and grasslands on all continents except Antarctica. These insects were sacred to ancient Egyptians (in Northern Africa)

Termites live in a wide variety of land habitats on all continents except for Antarctica. The bandicoot living in the termite mound would only be found in Australia.

Caddisflies lay eggs in freshwater (streams, rivers, lakes and ponds) on all continents except for Antarctica. Find the larvae in Europe.

Dart frogs live in tropical rainforests of Central and South America.

Asian elephants live in Southeast Asia.

## Reduce, Reuse, and Recycle: True or False?

**Reduce** means to buy or use less of something. What can you do to reduce waste?

Turn off lights when leaving a room.

Take reusable bags to the store instead of using bags from the store.

**Reuse** is to use something more than once. What can you and your family reuse?

Reuse cardboard boxes to build a fort.

Reuse plastic sandwich baggies.

**Recycle** is to make a new item from something that has been used before. Many items can be recycled: paper, plastic, metal, glass, electronics and more! Look for products made from recycled items. Glass can be turned into sports turf or countertops. Plastic is made into carpet, fleece jackets, or outdoor furniture. What are some things you and your family could recycle each week?

Recycle newspaper into gift-wrap.

Recycle jelly jars into drinking glasses.

Recycle empty plastic food containers into containers for toys.

**Which of the following statements are true and which are false?**

1. A yard sale is a good place to look for something you need instead of buying something new.
2. You should not turn off the water while brushing your teeth or washing your hands.
3. Drive places instead of riding a bike because oil and gasoline are renewable resources.
4. Reduce waste by donating your outgrown clothes instead of throwing out and adding trash to crowded landfills.
5. Never use bath towels more than once or wear clothes more than one time before washing.
6. Paper napkins are much better for the environment than cloth napkins.
7. An average shower uses 5-10 gallons every minute.
8. Polyester is a good fabric to choose for your clothing.
9. Vermicomposting is the process of using worms to turn food waste into plant fertilizer.
10. Plastic grocery bags pollute the environment, harm animals, and take hundreds of years to decompose.



Answers: 1) True; 2) False; You can save 8 gallons of water each day by turning off the water while brushing your teeth! Turn off the water while soaping your hands to save even more water. 3) False; Try to walk or ride a bike when you can. Oil and gas are non-renewable resources. 4) True; 5) False; Try to reuse clothing and towels if they are not dirty. This saves water and your clothes will last longer. Hang clothes to dry rather than using excess energy with the dryer. 6) False; Cloth napkins can be used over and over again. Paper napkins add to landfills if not recycled. 7) True; 8) False; Polyester is made from petroleum, a non-renewable resource. 9) True; 10) True



For my husband Marshall, an avid recycler. Thanks for making my world a better place!—ML  
To my great nephew, Oliver Grier Luke. Oliver recycles. How about you?—CM  
Thanks to Jaclyn Stallard, Manager of Education Programs at Project Learning Tree ([www.plt.org](http://www.plt.org)) for verifying the accuracy of the information in this book.

Library of Congress Cataloging-in-Publication Data

Lord, Michelle.

Nature recycles : how about you? / by Michelle Lord ; illustrated by Cathy Morrison.

p. cm.

ISBN 978-1-60718-615-1 (english hardcover) -- ISBN 978-1-60718-711-0 (spanish hardcover) -- ISBN 978-1-60718-627-4 (english pbk.) -- ISBN 978-1-60718-639-7 (english ebook (downloadable)) -- ISBN 978-1-60718-651-9 (spanish ebook (downloadable)) -- ISBN 978-1-60718-663-2 (interactive english/spanish ebook (web-based)) 1. Recycling (Waste, etc.)-- Juvenile literature. 2. Environmentalism--Juvenile literature. I. Morrison, Cathy, ill. II. Title.

TD794.5.L66 2013

363.72'82--dc23

2012031348

Nature Recycles—How About You?: Original Title in English

La naturaleza recicla—¿Lo haces tú?: Spanish Title

Lexile® Level: 600L key phrases for educators: recycling, conservation, geography, repeating phrases

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Mt. Pleasant, SC 29464  
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