Save the Ocean!

35 Ways You Can Help

DOG ADOPTS DUCKLINGS

PERSONALITY QUIZ

BET YOU DIDN'T KNOW!
TELL US WHAT YOU THINK!

Join the National Geographic Kids Team.*

Throughout the year we’ll invite you by email to complete our latest online survey. The surveys ask for opinions about current magazine issues, articles we’re working on, and topics that affect kids like you.

Apply online!

SIGNING UP IS EASY!

1. Grab a parent.
2. Go to ngkidsandfamilyteam.com/join2019. Have your parent fill out the consent form.
3. Look for email confirmation from Nat Geo Kids.

If you have any questions, contact tracy.stone@natgeo.com.

For each survey you complete, you’ll be entered into quarterly drawings to win an AMAZON GIFT CARD!

*Children of NGS staff, NGP staff, and contractors are not eligible to participate. Only those selected will be notified. If you are already a member of the panel, you do not need to reapply.
Save the Ocean!

We know you love the ocean and want to protect the animals that depend on it. Before getting started, take a cool quiz on page 12 to find out which of the rescued creatures below you’re most like, then dive in!

RESCUED FROM PLASTIC

14 Duck
A caring human rescues an injured bird from a plastic ring.

16 Dolphin
Divers take action to save this sea mammal from fishing line.

20 Whale Shark
Brave swimmers come to the aid of a whale shark entangled in plastic.

22 Harbor Seal
Fishermen scoop up a harbor seal pup trapped in plastic nets.

18 Sea Turtle
Rescuers swoop in to help a baby sea turtle that swallowed a balloon.

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JUST FOR PARENTS

EXPLORATION HAPPENS BECAUSE OF YOU.
Support from people like you helps further the work of our scientists, explorers, and educators around the world.

For corrections and clarifications, go online: natgeo.com/corrections

Follow us on Twitter @NGKids and like us on Facebook.
Check out these outrageous facts.

BY MARILYN TERRELL

A line of all the HARRY POTTER BOOKS SOLD (over 500 million copies) could circle the Earth twice.

The first AIRPLANE JOURNEY across the United States took 49 DAYS.

It's possible to produce ELECTRICITY from elephant dung.

Adults can have as many as 1,500 DREAMS a year.

A piece of CAKE more than 4,000 YEARS OLD was found in a tomb in EGYPT.

THERE ARE hundred-foot-tall SAND DUNES IN ALASKA.

A 95-mile-long underground river flows beneath MEXICO.

A Pennsylvania bakery made a hot dog that was 54 feet long.

A Pennsylvania bakery made a hot dog that was 54 feet long.
LION CUDDLES WITH MEERKAT

Pilanesberg, South Africa
Whenever Bob the meerkat got sleepy, he’d curl up in his favorite spot—between the paws of Zinzi the lion cub. “The animals would play in the morning and then cuddle together as they dozed,” says San-Maré Pretorius, co-manager of Predator World, where the animals lived. “They were inseparable.”

The pair was introduced after their mothers abandoned them. Soon they were grooming each other, chasing one another, and snuggling when it was nap time. Zinzi liked to playfully leap at her meerkat buddy, then Bob would run away but return a few seconds later to try to pounce on Zinzi! The mischievous meerkat would also sometimes snatch the cub’s food or grasp onto her leg for a ride.

Zinzi moved back to the zoo’s lion habitat when she was about three months old. But the animals’ friendship had a long-lasting effect. Carefree Bob made Zinzi feel less nervous. And Bob had so much fun hanging with Zinzi, he’s become friends with domestic cats that live at the zoo. Maybe these new pals made good pillows too!

MEERKAT

HEIGHT 10 to 14 inches tall
WEIGHT about 1½ pounds
RANGE southern Africa

A DUSTY DEFENSE
Meerkats distract predators by digging up clouds of dust.

FIGHT THE BITE
These mammals are immune to some snake venom.

AFRICAN LION

HEIGHT 3½ to 4 feet tall at the shoulder
WEIGHT 265 to 420 pounds
RANGE much of Africa

SUPERSIZE MEALS
Lions can consume over 70 pounds of meat in one sitting. That’s like eating more than 280 hamburgers for dinner!

MANE POWER
Some researchers think you can tell how strong a male lion is by the length of his mane.
Windpowered!

Racing 126.1 miles an hour across a Nevada desert, this cool wind-powered contraption became the fastest land yacht ever. Called the Ecotricity Greenbird, it seems to sail like a boat on water. But if the driver doesn’t catch the 30-mile-an-hour wind just right, the land yacht might bite the dust! —Molly Marcot

So Many Yo-yos!

“Around the World” is probably a super-easy trick for this yo-yo master. Ben McPhee can spin 16 yo-yos simultaneously, the most on record. He starts by spinning 10 yo-yos and hanging them on hooks. The others? Two hang from each hand, two from each ear, and two are clenched between his teeth. Let’s hope he doesn’t get tied up in all that string. —Angela Modany

Dogs Get Married

Wearing a $6,000 dress, Baby Hope Diamond the dog wasn’t just a bride. She was a bride in a wedding valued at $158,187.26, the most valuable pet wedding on record. Dog guests wore tuxedos and evening gowns, dined on a special dog chow buffet, and listened to a $25,000 orchestra. Although the wedding expenses were donated, human guests paid up to $250 to attend, raising money for the Humane Society of New York. That’s something that the groom, Chilly the dog, can really wag his tail at. —Angela Modany
1. It can take about 20 SECONDS for a CHAMELEON to change color.

2. Wearing BLUE-TINTED SUNGLASSES might make you LESS HUNGRY.

3. OSCAR THE GROUCH was originally ORANGE.

4. More than 6 BILLION GREEN MONOPOLY HOUSES have been manufactured since 1935.

5. In parts of ENGLAND, having a BLACK SHEEP in a flock was considered LUCKY.

6. BROWN is the most COMMON human eye COLOR.

7. Darker-colored FROZEN POPS usually MELT FASTER than lighter ones.

8. In ancient CHINA, only EMPERORS could wear YELLOW.

For more fun facts, grab a parent to watch Things You Wanna Know! youtube.com/natgeokids
You have a super sense of smell, but you have to wait for your dinner. If you chose THIS:

You’re super fast, but you’re in constant danger of being squashed.

CHOOSE THIS:

or

If you chose THAT:

You have a super sense of smell, but you have to wait for your dinner.
Even **SPEEDY SUPERHEROES** like the Flash might not be as fast as a **COCKROACH**. If you could move as fast as this incredible insect, you’d be able to run a hundred-yard dash in just one second! With this superpower, you could be in two places at once. Unfortunately, cockroaches don’t have a fan club like **THE FLASH** does: They’re more often the main targets of the pest-removal industry.

Speed isn’t the cockroach’s only superpower. These insects can live for weeks without their heads. They can breathe through holes in their bodies and survive off of stored food they’d already eaten. But without mouths, the headless bugs eventually die from a lack of food and water.

What if you could smell a pizza from 2.5 miles away... then had to wait hours before it was ready to eat? That’s just life for a **KOMODO DRAGON**. One of the only venomous lizards on Earth, this reptile stalks its prey from up to 2.5 miles away using its super sense of **SMELL**. Then attacks. But the chow isn’t ready yet! The victim might get away from the fight—but not for long. The dragon’s **VENOM** decreases the prey’s blood pressure, prevents blood clotting, and sends the animal into shock, making it too weak to fight back. Dinner’s finally served.
Stansted Mountfitchet, England
Fred the Labrador retriever took a quack at fatherhood when he adopted nine ducklings.

After the ducklings were found wandering the grounds of Mountfitchet Castle (Fred’s home), the castle’s owners were worried the youngsters would struggle to survive without their mother. Good thing 10-year-old Fred was ready to be a parent! “Fred instantly took to the ducklings,” castle owner Jeremy Goldsmith says. The ducklings napped in a dog bed with Fred and often climbed on his back, the same way they’d sit on top of their duck mom.

Ducklings that lose their mother sometimes become attached to the first moving thing they see, animal behavior expert Mary Burch says. “I would say the ducklings adopted Fred,” she says. The ducks are grown now, but they still see Fred every day. These fuzz balls keep Fred on his paws!

—Alli Dickey
The Tortoise and the Pair

Wellington, South Africa

So you’re hanging out, watching your pet tortoises’ eggs hatch, when all of a sudden two heads poke out of one egg! That’s how Noël Daniels discovered that he was the proud owner of a rare two-headed tortoise. Probably caused by abnormal cell growth, the two heads shared a body ... but both liked to eat on their own. This terrific tortoise did get a little, well, ahead of itself sometimes. “Once the right head was eating and the left head saw me walk into the pen,” Daniels says. “The left side of the tortoise tried to leave, but the right head was still eating. So that side wouldn’t move!” —Candice Swarts

Beaver Dam Visible From Space

Wood Buffalo National Park, Canada

You’ve heard of busy beavers. But these guys take the phrase to a whole new level: They built a 2,800-foot-long dam, the longest known beaver dam on Earth. It’s so big it can be seen from space!

The critters’ construction zone is in a remote national park accessible only by helicopter, so no one even knew the dam existed until 2010. Researcher Jean Thie accidentally discovered it while studying satellite photos for signs of climate change. Instead he spotted high water levels, dead trees, and lodges—sure signs of a dam.

The steady flow of water from the nearby mountains is a trigger that means the beavers will keep adding on to their dam. “When beavers hear water, they build,” research biologist Matt Peek says. “They’ll even build a dam on top of a tape recorder playing the sound of flowing water.” That’s something to chew on. —Jamie Kiffel-Alcheh
This special Save the Ocean issue will help you tackle a big problem: single-use plastic pollution. You probably use items such as plastic water bottles and grocery bags every day. But unlike paper or food waste, plastic doesn't decompose, or break down into pieces that can be reused by nature. Many plastic items end up in the ocean, where they can entangle animals or make them sick.

Luckily humans are pitching in to save these creatures. The next 10 pages tell five inspiring stories about freshwater and ocean animals that have been rescued from life-threatening encounters with plastic. Plus you’ll get tons of tips on how you can reduce your plastic waste and keep habitats healthy for all animals.

But first, take this fun personality quiz to see which of the rescued animals you’re most like. Then dive in. It's time to take care of our oceans!

If these descriptions don’t match your personality, don’t worry. These questions are just for fun!

CHECK OUT MORE TIPS ON HOW TO KEEP OUR PLANET CLEAN.
natgeokids.com/KidsVsPlastic

BY KAY BOATNER

Welcome to the
SPECIAL
Save the Ocean! ISSUE

START HERE!

Choose your next vacation destination.

SUPER-SPOOKY GHOST TOWN

CROWD, FOR SURE

SUNNY TROPICAL ISLAND

Where would you rather spend your evening?

BRIGHT LIGHTS, BIG CITY!

FLY SOLO!

CHOCOLATE BAR

Which would you rather snack on?

GUMMY BEARS

You're helping NASA with its Mars mission. What's your job?

CHEETAH

WILL YOU RATHER RUN AS FAST AS A CHEETAH OR HIDE AS WELL AS AN OCTOPUS?

OCTOPUS

GIRAFFE

Would you rather have a long neck like a giraffe or be able to turn your head around like an owl?

JUST THE STARS ABOVE ME
Pick a single-use plastic item to ditch from your daily life.

**PLASTIC BOTTLES**

**PLASTIC CARRY-OUT CONTAINERS**

**PLASTIC SIX-PACK RINGS**

**PLASTIC BALLOONS**

**PLASTIC BAGS**

**GREEN SEA TURTLE**

Green sea turtles are often on the go—just like you. They migrate long distances between their feeding grounds and their nesting sites, up to 1,600 miles. That’s farther than New York City is from Dallas, Texas! Though you love to travel, home is a special spot. These turtles might feel the same way. When it’s time to lay their eggs, females return to the same nesting grounds where they were born.

**WANT MORE TURTLES?** Head over to page 18 to find out how a green sea turtle survived after swallowing a balloon.

**HARBOR SEAL**

This marine mammal is big on routine, and so are you. Harbor seals spend a lot of time switching between napping in groups and hunting on the go. Sticking to a schedule doesn’t mean you’re not full of surprises, though. Like harbor seals, you occasionally get curious and wander the way.

**WANT MORE SEALS?** Check out page 22 to see how a harbor seal was freed from a mass of plastic fishnet.

**WHALE SHARK**

Like the whale shark, you can be quiet and mysterious. But you’re just saving your words for when they count. When you do speak up, people listen—you’ve got some serious leadership potential. Whale sharks are pretty impressive too; this boneless giant is the world’s largest fish.

**WANT MORE SHARKS?** Flip to page 20 to learn how a whale shark was rescued after getting tangled in plastic.

**BOTTLENOSE DOLPHIN**

Just like the bottlenose dolphin, you’re known for being playful. You enjoy meeting new people and spending time in a pod, or group. Dolphins talk to each other a lot—just like you and your friends. (Well, kind of… dolphins communicate with whistles, clicks, and squawks.)

**WANT MORE DOLPHINS?** Head over to page 16 to find out how a bottlenose dolphin was rescued from plastic wrapped around its mouth and fin.

**WHITE-FACED WHISTLING DUCK**

You know how to crank up the volume. Similarly, this duck’s high-pitched whistling calls are hard to miss. And you’re not afraid of change: New school? No prob. These ducks are also OK with exploring new places. Though typically found in the water, they’re called “tree ducks” because they can sometimes be found perched in branches.

**WANT MORE DUCKS?** See page 14 to discover how a caring person saved a white-faced whistling duck that had its head stuck in a ring from a plastic bottle top.

**I’D BE AN ASTRONAUT, OBVIOUSLY.**

**DESIGNING THE SPACECRAFT**

**YOUR ANIMAL MATCH**

**Pick a single-use plastic item to ditch from your daily life.**

**Cook a big breakfast and be late for school, or grab something quick but make it on time.**

**BE ON TIME, DUH.**

**Eat, of course!**

**Pick a single-use plastic item to ditch from your daily life.**

**LASTIC BOTTLES**

**PLASTIC CARRY-OUT CONTAINERS**

**PLASTIC SIX-PACK RINGS**

**PLASTIC BALLOONS**

**PLASTIC BAGS**

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**FIND OUT WHAT KIND OF PLANET PROTECTOR YOU ARE.**

natgeokids.com/SaveTheEarth
Plastic Ring
A Caring Human Rescues an Injured Bird from a Plastic Ring.

All text by Allyson Shaw

A white-faced whistling duck walks backward with its head between its feet. It shakes its beak, stops to rest, and shakes again. The duck’s odd movements catch the attention of Glenda Maguire, who’s been watching the visiting animal from her patio in South Africa. Using her camera to zoom in for a closer look, she sees a ring of white plastic—likely from a milk bottle—wrapped around the duck’s mouth and neck. “It was painful to watch,” Maguire says. She wants to help, but she knows if she tries to catch it, the wild duck will fly away and not come back to the lake.

Maguire sets out an animal trap with food pellets near the water, hoping the bird will walk inside. But the duck seems scared of the trap and later flies away. Maguire hopes that someone will save the duck before it’s too late.

RIVER TO SEA
Freshwater streams, lakes, and rivers—where animals like white-faced whistling ducks live—are often the starting point for plastic that ends up in the ocean. In fact, about four million tons of plastic flow from rivers to the ocean each year. “On a windy day you can see plastic bags and bottles tumbling around on the ground,” says Carlie Herring, a research analyst with the National Oceanic and Atmospheric Administration. “Those items might end up in a stream, then a river, and eventually the ocean.”

Polluted rivers are bad for both animals and humans. One group of researchers found hundreds of thousands of pieces of plastic in just one square mile of North America’s Great Lakes, one of the world’s largest freshwater systems. That includes microplastic—super-small plastic pieces.
When white-faced whistling ducks are alarmed, they stand up straight and freeze.

More than 40 percent of all plastic trash is single-use plastic, meaning it’s used only once before it’s thrown away.

About 90 percent of seabirds eat plastic trash.

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A dozen reef manta rays swim in a group in the open ocean near Hawaii, scooping up plankton in their mouths. Divers direct their lights toward the scene, watching the rays. Amid the action, a male bottlenose dolphin swims slowly through the group. The dolphin catches the divers’ attention. He’s alone, which is unusual since most dolphins travel in small pods, plus he doesn’t seem to be afraid of the noises that the divers are making. The dolphin passes back and forth in front of the divers a few times, as if to get their attention. “We usually don’t interact with wild animals,” underwater camera operator Martina Wing says. “But this dolphin was trying to show us that he had a problem.” The dolphin, later given the name Notch, is tightly tangled in fishing line.

DOLPHIN RESCUE

DIVERS TAKE ACTION TO SAVE A DOLPHIN FROM FISHING LINE.

OPEN-OCEAN TRASH

Bottlenose dolphins live in almost all of the world’s oceans. Plastic can be found at every level of every ocean. Light plastic floats on the ocean’s surface, while heavier plastic typically sinks to the very bottom—but a lot of plastic floats somewhere in the middle.

This garbage is carried through the oceans by wind and water currents, often ending up swirling in one of five garbage patches around the world created by circular ocean currents called gyres. The biggest of these is the Great Pacific Garbage Patch, which floats between Hawaii and California and contains a stretch of waste roughly the size of Texas. Many of the items in this garbage patch are microplastics, tiny pieces of plastic no bigger than a sesame seed. But by weight, the most common item in the garbage patch is abandoned fishing gear—the stuff that’s entangling Notch.

SNIP AND SAVE

The divers look closer and see that Notch has a hook.
**BOTTLENOSE DOLPHIN**
Off the coast of Kailua-Kona, Hawaii

**THE OCEAN COVERS MORE THAN 70 PERCENT OF EARTH’S SURFACE. ABOUT 97 PERCENT OF THE PLANET’S WATER IS IN THE OCEAN.**

**POLLUTION SOLUTION**

**CATCH THE TRASH**

How do you scoop up a lot of trash? With a really big contraption. Like, really big. The Ocean Cleanup system is a 2,000-foot-long U-shaped pipe with an attached net-like skirt. With plans to be afloat in the Pacific Ocean by mid-2019, the system uses ocean currents and wind to gather up trash from the surface down to 10 feet below the structure. Eventually boats will come to collect the trash from the skirt and bring it back to shore, where it can be recycled. The Ocean Cleanup organization hopes to launch 60 more sea sweepers around the world by 2020.

**FLOATING PLASTIC COLLECTOR**

**SEE PICS OF HOW ANIMALS CAN BE AFFECTED BY PLASTIC.**
natgeokids.com/KidsVsPlastic

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Bottlenose dolphins shed their outermost layer of skin every two hours.

Experts think 8.8 million tons of plastic enter the ocean every year.

The Great Pacific Garbage Patch is estimated to have about 1.8 trillion pieces of plastic in it.

Experts think of plastic entering the ocean every year.

**THE OCEAN CLEANUP**

- Off the coast of Kailua-Kona, Hawaii
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- Uses ocean currents and wind to gather up trash from the surface down to 10 feet below the structure
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**STUCK IN THE TRASH**

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The Great Pacific Garbage Patch is estimated to have about 1.8 trillion pieces of plastic in it.

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**BOTTLENOSE DOLPHIN**

In the ocean off the coast of Kailua-Kona, Hawaii, a bottlenose dolphin is seen up close.

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A young green sea turtle bobs along the surface of the water off the coast of Florida. Young turtles usually don’t hang out at the surface—that’s where predators can easily spot them, plus their food is deeper underwater. But something is keeping this foot-long turtle from diving.

Luckily, rescuers spot the struggling turtle and take it back to the Clearwater Marine Aquarium, where they name it Chex. Staff place Chex in a shallow kiddie pool so that the turtle won’t waste energy trying to dive. They test Chex’s blood and run x-rays but can’t figure out what’s wrong. “Then one day Chex started pooping out something weird,” biologist Lauren Bell says. The weird object turns out to be a purple balloon and an attached string.

**SOS (SAVE OUR SEAGRASS!)**

Sea turtles often mistake floating trash for food. “Even some people can’t tell the difference between a plastic grocery bag and a jellyfish in the water,” Bell says. But plastic doesn’t just hurt sea turtles: It hurts their habitat.

**Bye, Balloon**

After several days at the aquarium, Chex starts to improve as the balloon makes its way through the turtle’s digestive system. Chex eventually passes the entire balloon, plus a two-foot-long string. A few months later,
A recent study found that over half of all sea turtles have eaten plastic in their lifetime.

It would take six 10-year-olds to weigh as much as an average-size green sea turtle.

The ocean is full of trillions of pieces of trash called microplastics that are smaller than the period at the end of this sentence—which makes them really hard to clean up. But the solution might be in tadpole-like creatures called larvaceans (lar-VAY-shuns). These marine animals eat by filtering tiny food particles out of the water and through their bodies. The particles are first trapped in what’s called a mucus house—a thin, see-through bubble of, well, mucus, that surrounds the larvacean as it travels. Scientists are studying this behavior to see if a similar process could pull harmful microplastics out of the water.

After aquarium staff have successfully introduced solid food back into Chex’s diet, rescuers declare the turtle is ready to return to the sea. Bell stands hip deep in the waves as another staff member hands Chex to her. She carefully places the little turtle in the water and watches it paddle away. “Chex was like, ‘Oh, there’s the ocean! OK, bye!’” Bell says. Chex’s rescue is worth celebrating … but maybe without the party balloons.

During one three-hour cleanup on a beach in Virginia, volunteers collected over 900 balloons.

A POLLUTION SOLUTION

The ocean is full of trillions of pieces of trash called microplastics that are smaller than the period at the end of this sentence—which makes them really hard to clean up. But the solution might be in tadpole-like creatures called larvaceans (lar-VAY-shuns). These marine animals eat by filtering tiny food particles out of the water and through their bodies. The particles are first trapped in what’s called a mucus house—a thin, see-through bubble of, well, mucus, that surrounds the larvacean as it travels. Scientists are studying this behavior to see if a similar process could pull harmful microplastics out of the water.

A recent study found that over half of all sea turtles have eaten plastic in their lifetime.

It would take six 10-year-olds to weigh as much as an average-size green sea turtle.
A young whale shark swims slowly through a coral reef off the coast of the Philippines in Southeast Asia. At first, divers are thrilled to spot the nearly 13-foot-long fish. But as it moves closer, they see that the shark has a rope and a plastic net wrapped around its midsection, blocking its gills and cutting into its fins and back. “It looked like a ghost floating through the coral reef,” diver Pierlo Pablo says. If they’re not removed, the netting and rope will become tighter as the whale shark grows. The already exhausted animal won’t have the strength to find food, or it might become an easy meal for other sharks. So the divers give the whale shark a name—Spooky—and come up with a plan to save it.

If a fishing net settles on a reef and a storm comes through, the nets can break off pieces of the coral,” says Carlie Herring, a research analyst with the National Oceanic and Atmospheric Administration. But we need corals to keep the ocean healthy: It’s estimated that about a quarter of all marine species—including whale sharks like Spooky—depend on coral reefs for their survival.

Back at the coral reef, divers must act quickly to save Spooky. The whale shark becomes still as one of the divers swims under the animal and starts to carefully cut the rope with a knife. “It was like the shark knew we were trying...”
A minke whale was found off the coast of France with over 1,700 pounds of plastic bags in its stomach in 2017.

Normally you toss your trash in a bin, but this bin grabs its own trash! The Seabin is a waste basket that bobs in the water, sucking in floating trash on and below the water’s surface from up to 15 feet away. Workers come to check the bin every day, sorting out the recyclable plastic from the rest of the junk. Each receptacle collects about three pounds of trash every day. The company hopes to install over 5,000 Seabins in marinas and harbors around the world over the course of the next few years—which means we might be seeing a lot less floating trash soon!

to help it,” Pablo says. The diver moves slowly, careful not to cut into the shark’s skin. After a few minutes, the diver is able to unwind the rope and the trapped net from around Spooky’s body.

Finally free, Spooky moves toward the dive boat and floats alongside the divers for an hour before swimming away. “We felt like he was saying thank you,” Pablo says. “I hope Spooky is still out there somewhere—eating, swimming, and exploring.”
A harbor seal pup floats in the water off the coast of Maine. The young seal has recently left its mother’s care—and it’s already in trouble. The little seal has a massive tangle of fishing nets wrapped around its body. Without help, the pup will not escape. Luckily a fishing boat passes by, and the people on board prepare to rescue the helpless animal.

POLAR PROBLEMS

Harbor seals live in coastal waters in the Northern Hemisphere, which includes polar habitats in the Arctic. It might seem like this region—and southern polar habitats around Antarctica—would be plastic free because few people live there. But ocean currents carry the trash to these regions, where it has nowhere to go.

“The ocean is the ultimate transporter on our planet,” environmental engineer Jenna Jambeck says. “Once plastic that floats enters the ocean, the currents can take it all over the world, including to the Arctic.” In fact, one study of the Svalbard Islands near the North Pole found polar bears and reindeer entangled in plastic.

Scientists have also discovered microplastics frozen in Arctic sea ice: One study shows 12,000 particles of microplastic in one liter—or about four cups—of sea ice. “When even the sea ice has microplastic—well, then pollution is everywhere,” says Carlie Herring, a research analyst with the National Oceanic and Atmospheric Administration. Experts worry that as the ice caps melt, they’ll release these microplastics into the seas, putting more animals like the harbor seal pup in danger.

SAVED SEAL

The fishermen quickly scoop the seal out of the water and onto their boat. One of the fishermen holds the seal in place, using a knife to slowly cut the thick netting off the animal, one rope at a time. The seal is still at first but tries to wiggle away as it feels the net loosen. The fishermen keep the marine mammal calm for just a few more minutes until all the rope is off.

Finally the animal is no longer trapped in plastic. A fisherman gently lowers the pup into the water. The uninjured seal floats for a few seconds as it gets used to its surroundings. Then it gracefully swims away.
Experts think just one fishing net can entangle up to 40 animals.

In the northeast United States, about 880 seals were accidentally caught in fishing nets over a seven-year period.

Harbor seals can't rotate their hind flippers forward to walk on land—they can only scoot forward on their bellies.

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HARBOR SEAL
Off the coast of Owls Head, Maine

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POLLUTION SOLUTION

NET CARPETS

Kick off your shoes and take a seat on the...fishing nets? An initiative called Net-Works helps fishing communities in the Philippines, a country in Southeast Asia, and Cameroon, a country in Africa, to collect abandoned fishing nets from the ocean that endanger marine life. The nets are then recycled and made into carpet. The group has already gathered enough nets to go around the world four times!

HARBOR SEAL
Off the coast of Owls Head, Maine

THE SCARED SEAL ATTEMPTS TO ESCAPE BEFORE THE ROPES ARE COMPLETELY REMOVED.

THE SEAL IS FINALLY ROPE-FREE. ONE OF THE FISHERMEN LOWERS THE ANIMAL BACK INTO ITS OCEAN HOME.

MAKE PLASTIC-FREE STRAWS!
natgeokids.com/KidsVsPlastic
35 WAYS YOU CAN SAVE THE OCEAN FROM PLASTIC

BY ALLYSON SHAW

You probably use plastic every day, but some types can cause major problems for wildlife. Big pieces can entangle animals, and smaller bits can make them sick if accidentally eaten.

Scientists estimate that about 8.8 million tons of plastic enter the ocean every year. But you can do so much to help solve this problem. Follow these tips to reduce the amount of single-use plastic you use, as well as take care of the plastic you already have. Together we can protect ocean animals and keep Earth clean!

1. CHOOSE A REUSABLE STRAW and bring it to restaurants and on car trips. You can pick between bendy silicone, durable metal, smooth glass, or natural bamboo.

2. GIVE YOUR TEACHER HOMEMADE COOKIES as a thank-you gift instead of plastic knickknacks.

3. SOAK IN A TUB of bubbles made from a bath bomb instead of the bottled stuff.

4. Ask your fave pizza place to LEAVE OUT THE LITTLE PLASTIC TABLE in your delivery box.

5. SPARKLE WITH NATURAL GLITTER made from eucalyptus plants. (Regular glitter is just tiny pieces of plastic.)

6. Make sure your plastic BEACH TOYS don’t get washed away by the waves.

EARN A PLANET PROTECTOR CERTIFICATE! natgeokids.com/KidsVsPlastic

Straws, grocery bags, and water bottles are all examples of single-use plastic—items that most people use only once and then throw away.

 natgeokids.com/KidsVsPlastic
FISHAROUN
PROJECT PLASTIC
APRIL 2019 • NAT GEO KIDS
Abandoned plastic fishing supplies, called ghost nets, often entangle ocean animals. You can help by being careful about the fish you choose to eat. Online guides like Seafood Watch investigate the use of dangerous fishing practices to give fish a grade. Try to eat only the best choices, and leave the rest off your plate.

You can’t avoid plastic all the time, so here’s how to keep the stuff you have from harming the environment.

Don’t put garbage on top of an overflowing trash can. It’ll likely be blown into animals’ habitats.

Never leave behind fishing gear, especially fishing lines. That way they won’t entangle animals.

Swap plastic toys with your friends instead of asking for brand-new things.

Take old electronics with plastic pieces to a recycling station or back to an electronics store instead of putting it in the regular trash. (Make sure the store accepts the item first.)

Give single-use plastic a new job, like using newspaper sleeves to pick up pet poo.

Use junk mail and old newspapers instead of bubbled plastic to pad breakable stuff.

GET CRAFTY with crayons and colored pencils instead of markers.

 swapping plastic toys with your friends instead of asking for brand-new things.

Take old electronics with plastic pieces to a recycling station or back to an electronics store instead of putting it in the regular trash. (Make sure the store accepts the item first.)

Give single-use plastic a new job, like using newspaper sleeves to pick up pet poo.

Use junk mail and old newspapers instead of bubbled plastic to pad breakable stuff.
If you really want to make an impact, ask businesses and governments to get involved too.

17 Does your favorite restaurant or ice-cream shop offer plastic straws and spoons? Ask an adult to help you reach out to these businesses about swapping the items for paper or plant-based options. Learn how online. natgeokids.com/KidsVsPlastic

18 Report plastic litter to your local government. By tracking the items people see most often, the government might change laws about trash.

19 Send your used plastic food wrappers back to the company with a letter asking them to change the packaging.

20 Ask your teacher to help you create a plastic project in your classroom. Start by recording all the plastic your class throws away in one week, then talk about ways to reduce what you see. Get more plastic-free classroom ideas online. natgeokids.com/april

21 Send a letter, postcard, or drawing to your local representative or even the president asking them to do something about plastic pollution.

22 Make a sandwich out of FRESH BREAD FROM A BAKERY instead of packaged grocery store bread.

23 Give your friends PLASTIC-FREE GIFTS like homemade treats, sidewalk chalk, or movie tickets.

24 Bring your lunch in a reusable bag, and wrap your sandwich in a pouch made of CLOTH, PAPER, OR BEESWAX.

25 Order your ICE-CREAM SCOOPS served in a cone instead of a cup. No plastic spoon needed!

26 TO FRESHEN UP A STINKY ROOM, place a bar of soap in your laundry hamper and spritz your shoes and sheets with white vinegar instead of using plastic plug-ins or spray bottles.
Experts estimate that only about 9 percent of the world's plastic gets recycled. Follow these steps to make sure your local recycling plant can accept the plastic in your bin.

1. Visit your city’s website to learn what your local recycling plant can take.

2. Clean and dry your recyclables. (If items are covered in food and grease, they might be sent to the landfill instead.)

3. Screw the lids back on containers like soda bottles, shampoo bottles, and mouthwash containers to ensure that the lids get recycled too.

4. Put all of your items into the recycling bin separately, not in bags or containers.

5. Plastic grocery bags, bubbled plastic, and Styrofoam can gum up the sorting machines, so keep these items out of the recycling bin. Instead, take Styrofoam packing peanuts to a mailing center to be reused, and bring the rest to the grocery store to be recycled separately.

6. Get SQUEAKY CLEAN with a bar of soap instead of bottled liquid wash.

7. Instead of packaged treats, snack on STOVETOP POPCORN, nuts, trail mix, cereal, and candies bought from the bulk-foods section of your grocery store (and gathered in reusable bags).

8. Sip store-bought drinks out of a CAN INSTEAD OF A PLASTIC BOTTLE. Even better? Ask your parents to buy it in a cardboard case instead of a plastic six-pack ring.

9. Decorate for a BIRTHDAY BASH with colorful banners, streamers, paper confetti, and pom-poms instead of balloons.

10. Trying to reduce the amount of plastic that you use can feel overwhelming. It's OK if you can't do everything—just getting started is the important part.
**COLOR CONFUSION**

If you think that the center tiles of each box are green, yellow, blue, and pink, think again. Each center tile is actually gray—just like the gray box below. To check, poke a small hole in a piece of scrap paper and place it over the page so you can see the center tiles without the surrounding colors.

**BEHIND THE BRAIN**

You know how an apple looks red whether it’s in a park or a cupboard? That’s because your brain can adjust to see the same color no matter how much natural light is shining on the apple. But sometimes brains get confused. In the four boxes above, your brain thinks that colored light is shining on each box’s tiles. The result? Your brain doesn’t see some tile colors correctly.

For instance, in the top left box, your brain thinks a pink light is shining on the nine tiles, which makes it see the gray box as green. Why? Because when you combine pink and green, you get gray. So when your brain tries to adjust for the “pink light” to see the gray box, it overcorrects and shows a complementary color.

**BRIGHT LIGHT**

Stare at the center of this cartoon bulb for 20 seconds and then quickly look at a blank wall surface that isn’t too far away. You should see a glowing light bulb!
What do patriotic apes wave on Flag Day?

ae-Spangled bananas!

You’ve got to be joking...

What happened when 500 hares got loose in the center of town?

The police had to comb the area.

What do you call a very popular perfume?

A best smeller.

Knock, knock.

Who’s there?

Dinosaur.

Dinosaur who?

Dinosaur because he fell down!

What do you call every popular perfume?

A best smeller.

Tongue Twister. Say this fast three times:

Knock, knock. Who’s there? Dinosaur. Dinosaur who? Dinosaur because he fell down!

What do patriotic apes wave on Flag Day?

Star-spangled bananas!
These photos show close-up and faraway views of patterns and textures in nature. Unscramble the letters to identify what's in each picture.

Answers on page 35
My friends and I have the ___________ job ___________ gardens for Mrs. Johnson, the ___________. One day, while ___________ friend’s name ___________ and ___________ another friend’s name ___________ pulled ___________ the lawn, I watered the ___________. Then I had a(n) ___________ idea. Wouldn’t it be more fun to water my ___________ friends ___________ instead? But just as I turned the hose on my pals, Mrs. Johnson ___________ past-tense verb ___________ into the path of the water spray—and got ___________. My friends and I froze. Then to our surprise, she yelled, “___________ fight!” She pulled a water ___________ noun ___________ from her back pocket and squirted my ___________ body part ___________. Then she aimed another ___________ animal ___________ at ___________ as ___________ dived behind a(n) ___________. Who knew gardening was a contact sport?
In the new book *Explorer Academy: The Falcon’s Feather*, 12-year-old Cruz Coronado breaks secret codes in order to fight dangerous villains and solve mysteries. Test your own skills by cracking the code on this page, then check out more about the book at [ExplorerAcademy.com](http://ExplorerAcademy.com).

**THE CODE: IRSA**

Over the phone, it can be hard to hear the difference between letters like *b* and *d*, or *m* and *n*. So pilots, police officers, and military organizations use the International Radiotelephony Spelling Alphabet (IRSA) to spell words clearly. In this code, each letter of the alphabet is represented by a word that starts with the same letter. Check out the IRSA below.

<table>
<thead>
<tr>
<th>IRSA</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Alfa</td>
</tr>
<tr>
<td>B</td>
<td>Bravo</td>
</tr>
<tr>
<td>C</td>
<td>Charlie</td>
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<td>D</td>
<td>Delta</td>
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<td>E</td>
<td>Echo</td>
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<tr>
<td>F</td>
<td>Foxtrot</td>
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<td>G</td>
<td>Golf</td>
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<td>H</td>
<td>Hotel</td>
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<td>I</td>
<td>India</td>
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<td>J</td>
<td>Juliet</td>
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<td>Lima</td>
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<td>M</td>
<td>Mike</td>
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<td>N</td>
<td>November</td>
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<td>O</td>
<td>Oscar</td>
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<td>P</td>
<td>Papa</td>
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<td>Q</td>
<td>Quebec</td>
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<td>R</td>
<td>Romeo</td>
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<td>Sierra</td>
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<td>T</td>
<td>Tango</td>
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<td>U</td>
<td>Uniform</td>
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<td>V</td>
<td>Victor</td>
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<tr>
<td>W</td>
<td>William</td>
</tr>
<tr>
<td>X</td>
<td>X-ray</td>
</tr>
<tr>
<td>Y</td>
<td>Yankee</td>
</tr>
<tr>
<td>Z</td>
<td>Zulu</td>
</tr>
</tbody>
</table>

You can hide a secret message by placing words from the IRSA into an otherwise unimportant piece of writing.

Carefully read this note from your friend, using the first letter of the IRSA words to spell out a secret message in the boxes below. Watch out—some of the code words are hidden in other words.

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*THE CODE: IRSA*

"In class today the teacher was talking about all the cool archaeological sites in Lima, the capital of Peru—did you know they still uncover mummies there sometimes? So cool! Oscar is going on a trip to South America, according to Charlie. He’s planning to run a 5k race in Argentina. (It’s five kilometers of running, which is about three miles.) I heard him talking about it while I was in the library and I could hear the echo from down the hall. But I think I’d rather go on a trip to Italy because ever since we visited that new Italian restaurant, Café Roméo, I can’t stop thinking about pizza! It’s way better than what my mom made for dinner last night: alfalfa sprouts. Yuck! Anyway, I wonder if he’ll learn how to dance the tango when he visits Argentina this November. Oscar is so lucky! I can’t wait to see Oscar’s awesome pictures—and maybe his race medal. But I guess I’m lucky too—my family is taking me to Alaska this November! I promise to send you a postcard."
POM-POM PUFFS

Help keep the Earth healthy by ditching single-use plastic items. This month, decorate your next party with paper pom-pom balls instead of balloons.

Why? Balloons released into the air or left outside can end up in the ocean, where they might entangle animals or be mistaken for food.

**MATERIALS**
- 8 sheets of equal-size tissue paper (Bigger tissue paper will make bigger pom-poms.)
- 1 craft pipe cleaner
- Scissors
- String (optional)

**STEPS**

1. Stack 8 sheets of tissue paper together. (You can use the same color or mix it up.)
2. Fold the tissue paper back and forth in 1-inch sections like an accordion. Press each fold firmly.
3. Wrap the pipe cleaner around the center of the folded tissue-paper stack, then twist the pipe cleaner to secure it.
4. Trim the pipe cleaner with scissors, then wrap the end of the pipe cleaner around itself so the wire doesn’t poke out.
5. Cut both ends of the tissue-paper stack into rounded, pointed, or frilly shapes.
6. Flip the tissue-paper stack on its side.
7. Separate each layer of tissue paper one at a time.
8. Pull the layers up and toward the center.
9. To hang your pom-pom, tie a piece of string to the center of the pipe cleaner.

**PLANET PROTECTOR TIP** Instead of releasing a balloon to make a wish, blow out candles.

Keep the party going with other ideas on throwing a plastic-free bash. Then take a Planet Protector pledge and find more Earth-saving tips! natgeokids.com/KidsVsPlastic
Nat Geo Kids readers show off their favorite marine animals in these drawings.

- **Green Sea Turtle** Marie R., 9, Gaffney, South Carolina
- **Hammerhead Shark** Chance H., 12, Marshall, Michigan
- **Amazing Octopus** Rishan C., 9, Portland, Oregon
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.

**Draw a new superhero!**

Send us your original drawings:

**Nat Geo Kids—**
Hero Art Zone
P.O. Box 98002
Washington, DC
20090-8002

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**Send us your original drawings:**

- **The Green Sturgeon** Jaden C., 10, Philadelphia, Pennsylvania
- **Meeting a Gentle Giant** Logan N., 8, Waverly, Iowa
- **Killer Whale** Henry W., 12, Carlsbad, California
- **Dolphin Pod** Sabina C., 10, Albuquerque, New Mexico
- **Penguins** Katelyn P., 10, Randolph, New Jersey
- **Otter of the Sea** Maryanne G., 11, Olathe, Kansas
- **Abstract Humpback** Hannah P., 12, Puyallup, Washington

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**Answers**

*What in the World?* (page 30):
- Top row: waves, moss, bubbling mud.
- Middle row: tree bark, lava, iceberg.
- Bottom row: seaweed, sand dune, flower field.

*Explorer Academy* (page 32): Locker at noon