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HOMEMADE CHICKEN NUGGETS

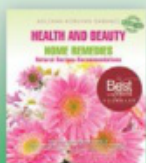
Ingredients

SERVES 10

1.1 lbs chicken breast
1 teaspoon salt
½ teaspoon sugar
1 tablespoon chopped parsley
1 tablespoon chopped mint
1 tablespoon chopped dill
1 tablespoon chopped thyme
1 tablespoon chopped rosemary
2 eggs
½ teaspoon ground turmeric
4 tablespoons olive oil
3 slices gluten free bread
2 tablespoons lemon juice
6 tablespoons sunflower oil
½ cup corn flour
1 medium onion
4 cloves garlic

Preparation (parent help required)

- 1 Coarsely chop the chicken breast, onion and garlic mix with a hand blender, take into a deep bowl.
- 2 Crumble the bread and add.
- 3 Add the salt, sugar, turmeric, thyme, rosemary, parsley, dill, lemon juice, olive oil, egg then knead to prepare the nugget dough.
- 4 Take 1-2 tablespoons from the nugget dough to shape into balls or patties.
- 5 Lay the corn flour on a flat plate, beat the egg in a bowl.
- 6 Dip the chicken nugget first in the corn flour then in the egg, then fry with sunflower oil.
- 7 You may serve with broccoli and cabbage salad, potato fries on the side.



To be prepared by loving parents for their mini gourmets.

FOR MORE INFORMATION ON THIS BOOK, WRITER'S OTHER BOOKS,
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ABOUT
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PETS IN COSTUME





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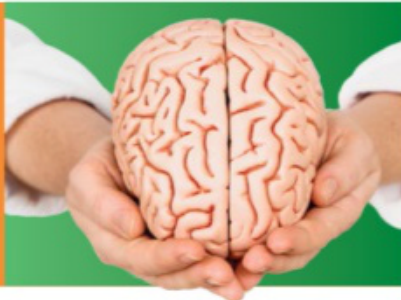
Find out where you score
on this ickiness scale.

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Check out surprising
facts about these
slithering reptiles.



THIS COASTAL WOLF
LIVES IN BRITISH
COLUMBIA, CANADA;
THE COASTAL WOLF
ON THE COVER
LIVES ON THE COAST
OF SOUTHEAST
ALASKA.



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COVER: JOHN HYDE / WILD THINGS PHOTOGRAPHY (WOLF); STRIKA ENTERTAINMENT (ZEUS THE MIGHTY ILLUSTRATION); MICHAEL SELEZNEV / ALAMY (DRAGON); REBECCA HALE / NG STAFF (PIRATE DOG). PAGE 3: PAUL NICKLEN / NATIONAL GEOGRAPHIC IMAGE COLLECTION (COASTAL WOLF); WINNIE AU / GETTY IMAGES (BULLDOG); BAIMIENG / SHUTTERSTOCK (SKULL); HIDE5Y / SHUTTERSTOCK (BRAIN); MICHAEL D. KERN (AMAZON TREE BOA); JAMES YAMASAKI (BAT ILLUSTRATIONS, THROUGHOUT)

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weird but true!

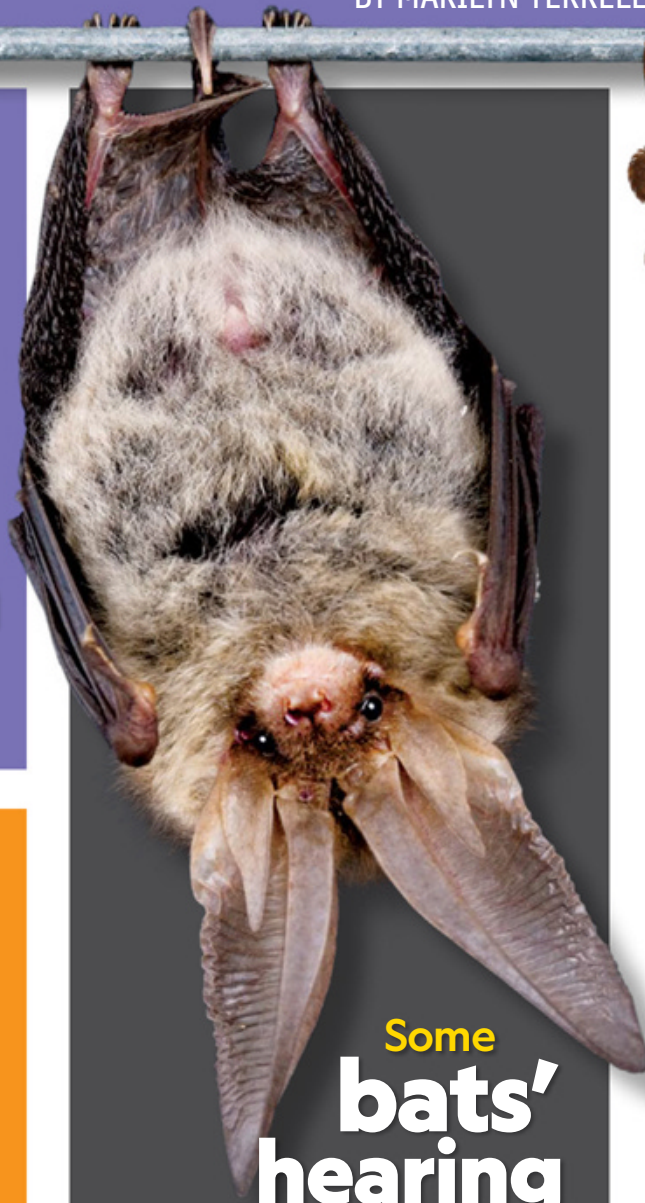
Check out these outrageous facts.

BY MARILYN TERRELL

Watch Fast Facts for even more crazy-fun facts.
natgeokids.com/october

weird but true!
fast facts

A speck of blood contains about **5 million** red blood cells.



Cryptozoologists study legendary creatures such as **Bigfoot**.

Portions of **Albert Einstein's brain** are on display in a museum in Philadelphia, Pennsylvania.

A town in Arizona is named **Tombstone**.

Some bats' hearing is strong enough to detect the sound of a beetle walking on a leaf.

Extracts from human hair are used to make some pizza crusts.



The death's-head moth has a skull-shaped design on its body.

The candy corn made each year could circle the Earth just over **4** times.



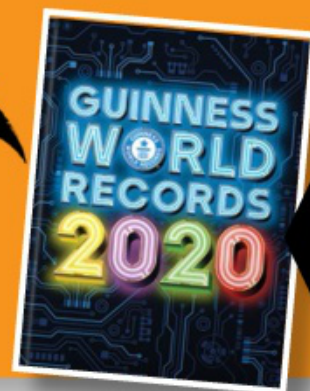
A goblin shark can thrust its jaws out of its mouth.



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GUINNESS WORLD RECORDS

BY ALLI DICKEY



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**GUINNESS WORLD
RECORDS 2020!**



SO MANY POTTERS

No muggles were allowed at West Byford Primary School in Perth, Australia, when 997 students gathered to break the record for the most Harry Potters in one place. The wannabe wizards all wore black robes and drew lightning scars on their foreheads. Wonder if anybody used polyjuice potion?



FREAKY TREE

This one giant banyan tree is so big, it looks like an entire forest when viewed from above. The massive 550-year-old structure holds the record for the greatest perimeter length for a tree, providing shade to some five acres of land. (About 20,000 people can fit under its canopy.) Located in India, the tree is an epiphyte, a plant that can grow on other plants. The tree drops its seeds from above and slowly invades other trees' space, earning it a pretty spooky nickname: the Strangler Fig. Yikes!

SCARY SCORPION

This creeper is seriously, well, creepy. The giant forest scorpion, found in southern India, is the world's largest scorpion species. On average, they measure about seven inches long, or nearly the length of a pencil. But that's nothing: The largest one ever discovered measured 11.5 inches from the tips of its pincers to the end of its stinger. That's almost the length of two dollar bills laid end-to-end.



ACTUAL SIZE! (BUT
THE LARGEST ONE
EVER IS NEARLY
TWICE AS BIG.)

INCREDIBLE ANIMAL FRIENDS

BY AMANDA SANDLIN

HERE'S
A THANK-YOU
KISS
FOR HELPING
ME OUT.



ROBI

BEAR

CARACAL GUIDES BLIND BOBCAT

CARACAL

SIZE 24 to 42 inches long (head and body); tail is 7 to 13 inches

RANGE Africa and the Middle East to India

WHAT'S FOR DINNER? Rodents, birds, hyraxes, dik-diks (small antelope), and monkeys

CLAIM TO FAME Most scientists think caracals twitch their ear tufts to communicate with other caracals.

FUN TO KNOW The word "caracal" comes from a Turkish word that means "black-eared."

Scotts Mills, Oregon

Grumpy, mean, and blind, Bear the bobcat was friendless and alone at the sanctuary where he lived. Staff worried about his mental health ... until they had an idea: Why not introduce him to an equally grumpy cat? That's when Nairobi the caracal moved into an enclosure next door. Almost immediately, Bear started rubbing against the fence that separated them, cooing to the caracal. At first "Robi" ignored the bobcat, but soon the caracal offered some friendly tail swishing and rump wriggling.

A few weeks later, staff opened the fence. Bear ran to Robi and started gently headbutting him. They quickly became besties—and more. Robi acted as Bear's guide cat and was always just a nose length ahead of him. If the bobcat lost Robi, he'd chirp until the caracal came back. "Bear was so reliant on Robi," says Cheryl Tuller, WildCat Ridge Sanctuary director. "Robi took that as his job." For breaks, the two would lie in the sun as the bobcat kneaded Robi's fur between his paws. No catfights here!

BOBCAT

SIZE 26 to 41 inches long (head and body); tail is 4 to 7 inches

RANGE United States, southern Canada, and Mexico

WHAT'S FOR DINNER? Mainly rabbits and hares

CLAIM TO FAME Bobcats are named for their stubby, "bobbed" tails.

FUN TO KNOW Bobcats can pounce 10 feet to catch prey.

BEAR THE BLIND
BOBCAT FOLLOWS
ROBI'S LEAD.



KARINE AIGNER / NG STAFF (ALL)

Bet You Didn't Know!

8 fiery facts about dragons

BY ANDREA SILEN



3

Ancient people may have mistaken dinosaur bones for dragon remains.

1

Some stories say that dragon eggs took 3,000 years to hatch.

2

People in China once thought dragons controlled rain.

5

In parts of Asia, these mythical creatures were considered kind.

4

Draco, the Latin word for "dragon," is the name of a dragon-shaped constellation.

6

Long ago in Europe, people believed dragon's blood cured illness.

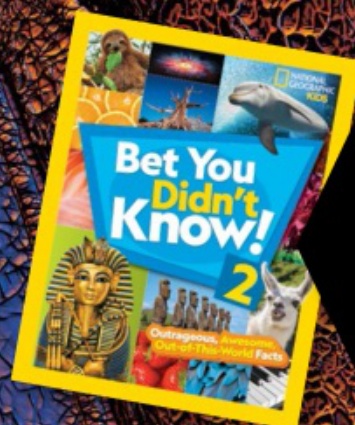
7

The capital of Vietnam was once known as Thang Long, or "Soaring Dragon."

8

Dragons in very old South American tales had feathers.

MICHAEL SELEZNEV / ALAMY



CHECK
OUT
THE
BOOK!

AMAZING ANIMALS

HALLOWEEN PET PARADE

You expect to see ghosts, vampires, and pirates on Halloween. What you *don't* expect is for those creatures to have four legs. Millions of pets will be dressed up for the holiday—and *Nat Geo Kids* found some of the funniest getups.

BY KAY BOATNER

These pets like wearing costumes, but yours may not. Never force your pet to do something it doesn't want to do.

ORANGE YOU GLAD I BROUGHT SNACKS?

CHUCKIE THE CHOW CHOW IS CUTE ENOUGH TO EAT IN HIS FUN FRUIT COSTUME.

If you dress up your pet, check that the outfit is comfortable and allows the animal to breathe and walk safely.





I THINK
I COULD
USE MORE
HAIR
SPRAY.

BETSY THE ENGLISH
BULLDOG IS HAVING A
SERIOUSLY AWESOME
HAIR DAY.



LET'S PLAY
CATCH ...
THE FISH.

STEVE THE
DACHSHUND IS
READY TO DIVE
DEEP IN HIS
SCUBA SUIT.

LANEY THE
POMERANIAN
ISN'T FOOLING
ANYONE IN HER
GHOST GETUP.



BARK!
I MEAN,
BOO!

FORGET
BATMAN,
I'M
BATDOG!



MASON THE
CHIHUAHUA
MAKES CRIME
FIGHTING LOOK
SUPERCUTE.

FETCHING COSTUMES

Which pet costumes
were all the rage last
Halloween? These were
some of the most popular.

1. pumpkin
2. hot dog
3. bumblebee
4. devil
5. cat
6. dog
7. lion
8. *Star Wars* character
9. superhero
10. ghost

GET MORE HALLOWEEN FUN!
natgeokids.com/october

AMAZING ANIMALS

THERE'S NO PLACE LIKE THE DOGGY PARK!

Nearly 20 percent of people who celebrate Halloween plan to dress their pets in costumes this year.



DRESSED AS DOROTHY FROM THE WIZARD OF OZ, NELLIE THE MIXED BREED IS ON THE LOOKOUT FOR A YELLOW BRICK ROAD.



SOME SPIDERS HAVE 12 LEGS.



PUFF THE MIXED BREED IS THE SWEETEST SPIDER EVER.

The wife of magician and escape artist Harry Houdini held séances every October 31 to try to contact her dead husband.



WELCOME TO SCARY.

A town in West Virginia is named Scary.

One survey showed that 90 percent of parents sneak some of their kids' Halloween candy.



On Halloween night in 2009, a basketball game between the San Antonio Spurs and the Sacramento Kings was delayed because of a live bat in the arena.

One year the Empire State Building in New York City put on a Halloween light show that could be seen as far away as New Jersey.



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FORGET THE CHERRY—I'LL TAKE DOG TREATS ON TOP.



CHARLIE THE GOLDEN RETRIEVER IS DELICIOUSLY DISGUISED AS A YUMMY DESSERT.

I NOW PRONOUNCE ME THE CUTEST PUP EVER.



TANK THE ENGLISH BULLDOG SAYS "I DO" TO THIS BRIDAL OUTFIT.

TREAT YOUR PET

Instead of candy, which will hurt your pet's tummy, give your furry friend its own Halloween snack. Check out pet stores for ideas, or grab a parent and try one of the recipes below from the American Society for the Prevention of Cruelty to Animals.

CREEPY CAT COOKIES

- 1/4 cup of warm water
- 5 tablespoons of grated Parmesan cheese
- 3 tablespoons of margarine
- 1 tablespoon of cod liver oil
- 1 cup of white flour
- 1/4 cup of soy flour

Preheat the oven to 300°F. Combine the water, cheese, margarine, and oil, then add the flour. Roll the dough 1/4 inch thick and cut it with spooky-shaped cookie cutters. Bake the cookies on an ungreased cookie sheet for 20 to 25 minutes.



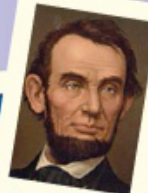
PUMPKIN POOCH BITES

- 2 1/2 cups of whole wheat flour
- 1/2 cup of fresh or canned pumpkin
- 1/2 cup of peanut butter
- 2 teaspoons of cinnamon
- 1 teaspoon of baking powder
- 1/2 cup of water

Preheat the oven to 350°F. In a bowl, whisk together the flour, pumpkin, peanut butter, cinnamon, and baking powder. Add water as needed, but the dough should be stiff and dry. Roll the dough until it's 1/2 inch thick and cut it with cookie cutters. Bake the treats for about 40 minutes.

These recipes should not replace your pet's regular meals. Check with your veterinarian if your pet has special dietary needs or food allergies.

The spirits of both Abraham Lincoln and Thomas Jefferson reportedly haunt the White House.



A government agency once issued joke instructions on how to survive a zombie attack.



While working for a haunted house, an employee spotted a black-and-white cat named Disaster that had been missing for two years, then helped reunite him with his owner.



WATCH THIS PIRATE DOG'S PHOTO SHOOT!
natgeokids.com/october



SURF Pups

5 WAYS COASTAL WOLVES
THRIVE BY THE SEA

BY ALLYSON SHAW



Awolf steps out onto a sandy beach. Catching a scent, it paws at the wet sand in search of a buried clam. *Crunch!* The wolf crushes the clam in its jaws and swallows. Still hungry, it splashes into the ocean waves and swims to a nearby island to find more food.

Wolves on the beach might sound strange, but these special gray wolves have been living sea-side for thousands of years. Known as coastal wolves, about 2,000 of these individuals make their homes among the islands and coastal rainforest of western British Columbia in Canada. (Another population lives in south-east Alaska.) “Their environment is so different from that of any other wolf,” wildlife researcher Chris Darimont says. “So they’ve had to adapt to this unique place.” Check out five ways these howlers are living their best life on the beach.

Wolves often howl in a chorus.

Coastal wolf pups start to learn how to swim when they’re about two and a half months old.

Coastal wolves are valued in many indigenous cultures; some groups consider them ancestors.



1

BEACH HAIR, DON'T CARE

You might expect coastal gray wolves to be, well, gray—like most gray wolves. But coastal wolves’ fur is often streaked with reddish-orange highlights. The shade is similar to a common seaweed on the shore. “The color matches almost perfectly,” Darimont says. That probably helps camouflage these predators while they’re searching for prey on the beach.

Coastal wolves also have less underfur than other gray wolves, Darimont says. The cottony fluff helps wolves living in snowy places like Montana and interior Alaska keep warm, like the stuffing in a winter jacket. But coastal wolves’ habitat is so mild that they don’t need the extra layer. And hey—you probably wouldn’t want to wear a winter coat on the beach, either.



2

SEA SIZE

About the size of a German shepherd, coastal wolves are about 20 percent smaller than gray wolves living in North American forests. Scientists think it could be because these seafood eaters don't need the extra strength. After all, coastal wolves are wrestling otters, not gigantic moose like their gray wolf cousins. "They aren't chasing massive prey, so they don't need the large body size to take them down," Darimont says.

A wolf's sense of smell is about a hundred times more sensitive than a human's.

Happy wolves wag their tails.

LEARN MORE ABOUT GRAY WOLVES.
natgeokids.com/october

Some coastal wolves have black fur.

WOLF SIBLINGS PLAY, JUST LIKE HUMANS DO.

PACK LIFE

Coastal wolves might have a different way of life because of their beach habitat, but they socialize just like other gray wolves do: in a pack. "Packs are really just families," wildlife researcher Chris Darimont says. "They have a mom, a dad, and lots of siblings."

All those siblings help the alphas (the mom and dad) raise the young pups. One older sibling typically stays behind to watch over the playful pups while the rest of the family is out hunting. Once the young wolves are old enough—about two years old—they might strike out on their own or stick around with their family to help raise the new youngsters.

SWIM TEAM CHAMPS

One small island usually isn't big enough for coastal wolves to find and eat the seven pounds of food they need each day. So the canines dog-paddle from island to island in search of more food. "They swim between islands like we walk on sidewalks," conservationist Ian McAllister says. And these wolves really are super swimmers. Scientists have spotted them on nearly every one of the thousand islands and rocky outcrops in the area, McAllister says, sometimes swimming up to 7.5 miles in between each strip of land.

5

SEAFOOD, PLEASE!

Some coastal wolves can get 90 percent of their diet from the sea.

Coastal wolves don't chow down on moose, elk, or caribou like forest-dwelling gray wolves do. Instead, coastal wolves comb the beach, using their powerful sense of smell to find whatever snacks the ocean served up that day. They might dig in the sand for crabs and clams, feast on fish eggs stuck to kelp, or sneak up on larger animals like sunbathing seals or otters. "They'll even eat barnacles off a log like corn on the cob," Darimont says.

Others get their fill of fish just from salmon. "They wait in the shallows where the salmon's backsides are poking out, then snap up the tastiest-looking fish they can find," Darimont says. A coastal wolf might scarf down 10 salmon in just one morning. Talk about fish breath!



HOWL-OWEEN

Ahhhh-wooooo! Around Halloween, that sound might send shivers down your spine. But why?

Wolves are the top predators in many habitats. For thousands of years people competed with the canines for food and protected their livestock from them. So it makes sense that in almost all cultures where ancient people lived near wolves, these carnivores inspired frightening folktales about humans turning into bloodthirsty beasts: werewolves. (In parts of the world with different animals at the top of the food chain, people created stories about creatures like were-tigers, were-jaguars, and were-crocodiles.)

Halloween celebrates spooky stuff, so go ahead and dress up as a werewolf. But leave real wolves out of it. They're super important when it comes to keeping habitats healthy, plus wolves have much more to fear from us than we do from them!

—Esther Kim

3, 2, 1 ...
SALMON!

TALK
ABOUT
A SNACK
ATTACK.

LOOKS
LIKE
SALMON
TACOS
FOR
DINNER!

4

SPLASHY SURPRISE

Gray wolves that live in open habitats like the tundra often hunt by chasing big, hoofed animals across a wide plain, Darimont says. But that style of hunting doesn't work on a coast that's full of thick rain-forest or tiny islands too small to run across. Instead, they often sneak up on prey—then pounce. "The seals haul out of the ocean to get away from killer whales," McAllister says. "But on land, they're not safe from ambushing wolves."



CHECK
OUT
THIS
BOOK!

OTHER
ANIMALS
IN

Odd Places

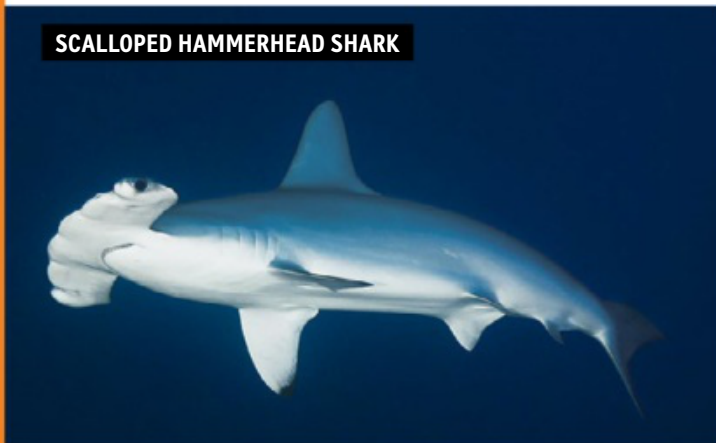
Think a wolf in the ocean is strange? Meet a few other animals that might seem out of place but are right where they're supposed to be.

TREE GOATS

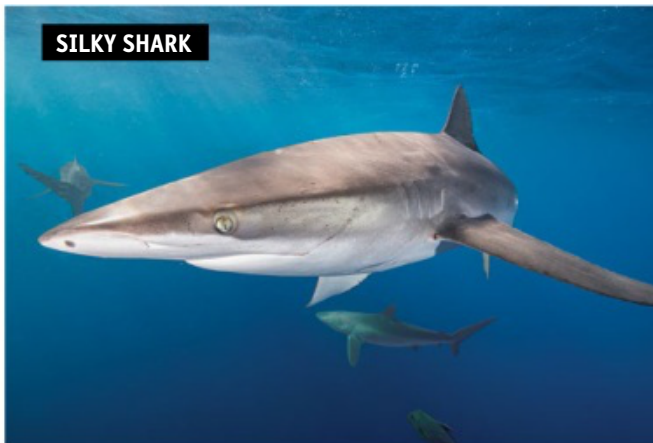
These goats will do a lot for a snack—that includes climbing to the top of a 30-foot-tall tree. Every summer the argan trees in southwest Morocco produce bitter-tasting fruit that the local goats love. And the goats are doing the humans a favor: When the goats, um, pass the undigestible nut inside the argan fruit, people collect the nuts to create an oil that can be used in hair products and for food. Thanks, goats!



SCALLOPED HAMMERHEAD SHARK



SILKY SHARK



PACIFIC SLEEPER SHARK



VOLCANO SHARKS When scientists dropped a deep-sea camera into the mouth of an active underwater volcano in the South Pacific Ocean near the Solomon Islands, they were shocked to discover three species of sharks swimming through water that's too hot and acidic for human divers—scalloped hammerheads, silky sharks, and one super-rare Pacific sleeper shark. The big question to answer: Can the sharks sense when the volcano will erupt again?

CITY WHALES No, they're not visiting the Empire State Building—they're here for the food! For the first time in about a hundred years, humpback whales are swimming back into the waters off the coast of New York City. Why? Years of cleanup efforts in the Hudson River—a tidal estuary where fresh and salt water meet—have brought back algae, zooplankton, and fish. And then those hungry humpbacks, which are the ultimate foodie tourists, weren't far behind.



EMPIRE
STATE
BUILDING



RAINFOREST PENGUINS

Tawaki penguins, or Fiordland crested penguins, prefer the warm waters and misty rainforest of southwest New Zealand to the icy Antarctic. With smaller bodies than many cold-weather penguins like emperors, these flightless birds can live in balmy 70°F temperatures. And their eggs stay toasty too, tucked away in caves, bushes, and tree stumps where Dad sits on the nest.

OCEAN SLOTHS

Pygmy three-toed sloths might be slow climbers, but when they get into the water, watch out! These special sloths, which live only on an island off the coast of Panama in Central America, plop into the sea when they want to move to a new tree. The sloths' tummies are often filled with gas due to their leafy diet, so it's easy for them to stay afloat. They can move three times faster in the water than they can on the ground. But since we're talking about sloths, that's not really saying much.



Explore the Ocean with LEGO® Friends Sea Life

The five LEGO Friends are on a mission to find out everything about marine creatures. Let's meet the girls...

Stephanie

Stephanie dives into every challenge headfirst. Speaking of diving, she's also a skilled submarine pilot!

LOVES: Her teammates, competitions

NOT CRAZY ABOUT: Being disorganized



Andrea

Bursting with energy, Andrea is full of spirit and drive. Will her underwater music catch on?

LOVES: Being in the spotlight

NOT CRAZY ABOUT: Sharks!



Olivia

When the mission calls for gadgets and inventions, Olivia always comes to the rescue.

LOVES: Her sidekick Zobo, technology

NOT CRAZY ABOUT: Crowds



Mia

Mia is an adventure seeker and expert on all animals, both in the sea and on land!

LOVES: Animals, alone time

NOT CRAZY ABOUT: Sitting around



Emma

Seeing and capturing the beauty of life under the sea is what Emma does best.

LOVES: Photography, painting, anything creative

NOT CRAZY ABOUT: Missing the sunset



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Sea Life Puzzle Time!

Dive in and get puzzling with the Sea Life Friends!

ANSWERS
AT BOTTOM
OF PAGE

Treasure Hunt

Which line will lead the Sea Life Friends to the treasure chest?



Mia Match

Which two of these images of Mia are exactly the same?



The LEGO Friends Sea Life Collection



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LEGO FRIENDS
SEA LIFE FUN!

ANSWERS: TREASURE HUNT - Line B leads to the treasure chest. MIA MATCH - 2 & 5 are exactly the same.

THE SCIENCE OF SPOOKY



HOW THESE CREEPY THINGS AFFECT YOUR BRAIN

BY AARON SIDDER

What's that strange noise in the night? Is it the wind? Or something else?

"When you encounter something scary, your brain releases chemicals," psychologist Martin Antony says. "These chemicals make our hearts race, so we breathe faster and sweat. Your nervous system is preparing your body to either fight a threat or run away from it." Scientists call this the "fight-or-flight" response.

So which so-called spookiness makes us feel this way—and why? Discover what puts the *EEK!* in these five freaky things.



THE FEAR: SPIDERS

SCIENTIFIC NAME: Arachnophobia

SPOOKY SCIENCE: Humans have been afraid of spiders since our ancient human ancestors thought they carried deadly diseases. "Today, we know that's not true," psychology professor Kyle Rexer says. "But a lot of people still have incorrect ideas about how dangerous spiders are." While some spiders *can* be deadly, most are not. In fact, humans actually benefit from the existence of spiders. By eating disease-carrying critters such as mosquitoes and cockroaches, these arachnids act as a form of pest control. Plus, scientists are currently studying spider venom in the hopes that it can one day be used in medicines to manage pain or cure illnesses.

THE FEAR: CLOWNS

SCIENTIFIC NAME: Coulrophobia

SPOOKY SCIENCE: One way we decide if a person is friend or foe is by evaluating their facial expressions. Clowns—with their makeup, wigs, and fake noses—are hard to read, which is what makes them scary to some people. "It's hard to tell how a clown is feeling," psychology professor Frank McAndrew says. "So we think, 'If clowns can hide their emotions, what *else* might they be hiding?'"

FIGHT THE FRIGHT

It's natural to avoid things that scare us. "But to get over your fears—whether you're afraid of spiders, clowns, the dark, or, well, anything—you have to

focus on them instead of avoid them," psychology professor Kyle Rexer says. He shares some useful tips to help you manage your fears.



THE FEAR: HEIGHTS

SCIENTIFIC NAME: Acrophobia

SPOOKY SCIENCE: When you're standing on solid ground, your eyes work with your inner ears to help you stay balanced. But if you're standing, say, at the edge of a cliff, your sense of balance can get out of whack. "Your inner ear is saying you're surrounded by solid ground, but your eyes are saying, 'Nope,'" inner-ear specialist Dennis Fitzgerald says. Your brain is getting mixed signals, which can cause vertigo, or dizziness that makes heights feel scary.

THE FEAR: DARKNESS

SCIENTIFIC NAME: Nyctophobia

SPOOKY SCIENCE: As with other phobias, humans developed a fear of the dark to avoid danger. Our ancestors had to be extra cautious at night to protect themselves against things like animal predators and human invaders. (This was before electric lighting!) "Many people still have that fear of the dark today," Antony says. "It's a fear of the unknown."



THE FEAR: SMALL SPACES

SCIENTIFIC NAME: Claustrophobia

SPOOKY SCIENCE: Maybe you've been stuck in an elevator before and thought it was no big deal. For some people, though, just the fear of being stuck can cause them to take the stairs. "Small spaces might cause some people to worry about running out of oxygen, or never being able to get out—no matter how unlikely that is," Antony says. "To increase our chances of survival, people have evolved to avoid being trapped. For some, that could be anywhere."

- Expose yourself to things that you're afraid of in a way that you feel safe. For example, if you fear public speaking, try practicing in front of a mirror first, then give the speech to a small group of trusted friends.

- If you feel anxious, place one or both of your hands on your stomach and focus on breathing slowly and deeply. Regulating your breathing will help you feel calmer and can lessen your sense of panic.

- Don't be too hard on yourself! Everyone's afraid of *something*. Just make sure it doesn't stop you from living your life. Talk to an adult if it feels like too much to handle on your own.

SPOOKY SCALE

Check out how the *Nat Geo Kids* team ranked some so-called scary things. Then **vote online** for what you think is the spookiest. natgeokids.com/october



ABSOLUTELY TERRIFYING

Mummies

Creepy Dolls



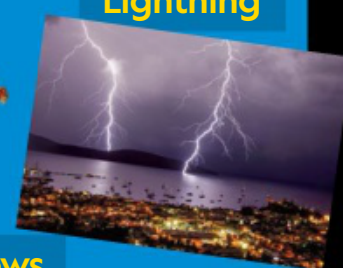
SPINE-CHILLING

Blood



KINDA FRIGHTENING

Lightning



Scarecrows



NOT-SO-SCARY

Skulls



Rats



TAKE A FUN HALLOWEEN QUIZ!
natgeokids.com/october

QUIZ

How squeamish are you?

BY ANNA CLAYBOURNE

THE WORD "SQUEAMISH" DESCRIBES A PERSON WHO IS SENSITIVE TO ANYTHING DISGUSTING, SUCH AS STEPPING IN DOG POOP ON THE STREET, GETTING A WHIFF OF ROTTEN FOOD, OR SEEING A SQUASHED SLUG. Curious about your own ability to withstand grossness? Take this just-for-fun quiz to find out where you score on the squeamishness scale!

START HERE

YOU HAVE A LARGE **SCAB**. WHAT DO YOU DO WITH IT?

Cover it with bandages and try not to faint.

Leave it alone and forget about it.

Pick or poke at it, even though you know you shouldn't.

WHICH OF THESE WOULD YOU PREFER AS A PET?

Guinea pig

Labrador retriever

Boa constrictor

HAVE YOU EVER **EATEN** A **BOOGER**?

No, of course not! Ew.

Um ... maybe?

STOMACH OF STEEL



Nothing grosses you out. NOTHING. In fact, we suspect you actually *like* all this gross stuff. And that's OK, because someone in this world has to perform gory surgeries and catch hairy spiders without batting an eye. But don't forget that things like puke and snot can be health hazards. Just make sure you wash your hands!

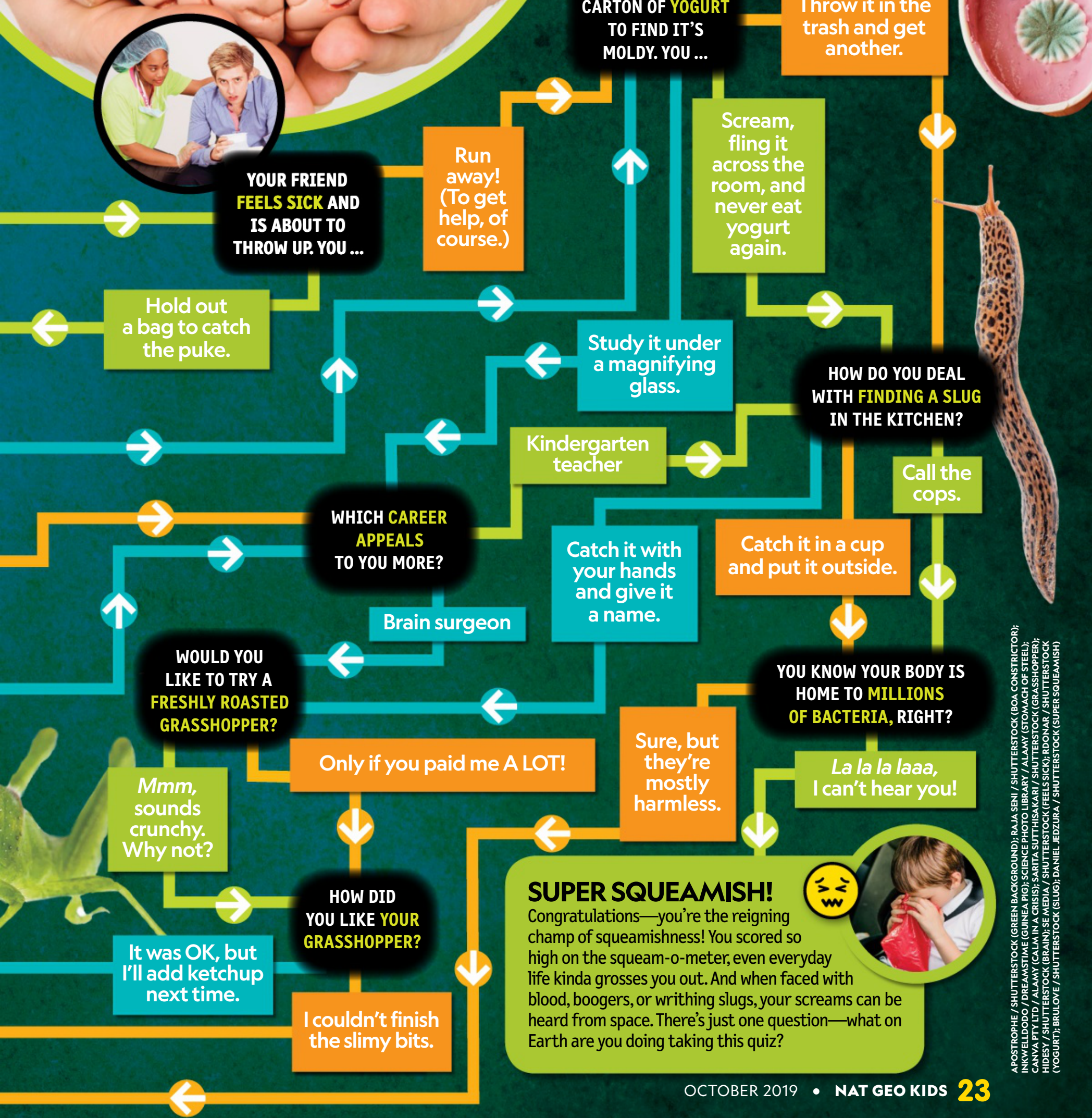
CALM IN A (GROSS) CRISIS



You're a handy person to have around when things get icky. When a gross or gruesome challenge rears its ugly head, you do what has to be done, even if you're gagging inside. Thank goodness someone around here is so sensible! Still, you're only human. Some disgusting scenarios even *you* can't cope with.



WIN THE BOOK!
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APOSTROPHE / SHUTTERSTOCK (GREEN BACKGROUND); RAJA SENI / SHUTTERSTOCK (BOA CONSTRUCTOR); INKWELDODO / DREAMSTIME (GUINEA PIG); SCIENCE PHOTO LIBRARY / ALAMY (STOMACH OF STEEL); CANVA PTY LTD / ALAMY (CALM IN A CRISIS); SARITA SUTTHISAKARI / SHUTTERSTOCK (GRASSHOPPER); HIDEY / SHUTTERSTOCK (BRAIN); SE MEDIA / SHUTTERSTOCK (FEELS SICK); RDONAR / SHUTTERSTOCK (YOGURT); BRULOVE / SHUTTERSTOCK (SLUG); DANIEL JEDZURA / SHUTTERSTOCK (SUPER SQUEAMISH)

SUPER SNAKES

Snakes are masters of disguise, skilled hunters, and champion eaters. More than 3,000 species of snakes slither around the world. Check out these surprising facts about snakes.

BY CHANA STIEFEL

SNAKES CHANGE THEIR SKIN.

Snakes literally grow out of their skin. Every few months, most start rubbing against the ground or tree branches. Starting at the mouth, a snake slithers out of its too-tight skin. Like a sock, the skin comes off inside out. *Voilà*—the snake has a fresh, shiny look. Nice makeover.



DIONE RAT SNAKE



PUFF ADDER

SNAKE VENOM CAN KILL.

By sinking two hollow, pointy fangs into their prey, many snakes inject venom to paralyze or kill victims before devouring them. Africa's puff adder is thought to be one of the world's deadliest snakes. Up to six feet long and weighing as much as 13 pounds, the puff adder strikes fast. Its venom can cause severe pain, tissue damage, and even death in humans. It's a snake to be respected ... from a distance.



AMAZON TREE BOA

SNAKES SMELL WITH THEIR TONGUES.

Smell that mouse? A snake uses its tongue to help it smell. It flicks its long, forked tongue to pick up chemical molecules from the air, ground, or water. The tongue carries the smelly molecules back to two small openings—called the Jacobson's organ—in the roof of the snake's mouth. Cells in the Jacobson's organ analyze the scent.

Mmm, lunch!

CONSTRUCTORS GIVE WICKED HUGS.

Boas, anacondas, pythons, and other snakes called constrictors are amazing squeezers. This kind of snake wraps its muscular body around a victim and squeezes until the animal suffocates. The twisted talent comes from muscles attached to 200 or more vertebrae in a snake's backbone. (Humans are born with only 33 vertebrae.)



GOLDEN TREE SNAKE

SNAKES “SEE” HEAT.

Some snakes—such as pythons, rattlesnakes, and copperheads—can't see well and use other senses to find prey. These creatures have openings called pit holes in front of their eyes. These pits sense the heat given off by warm-blooded prey. The snakes' heat vision allows them to track prey day or night.



GREEN TREE PYTHON

SOME SNAKES CAN DISAPPEAR.

Snakes are great hunters, but often they're the prey. Birds, raccoons, foxes, and other animals have a taste for snakes. One way to hide is with camouflage. Many snakes sport colors and patterns that allow them to blend in with their surroundings. For instance, a green tree python looks like a vine when it coils itself around a branch. A yellow eyelash viper blends in with flowers. And a rainbow boa disappears on gnarled tree stumps. *Poof*, gone.

BRAZILIAN RAINBOW BOA

VENOM

can be good for you!

Scientists have discovered that the same poison that causes awful symptoms—and even death—in people who have been bitten by a venomous snake can be turned into medicines. Here are a few examples.

COPPERHEAD

SYMPTOMS IF BITTEN:

swelling, difficulty breathing, low blood pressure, bleeding

USED TO TREAT:

breast cancer

WESTERN RATTLESNAKE

SYMPTOMS IF BITTEN:

muscle twitches, swelling, low blood pressure, vomiting, difficulty breathing, bleeding

USED TO TREAT:

heart attacks

GABOON VIPER

SYMPTOMS IF BITTEN:

cardiac arrest, fever, internal hemorrhaging, blistering, swelling

USED TO TREAT: strokes

SNAKES LIVED WITH DINOSAURS.

Snakes slithered onto the scene more than a hundred million years ago, when dinosaurs still roamed the Earth. More primitive snakes, such as boas and pythons, have traces of hind leg bones in their skeleton. This is evidence that the snakes evolved from lizard-like animals with legs. Over time, snakes lost their limbs. Their advantage? With its body on the ground, a snake can sense the vibrations that tell it when food—or danger—is nearby.

SNAKES CAN'T HEAR.

Snakes don't have external ears to hear sound waves in the air. Instead, bones in their lower jaw pick up vibrations in the ground or water. The vibes trigger signals in the snakes' brains, which are received as messages. *"Juicy mouse coming closer!"*

SNAKES DON'T CHEW.

Ever feel so hungry you could swallow a meal in one gulp? A snake can! Its lower jawbone is hinged loosely in back, so the snake can open superwide. The snake's backward-curved teeth are designed to grab prey and move it down its throat. Loosely attached ribs and elastic skin expand as the food moves on down. Boas and other huge snakes can even eat goats and deer. After a big meal, snakes can go weeks without food.

SEDGE VIPER

VINE SNAKE

BRAZILIAN PIT VIPER

SYMPTOMS IF BITTEN:

tissue death, bleeding, kidney failure

USED TO TREAT:

high blood pressure

INDIAN COBRA

SYMPTOMS IF BITTEN:

swelling, bruising, paralysis, blistering, respiratory failure

USED TO TREAT:

arthritis

KING COBRA

SYMPTOMS IF BITTEN:

drowsiness, difficulty breathing, limb paralysis, convulsions, headache, loss of consciousness

USED TO TREAT:

neurological conditions

AFRICAN SAW-SCALED VIPER

SYMPTOMS IF BITTEN:

blistering, hemorrhaging, tissue death

USED TO TREAT:

heart attacks

MICHAEL D. KERN (BRAZILIAN RAINBOW BOA, SEDGE VIPER); MATTIAS KLUM / NATIONAL GEOGRAPHIC (VINE SNAKE); JACK MICHANOWSKI / AGE FOTOSTOCK / GETTY IMAGES (COPPERHEAD); DAVE KING / DORLING KINDERSLEY / GETTY IMAGES (RATTLESNAKE); ER DEGGINGER / PHOTO RESEARCHERS / GETTY IMAGES (GABON VIPER); MARK MOFFETT / MINDEN PICTURES (BRAZILIAN PIT VIPER); MICHAEL & PATRICIA FODDEN / MINDEN PICTURES (INDIAN COBRA); DAVE STAMBOULIS / ALAMY (KING COBRA); HITENDRASINKAR PHOTOGRAPHY / ALAMY (AFRICAN SAW-SCALED VIPER)

FUN STUFF

GAMES, LAUGHS, AND LOTS TO DO!

PLAY!

GET SPOOKED!

Real-life animals inspired many of the trick-or-treaters at this Halloween party. Find the 15 costumes listed below.

- 1 goblin shark
- 2 bumblebee bat
- 3 pink fairy armadillo
- 4 Gila monster
- 5 spider monkey
- 6 skeleton shrimp
- 7 leafy sea dragon
- 8 wolffish
- 9 milk snake
- 10 tiger mosquito
- 11 giraffe weevil
- 12 demon mole rat
- 13 vampire squid
- 14 spectacled bear
- 15 ghost frog

ANSWERS ON PAGE 33



WHAT IN THE WORLD



CHECK OUT
THE BOOK!



BLACK AND WHITE

These photos show close-up and faraway views of animals that are black and white. Unscramble the letters to identify what's in each picture. **ANSWERS ON PAGE 33**



RAEZB



ITAAMRN



RAOC



BATBRI



ITAGN NAPDA



OWC



IGPUNEN



YLTEURTFB



KKNSU

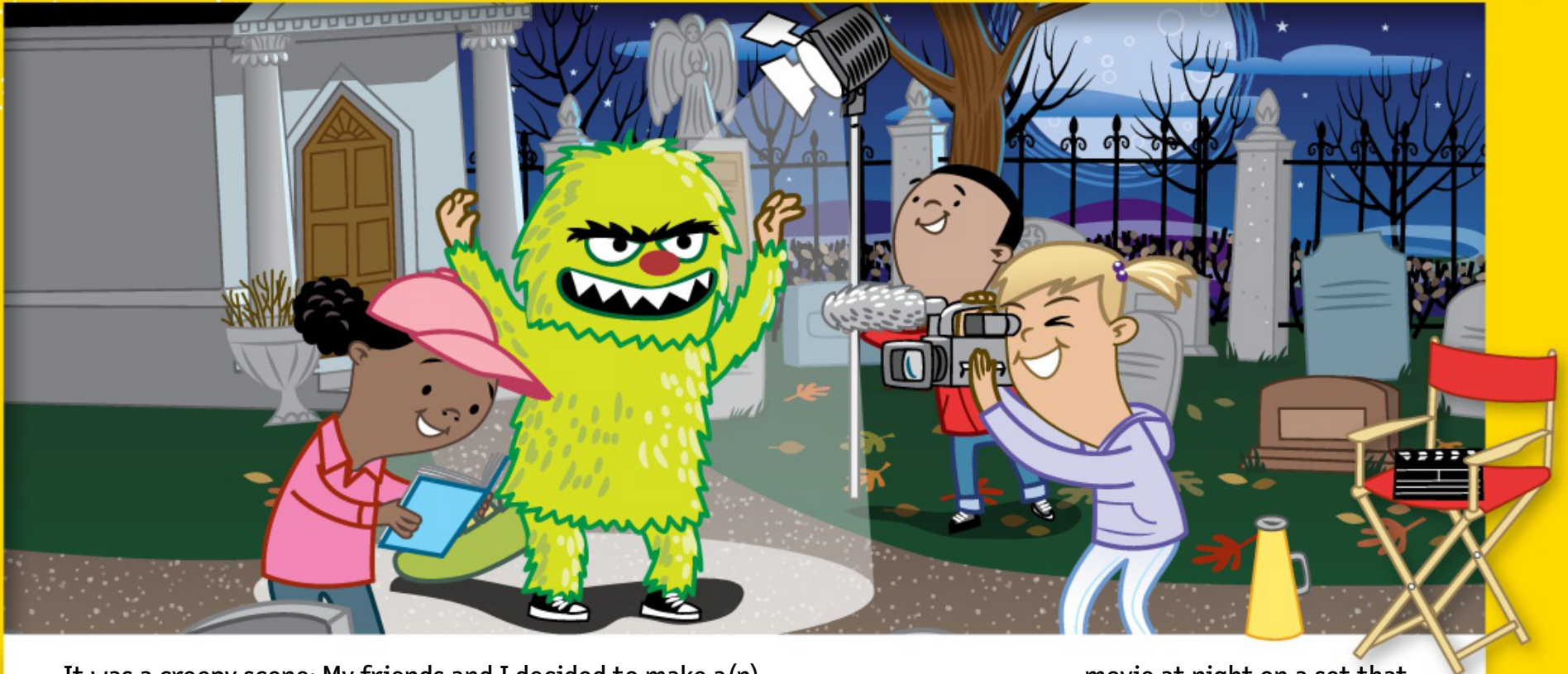
TOP ROW (LEFT TO RIGHT): ENGLISHINBAS / SHUTTERSTOCK; TIM LAMAN / NATIONAL GEOGRAPHIC IMAGE COLLECTION; TORY KALLMAN / SHUTTERSTOCK; MIDDLE ROW (LEFT TO RIGHT): TERRY WHITTAKER / FRANK LANE PICTURE AGENCY / GETTY IMAGES; HUPENG / DREAMSTIME; G K & VIKKI HART / PHOTODISC GREEN / GETTY IMAGES; BOTTOM ROW (LEFT TO RIGHT): STEVE ALLEN / DREAMSTIME; FLORIAN DELMAS / SHUTTERSTOCK; ULTRASHOCK / SHUTTERSTOCK.

FUNNY FILL-IN

HAPPY HAUNTING

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 MOLLY MARCOT

PLAY MORE FUNNY FILL-IN!
natgeokids.com/ffi



It was a creepy scene: My friends and I decided to make a(n) _____ movie at night on a set that
looked like a(n) _____-year-old graveyard. We turned on our _____, and
I put on a(n) _____ costume. Just then, I heard a(n) _____. "It was probably
just the _____," I said. But then the sound moved closer. And closer. Suddenly I saw a big, shadowy
_____. " _____!" I screamed. My friends _____ over each other
as they tried to escape _____. As I ran, I closed my _____ and _____
into a(n) _____. But then _____ pointed a(n) _____ into the
distance. "It's just a(n) _____," (s)he said. We all _____ in relief.
Guess this _____ movie can wait until next _____.



EXPLORER ACADEMY

In the new book *Explorer Academy: The Double Helix*, 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.

TEXT AND PUZZLE BY GARETH MOORE

THE CODE: SEMAPHORE

Semaphore is a flag-based communication system in which letters are represented by the way a person holds two flags. Once used by sailors to send messages to other ships, today this code is often used to signal airplanes. See how the code lines up with the flag positions on the right.

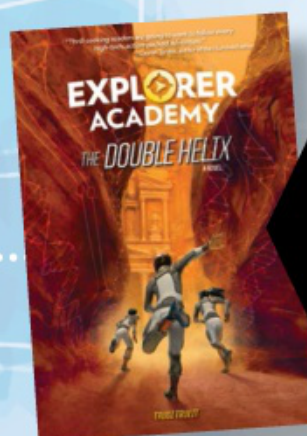
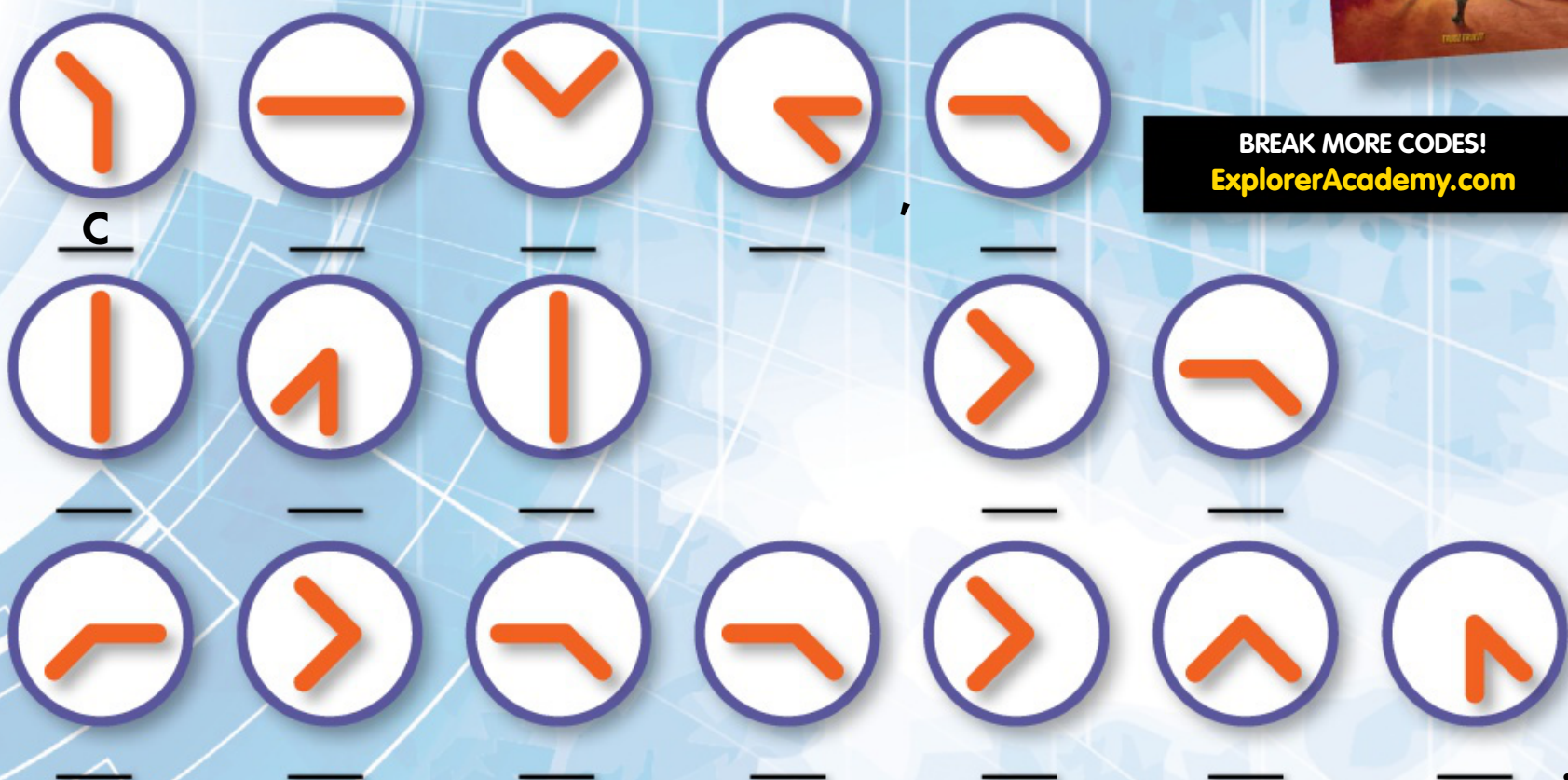
The flag positions can be hidden in any type of image. Below, we've hidden the positions in a clock face.



CRACK THIS CODE!

Using the semaphore alphabet above, unlock the message hidden in these clock faces.

ANSWER ON PAGE 33



CHECK OUT THE BOOK!

BREAK MORE CODES!
ExplorerAcademy.com



ARTZONE

CREEPY COSTUMES

Nat Geo Kids readers will be a fright in these spooky suits.



▲ **Dracula on Pumpkin Hill** Chloe B., 8, Senoia, Georgia

Three-Headed Clown Squid

Declan P., 11
Sperryville, Virginia

"Which" Gown

Natasha B., 8
Los Altos, California



My Scary, Hairy Full-Moon Friend

Evan A., 10
Bolton, Massachusetts



Spooky Demon

Kenny F., 6
Herriman, Utah



Vampire Kitty

Shelby K., 10
Alachua, Florida

Draw a character from the Explorer Academy book series.

Send us your original drawings:

**Nat Geo Kids—
Academy 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*.



Frankensquid
Robert K., 10
Ossining, New York

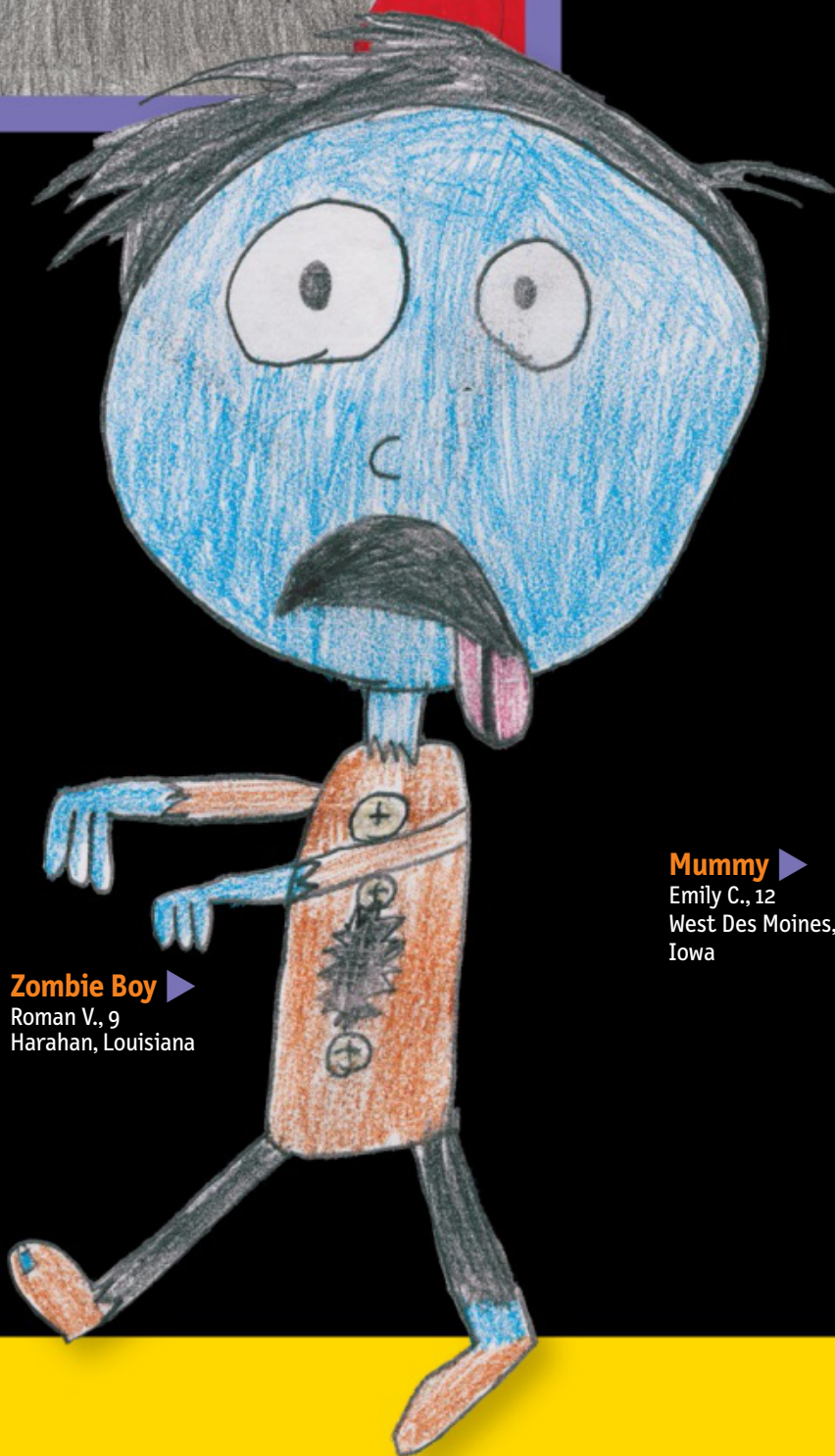
Spider Attire
Danika R., 13
Seattle, Washington



“What in the World?”
(page 29): zebra, tamarin, orca. **Middle row:** rabbit, giant panda, cow. **Bottom row:** penguin, butterfly, skunk.
“Explorer Academy”
(page 31): Cruz’s dad is missing.



Answers
“Get Spooked!”
(page 28):



Zombie Boy
Roman V., 9
Harahan, Louisiana

Mummy
Emily C., 12
West Des Moines,
Iowa

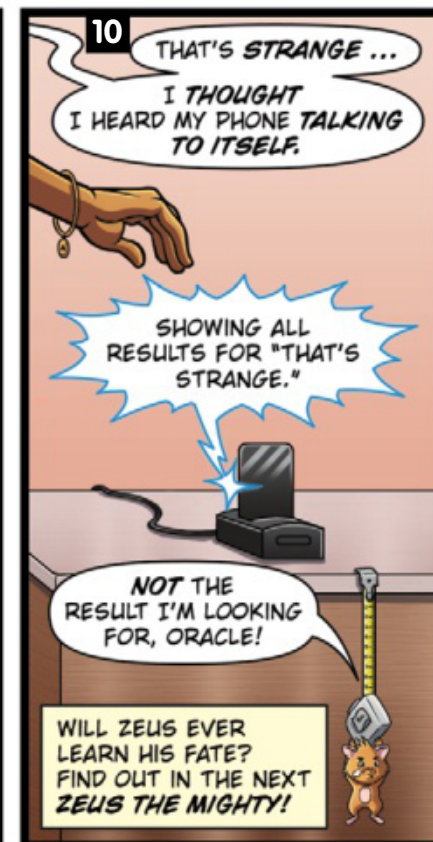
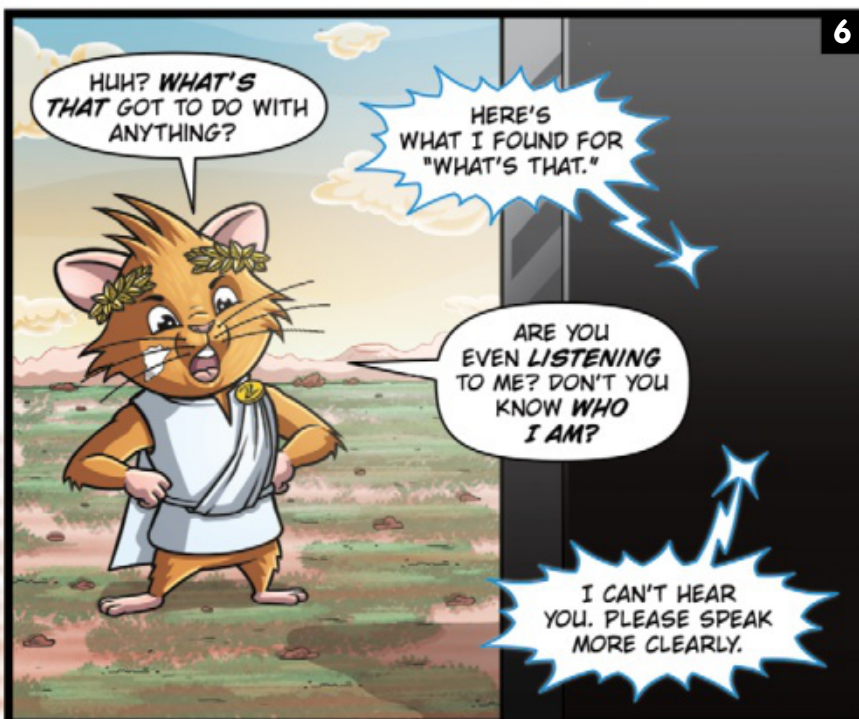
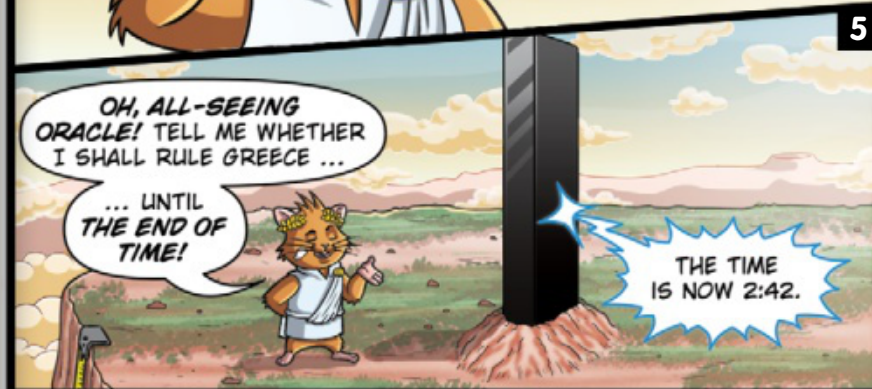


ZEUS

THE MIGHTY



CHECK
OUT
THE
BOOK!





**MAKE THIS
TO AVOID THAT**

**HOMEMADE
BAT COSTUME**

**PLASTIC-
WRAPPED
COSTUME**

BOO-TIFUL BAT COSTUME

Help keep the Earth healthy by ditching some plastic items. This month, make your own Halloween costume instead of buying a store-bought getup. Plastic packaging can wind up in streams and rivers, where it might entangle animals.

MATERIALS

- Measuring tape
- A rectangle of black fabric about 6 feet by 3 feet
- Black marker
- Scissors
- Hot-glue gun
- String or twine
- About a foot of cardboard
- Black paint or black felt
- 2 bobby pins

STEPS



1

Ask a parent or friend to use a measuring tape to find the distance between your fingertips when your arms are outstretched from your sides. Cut a rectangle of fabric that is the length of your wingspan by about 3 feet wide.



2

Fold the fabric in half lengthwise, then draw three scallops diagonally across the fabric with the marker.



3

Cut the fabric along the outline, then unfold the fabric and lay it on a flat surface.



4

Cut two 3-inch pieces of string or twine. Grab a parent and place a dab of hot glue at the end of one finger on each hand.



5

Twist one of the strings into a loop and secure it to the hot glue. Repeat this step on the other wing with the second string.



6

Cut two triangles from the cardboard, about 2.5 inches wide and 3.5 inches tall.



7

Paint the triangles black, or cover them in black felt. Then fold the bottom of the triangles to form a base.

HALLOWEEN NIGHT

To wear your costume, dress in all black and drape the bat wings against your back, looping the strings around one finger on each hand. Use bobby pins to secure the ears to your hair, or glue them to an old headband.

PLANET PROTECTOR

TIP Trick-or-treat with a reusable cloth bag or pillowcase instead of a plastic bucket or bag.

GET MORE PLASTIC-FREE IDEAS TO MAKE
THIS HALLOWEEN GHOULISHLY FUN!
natgeokids.com/KidsVsPlastic