Cricket®

Click®

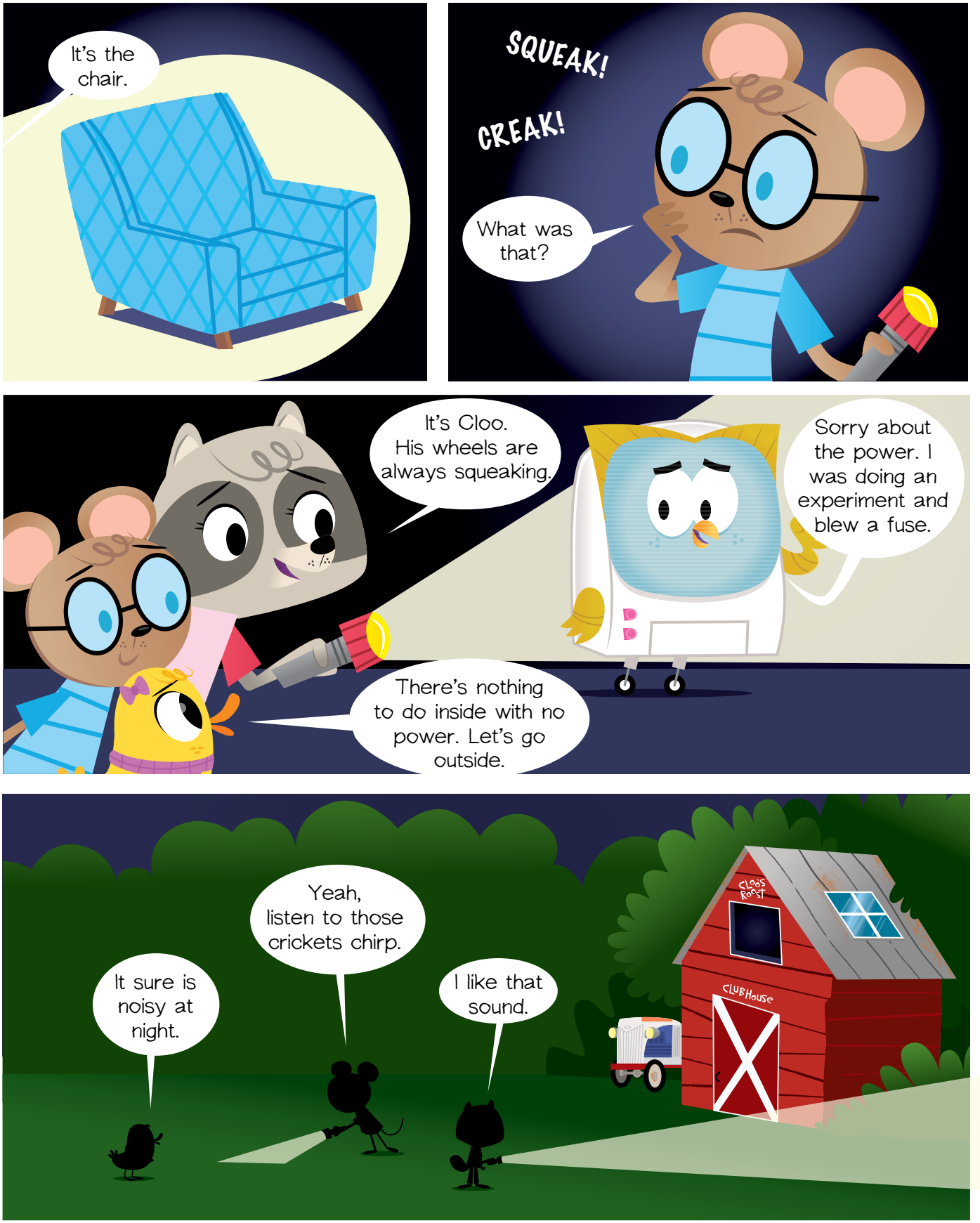
Science and Exploration for Young Kids

Good night

Sweet Dreams

Connect the dots to see what Click is dreaming about.

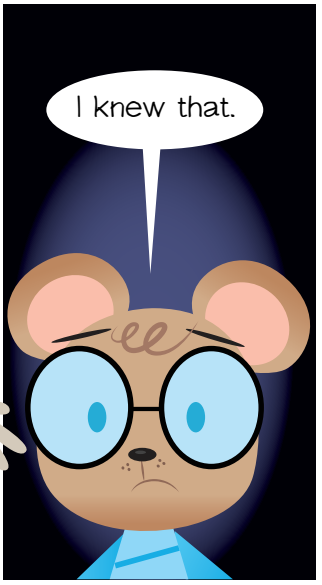

Click & Jane
by Rob McClurkan
The power went out.
Ouch! I stubbed my toe.
I'm scared of the dark.
Where is the flashlight?
There's nothing to be afraid of.
Oh, yeah? What's that blob over there?


It's the chair.
SQUEAK!
CREAK!
What was that?
It's Cloo. His wheels are always squeaking.
Sorry about the power. I was doing an experiment and blew a fuse.
There's nothing to do inside with no power. Let's go outside.
It sure is noisy at night.
Yeah, listen to those crickets chirp.
I like that sound.
CLOO'S ROOST
CLUBHOUSE


Wow, it was so hot earlier today, but now that the sun is gone, it's much cooler. I'm glad I have my scarf.
Let's explore and see if we can spot the different animals that come out at night.
Good idea, Click.
Fireflies! You don't need a flashlight to see those.
RUSTLE!
RUSTLE!
What was that?
Hey, look, a possum.
WHO!
WHO!
WHO!
Who, what?
I didn't say anything.


I spotted an owl.
Neat! I've always wanted to see an owl in the wild.
They come out at night. So it's much harder to see one during the day.


AHHHH! Something is attacking my flashlight.
Relax. It's a moth. They are attracted to the light.


I knew that.


Look, a deer.


I found a frog.


Is that a campfire?
Sure is.


Looks like Farmer Griz is making s'mores.

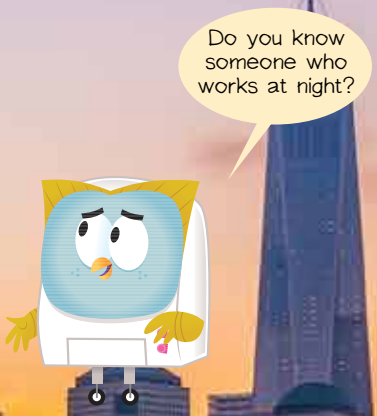

Hey, Click disappeared.


Howdy, Farmer Griz. Would you like some help eating those s'mores?


Best night ever!

The Night Workers

by Tracy Vonder Brink



The sun has set. You yawn and rub your eyes. As you get ready for bed, some people are just starting work. They have important jobs to do.

Grocers fill shelves with good food for us all.

Responders rush out when emergencies call.

Workers clear streets that are snowy and slick.

Nurses take care of the folks who are sick.

Subway conductors steer trains through the night.

Airport staff help all the people with flights.

Cleaners make offices tidy and neat.

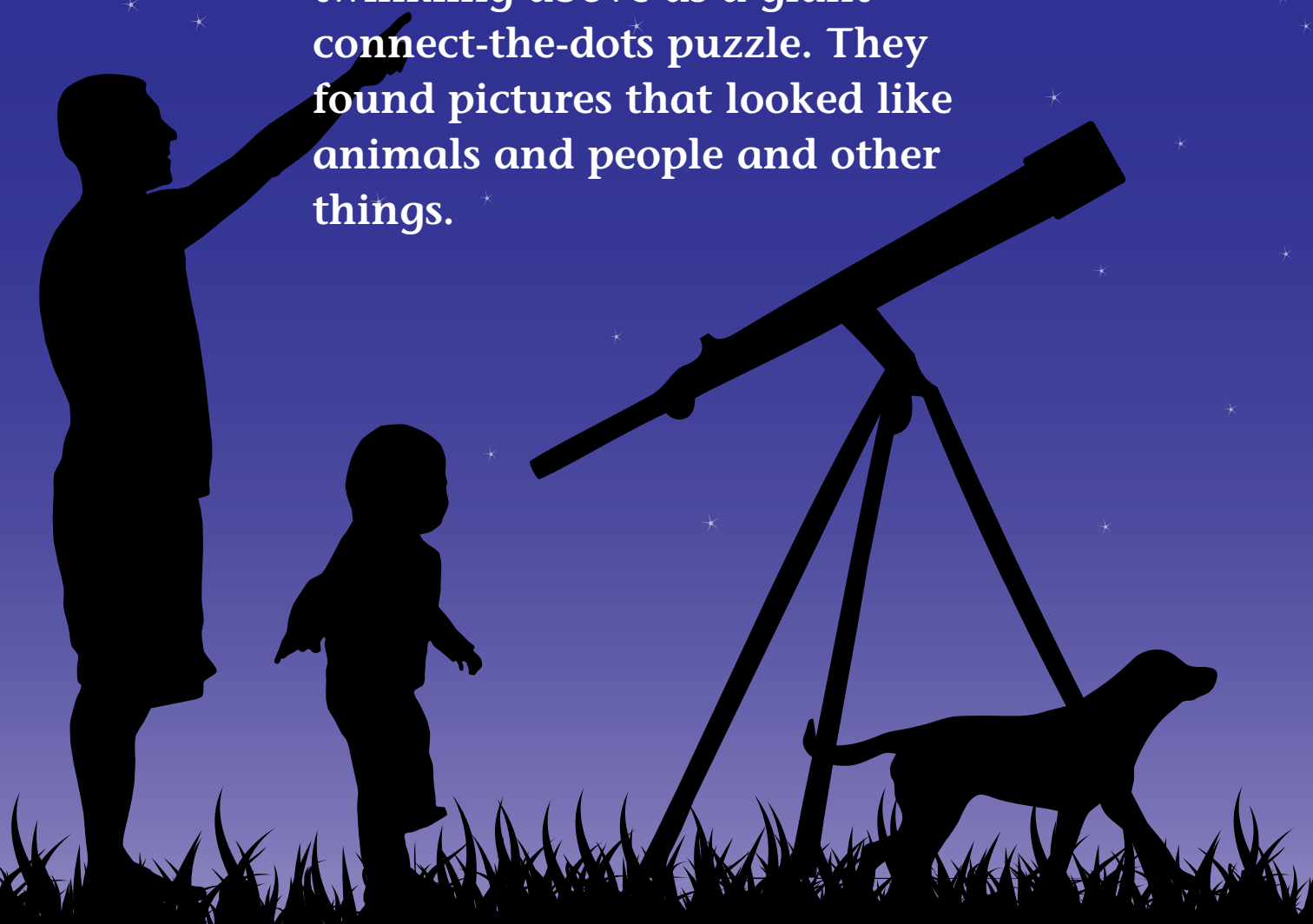
Bakers are cooking up good things to eat.

So many stay busy while you are asleep!

Seeing Stars

art by Kristen Scribner

Long ago, when people first looked at the night sky, they viewed the hundreds of stars twinkling above as a giant connect-the-dots puzzle. They found pictures that looked like animals and people and other things.

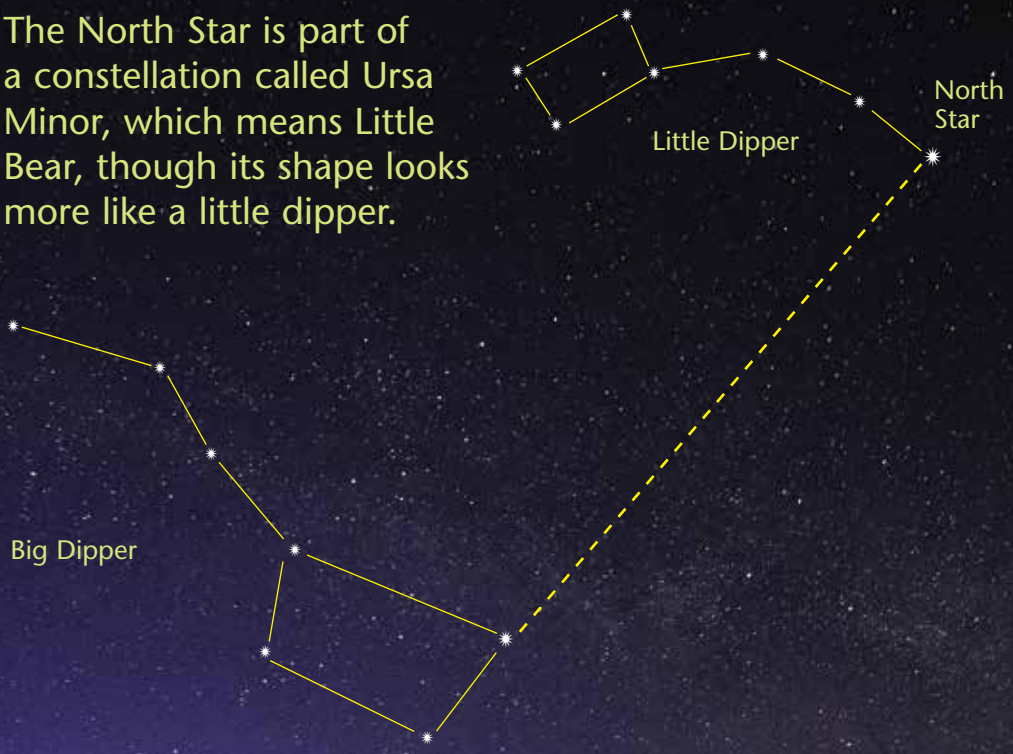


We call a group of stars that form one picture a constellation.

This constellation is called Ursa Major, or the Great Bear. Seven of the stars that are part of the bear also make another shape—the Big Dipper.

In the sky, the two stars at the end of the dipper's bowl point to a special star called the North Star. If you watched the stars all night long, you'd see that the North Star stays still, while all the other stars turn in a circle around it.

The North Star is part of a constellation called Ursa Minor, which means Little Bear, though its shape looks more like a little dipper.



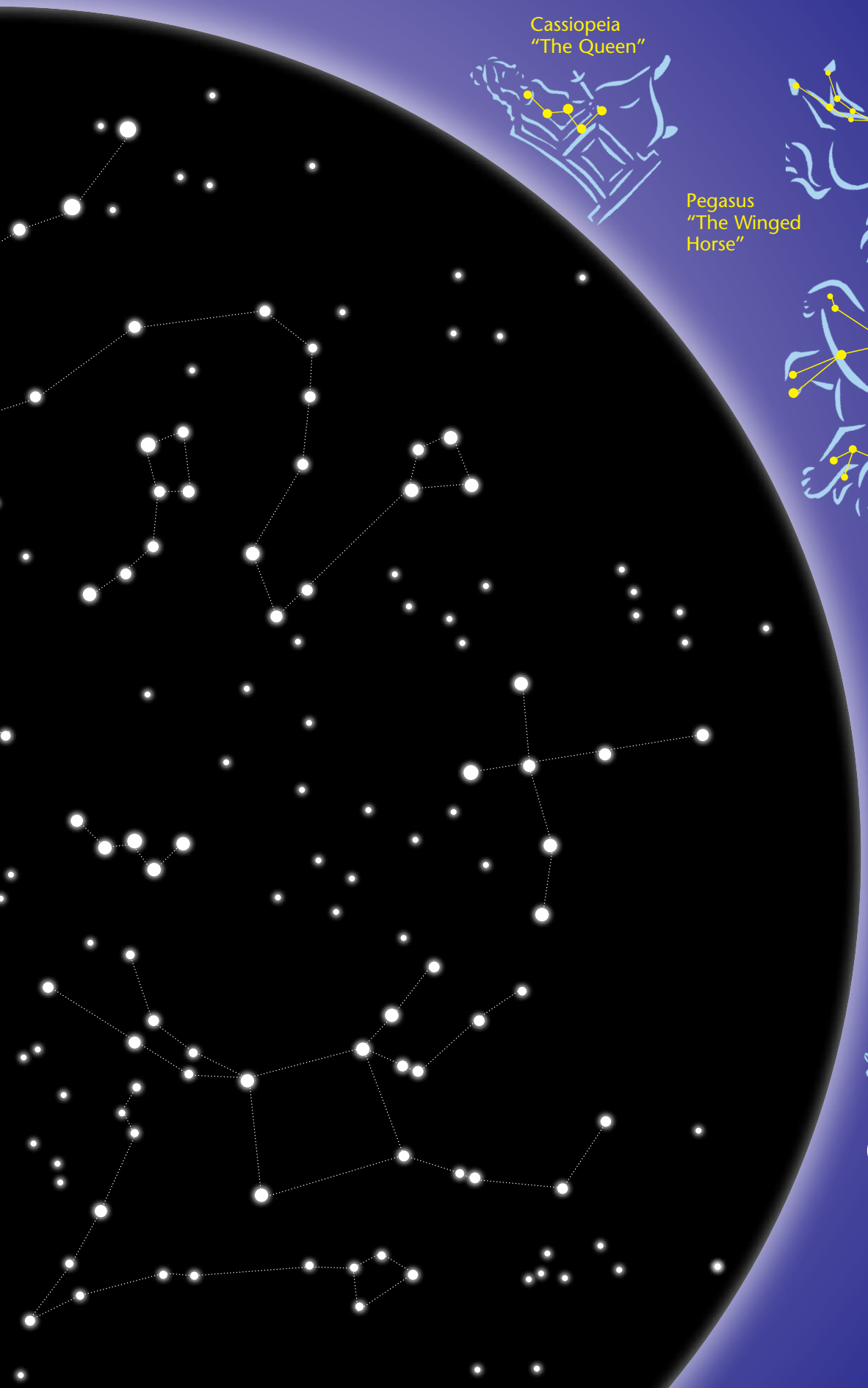
The stars aren't really turning. Earth is. Imagine Earth as a giant spinning top, with its spinner pointing to the North Star.

As Earth spins, we see different parts of the sky. But if you're on the northern half of Earth, you can always see the North Star.

Stand right under a ceiling lamp and look up. As you slowly spin in place, you'll see different parts of the ceiling. But no matter which way your body points, you'll always be able to see the lamp.

Turn the page.
Can you find the North Star?
Can you find the other constellations shown?


Pisces
"The Fish(es)"
Gemini
"The Twins"
Draco
"The Dragon"
Cygnus
"The Swan"
Taurus
"The Bull"
Orion
"The Hunter"



Cassiopeia
"The Queen"

Pegasus
"The Winged
Horse"

Ursa Major
"The Big Bear"

Ursa Minor
"The Little Bear"

Camelopardalis
"The Giraffe"

I wonder if I can see a mouse.

Whoo's Out at Night?

by Tracy Vonder Brink

Whose calls do you hear after the sun sets? Who sails through the night on silent wings? Whose big eyes help them see in the dark? More than 200 different kinds of owls, all over the world. That's who!

Some are small.

The elf owl is about the size of a soda can.

Some are big.

Blakiston's fish owl is almost as tall as a one-year-old child.

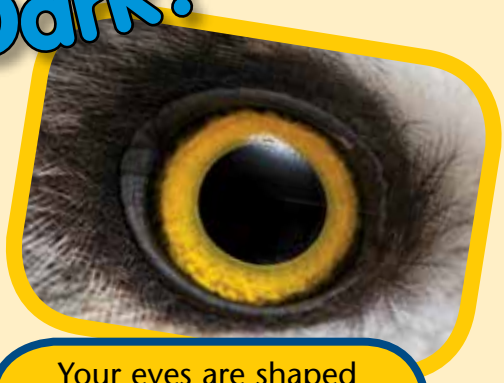
But all owls are alike in some ways. Let's see how!

Whooo's Hiding?

Owls sleep during the day. But sleeping out in the open in daylight can be dangerous. Anyone can see you. Owl feathers come in different colors and patterns to make owls harder to see, so they can sleep safely.

Whooo Sees in the Dark?

Owls' eyes have lots of tiny parts, called rod cells, that help them see in the dark.



Your eyes are shaped like balls. Owl eyes are flat in front and long like a tube.

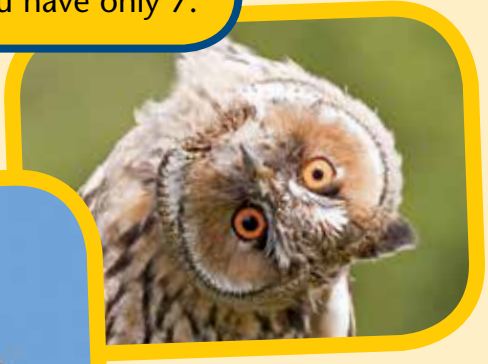
Owls can only look straight ahead. Their tube eyes don't move like your eyeballs.

Your eyes have rod cells too, but owls have many more. Their eyes are also extra big, to let in more light.

Whooo's Looking?

Owls can't move their eyes, so they move their necks instead. Special bones in their heads and necks make them extra bendy. Being able to look all around helps them find food.

Owls have 14 neck bones. You have only 7.



Owls can turn their heads almost all the way around.

Whooo Wants Dinner?

Owls have special feathers, so they can fly without making a sound.

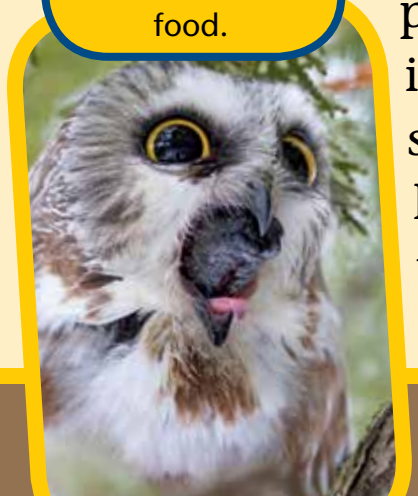
Owls' eyes and ears make them great nighttime hunters. Their hearing is so good they can hear a mouse squeak! They also catch bugs, frogs, snakes, rabbits, and birds.

Their toes end in sharp claws, called talons.

Whooo Eats Everything?

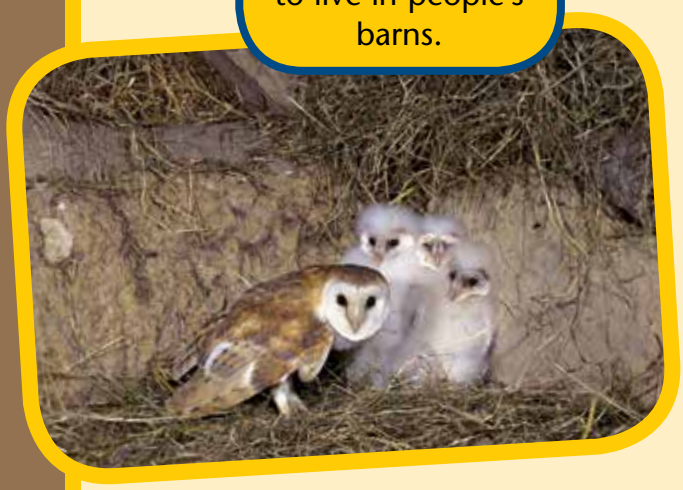
Owls often swallow their meals whole, including bones, teeth, and fur. A part of their stomachs, called a gizzard, packs these parts together into a pellet. Then owls spit the pellet up. The owl has no room for new food until it spits out the pellet.

Owls spit up the stuff they swallow that isn't food.



Scientists can look at the spit-out pellets to see what animals the owls hunted.

Whooo's Home?



Barn owls like to live in people's barns.

Burrowing owls live in empty prairie dog dens in the ground.

Owls don't build nests. Instead, they take over empty nests made by other animals. Many owls nest in trees. But look where these owls raise their chicks.

Eagle owls nest on rocky cliffs.

Whooo Do You Like Best?

A Good Night's Sleep

We spend about one-third of our lives sleeping. If you're six years old, that means you've spent two of your six years asleep. In fact, it's probably more than two years. Most babies and children sleep not just one-third but closer to one-half of each day. So if you're six, you might have spent three years of your life sleeping!

Why spend so much time sleeping?

It's while you sleep that your brain saves memories. Without enough sleep, you won't be able to learn and remember new things when you're awake. You'll have a hard time paying attention and solving problems too.

The rest of your body won't work well either. Our bodies release growth hormones while we sleep. Those hormones—you guessed it—make us grow. No wonder growing children need more sleep than adults. But even when we've stopped growing taller, those hormones help us keep growing strong muscles, bones, skin, and more.

Have you ever noticed that you sleep more when you are ill? That's because your body repairs itself and fights diseases while you sleep. If you stay awake, it will take longer for you to get well.

Most animals need to sleep too—and for many of the same reasons people do. But the ways they sleep can be very different.

Bats hang upside-down to sleep. It might not sound comfortable, but little brown bats sleep almost all day. They stay awake only a few hours at night to hunt for food.

Giraffes mostly sleep standing up. But they lie down with their heads on their rumps for a deep sleep. Up or down, each snooze lasts only two or three minutes at a time. And all the minutes add up to just a few hours each day.

Like you, an orangutan sleeps in a comfy bed. But its bed is made from leafy branches. It builds a new bed every night high in the treetops.

Fish don't close their eyes to sleep. They don't have eyelids! But they sleep. Some bed down in a safe spot in the sand or rocks. Some float in place. The parrotfish wraps itself in a bag of mucus, or snot. The sleeping bag protects the fish from little biting pests.

A dolphin needs to come to the water's surface to breathe. So it sleeps with only half its brain—and closes only one eye—at a time. The other half stays awake to tell the dolphin to breathe and warn it of danger.

Some birds fly for days without stopping. They sleep with only half a brain too, until they're back on land. The great frigatebird can even fly with all of its brain asleep, but only for a few seconds at a time. In total, it sleeps less than an hour a day when it is flying.

Dozens of Cousins,

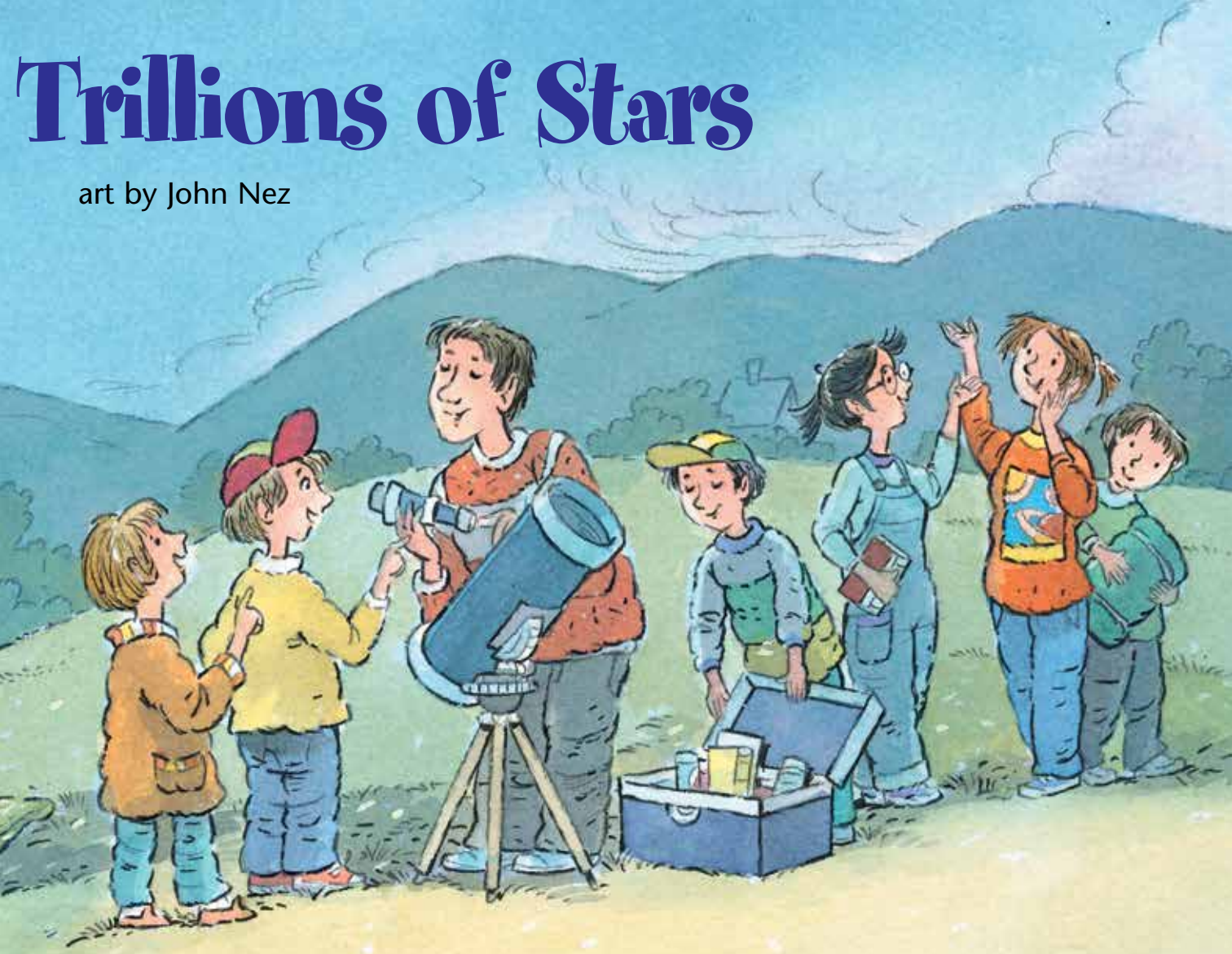
by Charnan Simon

The meadow on Aunt Margaret's mountain was filled with cousins.

"Dozens of cousins, hundreds of cousins, millions of cousins," Katelyn sang happily as she spread out her sleeping bag. The sun was already setting behind the mountaintop. Soon Katelyn and all the cousins would settle into cozy sleeping bags and count stars. It was the Hill family annual stargazing party, and Katelyn was finally, finally old enough to stay in the meadow all night long.

Trillions of Stars

art by John Nez



"Thirteen cousins doesn't count as dozens," said Andy. "It's not millions!"

"Billions of cousins!" Hana said. She plopped her sleeping bag next to Katelyn. "Trillions of cousins! Too many to count!" She and Katelyn rolled into each other, laughing and laughing.

Andy snorted and went to help Uncle David set up the telescope. Aunt Mary and Aunt Margaret came out of the house, carrying cocoa and coffee.

"Turn off the lights!" Uncle Tom bellowed. "How can we see anything with all those lights?"

"Look!" Mike and Joey called out together. "The first star!" They started arguing over who saw it first.

Katelyn and Hana looked. There it was, twinkling in the dusky sky, just begging them to chant, "Star light, star bright, first star I see tonight," but Katelyn changed her ending. "I wish I may, I wish I might, not ever fall asleep tonight!"

More and more stars popped out of the velvety night sky. Katelyn sipped her cocoa and counted. "One, two, three, four . . ."

". . . five, six, seven, eight," Hana picked up. "Katelyn! There are too many! We'll be counting all night!"

"You'll be counting longer than that!" Cousin Anna came over to sit by them. Anna was in college, almost a grownup. "Just looking, we can probably see four or five thousand stars. If we use Uncle David's telescope, we might see a couple of million stars. If we could see all the stars in our Milky Way Galaxy, we'd see a couple hundred billion stars. You'd have to count for thousands of years to get them all!"

It was too much to think about. Anna laughed. "Here's something easier," she said. "Stand up, you two! Turn like this, so you're facing south."

Taylor and Bailey and Audrey wanted to face south too. "OK, guys," Anna said. "Look up and a little bit to the right. See those three stars right in a row? They're part of the constellation called Orion. They're Orion's belt."

"I know about constellations," Taylor said. "They're star pictures." She paused. "But I can never really see them, except the Big Dipper."

"They're hard," Anna agreed. "You really have to use your imagination. Orion is called the hunter because the whole picture looks like a man holding a club and a shield. But mostly, I just look for the three stars that make his belt."

"What's that star?" Hana asked, pointing past Orion. "It's the brightest one in the sky!"

"It is," agreed Anna. "But it's not a star—that's the planet Jupiter! See how it shines instead of sparkles? That's one way of telling it's a planet."

"Hey, everybody!" Now Brian and Joel and Uncle Dick were all pointing. "A satellite!"

The satellite looked like a little bright star, moving slowly and steadily across the sky. "What's it doing up there?" Katelyn asked.

"It could be doing lots of things," Uncle Dick said. "Maybe it's a weather satellite, taking pictures of clouds and storms. Maybe it's taking pictures of stars and planets. Maybe it's helping send television programs all over the world. Satellites do all kinds of jobs."

Katelyn was still watching the satellite when suddenly—"A shooting star! I saw a shooting star!" she cried. Katelyn loved shooting stars! This one whooshed across the night sky in a fast streak of bright light—and then it was gone.

"It's not really a star, you know," said Cousin Ariel. "It's just a tiny speck of space dust, burning up on its way to Earth."

Aunt Cindy called from Uncle David's telescope. "Who wants to see Saturn?"

Katelyn and Hana hurried over. Uncle David had already pointed the telescope, and when Katelyn looked into the little eyepiece, she saw a yellowish tan planet with a ring stretching all around it. "Is that really Saturn?" she asked. "It looks just like a picture!"

"It's really Saturn," Uncle David assured her. "Besides the ring, Saturn has 82 moons. Can you imagine? They go around Saturn just like our moon goes around Earth."

"Where is our moon, anyhow?" Katelyn asked. "I want to see the craters!"

Aunt Cindy laughed. "Don't wish for the moon around Uncle David!" she warned. "Stargazers don't like it when the moon is out. It makes the sky too bright, so you can't see the stars as well. We always pick a night when the moon isn't shining for our party."

Cousin Andrea lowered the binoculars she was looking through. "Here's something weird," she said. "You'd think a full moon would be twice as bright as a half moon, right? Well, it's not! A full moon is more than ten times as bright as a half moon. And the full moon is more than 100,000 times brighter than the brightest nighttime star!"

All these numbers were making Katelyn tired. "Come on," she told Hana. "Let's get in our sleeping bags and look for more shooting stars."

They curled up close to each other and stared into the night.

"Do you believe Earth is really spinning around in space, like all the other planets?" Hana whispered.

Katelyn wasn't sure. "I hope we don't fall off," she giggled sleepily.

Hana scooted even closer. Billions and trillions of stars twinkled down on them.

"Star light, star bright," Katelyn murmured. "So many stars I see tonight. I wish I may, I wish I might—"

And then she fell asleep that night.

MOON SHAPES

art by Christine Schneider

Look up at the night sky.
Do you see the moon shining?

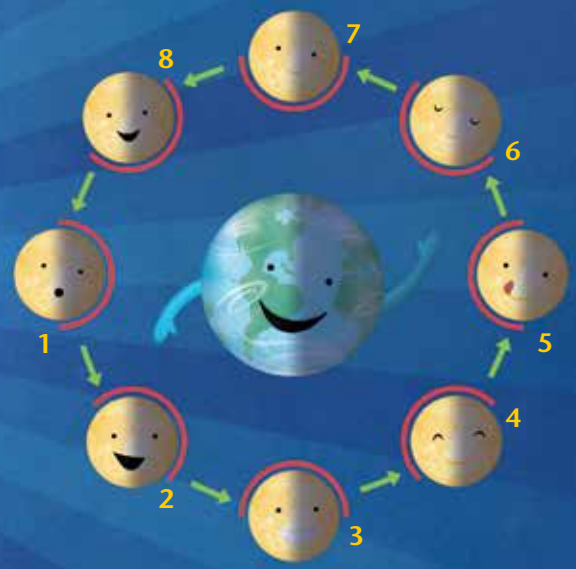
Is the moon round like a ball?

Or is it shaped more like a banana?

Or a calzone?
Maybe you can't see it at all.

The moon looks as if it changes shape from night to night. But it doesn't. It doesn't even shine by itself. All it does is reflect the sun's light. The sun always lights up half of the moon, just as it always lights up half of Earth. What changes is how much of the sunlit side we see each night.

The moon is always circling Earth. It takes about 27 days to go around once. We see different amounts of its sunlit side when it is in different places. That makes it look like it has different shapes, called phases.



The red lines show which half of the moon faces Earth at that spot in the moon's path. We can see only the parts lit by the sun. When the moon is at spot 1, we can't see any of its sunlit side. We call it a new moon. Match the numbers to the pictures below to see the name of each phase.

1 new moon **2** waxing crescent **3** first quarter **4** waxing gibbous

5 full moon **6** waning gibbous **7** last quarter **8** waning crescent

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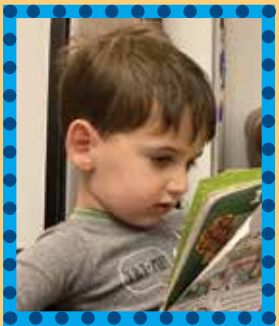

Jake L.
age 4
New York, NY

Laura H.
age 6
Cottage Grove, WI

Brayden T.
age 4
Basalt, CO

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Send us a picture of you reading *CLICK*.

How to Make Hootie

1. Cut out all the pieces along the thick black lines. The body piece is the one with the big tan-colored patch in the center. The head piece is the one that is mostly dark brown.

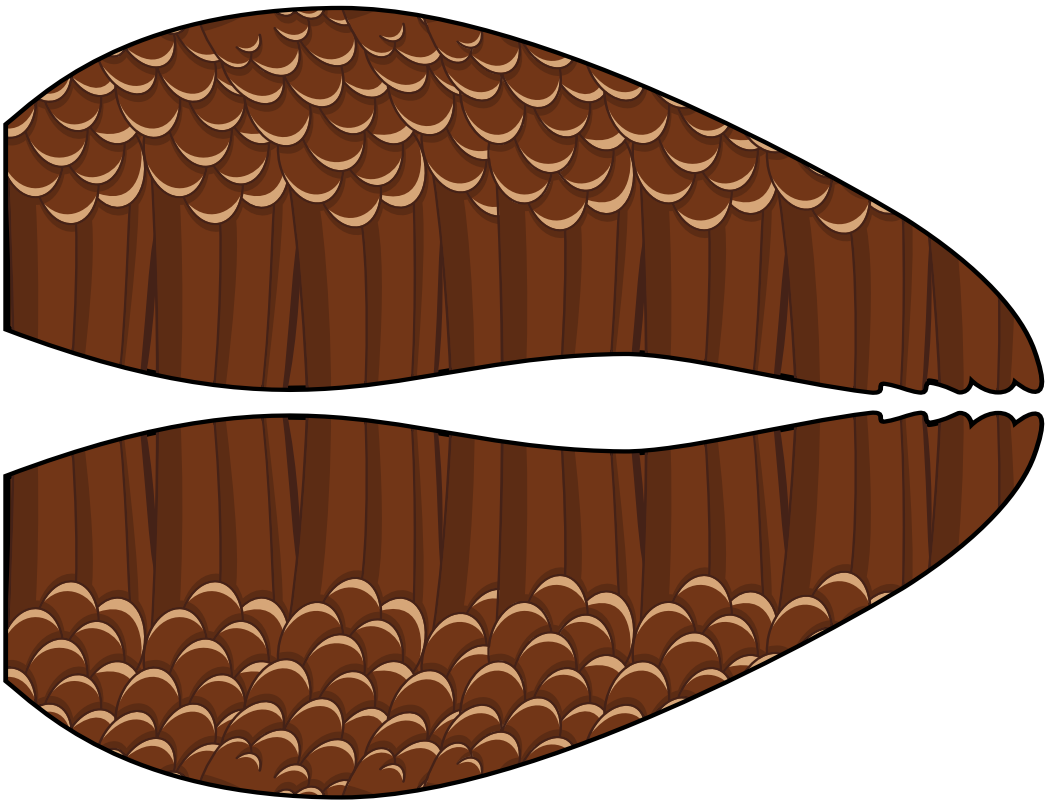
2. Roll the body piece into a cone shape. Tape or glue the white flap down to keep the body from unrolling.

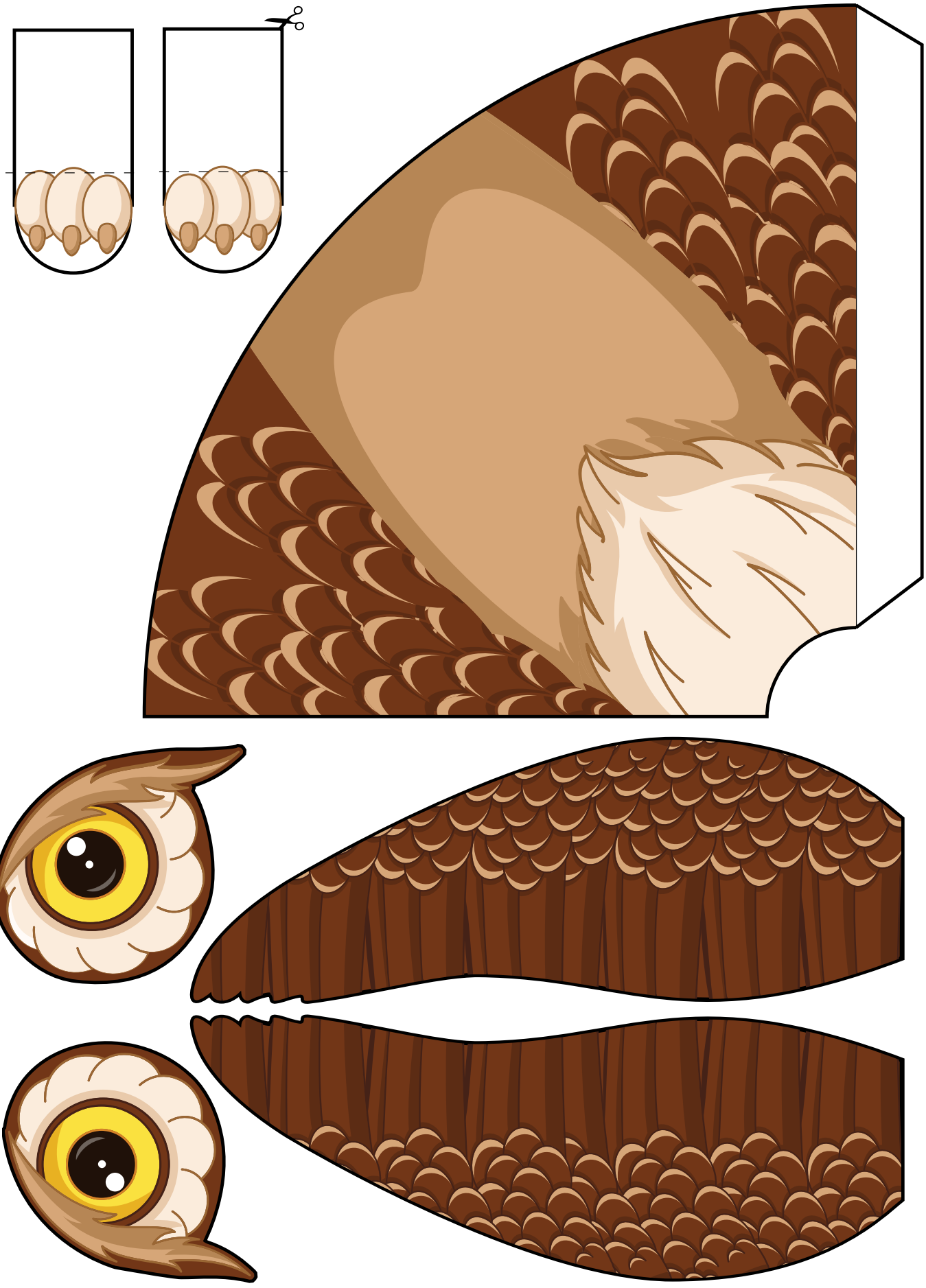
3. Fold each foot along the black dashed line. Tape or glue the white flap to the inside front of the body.

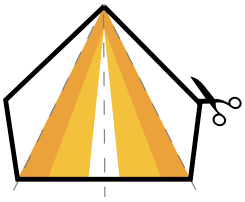
4. Roll the head piece into a tube. Tape or glue the white flap down. Gently push the center top edges of the tube down along the tan dashed lines. The sides should stick up and make the feather tufts.

5. Fold the beak along the three black dashed lines. Tape or glue the white flaps on the sides to the middle of Hootie's head.

6. Tape or glue on Hootie's eyes and wings. Place Hootie's head on his body. You're done!







Hootie the Owl

Hootie is a great horned owl like the one on our cover. Despite their name, great horned owls don't have horns. The pointy bits at the top of the owl's head are tufts of feathers. They look a bit like ears, but a great horned owl's ears are hidden under the dark feathers on the sides of its face.

You can turn Hootie's head all the way around. Real owls can't do that. But almost! If the owl is looking straight ahead, it can turn its head so its beak passes one shoulder, then its back, all the way around to the other shoulder.

Turn to the other side of this page to see how to make Hootie.

Beatrice Black Bear

The World's Trickiest Photographer

By John Grandits

Illustrated by Paige Billin-Frye

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