

NATIONAL GEOGRAPHIC

weird but true!

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KiDS

THE INCREDIBLE RED PANDA

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COOL COMIC



FUN FOOD FACTS



SPEEDY CHEETAH



# YOU COULD WIN \$500 TO HELP SAVE LIONS!

**W**ith a lion's strong jaws and claws, it's no wonder that this big cat is a big star in the wild. But the powerful predator still faces threats—including ones from humans—and their numbers are dwindling.

That's why this year's **Almanac 2019 Challenge** is all about saving lions—and how you can help. Send in a poster that includes original art and a one-sentence message about why it's important to protect lions. You could win \$500 to host a "Lions Forever" party that will inspire your friends and family to save these big cats. Plus your artwork might be included in a future issue of *Nat Geo Kids* magazine, [natgeokids.com](http://natgeokids.com), or even in next year's *Almanac 2020!*



Although lions are known as "kings of the jungle," they **ACTUALLY LIVE ONLY** in **GRASSLANDS.**

A lion cub is typically **BLIND** for the first 3 to 15 days **AFTER BIRTH.**



**SHOW LIONS HOW IMPORTANT YOU THINK THEY ARE!** Enter the Almanac 2019 Challenge today by going online for the official rules.

[natgeokids.com/almanac](http://natgeokids.com/almanac)

## COOL PRIZES



**One grand-prize winner** will win a \$500 gift card to host a "Lions Forever" party and a copy of the book *National Geographic Kids Almanac 2019*.

**Ten runners-up** will win a copy of the book *National Geographic Kids Almanac 2019*.

## HOST A "LIONS FOREVER" PARTY!

**The grand prize is a \$500 gift card to host the party**—but you can host one on your own too! Invite friends, family, and classmates to talk about why it's important to save lions. Plan a fun activity that everyone can learn from, and don't forget refreshments! (Lemon Lion Cupcakes, anyone?) Go online to get ideas.

[natgeokids.com/almanac](http://natgeokids.com/almanac)

## MEET A REAL-LIFE LION PROTECTOR

Go online to discover amazing stories about saving lions from Nat Geo explorer

**Thandiwe Mweetwa.**



[natgeokids.com/almanac](http://natgeokids.com/almanac)

### IMPORTANT ENTRY INFORMATION

**NO PURCHASE NECESSARY TO ENTER OR TO WIN.** Contest starts on May 8, 2018, and ends on December 3, 2018. Open to legal U.S. residents who are ages 6 to 12 years or older. Void where prohibited by law. To enter visit [natgeokids.com/almanac](http://natgeokids.com/almanac). See Official Rules for complete prize description and full details.

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## IN THIS ISSUE

**12** Starring ... The Incredible Red Panda!  
Prepare to be amazed by this acrobat of the forest.

### 20 What Would Happen?

Find out what would go down if some crazy scenarios came true.



### 22 Animal Smackdown

Discover which animals come out on top in these surprising matchups.



### 26 30 Cool Things About Food

Take a big bite out of these tasty fun facts.



### DEPARTMENTS

- 4 Weird But True!
- 5 Incredible Animal Friends
- 6 Guinness World Records
- 7 Bet You Didn't Know
- 8 This or That?
- 10 Amazing Animals
- 28 Fun Stuff

**LION CONTEST!**  
PAGE 2

**FUN POSTER!**  
PAGES 18-19

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# Weird but true!

## Check out these outrageous facts.

BY MARILYN TERRELL

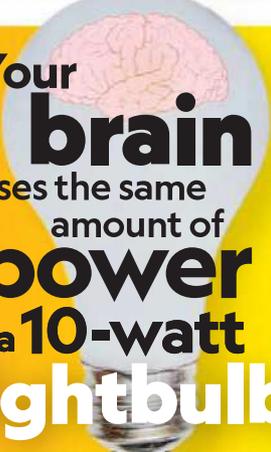


CHECK OUT THE BOOK AND APP!



About **12,000 animal crackers** are created every minute.

Your **brain** uses the same amount of **power** as a **10-watt lightbulb.**



**Apes laugh** when tickled.



The **largest hurricanes** can measure **10 miles** from **top to bottom.**



The **largest salamanders** can grow as long as a **bicycle.**



**Days** were only **18 hours long** a billion years ago.

The **record** for the highest jump by a **pig** is **27.5 inches**—that's the height of a **St. Bernard.**



There are **more text messages sent** each day than there are **people on Earth.**



Your **ears** produce **more wax** when you're **afraid.**



JONATHAN HALLING / NG STAFF (ANIMAL CRACKERS); LIGHT BULB; SALAMANDER, PIG, COTTON SWAB; KARINE AIGNER / NG STAFF (ORANGUTAN); NOAA (HURRICANE)

# INCREDIBLE ANIMAL FRIENDS

I CALL DIBS  
ON THIS DOG  
FOR MY BFF.

BY ELISABETH DEFFNER



## DOG DIGS DEER PAL

### BLACK-TAILED DEER

**RANGE** The Pacific Northwest region of the United States and Canada

**WEIGHT** 90 to 200 pounds

#### DEER TALK

Black-tailed deer use up to 12 different sounds to communicate.

#### TOUGH STOMACH

These animals can safely eat poison oak—in fact, it's one of their favorite foods.

### Courtenay, Canada

Kate the Great Dane couldn't help but fawn over her buddy, Pippin the black-tailed deer. She lovingly licked her hooved pal's coat and constantly nuzzled her neck.

The Great Dane's owner, Isobel Springett, found the scared and hungry orphaned fawn near her home and brought her inside to feed her. "The moment the two animals laid eyes on each other, they were BFFs," Springett says.

Over the next few weeks, Pippin gained strength and bonded with her dog pal. The buddies would spend the day play-fighting and running after a toy ball.

Soon healthy, Pippin joined a wild deer herd. But she still paid regular visits to Kate. When they weren't cuddling, they playfully chased one another—or other animals. Springett once saw them scamper after a black bear. "He took one look at them and ran away," she says. This dog-deer team cannot be stopped!

### GREAT DANE

**WEIGHT** 100 to 150 pounds

**ORIGIN** Germany

#### GIANT GROWTH SPURTS

In one year, a Great Dane pup can grow more than 70 times its birth weight.

#### ROYAL POOCH

Emperors and kings once gave these giant dogs as gifts to other monarchs.



Pippin

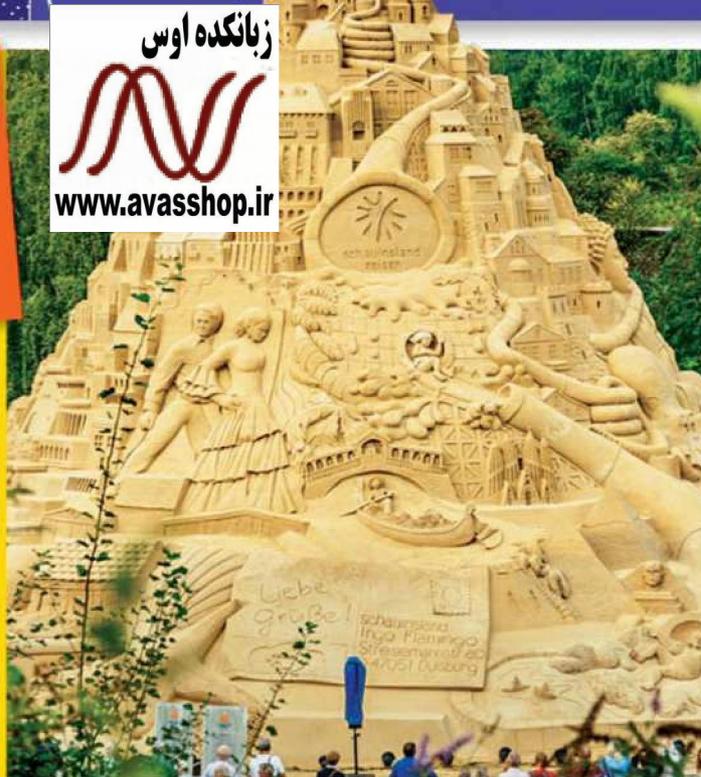
Kate

# GUINNESS WORLD RECORDS

BY ELIZABETH HILFRANK

## SUPER- TALL SAND- CASTLE

**Y**ou'd need a really big wave to wash away *this* sandcastle. The world's tallest sandcastle stood a staggering 54 feet tall in Germany—that's nearly as tall as three adult giraffes stacked on top of each other! Entirely handmade, the castle took almost a month to build. Wonder how long it took to get the sand out of their clothes?

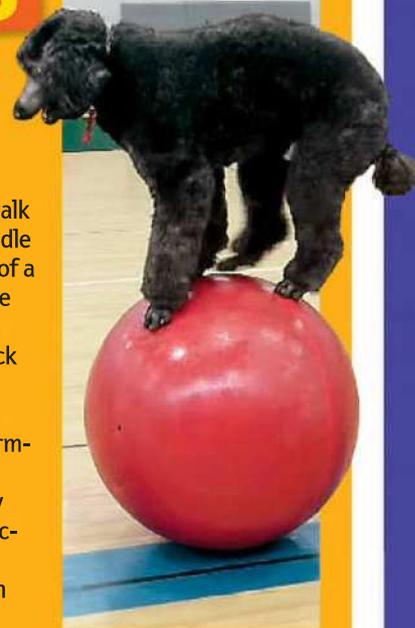


## EDIBLE FIREWORKS

**S**cientists in London, England, decided that the sky was the limit for one New Year's Eve celebration—they made the fireworks smell *and* taste good for the first ever multi-sensory fireworks display! The red ones were strawberry scented; the orange fireworks burst in the shape of, well, oranges; and best of all, edible banana-flavored confetti fell over some 50,000 people at the end of the evening. You could say the sky was bursting with flavor.

## DOG WALKS ON BALL

**W**hy catch a ball when you can walk on one? Sailor the poodle walked 32 feet on top of a ball in 33 seconds—the fastest time for a dog. That's not the only trick Sailor can do ... he can walk backward on the ball as well! The performing pooch earned two records in just one day when he reversed direction and covered the exact same distance in just 17 seconds.



Bet you  
**didn't**  
know

# 6 tasty facts to sink your teeth into

BY ERIN WHITMER

CHECK OUT  
THE BOOK!



1

AMERICANS  
eat enough  
**PIZZA**  
every year to cover  
**NEW YORK CITY**  
about  
two times.

2

**FORTUNE  
COOKIES**  
originated in  
**JAPAN**,  
not China.

3

**FRIED  
TARANTULAS**  
are considered a  
delicacy in  
Cambodia.

4

A restaurant in  
**TAIWAN** serves  
meals in bowls  
shaped like  
**TOILETS.**

5

**FAIRY  
FLOSS** is another  
name for  
**COTTON  
CANDY.**

6

**ONE ACRE**  
of peanut plants  
can produce  
**30,000**  
peanut-butter-  
and-jelly  
sandwiches.

# THIS or THAT?

BY JR MORTIMER

CHOOSE  
**THIS:**

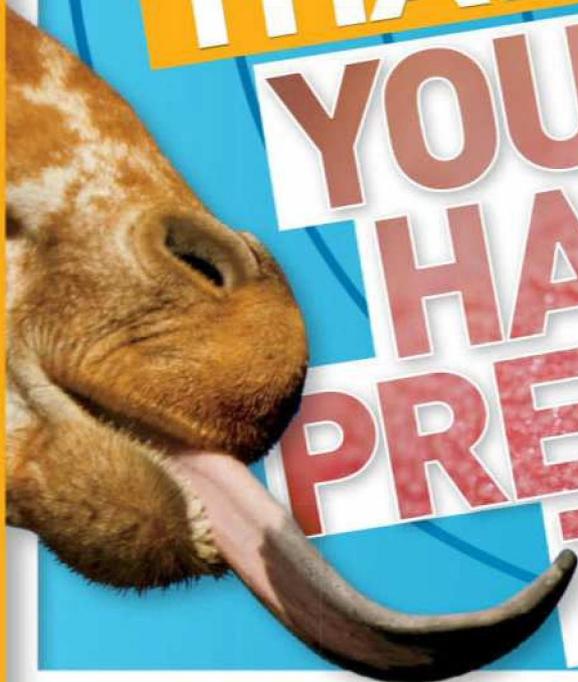
**YOU  
HAVE A  
PREHENSILE  
TAIL.**



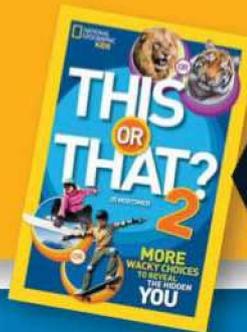
CHOOSE  
**THAT:**

**or**

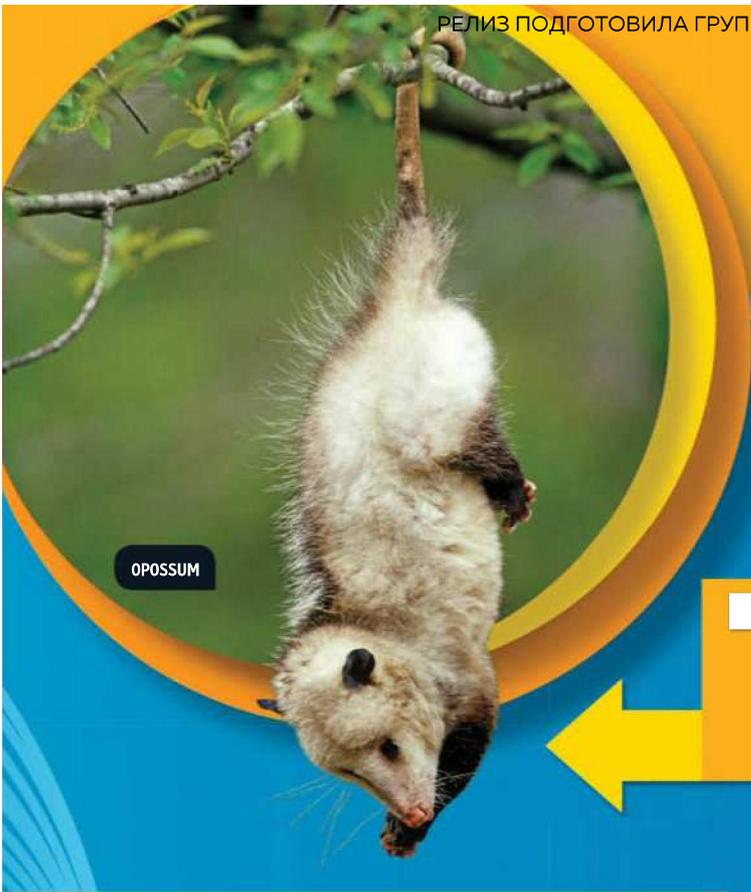
**YOU  
HAVE A  
PREHENSILE  
TONGUE.**



**WHAT'S  
"PREHENSILE"?**  
It's a body part—like a chameleon's tail or a giraffe's tongue—that can be used like a fifth limb to grab or grip things.



CHECK OUT THE BOOK!



OPOSSUM

# If you CHOSE THIS

Give yourself a hand. No, really—give yourself an extra hand! A prehensile tail is like a bonus arm on your backside, able to clutch branches and grab goodies. You've probably seen pictures of howler monkeys using their long, skinny tails to dangle from branches, which frees their arms to grab tasty leaves. But lots of other animals have prehensile tails. Opossums, anteaters, kinkajous, tree pangolins—they're all in the club. You're in cute company!

# If you CHOSE THAT

## GLOB AND GRAB...

If the thought of slurping ants from your nose doesn't turn you off, consider this **nasty giraffe habit**: Their mouths generate great gobs of slobber to neutralize the toxins in leaves.

A prehensile tongue sure comes in handy. Just ask a giraffe! These long-necked lickers wield their 18-inch tongues to strip seriously prickly plants. Africa's acacia trees sprout three-inch spikes as a defense against grazing animals, but a giraffe's tongue is nimble enough to navigate the thorns and grab the leaves. A giraffe can even jam its tongue deep into its own nostrils to retrieve angry ants that occasionally swarm from tree branches.



© STEVE MASLOWSKI / VISUALS UNLIMITED (OPOSSUM); ISTOCKPHOTO (GIRAFFE TONGUE, LEFT); © ANDY ROUSE / NATURE PICTURE LIBRARY (GIRAFFE TONGUE, RIGHT)

# AMAZING ANIMALS

## Baby Sloths Rock Out

YOU'RE TOTALLY ROCKING THIS.

**San Josecito de Heredia, Costa Rica**  
Huey is in school—and since he's a two-toed sloth at the Toucan Rescue Ranch, that means his classroom includes two rocking chairs connected by ropes and vines.

Rangers near Braulio Carrillo National Park found one-month-old Huey alone in the forest, too young to survive on his own. They brought him to the rescue center, where staff prepare orphaned sloths to live in the wild. That's where the rocking chairs come in—they teach the sloths how to climb in real trees. "The chairs, vines, and ropes aren't stable, so they sway like branches in the wind," says Pedro Montero, a biologist at the center.

Once he aces the rocking chairs, Huey will climb on a jungle gym made of wood and tree branches. After mastering that, he'll hang out in a larger enclosure that will get him ready for life in the wild. When Huey is about two years old, staff will put a tracking collar on him. Then his keepers will leave the enclosure door open, letting Huey "graduate" to the forest when he's ready—no cap and gown required!

—Aaron Sidder



HUEY EXPLORES A PART OF HIS ROCKING-CHAIR STRUCTURE.

ROCKING CHAIRS

HUEY (RIGHT) HANGS OUT WITH HIS BEST FRIEND, ADELE.

**SLOTHS ROCK! WATCH THE VIDEO.**  
[natgeokids.com/august](http://natgeokids.com/august)



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KITTENS LIKE THESE GOT INTO A STICKY SITUATION.

# Mountain Lion Tracks

## Butte, Montana

The railroad inspector's heart stopped when he saw the three wet mountain lion kittens frozen to the icy-cold tracks. And a train was on its way!

After crossing a creek with their mother, the clumsy kittens—their paws and bellies dripping wet—had stuck fast when their wet bodies froze onto the steel rails. Thinking quickly, the inspector alerted oncoming trains to

stop. Then he poured lukewarm coffee over the shivering kittens, trying to melt the ice that had formed on their paws. It didn't work. So state game warden Marty Vook tried a portable pump that squirted jets of warm water. Freedom!

"They scurried off into the bushes to their mama," Vook says. These kittens were very cool cats! —*Maryalice Yakutchik*

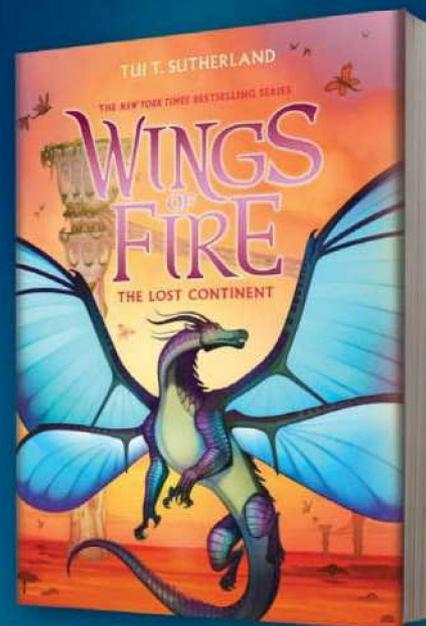
**MOUNTAIN LIONS**  
Butte, Montana

**SLOTHS**  
San Josecito de Heredia, Costa Rica



The New York Times bestselling series

# WINGS OF FIRE



THE NEW DRAGONS ARE HERE!



Start at the beginning!

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STARRING ...

# THE INCREDIBLE RED PANDA

PREPARE TO BE  
AMAZED BY THIS  
ACROBAT  
OF THE FOREST.

BY ALLYSON SHAW

A red panda totters along the branch of an evergreen tree, placing one paw in front of the other like a gymnast on a balance beam. But then ... whoops! The panda loses its footing. A fall from this height—about a hundred feet—could be deadly. But the panda quickly grips the branch with all four paws and some seriously sharp claws, steadies itself, and keeps moving.

Red pandas spend about 90 percent of their time in the trees, says Mariel Lally, a red panda keeper at Smithsonian's National Zoo in Washington, D.C. In fact, red pandas have adapted so well to life in the trees that they're famous for their incredible acrobatic skills. Check out six ways red pandas land a perfect score with their amazing aerial act.



Where red pandas live





Like house cats, red pandas groom themselves by using their paws to wash their bodies.

**BUILT-IN BALANCE**  
A tightrope walker is all about balance. But red pandas can't exactly extend their arms like an acrobat. Instead they hold their tails straight behind them. "If they start to swing in one direction, they can move their tails the opposite way," Lally says. "It's sort of like a tightrope walker's pole."

When red pandas need to cool off, they hang their legs down the sides of branches.

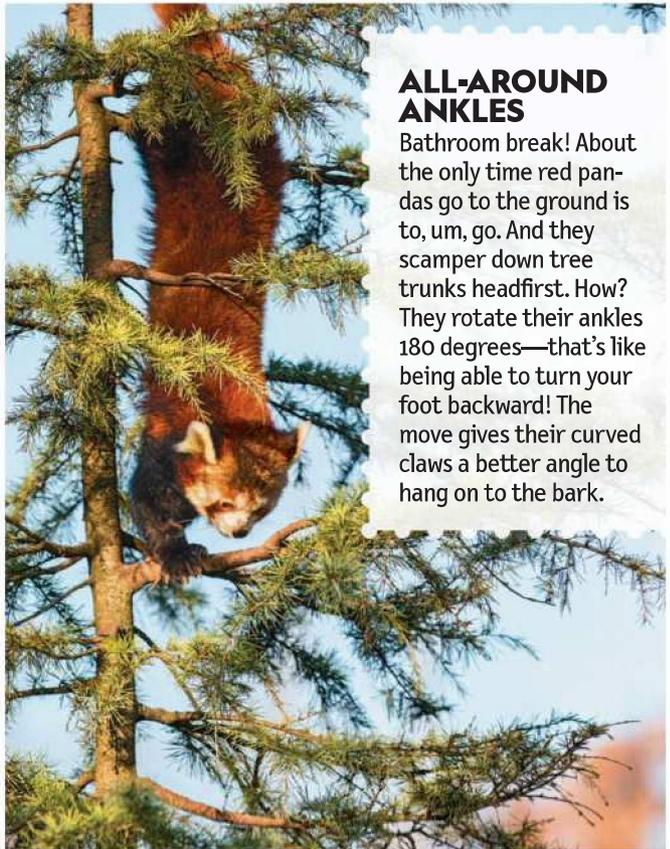
# CRAZY NAMES

European scientists were confused when they first heard about the red panda in 1825. "They couldn't figure out what it was," says Mariel Lally, a red panda keeper at Smithsonian's National Zoo in Washington, D.C. Experts now know that they're in a family all their own. But that didn't stop people from calling them by some odd names before settling on "red panda." Which name below do you think is the weirdest?



- Lesser Panda
- Red Bear-Cat
- Red Cat-Bear
- Firefox
- Firecat
- Fox-Bear

OUR VERSION OF A RED PANDA IF IT HAD BODY PARTS FROM ANIMALS IT WAS ONCE CONFUSED WITH!

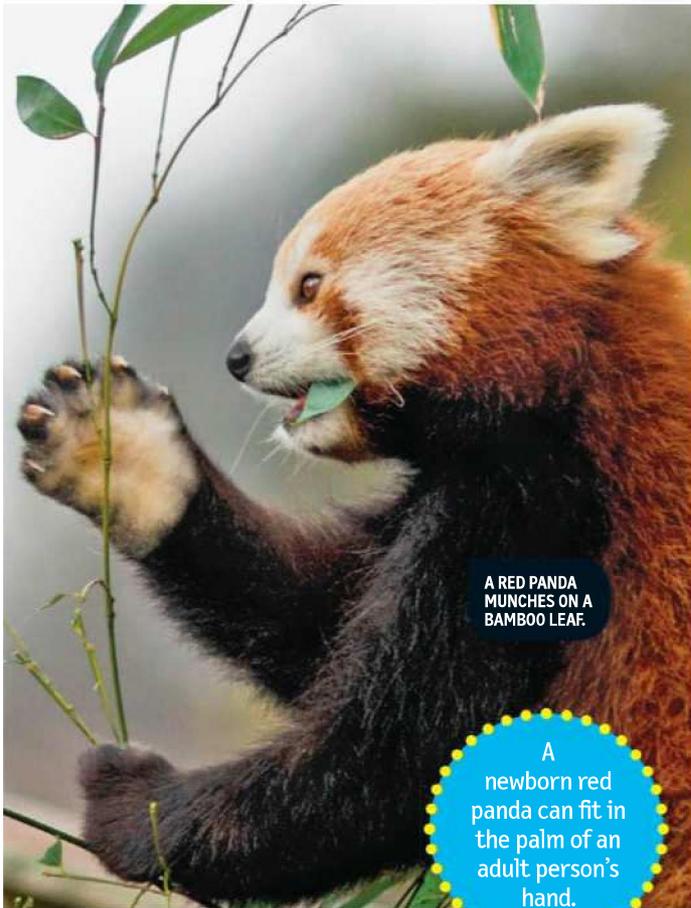


**ALL-AROUND ANKLES**  
Bathroom break! About the only time red pandas go to the ground is to, um, go. And they scamper down tree trunks headfirst. How? They rotate their ankles 180 degrees—that's like being able to turn your foot backward! The move gives their curved claws a better angle to hang on to the bark.

# PANDA SMACKDOWN

Although red pandas and giant pandas aren't closely related, they share more than just a name. Take a look at how these guys stack up.

	WHERE THEY LIVE	WHAT THEY DO	FOOD THEY LOVE	THUMBS-UP	STATUS
<b>RED PANDAS</b>		Spend most of their time eating and sleeping in trees	Tender shoots and leaves of bamboo plants	Thumb-like digits help them climb down trees headfirst	Endangered
<b>BOTH</b>	Forage in cool mountain forests in Asia, often within a few hundred feet of each other. (Many of the animals' similarities developed because of this shared habitat.)		Bamboo, bamboo, and more bamboo	Thumb-like digits on their wrists	Threatened by habitat destruction
<b>GIANT PANDAS</b>		Spend more time plodding around on the ground looking for food	Tough bamboo stalks	Thumb-like digits help them grasp bamboo	Vulnerable



A RED PANDA MUNCHES ON A BAMBOO LEAF.

A newborn red panda can fit in the palm of an adult person's hand.

## FLUFFY FEET

It's not like red pandas can pull on galoshes when the weather turns wet. And wet paws on a slippery branch can be dangerous. But the soles of a red panda's feet are completely covered in fur, helping it keep its footing in the rain. (Compare that to your dog or cat's bare pads.)



## UNDER FUR COVER

What's the best way to avoid a hungry snow leopard? Never let it see you in the first place! The small red panda's fiery coat sticks out at the zoo, but in the fir trees of the Himalayan mountains, the fur hides the panda in the reddish moss and white lichen (a plant-like organism) that often hangs on the trees. Red pandas are so hard to spot that even scientists have trouble locating these creatures.

## FAKE THUMB

A trapeze artist needs her thumbs to wrap her whole hand around the trapeze as she swings. Otherwise she might fly off! Same idea with red pandas. They have a special thumb-like wrist bone that gives them an extra grip when climbing down trees headfirst.



THUMB-LIKE WRIST BONES ALSO HELP GRASP BAMBOO.



## CLAW-SOME PAWS

Red pandas' paws are tipped with supersharp claws, which give them a good grip on branches. If the panda slips? By digging its claws into the branch, the panda can stop itself from falling all the way down. "Their claws really stick in the bark," Lally says.

WATCH A RED PANDA GROW UP!  
[natgeokids.com/august](http://natgeokids.com/august)

# GREAT ESCAPES

**"BEWARE:  
RED PANDAS  
ARE  
ESCAPE  
ARTISTS."**

That's an actual warning from the Association of Zoos and Aquariums' red panda care manual! Read about a rascally red panda and other wild escapees.

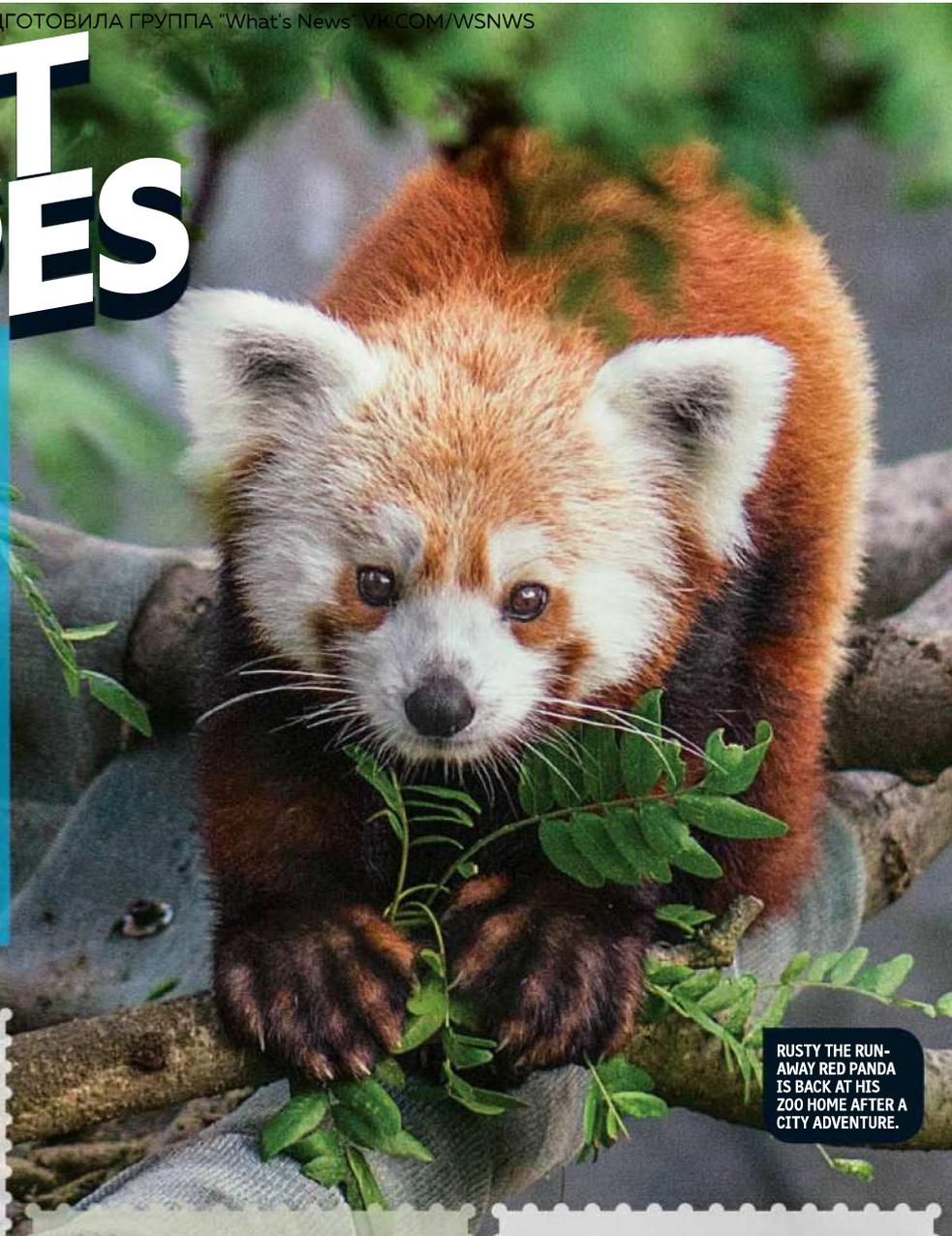
## RED PANDA ON THE RUN

Smithsonian's National Zoo  
Washington, D.C.

Ashley Wagner was out with her family when she spotted an animal crossing the street. At first Wagner's mom thought they'd seen a raccoon, but as soon as the creature turned its face toward them, Wagner knew it was a red panda. "He seemed very confident," she says.

Rusty the runaway red panda had arrived at the zoo just a few weeks before. As he scampered under a fence, Wagner snapped photos, shared them on social media, and called the zoo. Soon a team came to the rescue, eventually nabbing him from a tree.

Today Rusty has retired from his life on the run and settled down. The father of three red panda cubs, he lives at the Smithsonian Conservation Biology Institute.



RUSTY THE RUN-AWAY RED PANDA IS BACK AT HIS ZOO HOME AFTER A CITY ADVENTURE.

## PESKY PENGUIN

Tokyo Sea  
Life Park  
Tokyo, Japan

Why settle for an aquarium tank when you can swim in the sea? A Humboldt penguin known as Penguin 337 scaled a wall and wriggled through the zoo's fence. Destination: Tokyo Bay.

The bird slipped past keepers and the Japanese coast guard a few times, even getting caught on video splashing in the bay. Keepers eventually picked up the penguin—which is naturally found off the coast of South America—as it lounged on a nearby riverbank. That's one powerful penguin!



## OUT-OF-HAND ORANGUTAN

San Diego Zoo  
San Diego, California

As a young orangutan, Ken Allen liked to unscrew the bolts to his playpen, explore his room at the zoo, and then put the pen back together before his keepers arrived the next day. As he got older, he surprised keepers by climbing straight up and over his enclosure wall, then taking a stroll along a path. He even stopped to look at other animals!

Nicknamed Hairy Houdini, Ken Allen broke out many times, amazing the zoo staff with each new escape. But the orangutan never ran too far. Often he would sit at the edge of his enclosure, waiting for keepers to let him back in.

GET MORE ZOO FUN!  
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# SAVING THE RED PANDA

With their kitten-like faces, fluffy fur, and waddling walk, it's easy to *aw* over red pandas. But their adorableness might put these animals in danger: Red pandas are ideal targets for the illegal pet trade.

Red pandas are already endangered. Their forest homes are being cut down, and poachers hunt them for their fur. Luckily people are trying to help.

For instance, the Red Panda Network hires local people to be forest guardians. These panda pals keep watch over the red pandas in Nepal, replant bamboo, and help paying tourists observe them without disturbing the creatures.

Other organizations are using high-tech methods to track poachers. By taking a DNA sample from a red panda rescued from the black market, conservationists can learn where the animals are being taken from.

You can help too. Tell your friends and family that these adorable animals aren't pets. You can also ask your parents and older siblings not to "like" photos and videos of red pandas on social media unless you know the group or person is trustworthy (like a wildlife photographer or a conservation group).



A RED PANDA CUB GETS COMFY IN ITS DEN.



"THIS PLACE IS LIKE THE BIGGEST ZOO EVER."



"GOT ANY BAMBOO BACK THERE?"

"NO DOOR CAN HOLD ME BACK!"



"CATCH YA LATER."



## LYNX ON THE LAM

Dartmoor Zoological Park  
Sparkwell, England

A helicopter, night-vision cameras, a drone, and nearly 25 other traps were no match for Flaviu, an escaped Eurasian lynx. The two-year-old cat had been at the zoo only a few hours when he chewed his way out of a wooden enclosure and sprinted into a nearby park.

Zoo staff tried luring him back with recordings of his mother's calls and the scent from her bedding. After three weeks on the run, Flaviu took one wrong bite and—crash! A mesh trap covered him as he tried to snag a piece of meat.



## CUNNING CAPYBARAS

High Park Zoo  
Toronto, Canada

Two capybaras escaped this zoo before they even arrived. As the animal handler was moving the pair to their pen, the capybaras slipped away. "They saw an opportunity and took it," says Sarah Doucette, an official who helped park staff find the escapees.

The South American mammals would not survive the coming winter in the park they scurried off to. So staff used corn on the cob and other treats to lure the runaways into traps. After a few weeks the pair was back and now has three babies. "They're good parents," Doucette says.





Great white sharks can grow to be 21 feet long.

Sharks propel themselves through the water using their tails.

The logo for National Geographic Kids, featuring the iconic yellow rectangular border on the left, followed by the words "NATIONAL GEOGRAPHIC" in white uppercase letters, and "KIDS" in yellow uppercase letters below it.

NATIONAL  
GEOGRAPHIC  
KIDS

There are about 400 species of sharks.

Sharks can smell a single drop of blood up to a third of a mile away.

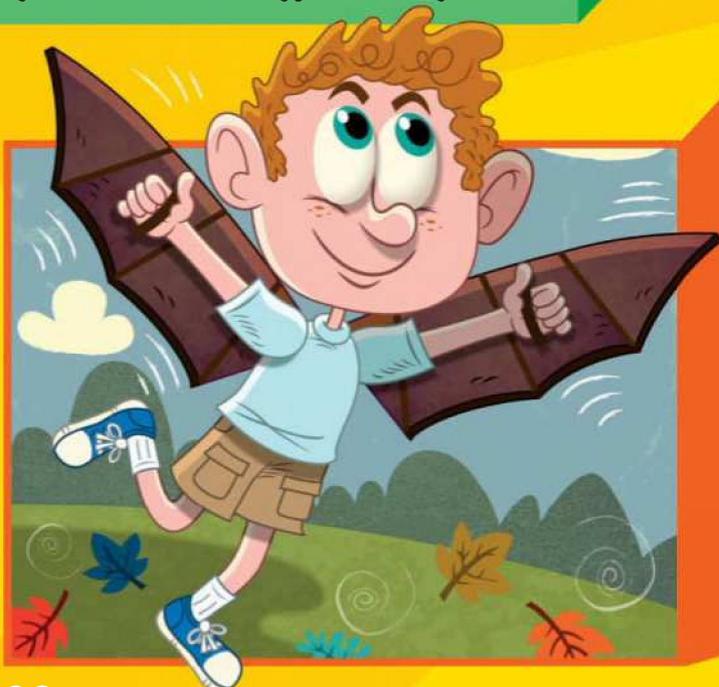
# WHAT WOULD HAPPEN?

**FIND OUT WHAT WOULD GO DOWN IF THESE CRAZY SCENARIOS ACTUALLY CAME TRUE.**

BY CRISPIN BOYER • ART BY JOE ROCCO

## What if aliens invaded the Earth?

Humans haven't explored our own solar system (or the universe beyond) well enough to rule out the presence of extraterrestrials. How cool would it be if we found out aliens *did* exist? Aliens that could pay us a visit from outside our solar system would possess amazing technology light-years ahead of our own. After all, these travelers figured out how to cross vast distances between stars. But not everyone is ready to welcome E.T. to Earth. Physicist Stephen Hawking believed in extraterrestrials and feared that any alien invaders would likely use their technology to ransack our planet for its resources. He thought Earthlings might be enslaved or wiped out. Maybe those aliens should stay just where they are.



## What if you had wings like a bird?

Having wings doesn't automatically mean something's capable of flying. Strength and weight are key factors in whether an object with wings can soar. So ... if a human had wings, could they take flight? Compare a winged person to the largest animal that ever flew: *Quetzalcoatlus* (pronounced KET-zul-koh-AHT-luss). This pterosaur (or winged reptile) had the wingspan of a fighter plane. Scientists aren't sure whether the animal took to the air easily or if it needed a big breeze to take off. But its body had evolved for flight, with hollow bones and powerful wing muscles. Humans, sadly, are bound for the ground, wings or no wings. Our bones are strong enough but too dense, keeping us from ever soaring like a bird—or *Quetzalcoatlus*.



## What if you could wield the Force?

Pretend you're a Jedi knight who hasn't succumbed to the evil dark side of the Star Wars galaxy. Extra strength comes with your training, but the real power is telekinesis. That's the flexing of mental muscles to open doors, lift heavy objects, and chuck tons of stuff with just a wave of your hand. A Force wielder's second-best trick is the power of suggestion. In many of the Star Wars movies, Jedi knights often get their way just by asking. In real life, you're better off influencing people with your magnetic personality and the use of the magic word: Please.

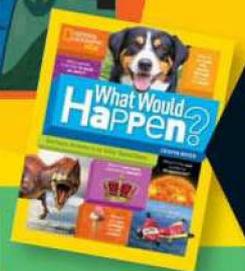
## What if Bigfoot turned out to be real?

Believers insist that Bigfoot could be a surviving member of a long-extinct species, such as *Gigantopithecus* (an oversize ape that disappeared hundreds of thousands of years ago), a Neanderthal early human, or some ancient undiscovered member of the great ape family. If Bigfoot was real, news shows would scramble for Sasquatch interviews, and sneaker companies would pay the ape big bucks to endorse their size-20 athletic shoes. But scientists would definitely be most excited about the discovery. Evidence of a surviving population of apes or early humans would fill in the gaps of human development and might prompt people to wonder about the existence of a few other similar legendary creatures. In other words: Could the yeti of the Himalayan mountains be far behind?



## What if you were related to royalty?

Look far back enough in time and *everyone* has someone famous in their family. It's simple math. Your two parents had four parents, who had eight parents, who had 16 parents, and on and on until about a thousand years ago, when every mother and father who lived in, say, Europe, was the common ancestor of everyone alive with European roots today. And, yep, these common ancestors include kings and queens. People are considered relatives if they share ancestors, so that means if you're of European descent, you're probably related to royalty from as recently as a thousand years ago—and quite possibly sooner. Unfortunately that isn't going to land you a guest room at England's Buckingham Palace. But the next time you spot a royal on TV, you can say, "Hey, that's my distant, distant cousin!"



CHECK  
OUT  
THE  
BOOK!

# ANIMAL SMACK

WHICH OF THESE ANIMALS  
WILL COME OUT ON TOP?

BY EMILY KRIEGER

# FASTEST

Quick: What's the world's fastest animal? You're about to meet two contenders, cheetahs and peregrine falcons, whose land and air speed make for one rapid race.

## CHEETAH



**ZERO TO SIXTY:** Cheetahs are the fastest animals on land, able to accelerate from zero to 60 miles an hour in three seconds, and maintain that superspeed over short distances. They can run nearly 330 feet in 5.95 seconds—about 3.5 seconds faster than an Olympic gold-medal sprinter.

**BIGGER = BETTER?** Cheetahs have another trick when it comes to making fast tracks: enlarged nostrils, lungs, and hearts. These big body parts let them draw in a lot of oxygen, which means more fuel for their muscles to get up to speed—literally.

**BUILT FOR SPEED:** Like a fast car, cheetahs have a streamlined shape that helps them move through the air with little resistance. Strong hind leg and back muscles power sudden bursts of speed, and their flexible spines and long limbs allow for big strides.

# DOWN



# ST



## PEREGRINE FALCON

**WINGING IT:** This bird's body is made to slice through the skies. For starters, it has a big breastbone that supports big chest muscles. Bigger muscles means more powerful wing beats. The shape of the falcon's wings helps too: They're long and pointed, making them aerodynamic.

**DAREDEVIL DIVES:** Peregrine falcons are the fastest animals in the air. One way they kill prey is by dropping down in superfast dives called stoops. During these dives, the falcons fold their wings against their bodies and tuck in their feet. They drop as far as 3,000 feet and reach speeds of more than 200 miles an hour!

**FLIGHT SUIT:** It's hard to catch your breath while rocketing through the air that quickly. So cone-shaped structures in a falcon's nostrils control all that air flowing into their beaks during flight. Transparent third eyelids act like a pair of natural goggles.



Cheetahs are the fastest animals on land, but when it comes to top speed, peregrine falcons are faster. These birds fly twice as fast as the cats can run. So in the end, this race isn't even all that close.

**WINNER:**  
**PEREGRINE FALCON**



**WIN THE BOOK!**  
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**JULY 10-17,**  
**natgeokids.com/august**

# SMARTEST

Scientists have uncovered some impressive ways in which chimpanzees and crows use their noggins. But which will win this mental matchup to take the title of smartest animal?



## CHIMPANZEE



**SIGNS OF INTELLIGENCE:** Chimps use body language, vocalizations, and facial expressions to communicate with each other. When it comes to talking to humans, a few chimps have learned a neat trick: American Sign Language. One chimp named Washoe learned about 250 signs!

**TECH SMARTS:** Amazingly, chimps have bested people in perhaps the most people-like pursuit: computer games! Chimps' excellent memories, ability to recognize patterns, and competitive skills likely contributed to them playing basic computer games better than human adults in scientific studies.

**TOOLIN' AROUND:** Chimps make and use tools to fetch themselves something to eat. They'll use stones to crack open nuts. They'll strip the leaves off a twig and use it as a fishing pole to get termites out of a hole. And they'll even sharpen branches into miniature "spears" that they use to hunt animals such as antelope and wild pigs.



## AMERICAN CROW



**PROBLEM SOLVERS:** Wild crows and children were presented with a problem: how to use objects, such as rocks, to raise water levels in containers. Kids struggled with the problem, but Kitty the crow cracked it!

**SAY, YOU LOOK FAMILIAR:** Several researchers in Seattle, Washington, wore masks while catching and releasing crows on a college campus. Those crows not only remembered the masks—they also spread the word about them. When the masked scientists returned to the campus, crows swooped and cawed alarms—even ones that hadn't been caught before.

**NO HANDS? NO BIG DEAL:** Even though they don't have hands, crows are surprisingly good at making and using tools. Some have been spotted using pieces of leaves to stick into tree crevices to grab tasty morsels.



Crows are brainiacs, no doubt about it. But when it comes to intelligence, chimps are hard to beat. They're able to learn sign language and beat adult humans at basic computer games.

**WINNER: CHIMPANZEE**

# DEADLIEST

Animals use teeth, venom, and more to defend themselves. In a fight between a grizzly bear and a black mamba, which would make it out alive as the deadliest animal?



## GRIZZLY BEAR



**BRUTAL BITE:** Grizzly bears have big mouths: Wide open it's almost a foot long. Their 42 teeth are impressive too. They can crunch through bone in a single chomp—their bite force is strong enough to crush a bowling ball! And each of their four canines is about two inches long.

**CLAWING TO THE TOP:** A grizzly bear's claws are curved and sharp, with front claws about two to four inches long. One easy way to tell if bear tracks belong to a grizzly (and not to a smaller, less aggressive black bear) is to see if their claw marks are at least a couple inches above each toe.

**CRUSHED TO DEATH:** Grizzlies are big animals, weighing up to 800 pounds. They can use their weight against their enemies, ramming them up against a tree or rock, or slamming into them and knocking them down (and out).



## BLACK MAMBA

2

**SPEEDY SNAKE:** Black mambas have both speed and length going for them. They're one of the fastest snakes on Earth, slithering at up to 12.5 miles an hour. And at 14 feet, they're the longest venomous snake in Africa.

**SHY BUT STUBBORN:** Black mambas are shy and will try to flee a threat first. But once pushed into a corner, they won't back down. They'll raise about a third of their body up off the ground and quickly and repeatedly strike, delivering large loads of venom to protect themselves.

**VERY LETHAL VENOM:** No snake venom works faster than a black mamba's. Delivered by half-inch-long fangs, it can kill an adult human in 20 minutes. Unless anti-venom is given quickly, a venomous bite kills 100 percent of the time.



A grizzly could definitely outrun a black mamba. The bears can run more than twice as fast as the snakes can slither. But in a battle, a black mamba's strike would be quick, accurate, and lethal. A bitten bear wouldn't stand a chance, while a snake *might* survive a grizzly attack.

**WINNER: BLACK MAMBA**

VOTE FOR YOUR FAVORITE ANIMALS!  
[natgeokids.com/august](http://natgeokids.com/august)

**1** Human "food technologists" taste cat and dog chow for pet food companies.

**2** The **chandelier** in the **Coconut Palace** in the Philippines is made of **101 coconut shells**.

**3** The U.S. Supreme Court ruled that a **tomato is a vegetable**, but botanists say it's a **fruit**.

**4** **Vanilla** is used to **make chocolate**.

**5** Christopher Columbus brought the first **lemon seeds** to the Americas.

**6** The co-inventor of the **cotton candy** machine was a **dentist**.

**7** It's considered **rude** to eat anything with your **fingers** in **Chile**—even french fries!

**8** Drinking **coffee** in 17th-century Turkey was **punishable** by **death**.

# 30 Cool THINGS ABOUT

BY KAY BOATNER

**9** A protein can prevent ice cream from melting quickly in **hot weather**.

**10** Pilots and copilots eat different food onboard in case one of the **meals** makes one of them **sick**.

**11** There are **more than 40,000** types of **rice**.

**12** Pumpkins almost went **extinct**.

**13** Smelling **rosemary** can improve your **memory**.



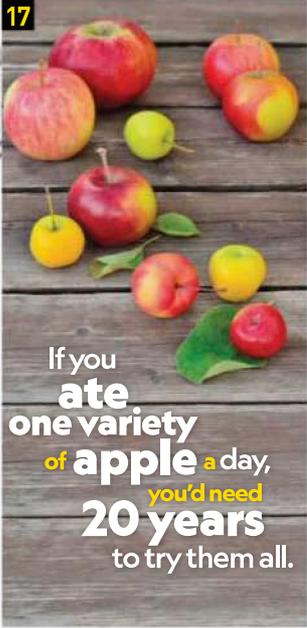
**15** Camel milk doesn't **curdle**.

**16** Peanut butter can be converted into a **diamond**.

**14** Food **neophobia** is the fear of trying **new foods**.

ROBYNRG / SHUTTERSTOCK (1); TIM UR / SHUTTERSTOCK (3); SUBBOTINA ANNA / SHUTTERSTOCK (4, FLOWER); PRETO PEROLA / SHUTTERSTOCK (4, CHOCOLATE); POLIANIN SERGEI / SHUTTERSTOCK (5, LEMON); GEORGIOART / ISTOCK / GETTY IMAGES (5, CHRISTOPHER COLUMBUS); ERMEJONCOC / SHUTTERSTOCK (6); M. UNAL OZMEN / SHUTTERSTOCK (7); © ALEXANDER PLADDET / DREAMTIME (8); SATTI SEW TIW / SHUTTERSTOCK (9); NORIKKO / SHUTTERSTOCK (10); ALL FOR YOU / SHUTTERSTOCK (11); TOPSELLER / SHUTTERSTOCK (12); VOLOSINA / SHUTTERSTOCK (13); KWANCHAI.C / SHUTTERSTOCK (14); ANDREA WILLMORE / SHUTTERSTOCK (15); ODM / SHUTTERSTOCK (16, DIAMOND); MELICA / SHUTTERSTOCK (16, PEANUT BUTTER)

**17**



If you **ate** one variety of **apple** a day, you'd need **20 years** to try them all.

**18** It can take up to **21 days** to **make** a single **jelly bean**.



**19** There's a **gelato museum** in Italy.



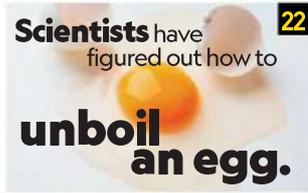
**20** **Gustatory rhinitis** is what doctors call a **runny nose** caused by spicy foods.



**21** **Asparagus stalks** can grow **10 inches** in **one day**.



**22** Scientists have figured out how to **unboil** an egg.



The **stringy parts** of a **banana** are called **phloem** (FLO-em).



**24** The **peak time** for **passing gas** is five hours after you've had **lunch** or **dinner**.



# FOOD

**25**



**Red food coloring** is made from **crushed bugs**.

**26** A **ham** once sold for **two million dollars**.



**28**



The **1904 World's Fair** featured a life-size elephant made of **almonds**.

**29** Some **dogs' paws** smell like **corn chips**.



**27** All the **cranberries** grown in North America in one year would stretch from **Boston, Massachusetts**, to **Los Angeles, California**, and back **250 times**.



**30** A menu from the **R.M.S. Titanic** sold for **\$88,000** at an auction.

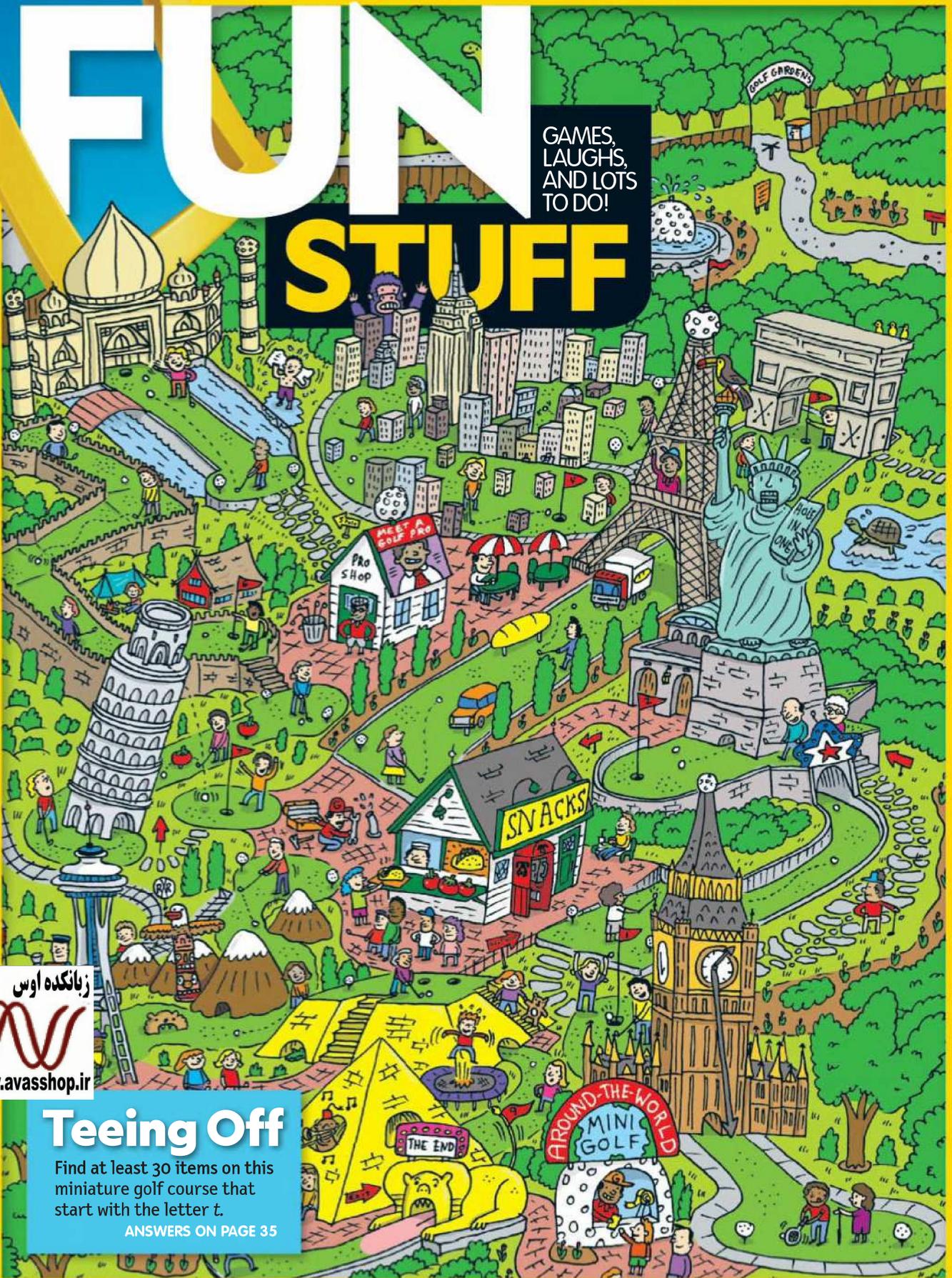


GET MORE FUN FACTS ABOUT FOOD!  
[natgeokids.com/august](http://natgeokids.com/august)

PANJELENA / SHUTTERSTOCK (17); DIANA TALIUN / SHUTTERSTOCK (18); CHUTIMA CHAOCHAIYA / SHUTTERSTOCK (19); PANOM PENSANGWANG / SHUTTERSTOCK (20); LIGHTSPRING / SHUTTERSTOCK (21); AFRICA STUDIO / SHUTTERSTOCK (22); © TODD TAULMAN / DREAMSTIME (23); ELIZABETH A.CUMMINGS / SHUTTERSTOCK (25); JURASY / SHUTTERSTOCK (26); MADLEN / SHUTTERSTOCK (27); MAYAKOVA / SHUTTERSTOCK (28); ARTVILLE / SHUTTERSTOCK (29); CHIPS, OKSANA2010 / SHUTTERSTOCK (29); PAW

# FUN STUFF

GAMES,  
LAUGHS,  
AND LOTS  
TO DO!



زبانگده اوس  
www.avasshop.ir

## Teeing Off

Find at least 30 items on this miniature golf course that start with the letter **t**.

ANSWERS ON PAGE 35

# WHAT IN THE WORLD

CHECK OUT THE BOOK!



## LOOK OUT BELOW!

These photos show how things look from up in the sky. Unscramble the letters to identify what's in each picture.

ANSWERS ON PAGE 35



CAER SACR

\_\_\_\_\_



ESUOSH

\_\_\_\_\_



LTAEDSWSIER

\_\_\_\_\_



OERLRL  
RSOCAET

\_\_\_\_\_



VYKDSIRSE

\_\_\_\_\_



YAIHWGSH

\_\_\_\_\_



NMAIAR

\_\_\_\_\_



EGEDH ZMEA

\_\_\_\_\_



FACÉ

\_\_\_\_\_

TOP ROW (LEFT TO RIGHT): JAMIE SQUIRE / ALLSPORT / GETTY IMAGES; ANDRIE LOMBARD / SHUTTERSTOCK; © HARALD SUND / BRAND X PICTURES / JUPITERIMAGES; MIDDLE ROW (LEFT TO RIGHT): JASON HAWKES / GETTY IMAGES; PURESTOCK / GETTY IMAGES; ABLESTOCK / IMAGES.COM / IPN; BOTTOM ROW (LEFT TO RIGHT): © CORBIS SUPER REF / ALAMY; JASON HAWKES / GETTY IMAGES; NEWS.COM / GETTY IMAGES REF / ALLAN BAXTER.

**FUNNY****FILL-IN****POWER PLANT**

Ask a friend to give you words to fill in the blanks in this story without showing it to him or her. Then read out loud for a laugh.

BY MARGARET J. KRAUSS

Play more Funny Fill-in!  
[natgeokids.com/ffi](http://natgeokids.com/ffi)



For our first field trip of the year, my class went to the arboretum to see all the \_\_\_\_\_ plants.  
 adjective

We dropped our \_\_\_\_\_ lunches and followed a(n) \_\_\_\_\_  
 adjective noun type of job

through a(n) \_\_\_\_\_ forest, making sure not to \_\_\_\_\_ anything. But then I saw  
 adjective verb

a rare \_\_\_\_\_ -eating plant that was as tall as a(n) \_\_\_\_\_.  
 color insect noun

I leaned in to \_\_\_\_\_ one of its flowers when I heard a loud \_\_\_\_\_.  
 verb sound

"\_\_\_\_\_!" I shouted. My \_\_\_\_\_ sandwich was being devoured by the plant!  
 silly expression something gross

Still hungry, the plant reached out with its \_\_\_\_\_ vines. I started to \_\_\_\_\_.  
 large number verb

for help. But then the plant \_\_\_\_\_ into my \_\_\_\_\_, pulled out a(n) \_\_\_\_\_,  
 past-tense verb noun favorite food

and put it in its \_\_\_\_\_. Now that's what I call plant food!  
 body part



# EXPLORER ACADEMY

In the new book *Explorer Academy: The Nebula Secret*, 12-year-old Cruz Coronado breaks secret codes in order to fight dangerous villains and solve mysteries. Test your own skills by cracking the code on this page, then check out more about the book at [ExplorerAcademy.com](http://ExplorerAcademy.com).

TEXT AND CODE BY GARETH MOORE

## THE CODE: CAESAR CIPHER

To use this cipher, just shift every letter of the alphabet forward or backward a fixed number of spaces—you can move the entire alphabet as many spaces as you want. In this example, we shifted the alphabet just one space: *A* becomes *B*, *B* becomes *C*, and so on until you reach the end of the alphabet. Then *Y* becomes *Z*, and *Z* becomes *A*.

You can write this out as a table. The bottom row is the code, and the top letters are the translations.

A	B	C	D	E	F	G	H	I	J	K	L	M
B	C	D	E	F	G	H	I	J	K	L	M	N
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
O	P	Q	R	S	T	U	V	W	X	Y	Z	A

So if you decode **X F M M E P O F**  
it says: **W E L L D O N E**

## CRACK THIS CODE!

Using the Caesar cipher table above, decode the message below. **ANSWER ON PAGE 35**

### WRITE LIKE A ROMAN

This code got its name because according to an ancient writer, the Roman politician and general Julius Caesar used this simple substitute cipher to keep his letters secure.

T P N F U I J O H  
 E B O H F S P V T  
 J T V O E F S  
 U I F  
 X B W F T .

BREAK MORE CODES!  
[ExplorerAcademy.com](http://ExplorerAcademy.com)

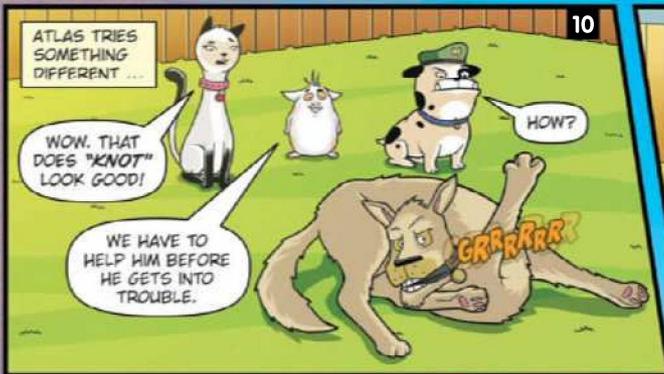


CHECK OUT THE BOOK!

STRIKA ENTERTAINMENT

# Unleashed





# ART ZONE

## EXPLORATION

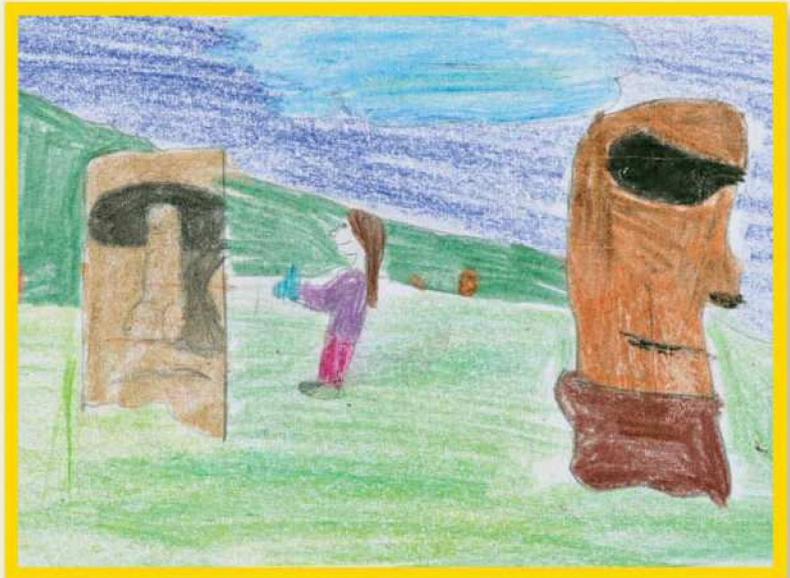
Check out all the cool places *Nat Geo Kids* readers want to explore in these drawings.



▲ **Amazon Rain Forest** Polina H., 11, Arlington, Virginia



▲ **Bat Cave** Ruby M., 9, Strafford, New Hampshire



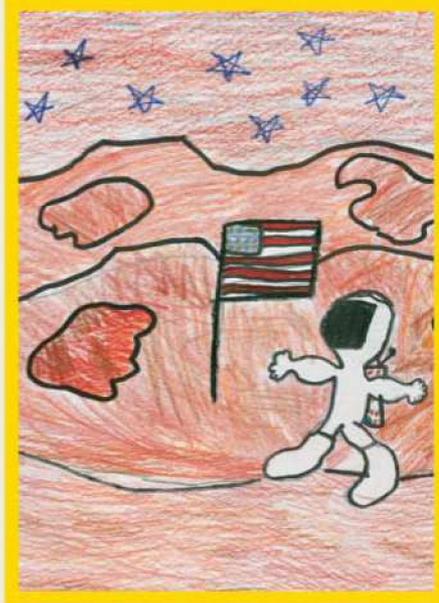
▲ **Easter Island** Sophia C., 9, Yardley, Pennsylvania

# Draw

something to show how you're an ocean champion.



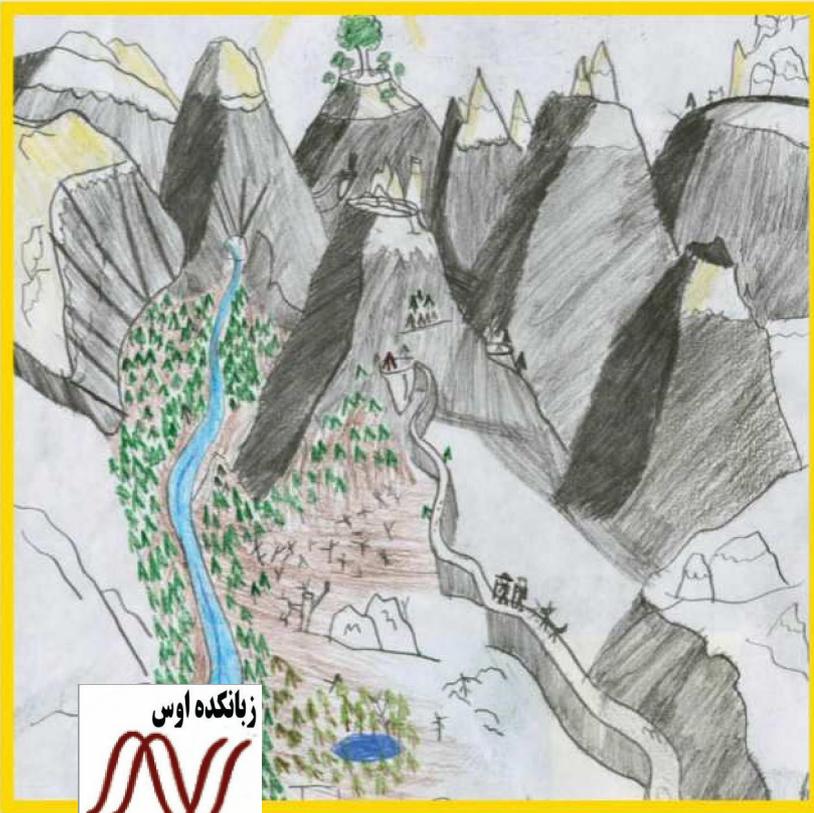
▲ **The Arctic**  
William B., 5  
Lake Country, Canada



▲ **Majestic Mars**  
Tessa R., 8  
Concord, Massachusetts



▲ **Antarctica**  
Asher M., 11  
Buffalo, Wyoming



▲ **The** [www.avasshop.ir](http://www.avasshop.ir), Newberry, Michigan

Maybe you pick up trash on the beach or say no to ocean-polluting plastic straws. Whatever you do, you're an ocean champion! Draw your favorite way to protect the ocean: Your art might be displayed in **National Geographic Encounter: Ocean Odyssey** in New York City!

Send us your original drawings: **Nat Geo Kids—Ocean Champion Art Zone**  
P.O. Box 98002  
Washington, DC  
20090-8002

Include your name, address, phone number, date of birth, a title for your drawing, a statement that it is your own work, and the name of your parent or guardian. Your parent or guardian must sign a release for publication if your illustration is selected. Submissions become the property of National Geographic Partners, and all rights thereto are transferred to National Geographic Partners. Submissions cannot be acknowledged or returned. Selection will be at the discretion of *Nat Geo Kids*.

**NATIONAL GEOGRAPHIC**

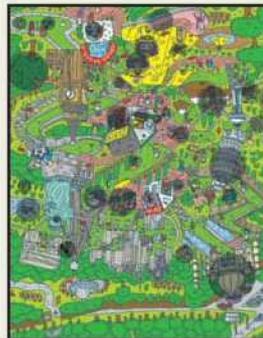
# ENCOUNTER™

## OCEAN ODYSSEY

For more information, grab a parent and go online.

[natgeoencounter.com](http://natgeoencounter.com)

"Teasing Off" (page 28):  
From top to bottom, left to right: Iqbal Masih, towel, tent, Tower of Pisa, train tracks, train, totem pole, trash can, toolbox, T-shirt, trombone, tie, tables, tacos, tomatoes, telephone booth, teddy bear, trampoline, "The End" sign, tongue, truck, tires, tickets, toucan, teeth, turtle, tulips, trees, tennis racket, tees.



**Answers**