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Editorial Kay Boatner, *Senior Editor / Digital Producer;* Allyson Shaw, *Associate Editor / Digital Producer*
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Advertising Offices Kim Connaghan, *Vice President, Publisher* (212) 822-7431; Bob Amberg, *National Brand Director* (212) 822-7437; **Detroit** Karen Sarris (248) 368-6304; **West Coast** Eric Josten (424) 292-5715
International Magazine Publishing Yulia Petrossian Boyle, *Senior Vice President;* Jennifer Jones, *Business Manager;* Rossana Stella, *Editorial Manager*
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Advertising Production Kristin Semeniuk, *Director;* Julie A. Ibinson, *Manager*
Publicity Caitlin Holbrook, *Publicist* (202) 912-6714
Parents, contact us online: kids@natgeo.com

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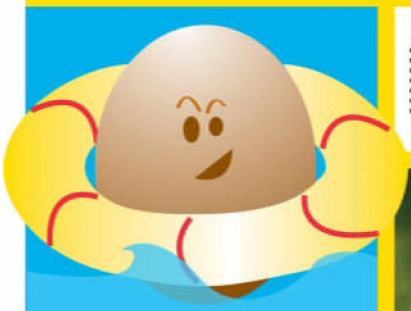
BY MICHELLE HARRIS

Check out these outrageous facts.

A TRAFFIC JAM IN CHINA LASTED FOR MORE THAN A WEEK.



Rotten eggs float in water.

KIDS' FINGERPRINTS DISAPPEAR FROM SURFACES FASTER THAN ADULTS' DO.

It's impossible for turtles to stick out their tongues.

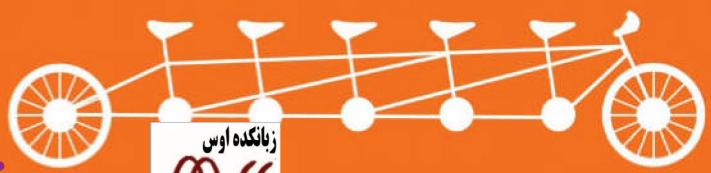
A Finnish man wrote a novel made up of 1,000 text messages.

Mexico City has sunk more than 32 feet in the last 100 years.

ANCIENT GREEKS USED hula hoops.

You can buy worms from a vending machine in some countries.

A FIVE-SEAT BICYCLE IS CALLED A QUINDEM.



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PETE OXFORD / MINDEN PICTURES / NATIONAL GEOGRAPHIC CREATIVE (TURTLE)

ASTONISHING STORIES FROM THE FILES OF

Guinness World Records

BY ELIZABETH HILFRANK

SUPER-FURRY RABBIT

Haircut ... what's that? With her nearly 15-inch-long hairs, Franchesca the Angora rabbit holds the record for the longest fur on a rabbit. One benefit is that she always has a cozy fur coat for the winter. The problem? According to owner Betty Chu, sometimes Franchesca's mistaken for a dog!

MAJOR BLING

Shield your eyes: This jewel's got some serious sparkle. The Pink Star jewel became the most expensive jewel sold at an auction after its owner paid $71.2 million for it. Jewelers took nearly two years to cut and polish the oval-shaped stone. Before being purchased, the Pink Star was displayed in museums around the world. You could look at it—but you *definitely* couldn't touch it.

READY, SET, JUMP!

If you think jumping rope is hard, try doing it with 299 people next to you. That's exactly what the students of Wat Lam Nao School in Bangkok, Thailand, did to earn the title of most people skipping over the same rope. Three hundred students simultaneously jumped over a rope 25 times. Wonder when they'll try double Dutch?

JAMES ELLERKER / GUINNESS WORLD RECORDS (FRANCHESCA); JUSTIN TALLIS / AFP / GETTY IMAGES (PINK STAR); GUINNESS WORLD RECORDS (JUMPERS). INFORMATION PROVIDED BY © 2018 GUINNESS WORLD RECORDS LIMITED.

ALL About MONEY!

BY KRISTIN BAIRD RATTINI

THE NAME OF FORMER PHILIPPINES PRESIDENT ARROYO WAS MISSPELLED AS ARROVO ON THE HUNDRED-PESO NOTE IN 2005.

SOME EARLY CHINESE COINS WERE SHAPED LIKE KNIVES.

IT TAKES ABOUT 4,000 DOUBLE FOLDS—FORWARD AND BACKWARD—BEFORE A U.S. BILL WILL TEAR.

CURRENCY MADE FROM THE RED FEATHERS OF THE SCARLET HONEYEATER BIRD WAS USED IN THE SANTA CRUZ ISLANDS IN THE SOUTH PACIFIC OCEAN UNTIL THE 1980S.

THERE ARE TWO ATMs IN ANTARCTICA.

THE MYTHICAL WINGED HORSE PEGASUS appeared on a coin from the ancient Greek city-state of CORINTH.

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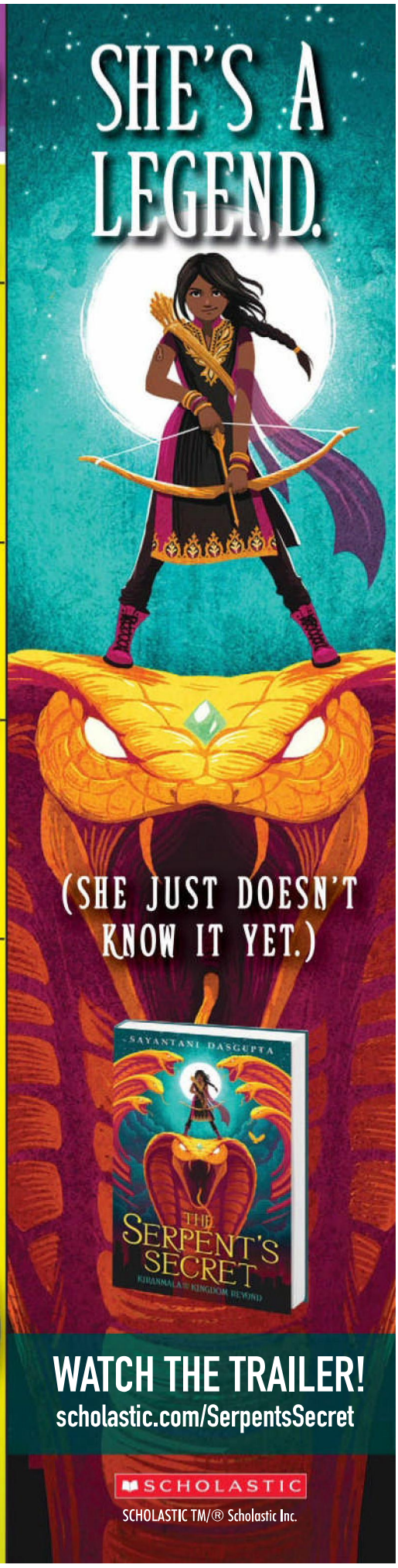

Bet you didn't know

BY ERIN WHITMER

6 feline facts to pounce on

1 People in the United States own about **94 million cats** and **90 million dogs.**

2 A **litter** of **kittens** is also called a **kindle.**

3 **Felix the Cat** was the **first balloon** in the Macy's Thanksgiving Day Parade.

4 **ALL CATS ARE BORN WITH BLUE EYES.**

5 **Cats** were **domesticated** at least **3,000 years ago** in Egypt.

6 **Cats communicate** using at least 16 known **"cat words."**

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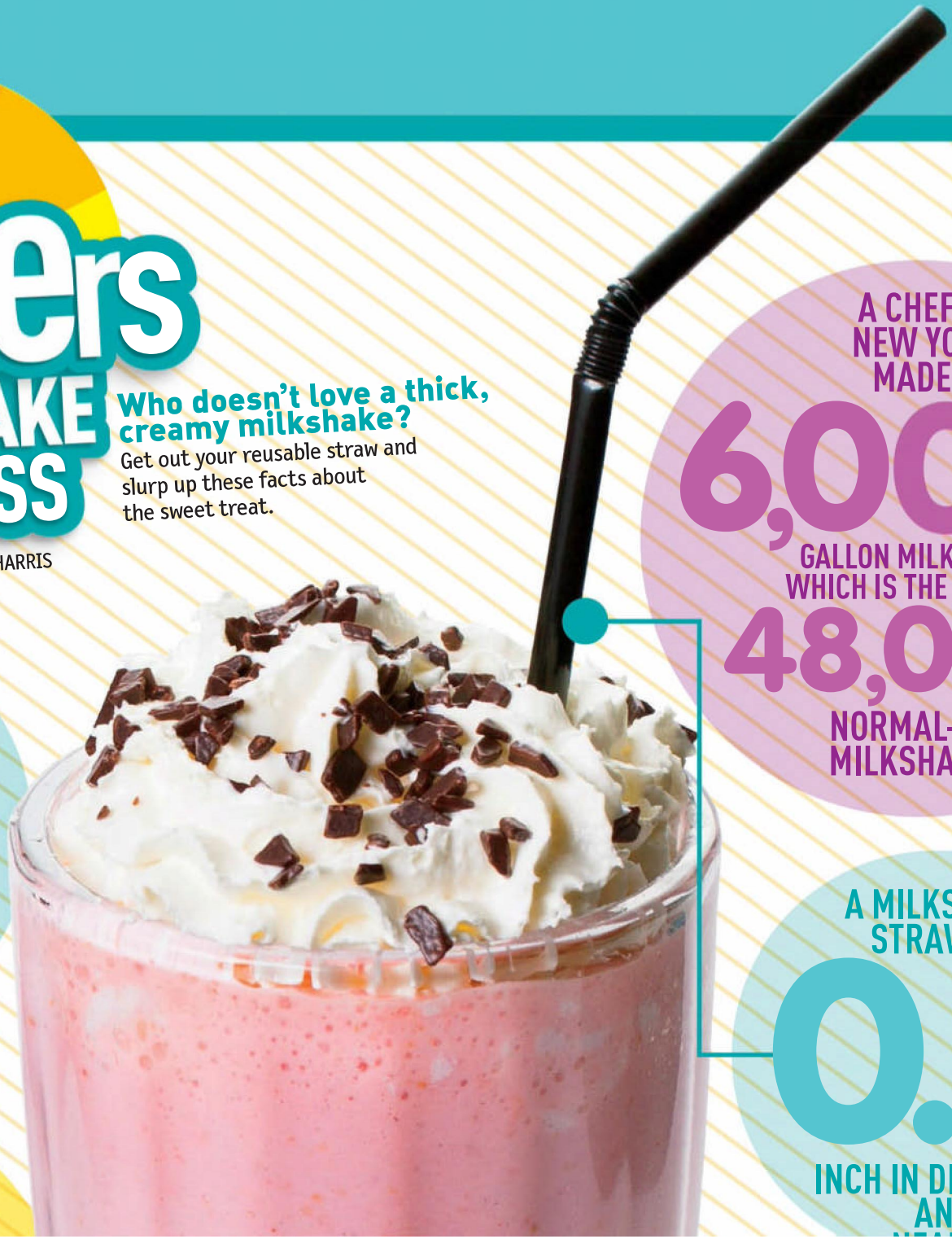
By the Numbers MILKSHAKE MADNESS

BY JULIE BEER AND MICHELLE HARRIS

Who doesn't love a thick, creamy milkshake?
Get out your reusable straw and slurp up these facts about the sweet treat.



EVERY AMERICAN EATS ON AVERAGE **8.4** POUNDS OF ICE CREAM EVERY YEAR.

A CHEF IN NEW YORK MADE A **6,000-** GALLON MILKSHAKE, WHICH IS THE SAME AS **48,000** NORMAL-SIZE MILKSHAKES.

A MILKSHAKE STRAW IS **0.3** INCH IN DIAMETER AND

A SMALL MCDONALD'S

VANILLA MILKSHAKE HAS

490

CALORIES AND **11** GRAMS OF PROTEIN.

NEARLY

8

INCHES LONG.

One United Kingdom restaurant sells more than 150 different milkshake flavors.

IT WOULD TAKE

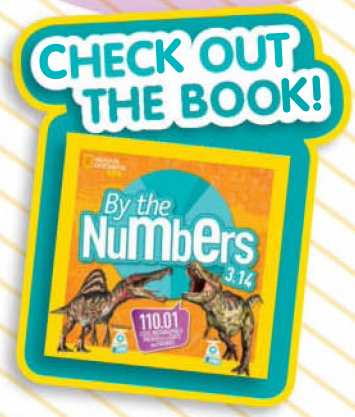
5.28 million

16-OUNCE MILKSHAKES TO FILL AN OLYMPIC-SIZE SWIMMING POOL.

THE ARTIFICIAL FLAVOR USED IN SOME STRAWBERRY MILKSHAKES CONTAINS ABOUT

40

DIFFERENT CHEMICALS.



OLGA MARKOVA / SHUTTERSTOCK

Amazing Animals

PARROT WEARS SWEATERS

THE BIRDS ALL CALL ME FOR FASHION TIPS.

Lecompton, Kansas

Chilly temperatures never get Javi the bird down. That's because the lesser sulphur-crested cockatoo (a type of parrot) owns plenty of sweaters to keep herself warm!

Normally birds rely on their feathers to stay toasty. But Javi—who was likely raised in harsh conditions before moving to the Tallgrass Parrot Sanctuary—probably plucked out most of her feathers because of stress. Caretakers weren't sure if her belly and chest feathers would grow back, but they knew Javi would be more comfortable with another layer covering her delicate skin. So they fitted her with a sweater.

Today the cockatoo owns more than 20 sweaters. They're made from colorful socks that Tallgrass co-owner Kail Marie makes herself. The fashions have caught the eye of Javi's bird friends, Sassy and Poppy. "Javi's the leader," Marie says. "They'll follow her anywhere." Looks like Javi got more than a new wardrobe—she got new friends as well.

—*Sara Schwartz*

JAVI WAITS FOR HER OWNER TO PREPARE HER APPLE.

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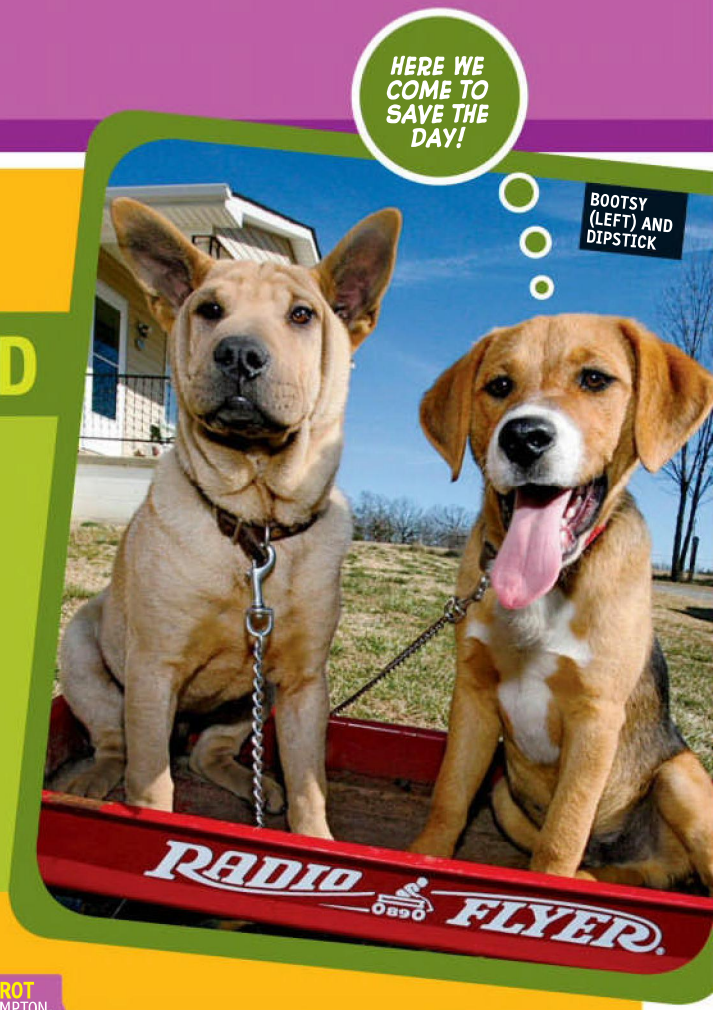
PUPPIES SAVE LOST KID

Virgilina, Virginia

Jaylynn Thorpe's family was terrified when the three-year-old wandered off into the woods on a frigid 17°F night. Thankfully, Bootsy and Dipstick the puppies wandered off with him—and probably saved his life.

While rescue workers searched for Jaylynn with scent-sniffing dogs and a heat-seeking helicopter, the puppies nestled around the shivering boy. They pressed against him all night and kept him warm—and alive. "They treated him like another puppy in their litter," veterinarian Emily Kinnaird says. "They snuggled to keep warm."

Twenty hours later, rescuers were nearby. But a scared Jaylynn hid beneath a pile of leaves. Once again, the puppies played the heroes, barking to alert the rescue team. Jaylynn was reunited with his family, cold and hungry but unhurt. "The puppies were very important to his survival," fire chief Chad Loftis says. —*Johnna Rizzo*



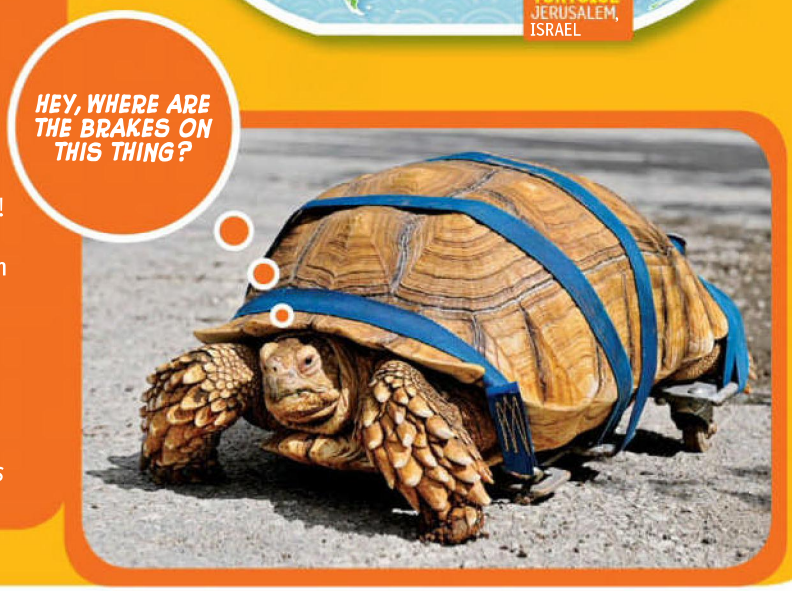
TORTOISE ♥S 2 SK8

Jerusalem, Israel

No one expects tortoises to be speed demons. But when Arava the African spurred tortoise got a "skateboard" for her back legs, she became speedier than most.

Arava had arrived at the Jerusalem Biblical Zoo unable to move her hind legs. "She wouldn't eat and kept tucking her head inside her shell," veterinarian Nili Avni-Magen says. "She seemed so sad." The medical staff couldn't find a reason for the paralysis, but they had a solution: wheels!

Arava could still use her front legs, so a metalworker built a two-wheeled metal platform with straps to go around her shell. When Arava first tried out her "skateboard," she took a few steps with her front legs and started rolling. Soon she was zipping around her enclosure on her board, "outrunning" the other tortoises—except when she was trying to ollie off of a ramp! —*Marinell James*



KAIL MARIE, DIRECTOR / CEO (JAVI, BOTH); KARINE AIGNER / NG STAFF (BOOTSY AND DIPSTICK); © TIBOR JAGER / THE TISCH FAMILY ZOOLOGICAL GARDENS IN JERUSALEM (ARAVA)

PENGUINS vs. PUFFINS

TEAM PUFFIN!

Who will win the battle of the birds? You decide.

BY JULIE BEER

Puffins

Dive-bombing in from the Northern Hemisphere, we have three adorable species of puffins. These "sea parrots" are ready to take on their seabird rivals in this epic battle of awesomeness.

Atlantic

Horned

Tufted

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Penguins

TEAM PENGUIN!

And next we have ... *whoa!* The penguins sure did bring a lot of friends to this showdown. Is it already an unfair match? Take a look at what the puffins are up against. Waddling in from the Southern Hemisphere are 17 species of penguins.

Adélie

African

Chinstrap

Emperor

Fiordland

Galápagos

Gentoo

Humboldt

King

Little blue

Erect-crested

Macaroni

Magellanic

Rockhopper

Royal

Snares

Yellow-eyed

OK, now you've had a look at both teams. Which one are *you* rooting for? And can you be swayed to the other side? See if you have the same opinion after we present some fierce battles!

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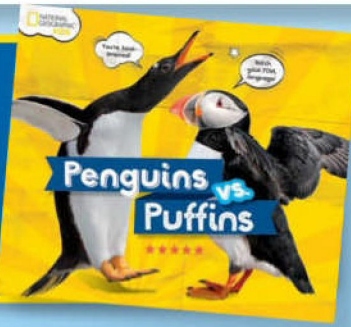

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Best Turf

If you're having trouble telling the difference between a puffin and a penguin, don't worry. There's zero chance you'll ever have an awkward run-in with them both. Why? They don't live in the same place! Puffins live north of the Equator, and penguins (except for the Galápagos penguin) live in the south. In fact, except for zoos and aquariums, there's not one place on Earth where you can see both a penguin *and* a puffin. So which bird occupies the best real estate? Let's find out!

Puffins

Want to play with the puffins? Well, pull out your scarves and mittens because puffins prefer to chill out where it's nippy most of the time—think Alaska, Iceland, Maine, and Canada. But for much of the year, they're simply floating out at sea, gobbling up fish and tidying their feathers. It's not until breeding season that they fly ashore.

Penguins

According to some movies, penguins live in Antarctica and spend their time waddling around the ice. Well ... some do. Those majestic emperor penguins rule icy Antarctica. And though it may sound fun to go down and waddle with them, consider this: It's not unusual for temps to drop as low as minus 40°F. But penguins have options. For instance, Galápagos penguins, the only penguins that live north of the Equator, spend their time in and around the rocky shores of the Galápagos Islands. They build their nests in volcanic rock! So if you're hanging with penguins, you get your choice: fire or ice.

Best Parents

Having a puffin or penguin as a mom or dad has its perks. For starters, you don't have to get out of bed for breakfast. If you're a penguin chick, you're served warm regurgitated fish. That's right, food that Mom and Dad already ate, then brought back up and dribbled right into your mouth. Yum? Pufflings get raw fish dropped at their feet daily. Take a look at penguins' and puffins' individual chick-raising styles to see which wins the trophy for best parents.

Puffins

To prepare for their little puffling, puffin parents dig a burrow several feet long on a rocky cliff and line it with feathers and grass. Puffin moms lay one egg, then both parents take turns keeping it warm. But instead of sitting on their egg, puffin parents tuck the egg under their wing and lean on it. Once a baby puffin is born, the couple rotates flying out to sea to snag some fish for themselves and their little one. Puffin couples often stay together their whole lives, reuniting at the same burrow site every year.

Penguins

Emperor penguins take a similar tag-team approach to parenting. After trudging the equivalent of two marathons (50 miles) to their breeding site, penguin moms lay a single egg, then make a quick hand-off (make that "footoff"—penguins don't have hands!) to Dad, who will stay with the egg for the next several months while Mom waddles back to the sea to hunt. Emperors don't build a nest. The egg balances on Dad's feet and is covered by his "brood pouch," a feathered flap of skin that keeps the egg warm. Once Mom shows back up with food for the newly hatched chick, Dad can trudge off to fill his growling belly.

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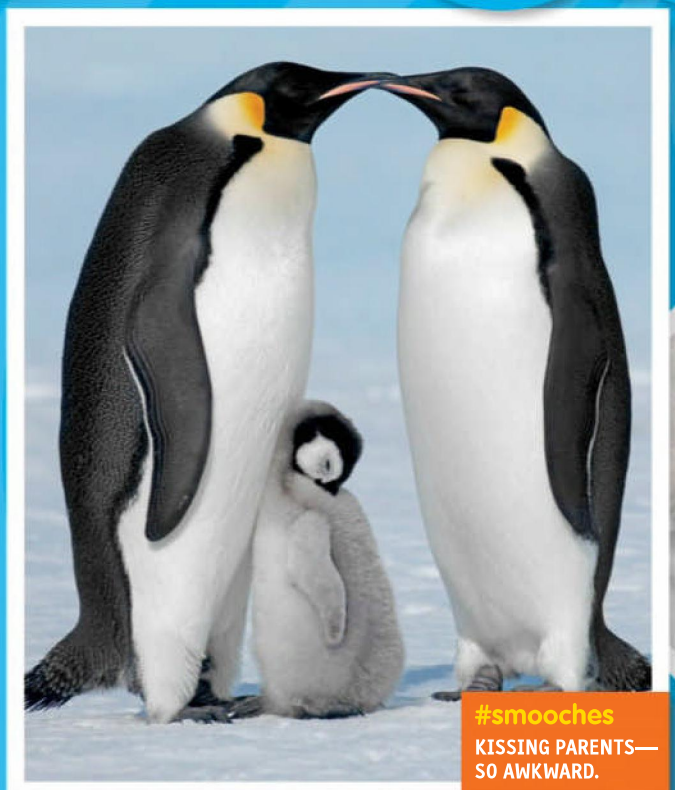
#fashionista
DOES THIS FLOWER MATCH MY OUTFIT?

#followme
I KNOW WHERE ALL THE GOOD FISH ARE.

#squadgoals
JUST A LITTLE CHEST-PUFFIN.

Most Photogenic

Penguin selfie! #cutepuffin! If penguins and puffins were on social media, they'd probably have more followers than a pop star. Check out these shots and decide whether penguins or puffins are better at mugging for the camera.



#smooches
KISSING PARENTS—SO AWKWARD.

#openwide
DO I HAVE FISH BREATH?

#bedhead
I WOKE UP LIKE THIS.

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Class Clown

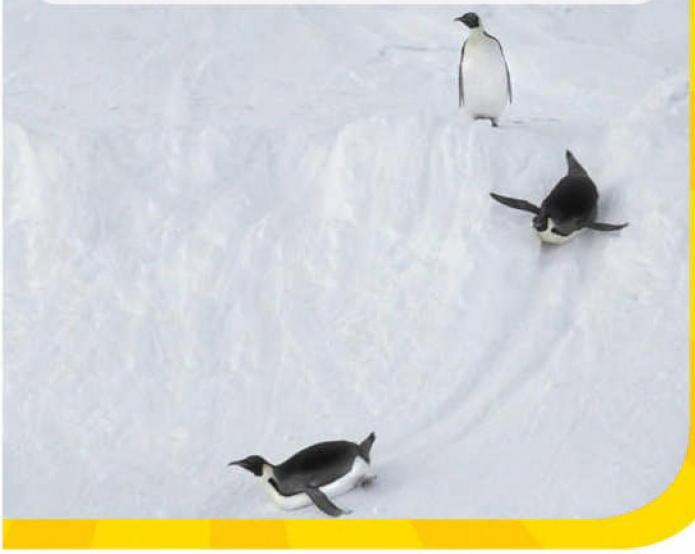
Uh-oh, penguins! A puffin's nickname is "clown of the ocean." How are you *possibly* going to win the category of "class clown"? It might take a red nose, a rainbow wig, and oversize shoes to win this battle.

Puffins

If this were a costume contest, the puffins would win by a nose. But puffins aren't just clown look-alikes—they play the goofy part as well. For instance, one of the best known clown tricks is the clumsy fake fall. Puffins have that nailed. Except ... it's not fake. When puffins come in for a landing, stay clear. Those little guys wobble and bobble until they plunk themselves down, and sometimes it's with a thump. (And if the landing is in the water, it's often with an ungraceful splash!)

Penguins

A penguin's "costume" may be stuffy and serious, but this bird knows how to have fun. For example, when cold weather penguins get tired of doing their little penguin shuffle, they plop on their bellies and go for a slide on the ice! This playful move is called—what else?—tobogganing. And better yet, they use both their wings and feet to steer. High marks in the silly category, penguins.



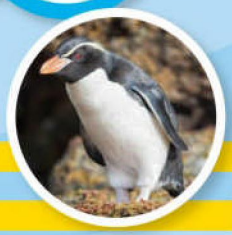
Decision Time

You're the expert now—on both penguins and puffins! So it's time to ask yourself: "Are you Team Penguin ... or Team Puffin?" Then grab a parent and go online to the Nat Geo Kids website at **natgeokids.com/penguins-vs-puffins** to have your voice heard in this battle of the birds.

Puffins REPLAY

Height: 10 inches
Weight: 17.5 ounces
Number of species: 3
Range: North of the Equator
Flight speed: Up to 55 miles an hour
Swim speed: About 3 miles an hour
Diving depth: 200 feet
Favorite food: Fish
Greatest enemy: Gulls
Known for: A clownish beak

Penguins REPLAY



Height: Up to 4.3 feet
Weight: Up to 90 pounds
Number of species: 17
Range: Mostly south of the Equator
Flight speed: Penguins don't fly!
Swim speed: Up to 22 miles an hour
Diving depth: Up to 1,850 feet
Favorite food: Fish, squid, and crustaceans
Greatest enemies: Leopard seals and predatory birds
Known for: Starring roles in blockbuster films

Porcupines sometimes click their teeth to communicate. The winter fur under a porcupine's bristles is as thick as sheep's wool.

A threatened porcupine may scamper backward at its enemy. Some porcupines have tails that help them grip and climb trees.

REAL OR FAKE?

BY EMILY KRIEGER ART BY TOM NICK COCOTOS

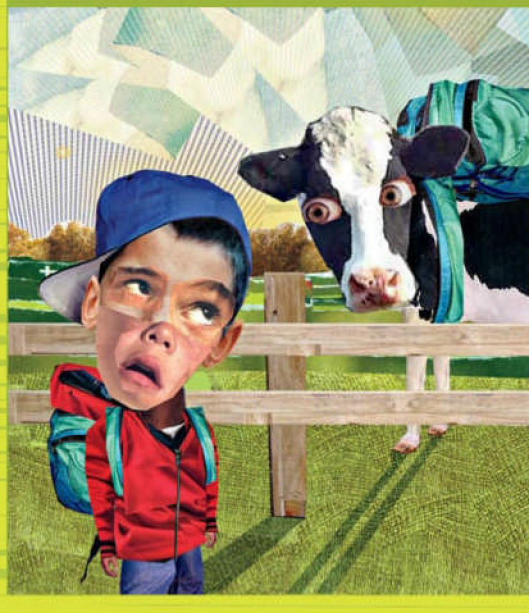
These may be some of the most bizarre stories you've ever read—but only three of them are actually true. Can you tell the difference between the real-life headlines and the phony-balonies? ANSWERS ON PAGE 35

1 SCIENTISTS DISCOVER ITCH TRICK

Having an itch you can't scratch is the worst. But scientists say they've found a solution for people plagued with itchy ailments. A study found that scratching the non-itchy, opposite limb while using a mirror to make it *look* like it's the itchy limb fools the brain into thinking the itch was scratched! The trick works like this: A mirror is placed between an itchy person's two arms, and they're asked to look into it so that they can't see their itchy arm but instead only a reflection of the non-itchy one. Then someone else scratches the non-itchy arm. (The trick doesn't work if the itchy person is doing the scratching.) Participants reported feeling relief when scientists performed the trick on them. Being fooled never felt so good!

2 ALASKAN ICE MONSTER

Is there a monster hiding in Alaska's remote waters? Thousands of people were left wondering just that after watching a video posted by the state's Bureau of Land Management. In 2016 the government organization shared a short but scary-looking video of the icy Chena River. The caption read: "#WildWednesday Our Fairbanks employees captured this strange 'thing' swimming in Fairbanks, #Alaska." In the clip, a large, snakelike object wriggles through the water. People all over the world shared the video of the "ice monster" and speculated what the creature could be. It didn't appear to be any known animal, and a government employee had posted the video, so it must be a real-life monster sighting.



CATHY AND GORDON ILLG (PORCUPINES, PAGES 18-19)

3

AT EARTH'S CENTER: ANOTHER EARTH?

Deep down in the center of Earth is something really weird: another planet! The cold, rocky sphere scientists call proto-Earth (*proto* means original or primitive) is a little-known secret nestled more than a thousand miles beneath people's feet. First discovered in 1975, its existence has repeatedly been called into question by scientists. But in 2007, researchers in Morocco announced that by studying seismic waves (the ones that cause earthquakes) and chemicals drilled from Earth's core, they had proof that a Mars-size Earth is lodged in the center of our planet. They estimate it's more than 20 billion years old, but they don't think anything lives there. Plans are in place to send machines to study the planet as soon as 2045.

4

PIGEONS PUT ON LIGHT SHOW

New York City is home to some superfamous stars. It's also home to a huge pigeon population, which many people consider pests. But one artist disagrees: He and his pigeon pals created an amazing aerial show. To put on the performance, the artist attached tiny, remote-controlled LED lights to leg bands for birds. Then he trained thousands of these pigeons living aboard a ship to fly when he blew a whistle at dusk. What happened after the pigeons took flight was totally unrehearsed. The birds' swooping movements through the night sky created a starry show that some viewers said looked like fireworks!

5

COW BACKPACKS CATCH BURPS

Cow burps are a problem. It's not their smell; it's because they pollute the planet. In the United States alone, about 25 percent of methane, a greenhouse gas that causes global warming, comes from cow burps. So scientists have been studying ways to reduce cow gas in the air. One idea out of Argentina is so weird it made news: cow backpacks! A plastic bag strapped atop a cow collects gas from its tummy via an inserted tube. It sounds silly, but it works: The contraption captures about 1,200 liters of gas from each cow every day; 300 liters are methane. Scientists say gas can be turned into an energy source strong enough to power a refrigerator for a full day!

WELCOME to FOX Island

How clever scientists saved these cute critters

BY ALLYSON SHAW

ME

Native Americans likely brought island foxes to the southern Channel Islands.

A MATING PAIR OF ISLAND FOXES SHOWS AFFECTION. THE SPECIES USUALLY MATES FOR LIFE.

WITH THE PACIFIC OCEAN BEHIND IT, AN ISLAND FOX PACES IN A GRASSLAND HABITAT.

An island fox kit emerges from its underground den and sniffs the brush on Santa Cruz Island, some 20 miles off the southern coast of California. His brother follows, and the two foxes tumble over each other as they play fight. Soon their mother halts the fun, grooms both pups from head to tail, then leads them away to teach them how to hunt.

A few decades ago, about 4,000 island foxes roamed Santa Cruz Island and two others in the Channel Islands National Park. But recently they nearly disappeared. Human activity had dangerously altered the foxes' habitat, and by 1999 only about a hundred foxes remained.

Scientists knew that if they wanted to save this fox—a species that lives nowhere else on Earth—they'd have to change the islands again. They'd need to develop a bold plan to restore the islands back to the way they were.

OUT OF BALANCE

About the size of house cats, foxes were once the top predators on these islands, eating everything from insects to mice to birds to fruit. "They were like the lions of the Channel Islands," says Tim Coonan, a biologist with the U.S. National Park Service. "They didn't have any predators."

But that started changing about 80 years ago. Before, the foxes shared their island home with bald eagles, which ate mostly fish and chased away other birds of prey. In the 1940s and 1950s, though, pesticide waste began seeping into the ocean off the California coast. It poisoned sea creatures, which over time poisoned fish-eating bald eagles too. By 1960 all the bald eagles were gone from the islands.

Without the territorial bald eagles guarding the islands, golden eagles settled on three northern Channel Islands: San Miguel, Santa Rosa, and Santa Cruz. Unlike bald eagles, these birds hunt mammals that live on land. Island foxes became the

AN ISLAND FOX KIT STAYS CLOSE TO ITS DEN. KIT DENS ARE OFTEN IN ROCKS, WOOD PILES, BRUSH, OR BURROWS.

SCHAFER AND HILL / GETTY IMAGES (BIG PICTURE); © SEBASTIAN KENNERKNECHT / MINDEN PICTURES (GOLDEN EAGLE); TIM HAUF PHOTOGRAPHY (FOX BEHIND BUSH); MEL MELCON / GETTY IMAGES (BALD EAGLE); CHUCK GRAHAM (TWO FOXES, KIT); MARTIN WALZ (MAP)

AN ISLAND FOX BRED IN CAPTIVITY ON SANTA ROSA ISLAND AWAITS RELEASE.

A WORKER FROM THE NATIONAL PARK SERVICE HOLDS AN ISLAND FOX KIT BORN IN CAPTIVITY.

perfect prey. Within a decade, golden eagles nearly wiped out the foxes.

The foxes were in danger of disappearing from the islands forever unless someone did something—fast. Working together, scientists from the National Park Service, the Nature Conservancy, and other agencies developed an amazing plan to save the island fox.

HERE COME THE KITS

A curious island fox sniffs its nose. "Cool!" it might have thought. "There's food in that box!" It walks in, and snap! A door shuts behind it.

The island fox rescue plan started with an attempt to increase the fox population. But to do that, scientists had to keep the critters safe from eagles. So they created special traps to help them move the foxes to safety.

Luckily the foxes weren't hard to capture: Biologists baited the traps with cat food and simply waited for the foxes to walk in. "When we went to collect the foxes, they'd be curled up asleep," says Christina Boser, an ecologist with the Nature Conservancy.

Scientists kept breeding pairs in 20-foot-by-40-foot pens on their home islands. Inside, the foxes climbed on tree branches, rested in hammocks, and hid in wooden den boxes. Then ... success! The foxes began having kits the following year. These animals were starting their comeback.

EAGLE SWAP

But what good is a comeback if hungry golden eagles still soar the skies? Scientists knew they had to get the predators away from the islands. And they had some tricky ideas.

One plan was to place an animal carcass on the ground that was secretly attached to a net that would spring up and trap the bird. Another was to place fake eggs in the eagles' nests that had drugs to make them sleepy. Yet another involved tricking the eagles into trying to chase away a real great horned owl from its nest—only to be trapped by netting when the eagle got close.

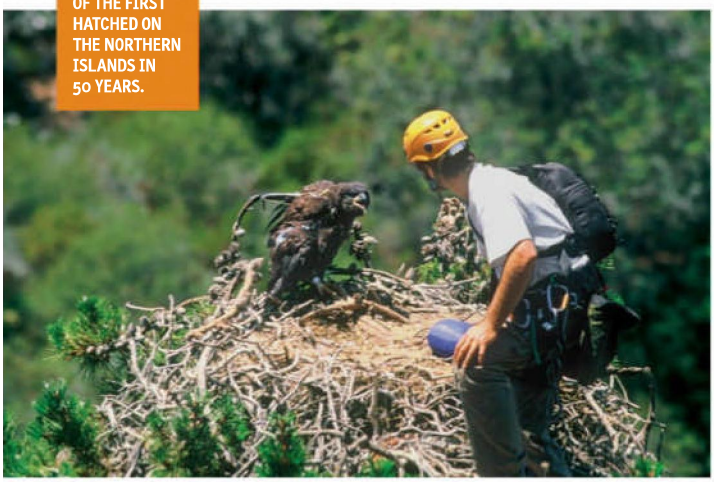
Unfortunately, once any method started working, the birds learned to avoid the traps. "Only the really smart eagles were left at the end," Coonan says.

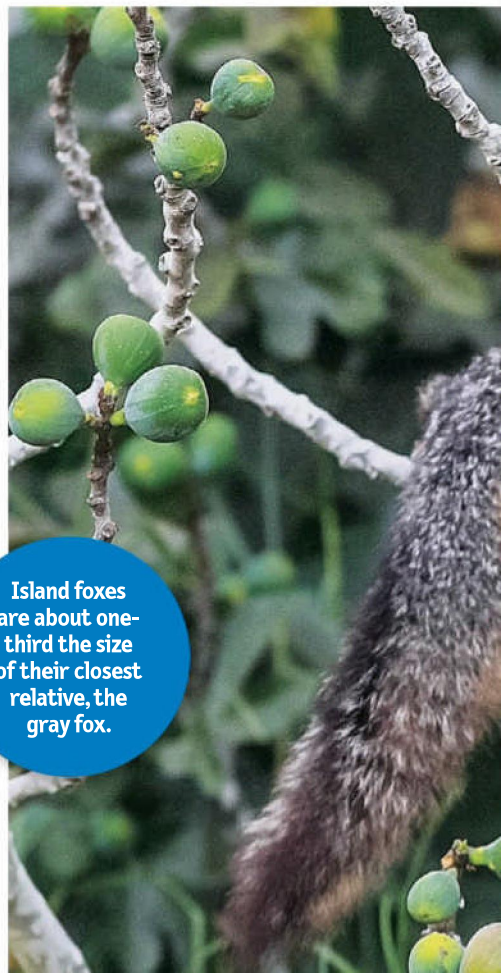
Scientists finally nabbed the last golden eagles, trapping them when they were on the ground with a net that was shot from a helicopter. In all, the team trapped, transported, and released 32 golden eagles back to the California mainland.

Now they just had to keep the golden eagles from coming back. The plan? Raising bald eagle chicks on the islands. Scientists even fed the eagles through a door so they wouldn't bond with humans.

Today about 60 bald eagles fly over the Channel Islands. They are helping to

A SCIENTIST CHECKS OUT A YOUNG BALD EAGLE, ONE OF THE FIRST HATCHED ON THE NORTHERN ISLANDS IN 50 YEARS.





Island foxes are about one-third the size of their closest relative, the gray fox.

CHUCK GRAHAM (CAPTIVE FOX, BALD EAGLE NEST, EATING FIG, TWO KITS, SKUNK, LIZARD, SALAMANDER); NPS (HOLDING KIT, RELEASE); CATHY SCHWEMM (DEER MOUSE); TIM HAUF PHOTOGRAPHY (SCRUB-JAY)

maintain a safe habitat for the foxes so the mammals can continue to thrive.

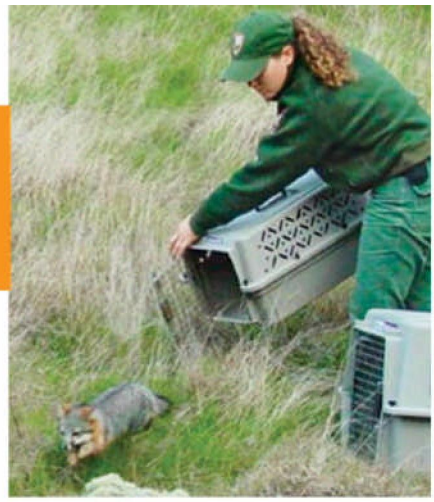
FOX ISLAND

With the golden eagle population dwindling, the wild foxes could safely breed again. Combined with pups from the captive foxes, scientists eventually increased the fox population to a healthy 250. Once the goldens were completely gone, scientists released the captive foxes back into their habitat.

Boser and other scientists brought the foxes in cat carriers to different parts of the three islands. But one fox wasn't ready to say goodbye. "We opened the kitty carrier and walked away to release another fox," she says. "When we walked back, she was sitting on top of the carrier."

The population on the three islands today is the same if not greater than it was before the golden eagles came to the islands. The curious, playful critters often greet human visitors when they arrive—and can get mischievous.

"They'll try to pull the zipper down on my tent and run off with my shoes and socks," says Chuck Graham, a wildlife photographer and kayak guide. "They're a part of the Channel Islands. They deserve to be here."



FREEDOM! BRED IN CAPTIVITY, AN ISLAND FOX DASHES AWAY AS IT'S RELEASED INTO THE WILD.

Pups weigh a hundred grams when born—about as heavy as a lemon.

Excellent climbers, the foxes can grab fruit from the tips of tree branches.

Island Living

Island foxes live only on California's Channel Islands. Meet a few other critters found nowhere else but there.

ISLAND DEER MOUSE

FUN FACT

When startled, deer mice drum their paws on a hard surface as a warning to other mice.

ISLAND SPOTTED SKUNK

FUN FACT

Skunk kits often walk behind their mom in a single-file line.

ISLAND SCRUB-JAY

FUN FACT

Island scrub-jays sometimes build their nests with animal hair.

ISLAND NIGHT LIZARD

FUN FACT

These lizards can live to be 25 years old.

CHANNEL ISLANDS SLENDER SALAMANDER

FUN FACT

Salamanders can lose and regrow their tails.

NOW SHOWING!
50 BIRDS, 50 STATES
CALIFORNIA
natgeokids.com/march

30 Cool THINGS ABOUT

BY ELIZABETH HILFRANK

1 In New Zealand you'll soon be able to order pizza delivered by drone.

2 The first robotic dinosaur, modeled after a *Troodon*, was created in 2001.

3 One day, laptops will roll up like a yoga mat.

4 The earliest handheld cell phone sold for nearly $4,000 in 1984.

5 The first computer mouse was made mostly of wood.

6 Humans blink over 50% less when using a computer.

7 A newly invented light bulb needs to be changed only once every 20 years!

8 Scientists are studying the "spines" on the surface of cats' tongues to develop a new high-tech hairbrush.

9 One computer system can tell the difference between a genuine smile and a false smile.

10 Nearly all cell phones in Japan are waterproof.

11 A car company modeled one of their cars after the yellow boxfish, a tropical fish found in parts of the Indian, Pacific, and Atlantic Oceans.

12 In 1936, a Russian scientist built a basic computer that was powered by water.

13 One of the world's first alarm clocks always rang at the same time: 4 a.m.

14 The first video game was thought to be invented in Long Island, New York, in 1958.

15 The computers used in the 1969 moon landing had less processing power than a modern cell phone.

16 The world's first robot chef can cook up to 100 different dishes, including crab soup.

KOYA79 / ISTOCK / GETTY IMAGES PLUS (1); GEORGE STEINMETZ / GETTY IMAGES (2); GEARSTD / SHUTTERSTOCK (3); TIM BOYLE / BLOOMBERG VIA GETTY IMAGES (4); BADAHOS / SHUTTERSTOCK (6); JOCIC / SHUTTERSTOCK (7); UKKI STUDIO / SHUTTERSTOCK (8); JAHANZAIB NAIYYER / SHUTTERSTOCK (9); SEONGJOON CHO / BLOOMBERG VIA GETTY IMAGES (10); STUBBLEFIELD PHOTOGRAPHY / SHUTTERSTOCK (11); 31MOONLIGHT31 / SHUTTERSTOCK (12); PRACHAYA ROEKDEETHAWEESAB / SHUTTERSTOCK (13); NASA (15); MOLEY ROBOTICS (16)

17 Motion-tracking technology allows visitors to **control the movements** of a **virtual sea lion** at *Encounter: Ocean Odyssey*, an interactive **digital aquarium.**

18 You'll find 10 times more **bacteria** on a smart-phone than on a toilet seat.

19 The world's **smallest computer** is the size of a grain of **rice.**

20 Some **windows** can **change their tint** based on the **angle of the sun's rays.**

21

Researchers are developing **touch screens** to allow trained **dogs** to make **phone calls** and send **text messages.**

22 A **humanoid robotic diver** named **Ocean-One** investigates underwater shipwrecks.

TECHNOLOGY

23

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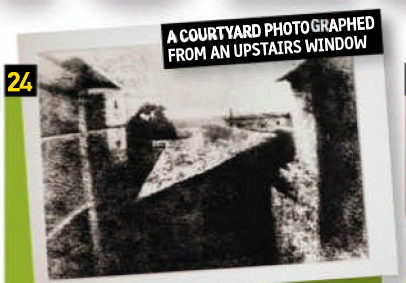
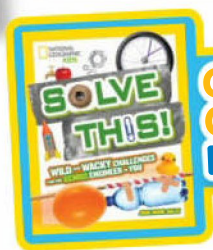
Some wind turbines have bumps that mimic those on a **humpback whale's flipper** to increase efficiency.

24



The world's **first photograph** took more than **eight hours to develop** in 1826.

25 **Plastic trees** planted in **Mumbai, India, convert sunlight into electricity,** illuminating some streets.

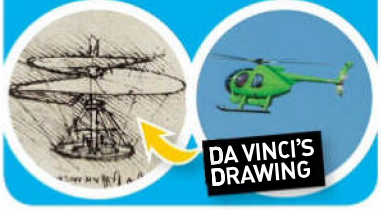


CHECK OUT THIS BOOK!

26 Some **drones** can create **3-D maps** of the **insides of buildings.**

27 **Special satellites** can see a **grapefruit** on a picnic table from **250 miles above Earth.**

28 **Helicopters** trace their history back more than **500 years** to drawings by **Leonardo da Vinci.**



29

3-D printers have created **fake beaks** and limbs for injured animals.

30 Wildlife officers use fake animals to **spy** on **illegal hunters.**

NATIONAL GEOGRAPHIC
ENCOUNTER
OCEAN ODYSSEY
For more information, grab a parent and go online.
natgeoencounter.com

HILARY ANDREWS / NG STAFF (17); AQUARIAGIRL1970 / SHUTTERSTOCK (18); MICHIGAN MICRO MOTE - UNIVERSITY OF MICHIGAN (19); BG-FOTO / SHUTTERSTOCK (21, DOG), PAKHNYUSHCHY / SHUTTERSTOCK (21, TABLET) IMAGE DIGITALLY COMPOSED; © OSADA / SEGUIN / DRASSM (22); DAVID ASHLEY / SHUTTERSTOCK (23, WHALE); ANDREW ZARIVNY / SHUTTERSTOCK (23, TURBINE); DPA / PICTURE-ALLIANCE / NEWSCOM (24); LEEMAGE / CORBIS VIA GETTY IMAGES (28, DRAWING); SHANNON HERYET / SHUTTERSTOCK (28, HELICOPTER); EZEQUIEL BECERRA / AFP / GETTY IMAGES (29)

FunStuff

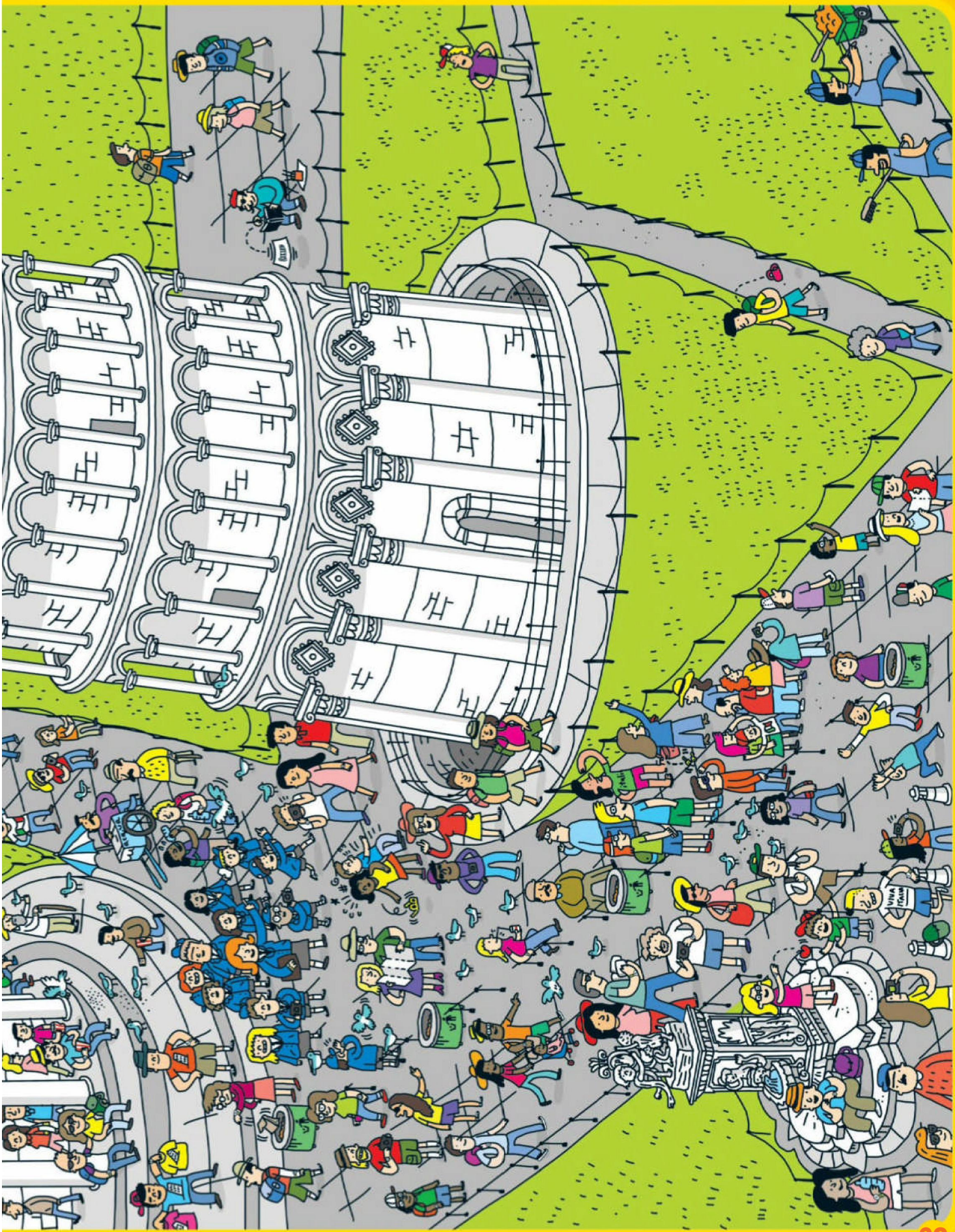
games, laughs, and lots to do!

Free Fall

Someone has forgotten a guidebook at the top of Italy's Tower of Pisa. Using the series of clues, figure out which person the guidebook belongs to. ANSWER ON PAGE 35

The person whom the guidebook belongs to ...

- ❏ is wearing glasses.
- ❏ is not wearing a hat.
- ❏ has brown hair.
- ❏ is wearing a watch.
- ❏ is wearing a short-sleeved shirt.
- ❏ is wearing red shoes.



Funny Fill-In

Rock Star

BY AMANDA SANDLIN

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.

My band, the Three _____ (animal, plural), finally got our big break. _____ (male celebrity) was looking for kids to star in his new show, "_____ (your hometown)'s Got Talent." We grabbed our musical _____ (noun, plural) and filed into the auditorium where _____ (large number) people were waiting to audition. Finally it was my band's turn to perform. I was so nervous my _____ (body part, plural) started to _____ (verb). I took a(n) _____ (adjective) breath, then we started to play a rock 'n' _____ (verb) tune. _____ (relative's name) jammed on the _____ (adjective) keyboard and _____ (friend's name) _____ (past-tense verb) on the drums. Then it was time for my _____ (adjective) solo. I went to hit a(n) _____ (adjective) chord when my guitar flew out of my hands. I _____ (past-tense verb) backward and grabbed it in midair, but I lost my balance, crashed into the drum set, and broke the keyboard. I _____ (past-tense verb) off the stage and landed in the front row. Everyone was silent until _____ (same celebrity) jumped to his feet and gave us a(n) _____ (verb ending in -ing) ovation. "_____ (silly word)!" he yelled. "That was the best comedy routine I've seen so far. You're in!"

DAN SIPPLE

From the pages of *Almanac 2018*

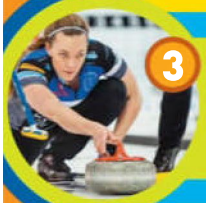
STUMP YOUR PARENTS

If your parents can't answer these questions, maybe *they* should go to school instead of you!

ANSWERS ON PAGE 35

1 **King Tutankhamun became Egypt's ruler when he was 9 years old. He was _____ when he died.**
A. 10 **C.** 35
B. 19 **D.** 50

2 **A baby giant anteater spends up to its first _____ of life riding piggyback on its mother.**
A. day **C.** month
B. week **D.** year



3 **In curling, a "burned stone" is the name for a stone that has _____.**
A. been set on fire **C.** been touched by a teammate
B. broken **D.** flown into the crowd

4 **What was usually on President John F. Kennedy's lunch menu?**
A. a grilled cheese sandwich **C.** meatloaf
B. New England clam chowder **D.** a hot dog

5 **What body part does a butterfly use to taste its food?**
A. wings **C.** feet
B. antennae **D.** abdomen

6 **Which song from the movie *Frozen* won an Academy Award for best original song?**
A. "Let It Go" **C.** "Colors of the Wind"
B. "Under the Sea" **D.** "A Whole New World"

7 **You may find a nudibranch—a shell-less snail—living _____.**
A. in a desert burrow
B. on a tree in the rain forest
C. on an Arctic glacier
D. under a rock on the seafloor

8 **According to legend, a(n) _____ caused the city of Atlantis to sink into the ocean over 11,000 years ago.**
A. hurricane **C.** tornado
B. earthquake **D.** alien invasion

9 **How did *Stegosaurus* protect itself from enemies?**
A. It smacked them with its spiky tail.
B. It sat on them.
C. It stomped on them.
D. It bit them.

10 **It took _____ to build the Empire State Building.**
A. a little more than a year **C.** 10 years
B. 5 years **D.** 50 years

KENNETH GARRETT / NATIONAL GEOGRAPHIC CREATIVE (KING TUT); ANATOLIY CHERKASOV / NURPHOTO VIA GETTY IMAGES (CURLING); AF ARCHIVE / ALAMY *(FROZEN)*; TIM ROCK / GETTY IMAGES (NUDIBRANCH); @ CHRISTIAN MARTÍNEZ KEMPIN / ISTOCKPHOTO *(STEGOSAURUS)*; CEDRIC WEBER / SHUTTERSTOCK (EMPIRE STATE BUILDING)

STRIKA ENTERTAINMENT
UnLeaShed
1
IT LOOKS LIKE THE KIDS HAD A GREAT TIME AT THE ZOO!
AND THE ANIMALS ARE LOOKING GOOD TOO!
2
THEY'RE SO WILD! I WISH I COULD BE ONE OF THEM.
3
YOU WANT TO BE WILD, EH?
4
DO YOU GUYS THINK THIS IS GOING TO WORK?
OF COURSE! YOU'RE ABOUT TO TAKE A WALK ON THE WILD SIDE!
GLUE
SOON AFTER ...
5
CHECK ME OUT! I'M A KANGAROO!
GO, ATLAS, GO!
BOING
6
JUST LOOK OUT FOR THAT ...
FENCE!
7
UNHHH!
THUD!
BOING

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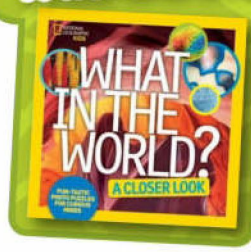
What in the World?

GOLD STANDARD

These photographs show close-up views of golden objects. Unscramble the letters to identify what's in each picture. Stay golden!

ANSWERS ON PAGE 35

CHECK OUT THIS BOOK!



OLGD RBSA

_____

HOPYRT

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YESK

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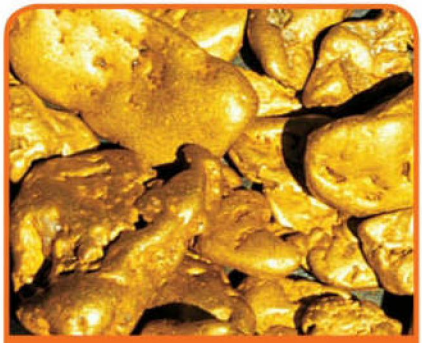

DGLO TNSGEUG

_____

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RNEFHC ONRH

_____

TOP ROW (LEFT TO RIGHT): © IMAGE SOURCE / CORBIS; JEFFREY COOLIDGE / GETTY IMAGES; © STOCK CONNECTION / SUPERSTOCK.
MIDDLE ROW (LEFT TO RIGHT): © SUPERSTOCK; © SERGIO PITAMITZ / GETTY IMAGES; NEAL MISHLER / GETTY IMAGES.
BOTTOM ROW (LEFT TO RIGHT): © CORBIS / SUPERSTOCK; AP PHOTO / U.S. MINT; © EXACTOSTOCK / SUPERSTOCK.

Just Joking

Blue-webbed gliding frog

KNOCK, KNOCK.

Who's there?
Cash.
Cash who?
No, thanks.
I prefer peanuts.

Q What protects a clown from the sun?

A The bozone layer

Q What do you call a shy lamb?

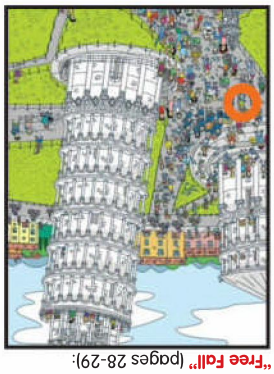
A *Baaash*-ful

CHECK OUT THIS BOOK!

Answers

"Real or Fake?" (pages 20-21): "Alaskan Ice Monster" (2) is fake—sort of. The government *did* post about a monster but only as a prank. The "monster" was actually an icy rope. "Another Earth?" (3) is the other fake story.

"Free Fall" (pages 28-29):



"Stump Your Parents" (page 31): **1.** B, **2.** D, **3.** C, **4.** B, **5.** C, **6.** A, **7.** D, **8.** B, **9.** A, **10.** A.

"What in the World?" (page 34): **Top row:** gold bars, trophy, keys. **Middle row:** watch, statue, gold nuggets. **Bottom row:** crown, coin, french horn.

KITCHIN & HURST / LEESONPHOTO (FROG); © RUBBERBALL / SUPERSTOCK (CLOWN); FUSE / GETTY IMAGES (LAMB)

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