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We know you love the Earth and want to protect it. Before getting started, take a fun quiz on page 12 to find out what kind of planet protector you are, then jump in! PLUS:

can save the world!

Climate Change

Even small changes can make a difference when it comes to keeping Earth healthy. PLUS: See page 16 for ideas on helping Earth's climate.

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Watch your waste to preserve wild places—and wildlife. PLUS: Head over to page 20 to learn how you can keep the planet clean.

**22 Habitat Destruction** 

Homes aren't just for humans—every creature deserves one. PLUS: Check out page 24 for tips on preventing habitat loss.

26 **Declining Biodiversity** 

Learn why animals in your backyard and beyond need protecting. PLUS: Flip to page 28 to find out how you can save wildlife.

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### Check out these outrageous facts.

Check out the book and app!

BY MICHELLE HARRIS



SMELLING good scents while SLEEPING might give you HAPPY DREAMS.

Some MONKEYS in THAILAND **TEACH** their young to



There are SOLID GOLD pizza-size **Canadian coins** worth

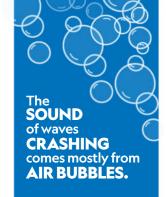


Canadian dollars.

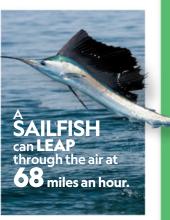


AN EARTHQUAKE in CHILE shortened the length of an Earth day by

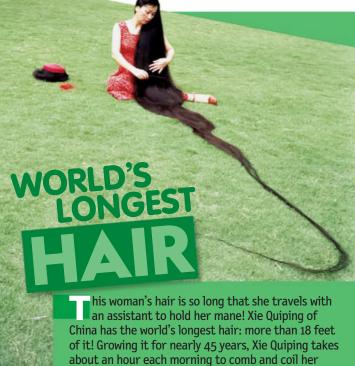




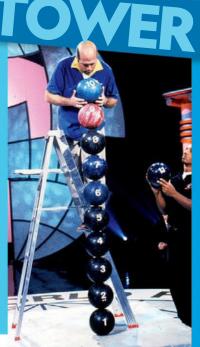








ow do you stack 10 bowling balls on top of each other without adhesives? Very carefully. **David Kremer has** toppled many towers in his successful quest to stack the most bowling balls. But only once has his big toe gotten squashed. Kremer says his trick is simply a balancing act, although some balls do flatten a little as more are added to the stack. The more stability the betterthe balls on top tend to break in half when they fall!



locks. There's just one problem: Sources say her hair

is so heavy that it's hard for her to stand up straight.

### BY KITSON JAZYNKA

LOVE MY **BEAK-TO-BELLY** RUBS!



### **ENGLISH SPRINGER** SPANIEL

**HEIGHT:** 19 to 20 inches tall at the shoulder

WEIGHT: 40 to 50 pounds

**ORIGIN:** Probably Spain, but the English came up with the breed name. The breed was brought to North America in 1913.

**CLAIM TO FAME: Springer** spaniels were traditionally bred as hunting dogs. Their name comes from the fact that they would "spring" at birds to flush them out of bushes.

### **FUN TO KNOW:**

Springer spaniels are sometimes called "Velcro" dogs because they're so friendly and stick to their owners.

### DOG LOVES OWL

### Cornwall, England

Before Bramble the owl takes to the sky for her daily flight, Sophi the English springer spaniel clears her for takeoff by licking the bird's beak. "Since the owl was a baby, Sophi has cleaned Bramble's beak," says Sharon Bindon, the dog's owner, who also runs a sanctuary for birds of prey. "Bramble returns the favor and 'beaks' the dog, as if he were grooming Sophi."

The Eurasian eagle owl and spaniel became best friends when two-week-old Bramble arrived at Ancient Art Falconry. "Sophi sniffed and licked the chick," Bindon says. "Soon Bramble hopped down, toddled over to Sophi, and started following her everywhere."

For years, the two were practically inseparable, even though in the wild this friendship would never exist. A wild owl would prey on small mammals such as mice, rabbits, and even foxes, which are about Sophi's size. "Sophi won't go near most of our birds of prey," Bindon says. But who needs other friends when

> you've got one that will snuggle down and nap with you in front of the television?



### **EURASIAN EAGLE OWL**

**HEIGHT: 2 feet** 

WINGSPAN: 5 to 6 feet

RANGE: Northern Europe through Asia, northern Africa

### **CLAIM TO FAME:**

Aggressive and powerful, Eurasian eagle owls are one of the largest known species of owls.

FUN TO KNOW: Male eagle owls are slightly smaller than the females.



# 

# CHOOSE

Your powerful jaw can chomp through anything.

**CHOOSE** 

You Can drink through your skin.





# If you CHOSE

You might not want to eat steel, but having a jaw powerful enough to bite through something that hard works out well for the GIANT PANDA. The panda's round head holds a set of POWERFUL JAW MUSCLES that make it easy to munch down on thick bamboo stalks—stalks that are so tough that some can withstand compression even BETTER THAN CONCRETE CAN! A giant panda spends about 12 hours a day eating bamboo. *Chomp*.

# on the second of the second of

You never have to worry about becoming dehydrated with a GREEN FROG'S SUPERSKIN, as long as you live in a moist, wetland spot. A frog's skin absorbs MOISTU and these amphibians also rely on their skin for getting oxygen from the water they live in. Frogs need moist skin so they can breathe in oxygen through it. So bring on the rain!





Winter the dolphin struggled against the discarded rope tangled around her body. If she couldn't break free, she'd die. Rescuers rushed her to Clearwater Marine Aquarium, where they fought to keep her alive. The dolphin survived,

but caregivers weren't able to save her damaged tail.

Clever Winter taught herself to swim by waggling from side to side, but this injured her spine. That's when local scientists Kevin Carroll and Dan Strzempka had an idea: the first ever prosthetic, or artificial, dolphin tail!

The tail, which attaches to her body like a rubber glove, took some getting used to. At first, Winter would toss it across the pool for her trainers to

Wiltshire County, England

### BADGER BREAK-IN

Maybe you've heard of a prison breakout. But have you ever heard of a jail break-in?

Two badgers evaded Erlestoke Prison authorities for weeks while they ate their fill of earthworms from the prison lawn. Officials weren't sure how the badgers broke in, but they suspected the furry fugitives might have squeezed through the front gates.

The badgers probably decided to become jailbirds because of the prison



yard's quiet location and large supply of earthworms. "The prisoners would also throw food out the windows to them," says Malcolm Clark of the Wiltshire Badger Group.

After several failed attempts, the authorities finally captured the badgers and forced them to freedom. Let's hope the critters don't become repeat offenders. —Deborah Underwood



**Dolphins** can learn to recognize themselves in the mirror.

It would take two 10-year-olds to equal the length of an Atlantic bottlenose dolphin.



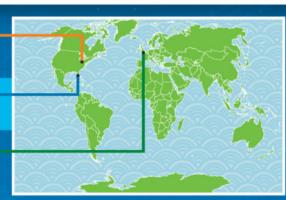
### CAT

### **DOLPHIN**

Clearwater, Florida

### **BADGERS**

Wiltshire County, **England** 



retrieve—just like a game of fetch. But after a few months of training, Winter accepted the tail, and her back started to heal.

Winter is an inspiration to everyone. When a group of physically challenged

children came to see her, Winter swam right up to them and wriggled. "It was as if she were saying, Look at me! I'm like you!" Carroll says. "She just loves making new friends."

—Sarah Youngson

I'M READY FOR MY HEROISM MEDAL.

Columbus, Ohio

### CALLS" COPS

One afternoon while trying to move from his wheelchair to his bed, Gary Rosheisen slipped and fell on the floor. He yelled for help, but no one heard him—and the phone was out of reach. Cold and sore. Rosheisen thought he'd be stuck on the floor until his nurse arrived the next day.

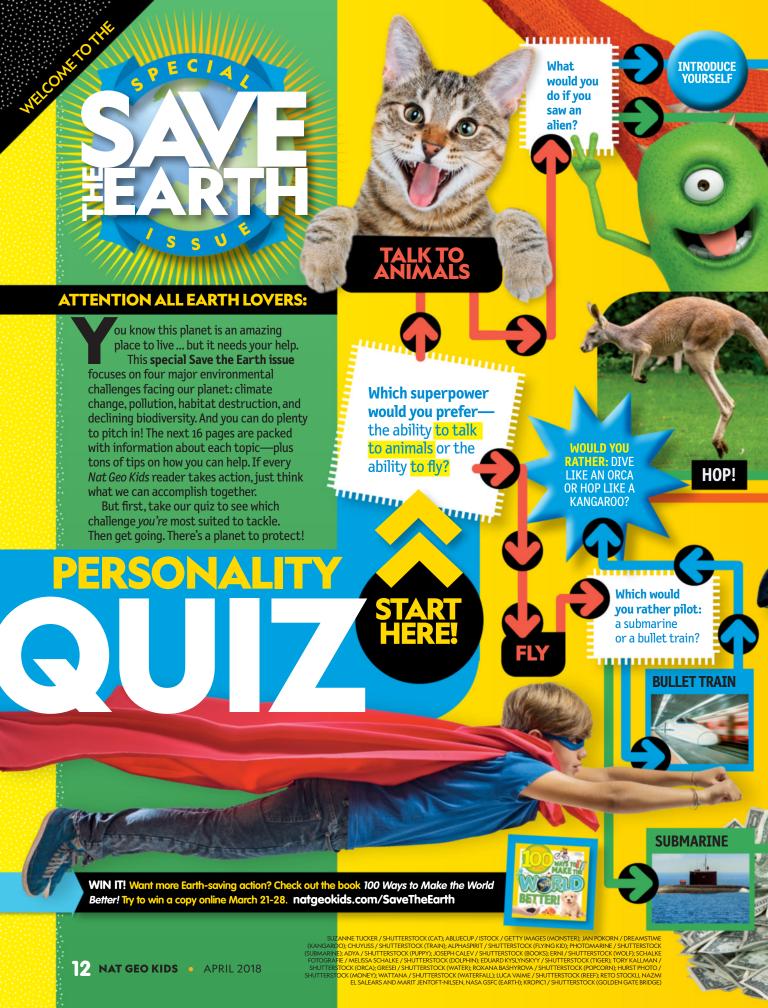
But 10 minutes later, a police officer came to Rosheisen's apartment and said a 911 call had been placed from his phone. Impossible, Rosheisen thought—until he remembered that several months earlier, he had tried

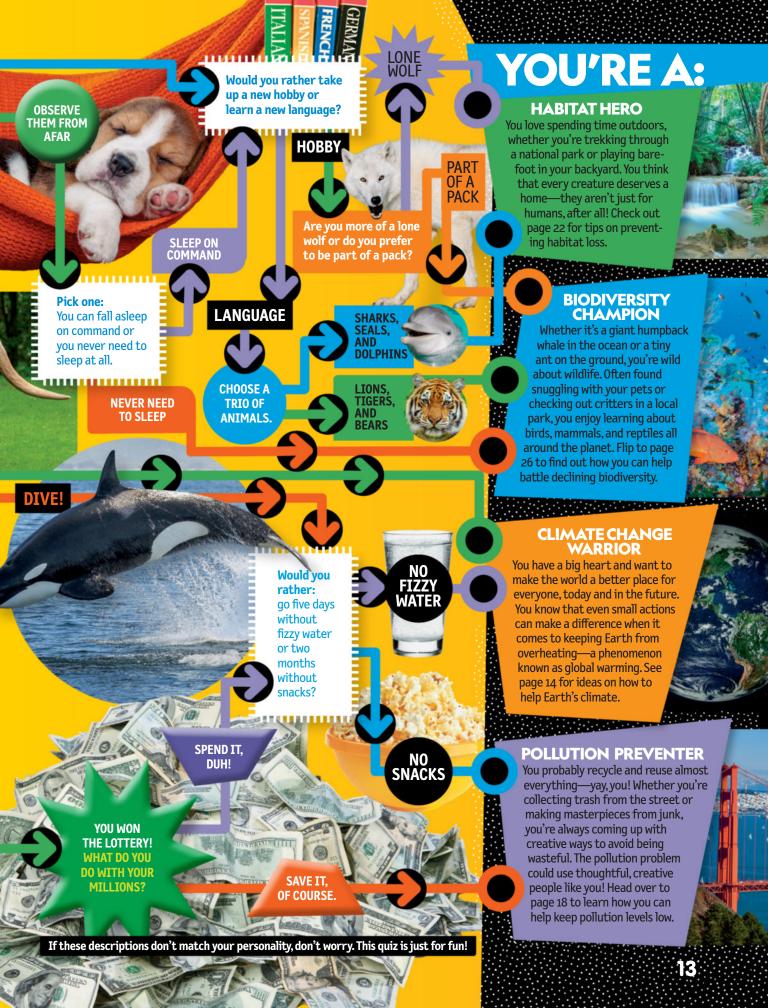
to train his cat Tommy to push the 911 button. "I told the officer about it. He went into the living room and there was Tommy, right by the phone."

Did Tommy mean to dial 911? "You could certainly train a cat to dial the phone," animal trainer Roland Sonnenburg says. "I'm not sure he understood calling 911 would help his owner, but I won't say it's impossible." Whether Tommy's good deed was intentional or just lucky, Rosheisen was grateful he had a cat with such good phone manners.

—Deborah Underwood









ALL TEXT BY ALLYSON SHAW

polar bear swims through the chilly waters of the Arctic Ocean, searching for a patch of ice to climb on. Polar bears rely on sea ice for resting, hunting, and in some places, raising their young. But lately the amount of sea ice has been shrinking. Some scientists predict that the Arctic might be completely icefree during the summer sometime this century. When that happens, this polar bear—and the approximately 26,000 others that call the Arctic home—will be in serious danger.

### RISING TEMPERATURES

According to NASA, the Earth's average surface temperature has increased about 1.5°F over the past hundred years, making 2017 one of the hottest years ever recorded. Most scientists expect the climate to warm another 0.5°F to as much as 8.6°F by 2100.

What's the big deal about a little extra heat? According to most scientists, plenty. As glaciers and polar ice sheets melt, rising sea levels could threaten coastal areas. And this global warming causes other changes to the Earth's climate, including harsher droughts, stronger hurricanes, and shifting wind and ocean patterns. Together, these changes are known as climate change.

### WHY THE WARM-UP?

So what do scientists say is causing climate change? Earth is surrounded by an atmosphere made up of a layer of gases. When sunlight enters the atmosphere, some of the sun's heat is trapped by the gases, while the rest escapes the atmosphere. The trapped heat keeps Earth warm enough to live on.

But during the past few centuries, the oil, gas, and coal we use have released carbon dioxide into the atmosphere. This gas traps heat that would otherwise escape Earth's atmosphere. This increases Earth's average temperature, which changes its climate. Climate change seems like an overwhelming problem, but you can make a difference. Keep reading for ways to live a more eco-friendly life.

### **Climate:**

The average pattern of weather conditions over a long period of time. Climate isn't weather—weather changes daily.

**Global warming:** The increase in Earth's average temperature over a long period of time

### **Carbon dioxide:**

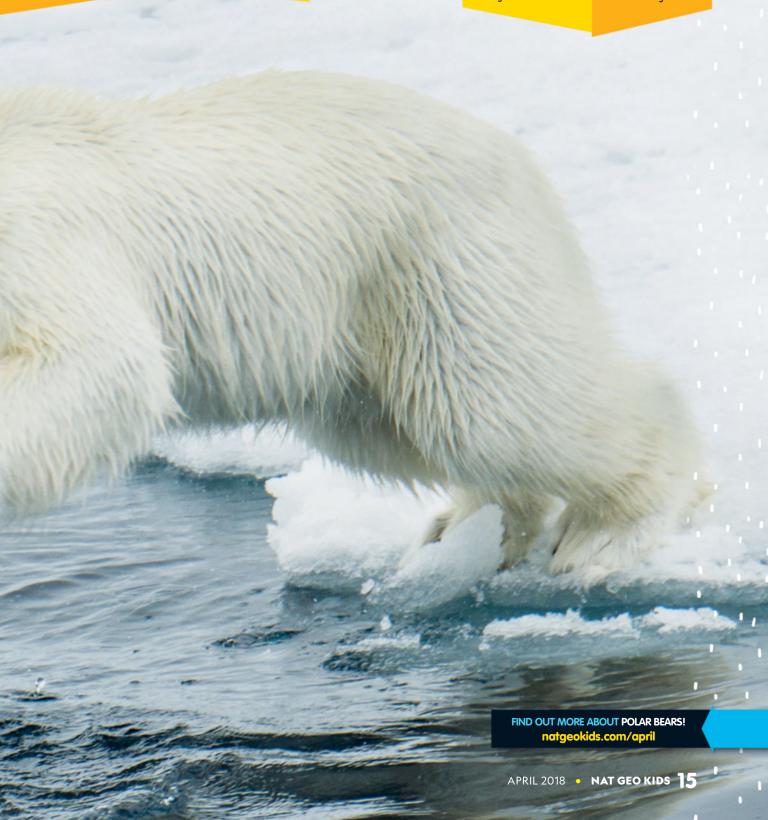
A gas released by the burning of coal, natural gas, oil, and wood that traps heat in the atmosphere

### Carbon footprint: The amount of

carbon dioxide one human releases into the environment in a year

### **Fossil fuels:**

Coal, oil, and natural gas, which come from the breakdown of ancient plants and animals over millions of years



We know you love watching videos on your phone. But modern activities such as plugging in devices, driving cars, and cooling homes—often rely on energy sources such as natural gas, oil, and coal. Those energy sources release a gas called carbon dioxide (CO<sub>2</sub>) into the atmosphere. When CO2 and other greenhouse gases trap heat that would otherwise escape Earth's atmosphere, the planet's temperature rises. That's called global warming, which causes climate change.

Most scientists believe that climate change is happening and causing rising seas, stronger storms, and shifting habitats for wildlife and people. But you don't have to give up videos or totally shut down the A/C to fight climate change. Read on to learn how you can help.



### **USED GOODS ARE GOOD**

Reduce and reuse as much as possible. Factories emit carbon dioxide when making new products. So instead of buying new stuff, fix your appliances and clothes. Good thing holey jeans are back in style!

### HELP OUT AT THE HOTEL

Hang up and reuse your hotel towels instead of washing them after each use. That saves water and energy.



### HOT AND COLD

Wear a warm sweater instead of turning up the heat, and open your windows and turn on a fan instead of blasting the air conditioner.

### SPREAD THE WORD

Write a letter to the editor about climate change in your local or school newspaper. The more people talk about the issue, the better!

### WALK IT OUT

Walk or bike as much as you can. Biking or walking just one mile a day for a year could save 330 pounds of carbon dioxide—that's the same as planting four trees and letting them grow for 10 years!



**EAT YOUR VEGGIES** 

Livestock such as cows account for some of Earth's heat-trapping gas emissions. (Yep, it's the cow toots!) Eating more plants cuts down on the need for so much

Go online to learn more about climate change and how you can help protect our planet.

natgeokids.com/SaveTheEarth

Rotting

trash in landfills

is the third leading

cause of humancreated methane

emissions in the

**United States** 



### money on energy bills!) **CLOSE THE DOOR**

It'll save your parents

**SLAY THE VAMPIRE** "Vampire" appliances suck

energy even when turned

off. Kill these monsters by

unplugging phone and lap-

top chargers when not in use, and use power strips

for lamps and TVs. (Bonus:

If you see a business with its door wide open in the summer, ask an adult to help you email or talk to an employee about closing it. An open door to an air-conditioned building can let 2.2 tons of carbon dioxide escape over one summer. That's about as much as a car on a 5,000mile road trip.

JEFF ZEHNDER / SHUTTERSTOCK (1); KATALINKS / SHUTTERSTOCK (2); HATCHAPONG PALURTCHAIVONG / SHUTTERSTOCK (3) GOIR / SHUTTERSTOCK (4); COOKIE STUDIO / SHUTTERSTOCK (6); NATE ALLRED / SHUTTERSTOCK (7); IOFOTO / SHUTTERSTOCK (10); ALEX OOSELTSEV / SHUTTERSTOCK (9); MIKE FLIPPO / SHUTTERSTOCK (10); LZ IMAGE / SHUTTERSTOCK (12); BROCREATIVE / SHUTTERSTOCK (13)



SCIENCE

CHAMPION

Not everyone understands climate change. Learn the facts and talk to your friends and family. If everyone gets the science, we can work together to find solutions.

ULLAN W SHUTTERSTOCK (KOALA) MCHAEL FEDMER / GETTY
MAGES SALAMADER DAMEA SHUTTERSTOCK (DRAL); MICHAEL
ORD / GETTY IMAGES (IIWI); SARI ONEAL / SHUTTERSTOCK (BUTTERFLY)

### FIGHT CLIMATE CHANGE-SAVE ANIMALS!

WHERE THEY LIVE: Eastern Australia WHY THEY NEED HELP: Heat waves and droughts cause animals to change their natural behavior. For instance, koalas usually get water from their leafy diet. But a warmer climate means drier leaves, which forces koalas to come down from eucalyptus trees to search for water. That can expose them to predators.

### Red-Cheeked Salamander

**WHERE THEY LIVE: Mountains of North** Carolina and Tennessee

WHY THEY NEED HELP: These salamanders live only at the top of the Great Smoky Mountains, where the air is cool and humid. As the climate changes, the salamanders' habitat may become too warm and dry for the amphibians.

**WHERE THEY LIVE: Tropical oceans** WHY THEY NEED HELP: When ocean temperatures rise, coral release the algae that live inside them. Because coral eat the carbohydrates that algae produce, the coral loses its main food source. This turns the coral completely white; the "bleaching" often kills them.

WHERE THEY LIVE: Some of the Hawaiian Islands

WHY THEY NEED HELP: Just one bite from a mosquito carrying malaria can kill an iiwi. These birds stay safe in their cool, mountainous habitat, out of the range of mosquitoes. But climate change will make the island peaks warmer, bringing more bugs.

### Butterfly

WHERE THEY LIVE: North, Central, and South America: Australia, Indonesia, and parts of Europe

WHY THEY NEED HELP: Monarch butterflies use temperature to figure out when to migrate, reproduce, and hibernate. Any changes in climate could impact their life cycles.











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sea otter carefully uses its paws to free itself from a plastic bag that's tangled loosely around its body. This sea otter isn't the only animal to have a dangerous run-in with litter: It's estimated that about half of all marine mammals have eaten or gotten trapped by plastic.

### A LITTLE POLLUTION = BIG PROBLEMS

Plastic is different from paper or food waste because it never fully decomposes, or breaks down into pieces that can be reused by nature. Instead, plastic often ends up in water, where it releases toxic chemicals and can be mistaken for food. In a study conducted by the journal *Science*, scientists estimate that 8.8 million tons of plastic enter the ocean every year, threatening over 700 species of marine animals.

Plastic trash isn't the Earth's only pollution problem. Oil accidentally spilling into the sea, agriculture products like fertilizers and pesticides seeping into the soil, and even excess noise and light can pollute the environment. (The sounds made by ships mess with whale calls, and bright lights can confuse animals such as birds and newly hatched sea turtles.)

### **CLEANING UP OUR ACT**

Once released into the environment, pollution can affect wildlife habitats for years. It's easy to blame factories, but some of the mess comes from everyday human activities. For instance, car exhaust fumes and excess garbage can seriously harm Earth's health.

You can probably clean your room in a couple of hours. (At least we hope you can!) But you can't cram Earth's pollution problem into your closet. We all need to pitch in and clean up the planet. Look at it this way: Just like your room, it's always better to prevent the Earth from getting dirty in the first place. Flip the page to learn ways to cut down on your own personal waste.



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# the Earth from POLLUTION

You might use plastic water bottles, yogurt cups, and straws for just a day, but they can remain in the environment for years. And that pollution can harm habitats and the animals that live there. Do your part to cut down Earth's trash with these tips.



found that

90 percent of seabirds eat plastic trash.

### **BIN FOR THE** WIN

Always throw trash in the can. Garbage left outside might harm wildlife and end up in the ocean. Trash that's properly brought to a landfill is kept out of the sea.



### **DUMP PLASTIC**

According to one study, over eight million tons of plastic pollution end up in the ocean each year. Drink from a refillable water bottle, place your sandwich in cloth or a reusable container, and use bar soap instead of bottled.

### **BEST BEACH**

Scientists estimate that about half the world's sea turtles accidentally eat plastic and other trash. Keep the ocean clean by never leaving toys or trash at the beach.

Balloons eventually fall back down to Earth ... and can end up in the ocean, entangling animals or being mistaken for food. Skip the balloons at your next party, and ask friends to do the same.



TRASH TROOPER Participate in a community cleanup. The groups that host the events sometimes weigh the collected trash, which helps leaders make decisions about laws that encourage people to waste less. VOLUNTEE the world, people throw away roughly four million tons of trash every daythat's enough to fill 10 Empire State Buildings. Check out our Recycle Roundup game! natgeokids.com/SaveTheEarth

### **BUSINESS TALK**

Does your favorite icecream shop use plastic spoons? Ask an adult to help you talk to the owner about switching to a non-plastic option. Some kinds of spoons are even edible!

### **RECYCLE RIGHT**

People in the United States recycle only about 35 percent of their waste, so recycle what you can. Ask your teacher to help create a paper and plastic recycling program in your classroom.

MYIMAGES—MICHA / SHUTTERSTOCK (1); NOKURO / SHUTTERSTOCK (2); STEPHEN BONK / SHUTTERSTOCK (6); ABIEL SKELLEY / GETTY IMAGES (5); KERDKANNO / SHUTTERSTOCK (6); SHAWN JACKSON / DREAMSTIME (8); KANITHA BOON / SHUTTERSTOCK (13)



### FIGHT POLLUTION—SAVE ANIMALS!

### African Penguin

WHERE THEY LIVE:
Coast of southern Africa
WHY THEY NEED HELP: Oil
leaked accidentally into the
ocean can burn penguins'
skin, which makes swimming
difficult. The oil can also
poison them.



### Eastern Spotted Skunk

WHERE THEY LIVE:
Central and southeastern
United States
WHY THEY NEED HELP:
Skunks can get their heads
trapped in trash such as
yogurt containers.



### Laysan Albatross

WHERE THEY LIVE: Islands of the Pacific Ocean WHY THEY NEED HELP: These birds—like many sea animals—mistake plastic for food.



### Rusty Patched Bumblebee

WHERE THEY LIVE: Eastern and upper midwestern United States WHY THEY NEED HELP: Bees absorb toxins from pesticides through their exoskeletons. Toxins can also be in the nectar and pollen



### Irrawaddy Dolphin

in fishing nets.

that the bees eat.

WHERE THEY LIVE: Coastal and fresh waters in southeastern Asia WHY THEY NEED HELP: These dolphins can drown when they become entangled





jaguar paces at the edge of a rain forest in Brazil. The big cat once roamed through a jungle packed with trees, but now part of its home is a working farm with herds of cattle that have taken over the jaguar's territory.

A hundred years ago, jaguars ranged from the southwestern United States to Argentina, in South America. Today their territory has shrunk by more than half, and they live mostly in the Amazon rain forest. And jaguars aren't the only animals losing their homes—according to the International Union for Conservation of Nature, habitat loss is the main threat to about 85 percent of all endangered plant and animal species.

### LIVING ON THE EDGE

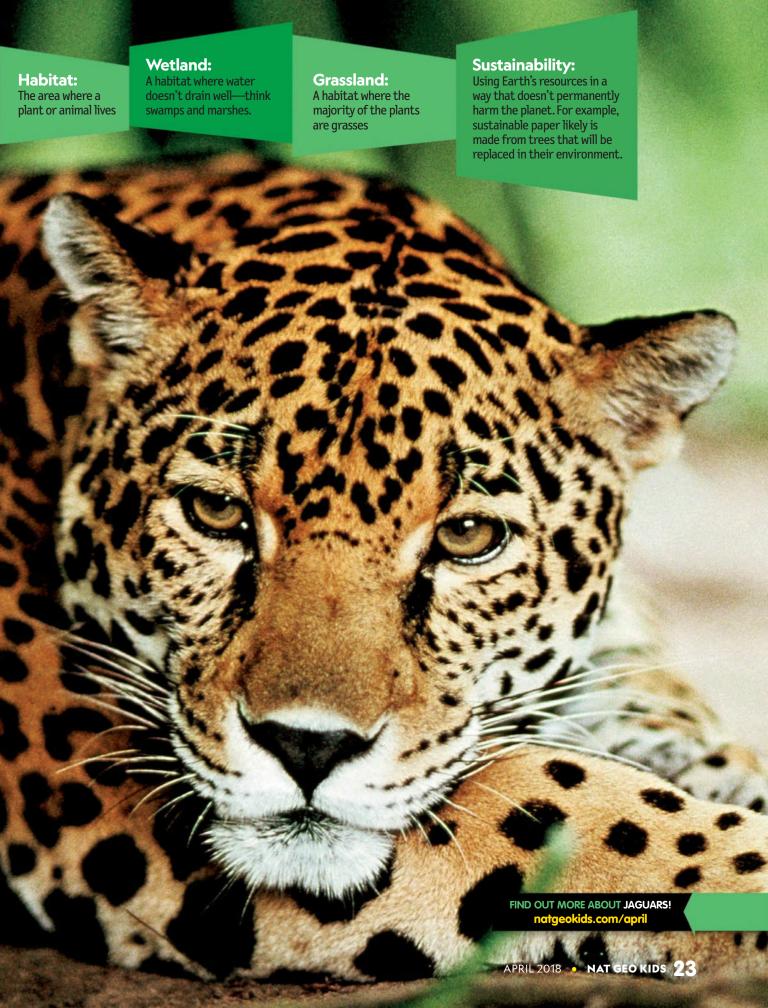
Tropical rain forests cover only about 7 percent of Earth's land, but they're home to an estimated half of all known plant and animal species. Most experts agree that about 80,000 acres disappear every day when trees are cut down for lumber and land is cleared for farms. Trees also play an important role in absorbing the carbon dioxide that contributes to climate change. Fewer forests means that more greenhouse gases remain trapped in the atmosphere.

Grasslands, underwater habitats, and wetlands are also at risk of habitat loss. For instance, the World Wildlife Fund estimates that about half of the world's wetlands have disappeared in the last hundred years due to being drained for farmland or other industries. That means less space for animals to feed, breed, and raise their young.

### **SHARING WITH WILDLIFE**

Finding a balance between what humans and animals need will help prevent habitat destruction. Some scientists think that if we put aside half of Earth's land and water for nature, we could save up to 90 percent of all species. In the meantime, your everyday actions can build a better planet. Turn the page to check out what you can do to protect Earth's wild places.





# ways to save the Earth from

### **SHOE SLEUTH**

Clean your shoes before going on a hike, especially in a new place. The mud caked in your sneakers may contain seeds of invasive plants, which can push out native plants that keep the ecosystem healthy.

SCRAP JUNK MAIL

Is your house full of mail from places like banks and utility companies? Ask your parents to sign up for online alerts. And make sure to recycle newspapers, magazines, and other paper in your home.

**PICK YOUR PAPER** 

People cut down about 15 billion trees every year, some of it to make paper. Save your sheets by using the back, buying recycled paper, and asking your teacher to sometimes switch from printed homework to online assignments.

### HABITAT DESTRUCTION

Just like people, animals need homes. But when too many forests are cleared to plant crops and build roads, and too many seabeds are destroyed to gather fish, critters struggle to survive. This is called habitat destruction. Read on to learn how small changes from you can mean big help for wildlife.

**VISIT PARKS** Your attendance matters! Wildlife refuges, parks, bird sanctuaries, and nature preserves are more likely to receive funding to stay open when more people visit them.

Only about 15 percent of Earth's land and 3 percent of Earth's oceans have been protected.



Habitats are often disrupted to create more stuff for people. So try your best to use less: Visit the local library instead of buying a DVD, share games and toys with friends, and reuse school supplies.

### **TECH TURNAROUND**

Cell phones and computers contain a mineral mined from African habitats where gorillas and chimpanzees live. The minerals can be reused, so always recycle your tech. (Bonus: It keeps toxic chemicals from polluting soil and water near landfills.)



Palm oil is often used in products like chocolate, soap, ice cream, bread, cookies, and shampoo. But some rain forests are being destroyed in order to grow the trees that produce palm oil. Try to avoid buying products that use it, or look for a label that confirms the ingredient was grown in a rain-forest friendly way.



Check out our Save the Earth hub online for even more tips on how to improve our planet.



FLUSH CLEAN

Flush only your own waste and toilet paper—no medicine, cleaning wipes, cotton balls, paint, or pet poo. This trash can eventually travel into the water system and affect the animals that live there.

### MONEY MAKES A DIFFERENCE

Work a lemonade stand, host a bake sale, or sell homemade jewelry to raise funds to protect wildlife and their habitats.

### **WATCH YOUR WATER**

Using too much water from lakes and rivers can affect animals' habitat.
Conserve this resource by taking five-minute showers, turning off the faucet when you brush your teeth, and bugging your parents to fix leaky pipes.



### FLOWER POWER

Ask your parents to plant a garden full of local trees, flowers, and shrubs to provide habitats for native bees, birds, and other animals.

FAREWELL TO FERTILIZER
Plant fertilizer can dump extra
nutrients into the water system,
which might create wildlife-killing
algae blooms in the ocean. Local
flowers, though, don't need as
much fertilizer to help them
grow. Encourage your parents
to plant them.

CDUSCHINGER / SHUTTERSTOCK (17): © THOMAS MARENT / MINDEN
PICTURES (FROG); ANUP SHAH / GETTY IMAGES (ORANGUTAN); JEFF
FOOTT / GETTY IMAGES (DEATROYS / MINDEN
PICTURES (GROG); EASTORT MOMATINIC, GETTY IMAGES (BISON)

### FIGHT HABITAT DESTRUCTION—SAVE ANIMALS!

### Lehmann's Poison Frog

WHERE THEY LIVE: Colombia, a country in South America WHY THEY NEED HELP: People cut down the frog's forest habitat for logging and agriculture.

### **Bornean Orangutan**

WHERE THEY LIVE: Borneo, an island in southeast Asia

WHY THEY NEED HELP: Over half of this orangutan's habitat has disappeared in the last 20 years, in part to build palm oil plantations.

### **Lined Seahorse**

WHERE THEY LIVE: Waters off the east coast of North, Central, and South America

WHY THEY NEED HELP: People fishing for shrimp often drag nets along the ocean floor. That can destroy the seagrass beds and mangrove forests where seahorses and other animals live.

### Cerulean Warbler

WHERE THEY LIVE: North and South America

WHY THEY NEED HELP: The cerulean warbler's forest home is used for planting crops, mining coal, and building homes for people. As a result, the species has decreased by about 70 percent in the last 40 years.

### **American Bison**

WHERE THEY LIVE: Isolated spots in Canada, the United States, and Mexico

WHY THEY NEED HELP: Bison were nearly hunted to extinction in the mid-1800s. Since then these mammals have made an impressive comeback, but they still live on less than one percent of their original range because grassland habitat is used for livestock, agriculture, and building homes.















# ways to save the Earth from

A healthy planet is full of plants and wildlife that all play important roles in their habitats. That's called biodiversity. But removingor adding—just one species can affect the entire ecosystem, often with bad results. Check out things you can do to prevent declining biodiversity and keep Earth wild.



### **SHOP SMART**

Avoid souvenirs or other items made from animal parts like scales, teeth, feathers, tortoise shells, seashells, coral, and especially ivory. Animals might have been harmed or disturbed to make them.

### COUNT 'EM

Participate in a citizen science project to tag, track, or identify animals. The information you gather can help biologists learn how the animals are adapting to climate change, habitat destruction, and other problems.



**KEEP TO THE TRAIL** 

Always stick to the trail when hiking, and keep your pup on a leash.



Think that Dory-looking blue tang would make a good pet? Think again. These fish are difficult to breed in captivity, so blue tangs you see in a store have likely been taken from the wild. That could upset the habitat. If you have a tank, make sure your fish were bred in captivity, not taken from the wild.



Riding elephants, holding monkeys, and snapping pics with lion cubs might seem fun, but these animals might have been snatched from the wild and aren't being properly cared for. Avoid these activities on vacation unless you know the group is trustworthy and not exploiting animals. Ask your parents not to "like" similar photos on social media.



### STAND UP FOR "SCARY" **ANIMALS**

Some people are scared of animals like wolves, sharks, and bats-and try to harm them. But these animals are super important because they keep their habitats healthy. So tell everyone how amazing they are!

### CAT ATTACK

U.S. cats (pets and those that don't live with people) prey on over one billion birds every year. Keep your feline indoors, or give it a bell or colorful collar that can alert birds of danger.

> Scientists discover a new species in the Amazon rain forest every other day





Bring binoculars on an outdoor adventure to enjoy wildlife from afar. That way you don't disturb animals, which can change their behavior. Critters are better off spending energy looking for food or caring for young—not hiding from you!

BAD PLANTS

Invasive species are plants and animals that don't belong in a habitat. They can destroy native species and shake up the whole ecosystem. You can help! Sign up to help remove invasive plants at a local park or nature center.



LIGHTS OFF

Birds can become confused by bright nighttime lights, causing them to collide with windows or fly in circles until they're exhausted. Turn off unnecessary lights at night in the spring and fall, when birds are migrating. You can also talk to your parents about turning off the lights at their high-rise offices.

FIND THE RIGHT FISH

Bluefin tuna and

Atlantic halibut are large fish that reproduce and grow very slowly—so try to avoid eating them unless you know they've been fished sustainably. Use a guide like FishWatch to select a swimmer that can be removed from the ocean without harming the ecosystem.



Never release a pet into the wild—it could become an invasive species! Cats, dogs, snakes, ferrets, and even hedgehogs prey on local wildlife. If you can't care for your pet, find it a new home.

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FIGHT DECLINING BIODIVERSITY—SAVE ANIMALS!

### Ring-Tailed Lemur

WHERE THEY LIVE: Madagascar WHY THEY NEED HELP: Wild lemurs live nowhere else except on this island off the coast of Africa. They keep their forest home healthy by eating fruit and, um, dropping the seeds back into the ground to grow. But because of habitat destruction and poaching, only about 2,000 ring-tailed lemurs remain in the wild.



WHERE THEY LIVE: Fiji and Tonga, islands in the South Pacific

WHY THEY NEED HELP: Non-native rats and cats hunt the iguanas, while domestic goats and pigs run free to munch and trample the plants these reptiles need to survive.

### **Dhole**

WHERE THEY LIVE: Southeast Asia WHY THEY NEED HELP: Humans have overhunted the dholes' prey, such as deer and wild pigs, making it hard for these wild dogs to thrive.

### **Snowy Owl**

WHERE THEY LIVE: Near the North Pole

WHY THEY NEED HELP: Snowy owls can survive in warmer habitats, but they can't live without the lemmings they prey on. Melting Arctic snow can flood lemming burrows, wiping out the owls' favorite food.

### **Sloth Bear**

WHERE IT LIVES: India, Nepal, and Sri Lanka

WHY THEY NEED HELP: Sloth bears are often affected by people cutting down trees in their forests, as well as poachers. A decline in sloth bears affects the entire habitat.











GAMES. LAUGHS, AND LOTS TO DO!

### Are You a Garbage Genius?

How much do you know about trash? Take this quiz to find out if you're a waste whiz. ANSWERS ON PAGE 35



### TRUE OR FALSE?

Before the days of trash collectors and dumps, people used to throw their trash on the streets for animals to eat.



### **PICK ONE**

What makes up the bulk of waste around the world?

- A. newspapers
- B. plastic
- C. food scraps
- D. yard trimmings



### **FILL IN THE BLANK**

zip(s) around at 20 times the speed of sound.

- A. garbage trucks
- B. motorized trash cans
- C. space trash
- D. trash robots



### **PICK ONE**

Which creepy crawlers can help compost your food?

- A. crickets
- B. centipedes
- C. spiders
- D. worms



### **TRUE OR FALSE?**

Old landfills are often turned into parks or green spaces.





TRASH ISN'T JUST FILTHY— IT'S FUNNY!

Here are some rubbishthemed riddles and jokes to try on your friends and family.

- What has four wheels and flies? A garbage truck
- What did the waste collector say while digging through the trash? dumps today! I'm down in the

Check out this book!

(CRICKET); © DOMICIANO PABLO ROMERO FRANCO / DREAMSTIME (SPIDER); © MARTINMARK / DREAMSTIME (JOGGE

## WHAT IN THE

### TRASH TAKEOUT

These photos show close-up views of things commonly found in trash and recycling bins. Unscramble the letters to identify what's in each picture.

ANSWERS ON PAGE 35







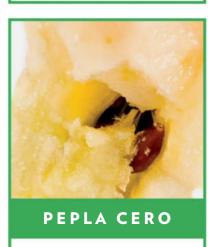














# If wild animals used social media, what would they say? Follow this Galápagos tortoise's day as it updates its feed.

# I LOYE SUN NAPS AND MUD BATHS!

### **GALÁPAGOS TORTOISE**

LIVES IN: Galápagos Islands, off the coast of Ecuador SCREEN NAME: SwellShell FRIENDS:



**BLUE-FOOTED** 

TealToes From



FrostyFur HOARY BAT



BY ALLYSON SHAW

LionAround GALÁPAGOS SEA LION

11 a.m.

**BOOBY** 



Boy, it's hot! Time to head up the "Tortoise Highway" to cooler ground for a few months. Thousands of tortoises made these tracks!



You weigh, what, 500 pounds? How fast can you cruise with that big backpack?





My shell's actually pretty light—it's my legs that weigh so much! And it's not like I need to hustle to get food: I can go an entire year without eating or drinking.

A year's nothing to **SwellShell**—he's at *least* a hundred years older than me. Do you even remember your birthday?





Nope! So I'll go ahead and celebrate today. Grass cake, anyone?

2 p.m.



I feel like a mud bath. How's everyone else doing?



I'm feeling blue.



Can I snag you a fish? That always cheers *me* up.



No—it's a good thing! I'm going to flash these baby blues around the beach and try to get a date!



Looking good, TealToes! Just like me when I get out of the water.



6:30 p.m.



Sun's going down—time to find a patch of soil to snuggle down in. #PerfectDay



Are you kidding? It's party o'clock! Nighttime is when I can really spread my wings.



FrostyFu

Admit it—you come out at night for the bugs. And hey, I got plenty. I surround my nesting area with dung, so lots of flies over here!

That's *fowl*. Get it? You're a bird—you're fowl. 😎



LionAround



### **DREAMING GREEN**

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



My family joined a tree planting in honor of	Day. Grabbing our, we walked to lanet
the park. "Whatever you do, don'tverb	when you're planting," the leader said. With our arms full
of, my sister and I ranadve	down the path to dig our first hole. As we got started, b ending in -ly
I did exactly what the leader told me not to do: I $\underline{\hspace{1cm}}_{\hspace{1cm} p}$	ast-tense verb . Suddenly, a (n) adjective noun
burst from the tree! I stared at it for so	econds and watched it turn a deep shade of I was
so surprised I like a(n)	. As my sister and I starteddown animaldown
the path deeper into the woods,	started springing from everywhere. Then the whole forest filled
with adjective noun, plural	and That's when I tripped over a root—
and woke up facedown on mypiece of furniture	. I must love the Earth. Even my dreams are green!



## ARIZONE

### **GREEN PLANET**

Nat Geo Kids readers came up with creative ways to protect Earth in these drawings.



▲ No Trash in the Ocean! Claire N., 11, Goleta, California



▲ Protect Rain Forests Garrett S., 10, Narberth, Pennsylvania



▲ Solar, Water, and Wind Energy, Plus Helpful Signs! Lucas F., 11, Warren, Rhode Island

### Draw a super-weird alien.

Send us

Nat Geo Kids-Alien Art Zone your P.O. Box 98002 original drawings: 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*.



**A** Doing Our Part Katerina A., 11, Baltimore, Maryland



▲ Pick Up Trash on the Beach Madeline G., 10, Adairsville, Georgia



▲ Recycle! Abby V., 10, Cecilia, Kentucky



Reduce, Reuse, Recycle Jacob G., 14, Meridian, Idaho

core, aluminum can. plastic bag, paper towels. **Bottom row:** milk jug, apple Widdle row: cereal box, 31): **Top row:** newspaper, coffee cup, banana peel. "What in the World?" (page

"Are You a Garbage Genius?" (page 30): 1. True, 2. True, 3. B, 4. C, 5. D.

**Answers** 

