



NATIONAL
GEOGRAPHIC

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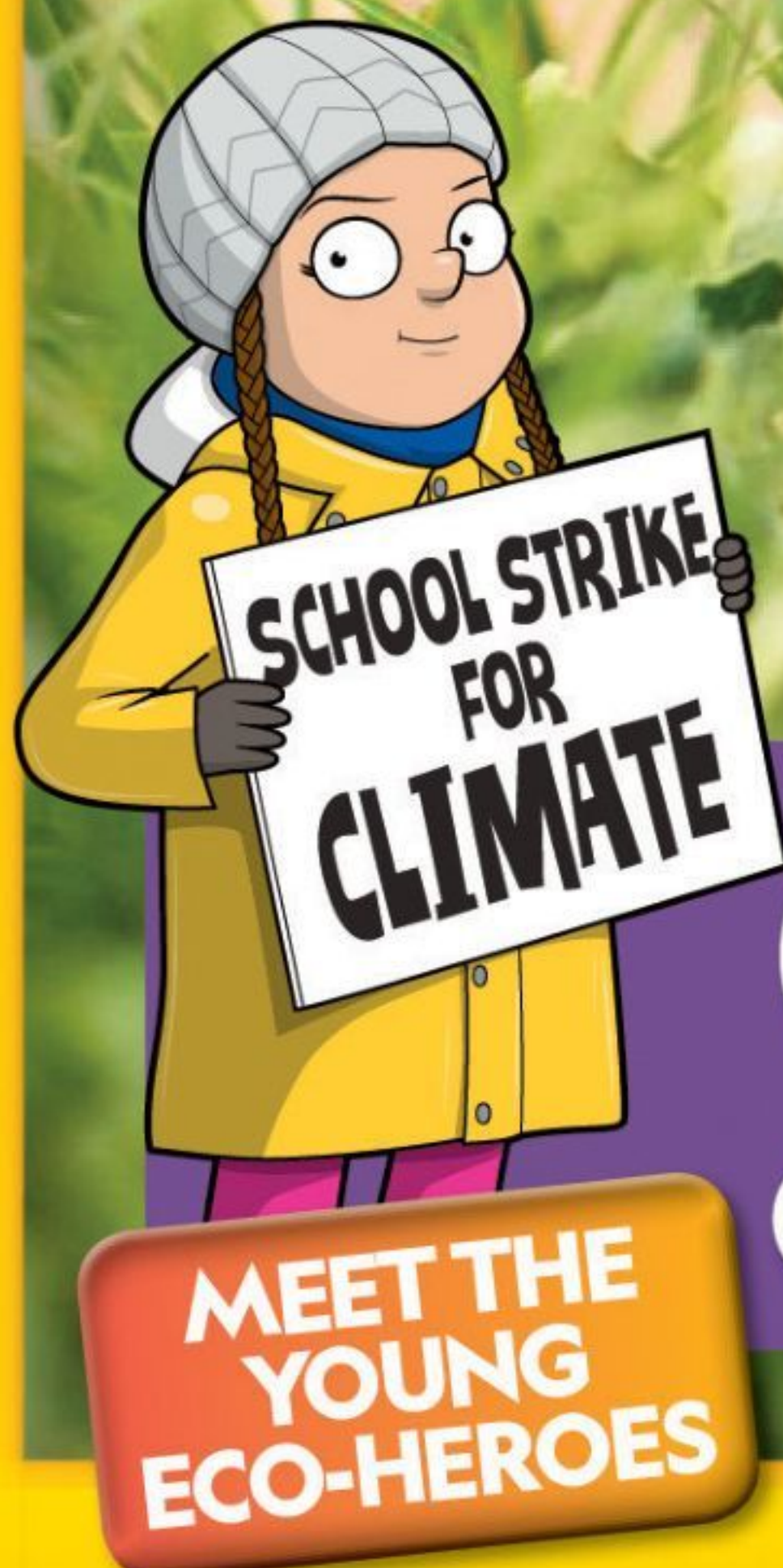
2019
PHOTO
COMP



WIN!
A FAMILY
HOLIDAY TO
MOROCCO!

KIDS

CRAZIEST CAT EVER?!



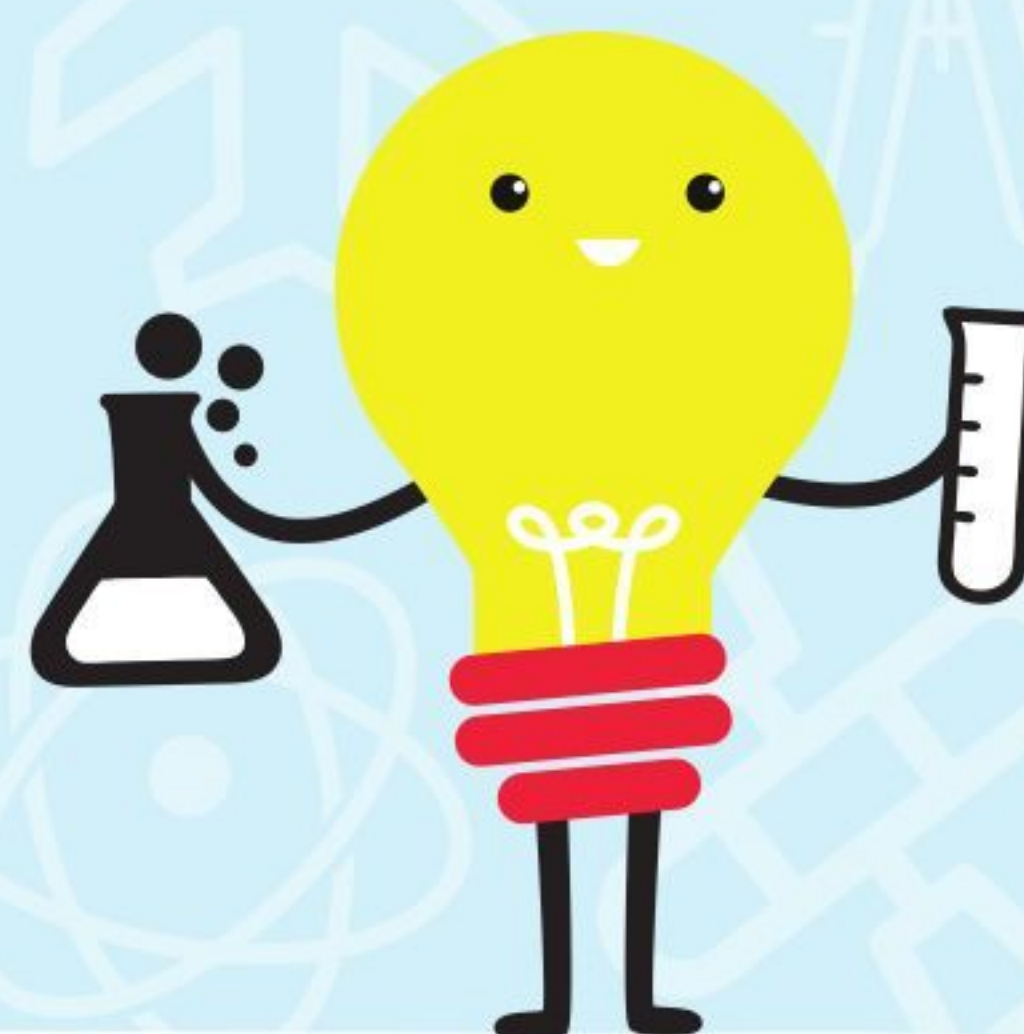
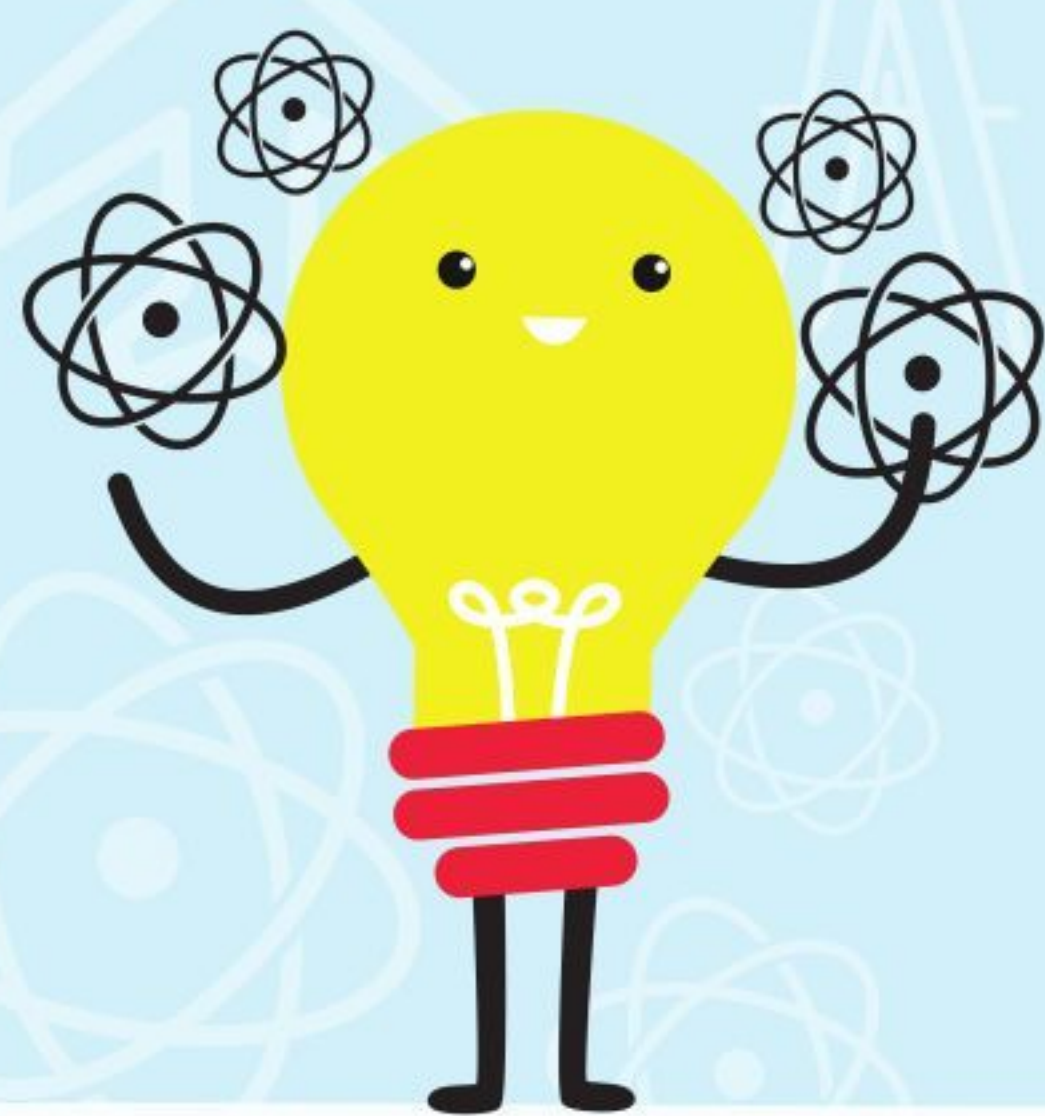
G
GRETA!

152
PRIZES
INSIDE



REAL
OR
FAKE?





Imagine...

A flying car.

A hoverboard wheelchair.

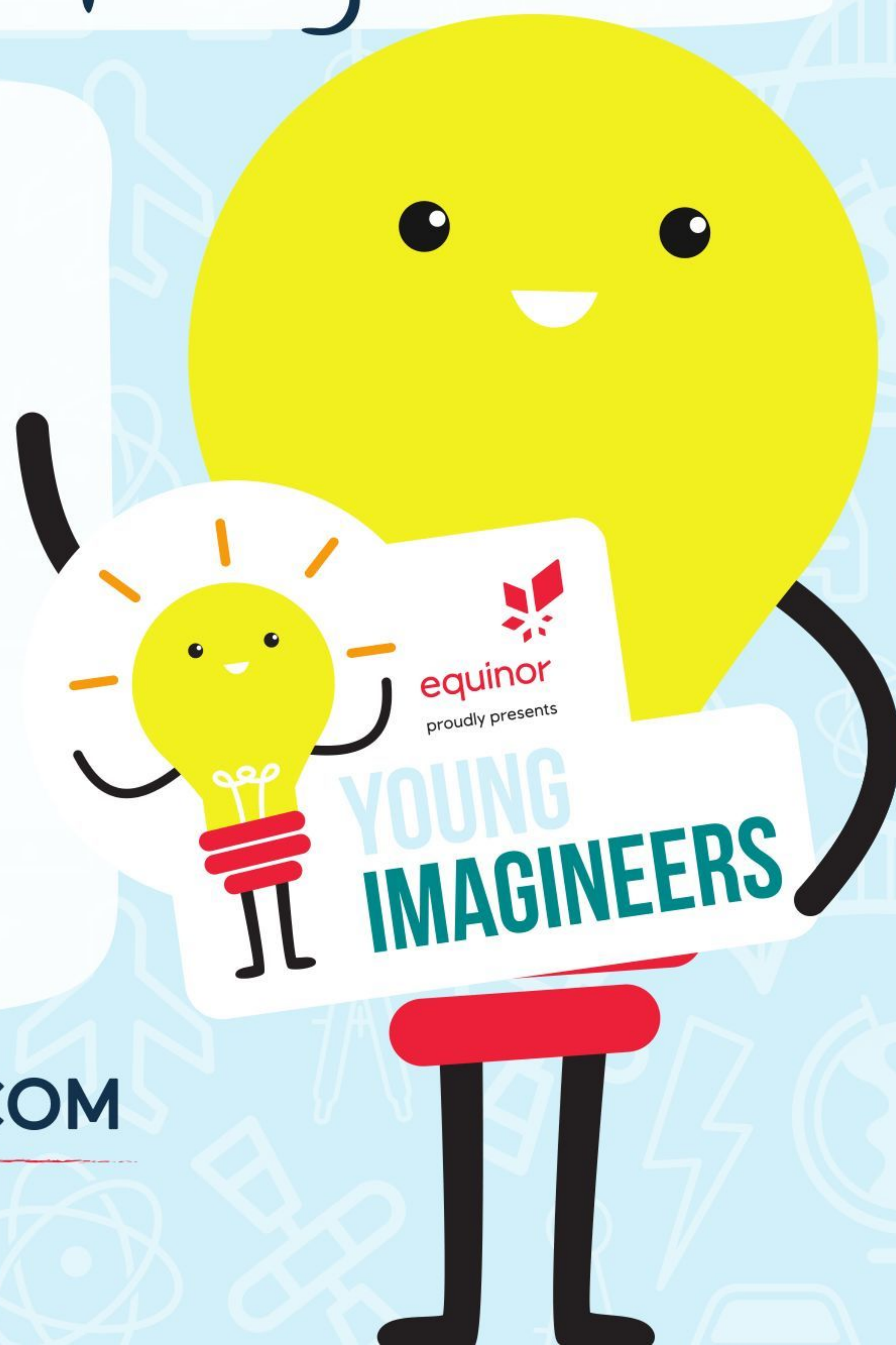
An underwater recycling robot.

Think a solar-powered, pollution-sucking robot pigeon is far-fetched? Well, that's what came from the mind of our winning Young Imagineer last year.

If your child is aged 7-14 and has an idea that could change the world, visit the site below to upload these ideas by 27th October.

Just ask your child to draw a design and explain it in 100 words, and they could have their invention displayed at the Science Museum in London.

What an amazing prize! And who knows, maybe your child's invention will change the world forever!



WWW.YOUNGIMAGINEERS.EQUINOR.COM

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Hello!

Have you ever seen a cat that looks like this month's cover star, the serval? It may look a bit silly, but the serval's crazy body means it's surprisingly suited to life on Africa's savannahs. Turn to page 12 to discover more about this fantastic feline.

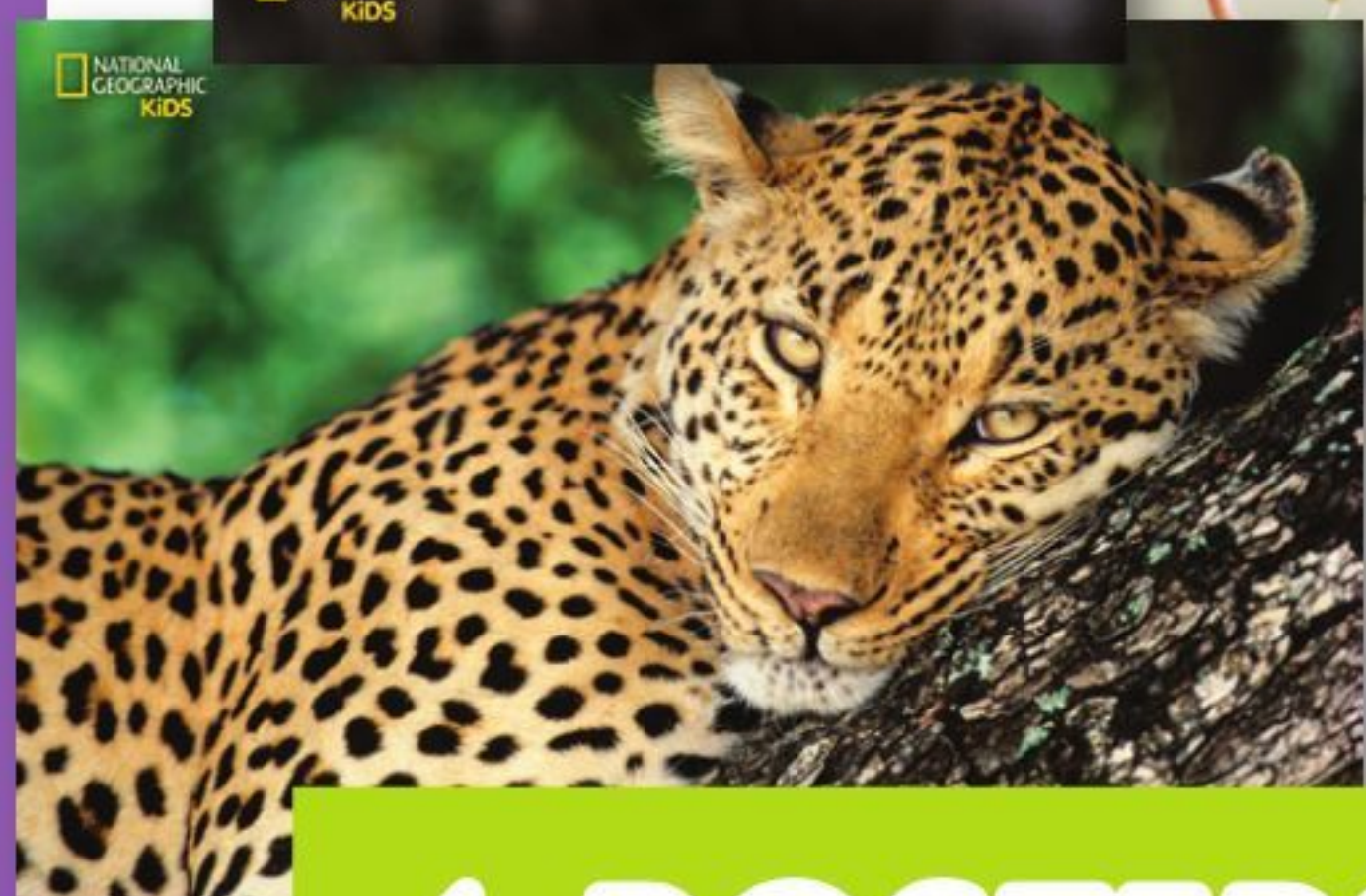


Also this issue, we find out about young eco-hero Greta Thunberg, and learn why so many kids are striking from school. Plus, we check out what NG KiDS' readers have been doing to help the planet!

As always, this month's mag is packed with posters, puzzles and fantastic prizes, so get stuck in!

Editor, Tim

FREE this issue...



6 POSTERS!

Write to NG KiDS

Email kids@ngkids.co.uk

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Facebook facebook.com/natgeokids

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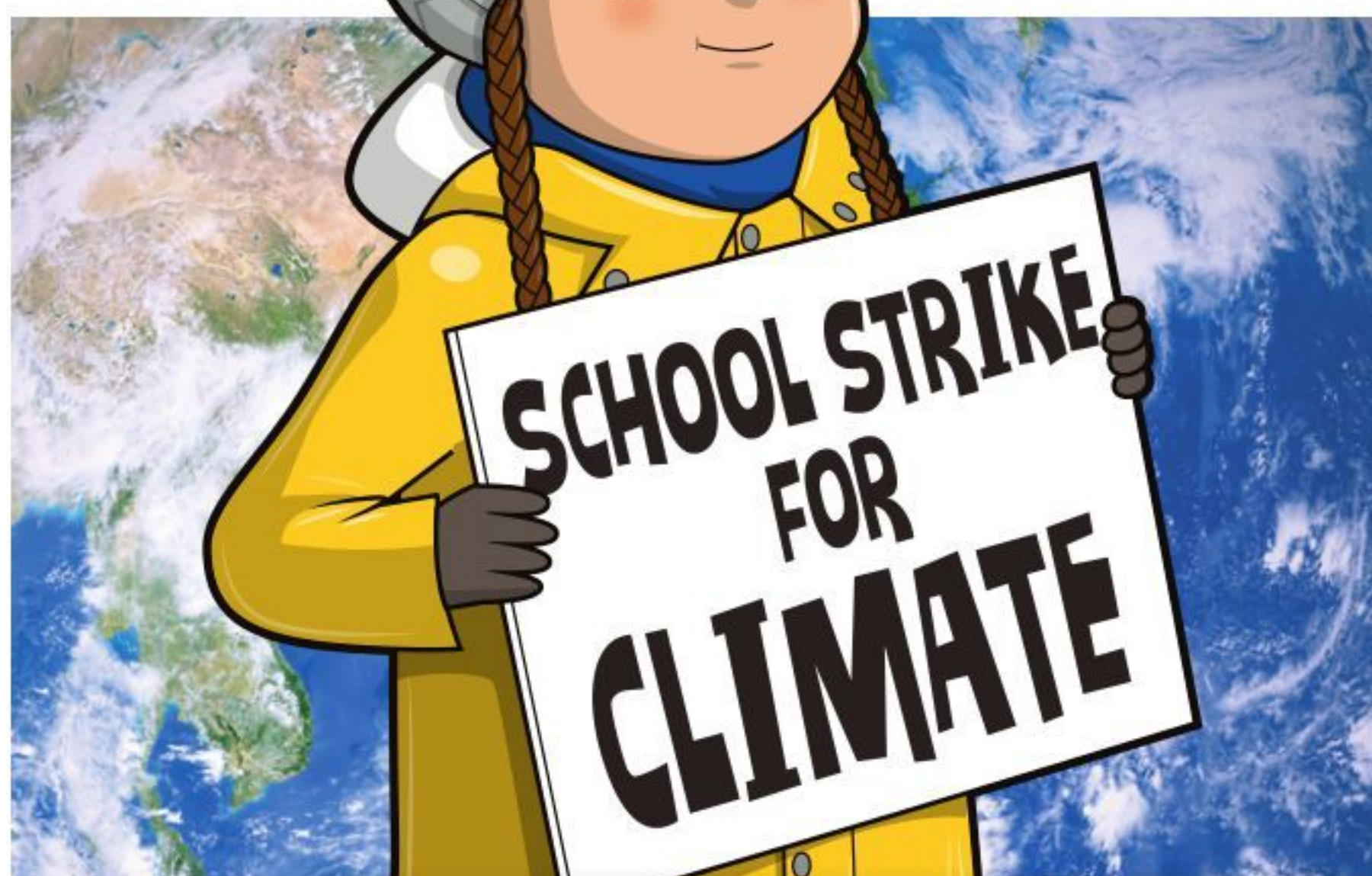
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WEIRDEST CAT EVER?!

Find out why the serval is perfectly equipped for life in the wild!



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YOUNG ECO-HEROES

Meet Greta Thunberg and seven other awesome activists!



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REAL OR FAKE?

Top tips on how NOT to be fooled by bogus bling!



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PHOTO COMP 2019!

Have YOU got the camera skills to scoop a trip to Morocco?!



47

ANIMAL HEROES COMIC

Max the mouse travels back in time to meet a life-saving gorilla!

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Competition entry form

You've got to be in it to win it!

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Puzzle Answers

Oi, no cheating!

INSIDE SCOOP

The latest news from around the globe...

Easy key-sy!

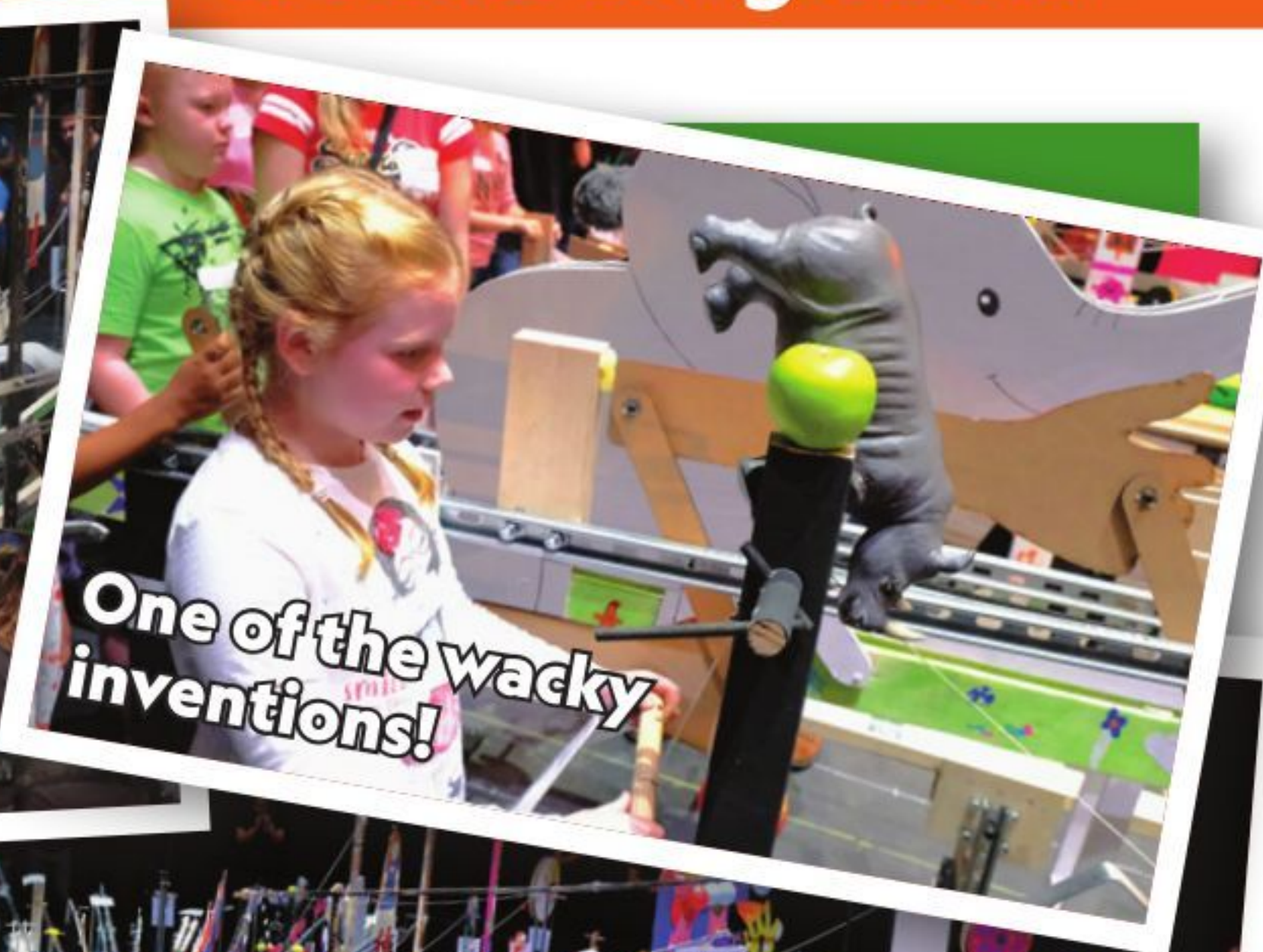


The record for the number of people playing a **piano at the same time** has been smashed by kids from around the UK! **Eighty-eight** young ivory ticklers played **one key each** on a **grand piano**, using crazy **mechanical fingers** they'd designed themselves.

More than **2,500 key-bashing inventions** were entered into a **competition**, and the winning 88 were then built by **engineers** led by the **University of Cambridge**! Our faves were a **banana gun**, a **toothbrush** pushed by a **windmill** and a **see-saw** made of **walking sticks**. Amazingly, the wacky musicians managed to make a decent tune!



All 88 kids were 'connected to a key!'



One of the wacky inventions!



The kids performed at Birmingham's International Convention Centre



The tube in action at Bonneville Dam, between Oregon and Washington in the USA

Salmon cannon



Salmon are famous for swimming **upstream** and **scaling waterfalls** to get back to their **breeding grounds**. But even the strongest salmon can't get past a **human-built dam**. Which is where the **Whooshh Passage Portal** comes in!

The giant '**salmon cannon**' was invented to **shoot fish over the dams**, allowing them to continue their epic journeys. The inventor says it's a smooth and **stress-free** ride, with salmon gliding through the tube at **35kmph**!

The technology has been around for about five years, but it went viral again recently, and many people are now demanding a **human version**! Wouldn't that be *fin*-tastic?!

3

FAST FACTS!

OLD GADGETS

You probably have a drawer full of unused phones, laptops and tablets at home, right? Here's why you should recycle them...

1 A new survey suggests that there are more than **40 million** old gadgets sitting in people's homes across the UK. But our old smart devices contain **precious metals** and **rare elements** – and up to **80%** of old phones can be **recycled**!

2 According to the **Royal Society of Chemistry**, there are at least **30 natural elements** in a **smartphone** and we could run out of **six** of the **rarest** in the next **100 years**. But that's not the only reason to recycle gadgets. **Mining** for precious elements is difficult, **dangerous** work, and may **destroy wildlife habitats**.

3 The good news is **YOU** can help! Start by encouraging your parents to **recycle their old gadgets**. Just ask them to send them back to the manufacturer or head to **tinyurl.com/recyclemobiles** to find out more.



How much of this clobber do you have in your home?!

Easy key-sy © 88 Pianists; Salmon cannon © Whooshh Innovations; Mini munchers © Chester Zoo. Illustration © Marek Jagucki. All other pictures © Getty Images UK.



Imagine seeing a penguin THIS big!

Big ol' birds



The fossilised remains of a **gigantic penguin** have been found in **Waipara, New Zealand!**

The *Crossvallia waiparensis*, discovered by **amateur fossil hunter Leigh Love**, measured a whopping **1.6m tall** (roughly the same height as the average person) and **weighed four times as much** as the current biggest living penguin species, the **emperor penguin**.

But penguins aren't the only big birds to have once lived in New Zealand. **Palaeontologists** there have also recently found fossils that belong to the **largest parrot** ever to have existed – the **1-m-tall *Heracles inexpectat***. Scientists say huge avians thrived in the area because there were almost no **mammal predators**.

Mini munchers



A group of very rare and very tiny **large heath caterpillars** have hatched at **Chester Zoo!** The cute critters (right) will grow and develop in **pecially designed habitats** before the butterflies are released into the wild next spring. Hooray!

Large heath butterflies were once **common** in the **wet mosslands of Britain**, but their boggy habitats began disappearing in the **1800s**, drained to make way for farms. These new insects will be returned to nature reserves in **Warrington** and **Manchester**, areas where they'd gone extinct. Let's hope they can make a comeback!

Paintbrushes were used to move the 1-mm caterpillars!

Actual size



**CRAZY
EVENT**

Pearly Kings and Queens Harvest Festival

Every **autumn**, London's most iconic 'royals' gather at **Guildhall Yard** for a fun **free festival**, complete with **Morris dancers, Maypole dancing, donkeys, carts** and various **mayors**. But don't expect to see **Harry, Meghan, Charles** or **Camilla**. The **Kings and Queens** in attendance are the '**pearly**' variety, Londoners who dress in fabulous outfits decorated with **pearl buttons, raising money for charity**.

The noble tradition was started in the **1870s** by a **street sweeper** named **Henry Croft**. Henry was inspired by the dapper **fruit and veg sellers** of London's **East End**, who sewed fancy buttons on their trousers and were well known for **looking after each other**.

MAKE IT A DATE

What's going on this month?

OCT
1



World Vegetarian Day

Go meat-free for the day (if you're not already a veggie!)

OCT
1-31



The Big Draw

Pencil in an event near you!
thebigdraw.org

OCT
1-31



Black History Month

Celebrating the culture and achievements of black Britons

OCT
4-10



World Space Week

This year's theme is 'The Moon: Gateway to the Stars'

OCT
27



End of British Summer Time

The clocks go back an hour at 2am!

WACKY WORLD!

Check out the planet's strangest pictures...



Fairway to heaven

Visitors to **Rochester Cathedral** in **Kent** were surprised to find the church's central aisle converted into a **crazy golf course** this summer! The **nine-hole course** featured local model bridges and was installed to attract people who fancied a bit of fun while they learnt about the **1,400-year-old cathedral**. Wonder whether anyone got a *holy* in one?!

Hoverboard hero

French inventor, **Franky 'Flyman' Zapata** has crossed the **English Channel** on a jet-powered **hoverboard**! The **35-km journey** from the northern coast of France to the south coast of England took just **22 minutes**, with Franky flying **15–20m** above the water at speeds of up to **177kmph**. Whoa!



Spider-Man scramble

When temperatures in **Chongqing, China**, soared to **40°C** in July, a group of **Spider-Man** fans decided to really splash out! The **wet web-slingers** battled it out on a **swimming pool assault course** at the **Amusement City water park**. Don't the soggy superheroes look **MARVEL-lous**?!

BONKERS BOATS

The **River Torridge** in **Bideford, Devon**, came alive with weird and wonderful **cardboard vessels** in July. The crazy homemade crafts were competing in the annual **Cardboard Boat Regatta**!



HOT DOG HOTEL!

Check out the **Wiernermobile**, an **8-m-long** delivery car shaped like a **hot dog**! Its owners in **Chicago, USA**, recently turned it into a **mobile hotel**, packed with, er, hot dogs!



PERSONABLE PLANTER!

Worried about when to water your flowers? Well, this **hi-tech plant pot** has **15** different **animated emotions** that show how your plant is '**feeling**'. Clever or what?!



FROM THE STUDIO THAT BROUGHT YOU

HOW TO TRAIN YOUR

DRAGON



HOME HAS A MAGIC ALL ITS OWN


 DREAMWORKS

ABOMINABLE

 PEARL IN CINEMAS OCTOBER 11

 DREAMWORKS

 PEARL

 UNIVERSAL

WHAT'S UP?

Films and books to get excited about this month...

ENTER ALL COMPS ON PAGE 55!



Abominable

When teenager Yi encounters a young **Yeti** on the roof of her apartment building in **Shanghai, China**, she and her cheeky chums **Jin** and **Peng** embark on an epic quest to reunite the **magical creature** with his family. The trouble is, yetis live on the highest point on Earth – **Mount Everest**! Plus, the kids need to stay one step ahead of the evil **Burnish**, who is desperate to **capture** the legendary creature for himself!

● In cinemas 11 October



Can Yi (right) and her friends help the yeti?!



Yi loves her abominable new pal

WIN! Ten winners will scoop **Abominable** goody bags. Just answer this question to be in with a shot!

Q The mythical Yeti is also known as the Abominable...

- a) Snowman b) Snowplough
- c) Snowshoe



Farmageddon

Shaun takes a trip to another galaxy 10,000 light years away!



Little LU-LA is even more mischievous than Shaun!



When LU-LA gobbles sweets, things get baa-rmy!

Shaun the Sheep, the world's favourite (and naughtiest) woolly hero, is plunged into a giggle-filled **intergalactic adventure** when an adorable alien called **LU-LA** crash-lands near **Mossy Bottom Farm**. Her **magical powers** (and galactic-sized **burps**) soon charm the flock, and Shaun takes his new extra-terrestrial friend on a road-trip to find her **lost spaceship**. But a sinister alien-hunting agency is on their tail! Can Shaun and the flock save LU-LA before it's too late?

We're so glad Shaun's back – this movie is **baa-rilant**!

● In cinemas 1 October

WIN! We've got three **Farmageddon** goody bags up for grabs! For your chance to win, just answer this question...

Q What is the name of the British animation studio that creates **Shaun the Sheep**?

- a) Aardman
- b) Hardman
- c) Aardvark

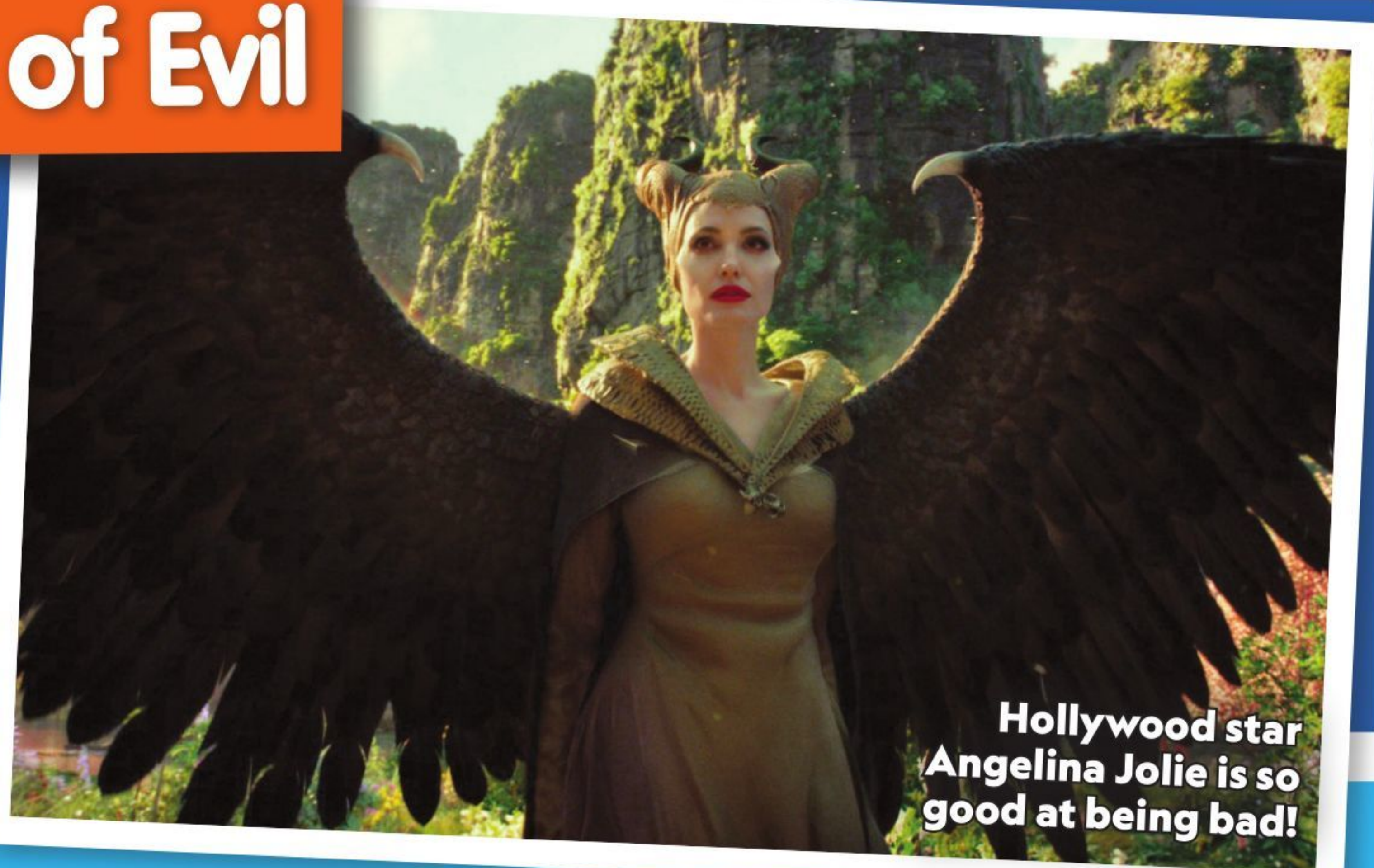


Maleficent: Mistress of Evil

Is she a goody? A baddy? Or just misunderstood? The ever-complex **Maleficent** returns in this twisted tale about the complicated relationship between a **powerful fairy** and innocent **Princess Aurora** – a child she once cursed, and then grew to love.

In the new movie, Princess Aurora gets **engaged** to **Prince Phillip** – but can Phillip's mum, **Queen Ingrith** be trusted? Maleficent doesn't think so, and soon wreaks chaos upon the kingdom! Can peace ever be restored?

● In cinemas 18 October



Hollywood star Angelina Jolie is so good at being bad!

KEY



Event



Movie



DVD



App



Book



TV

6 SHAUN THE SHEEP FACTS!

1 It takes over three years to make a Shaun movie! On average, just two seconds of animation is produced by each animator per day.



2 There were 28 stop-motion animators working on the movie, helping bring Shaun and his new friend, the magical alien LU-LA, to life.

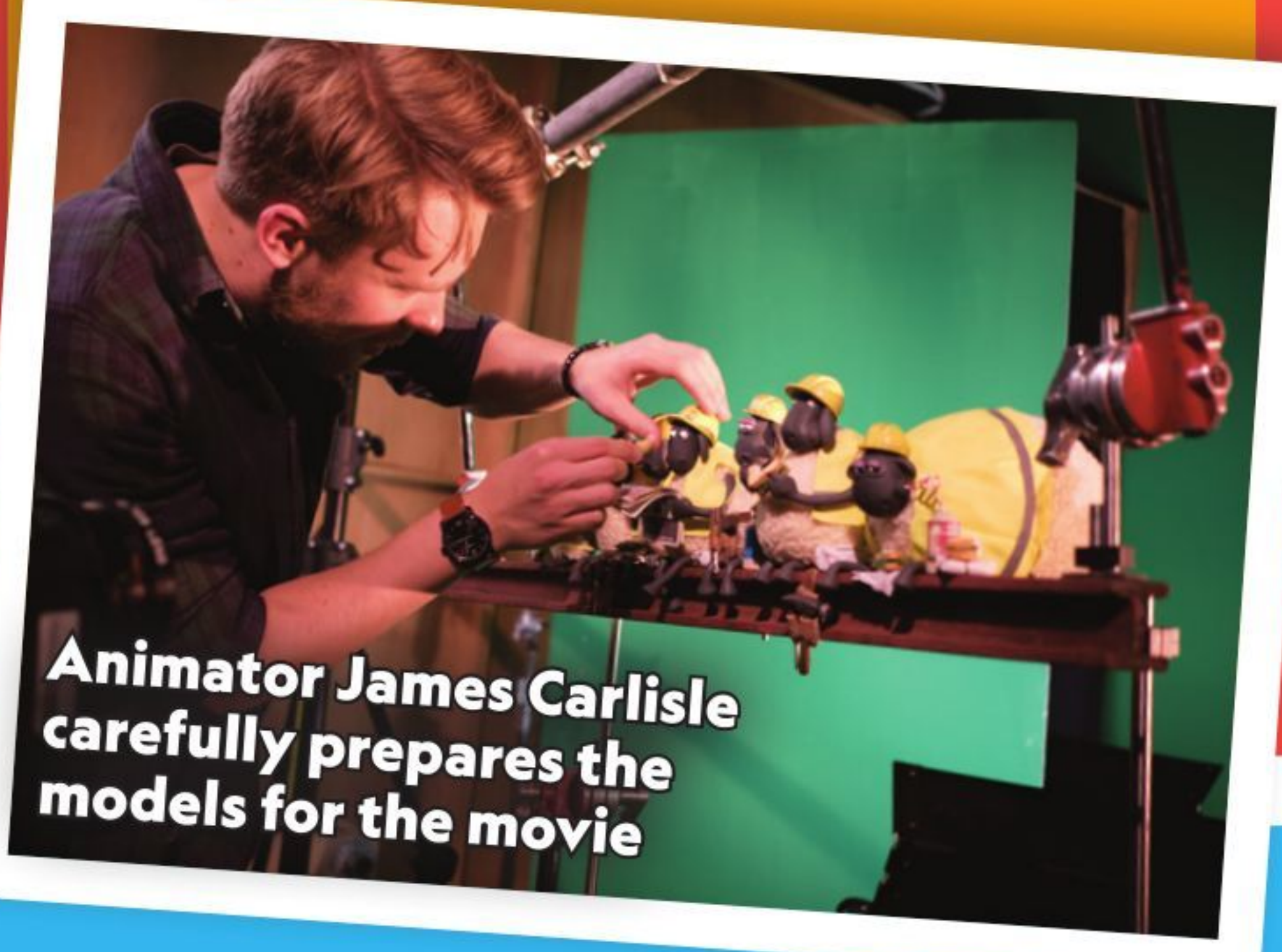


3 Shaun can't speak, but his 'baas' and chuckles are voiced by Justin Fletcher – CBBC's Mr Tumble!

4 To date, Shaun has featured in 150 episodes of his TV show, one TV special and, now, two feature-length movies. The first film, *Shaun the Sheep Movie*, came out in 2015!

5 There are now Shaun the Sheep theme parks in Sweden, Japan and Australia, with one planned in China, too! He's popular all over the world!

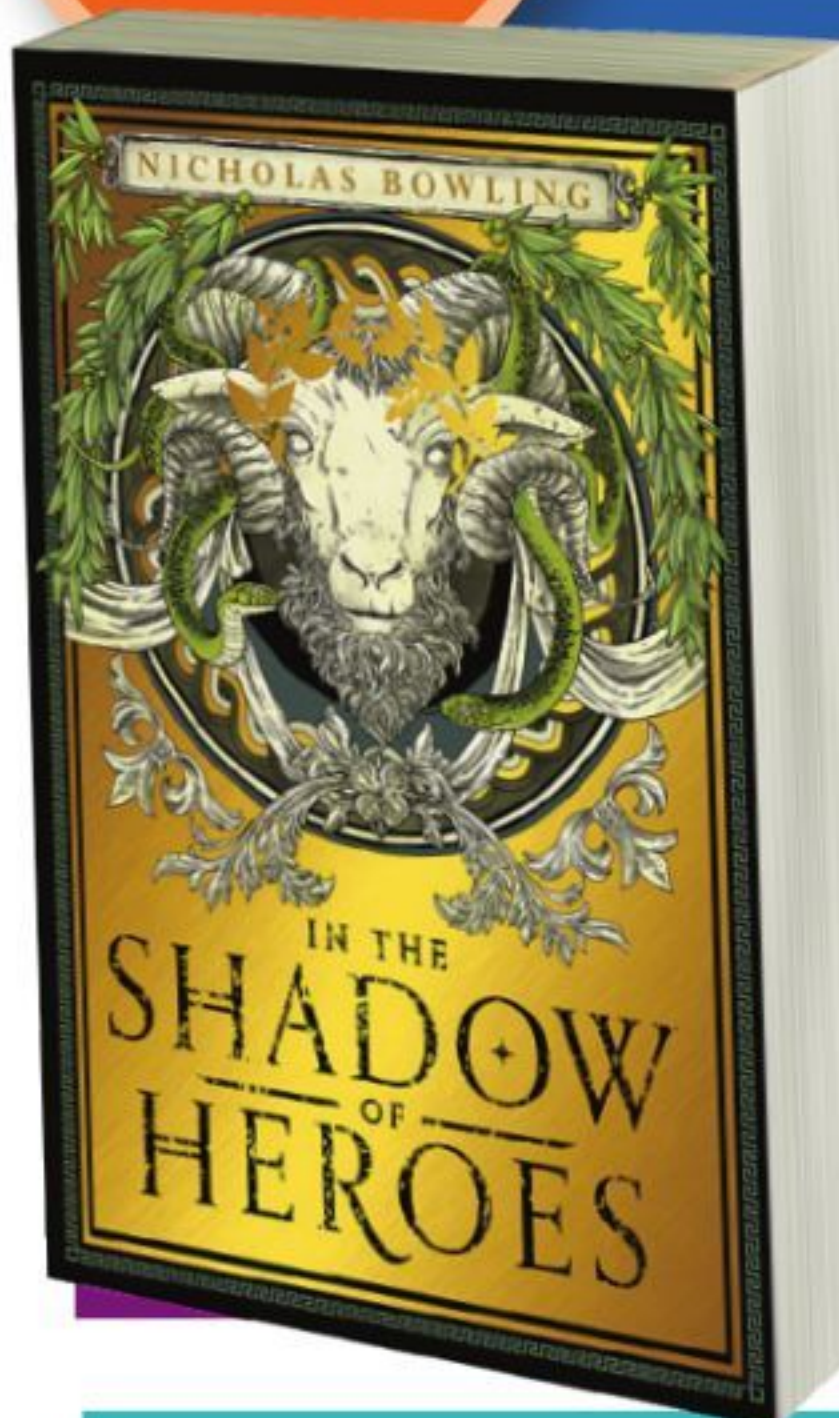
6 A typical Shaun the Sheep puppet is 17cm tall and weighs 100g – that's lighter than a copy of NG KIDS!



Animator James Carlisle carefully prepares the models for the movie



Your book reviews



In the Shadow of Heroes *Nicholas Bowling*
Cadmus is a slave in Ancient Rome, but after his master mysteriously disappears, it's up to Cadmus and his friends to stop the villainous Emperor Nero from getting his hands on the mythical Golden Fleece.

I loved the part when Cadmus and his pals meet the crew of an ancient ship that disappeared from mythology. The ending was hard to decipher so I hope there will be another book in the series. I would recommend this to people who like Rick Riordan books.



Callum, 10

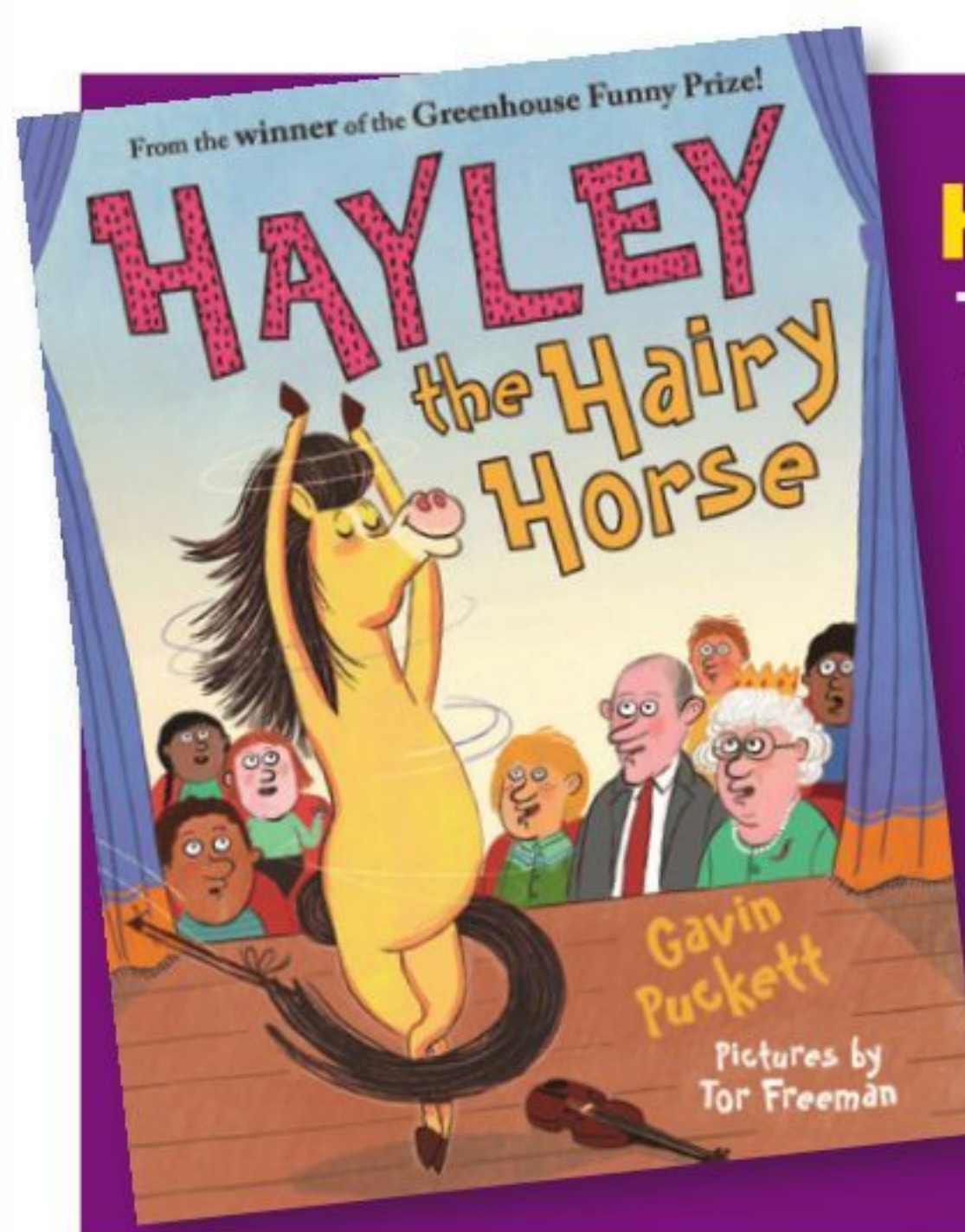
Fire Maker *Guy Jones*

Alex Warner is a boy from London who is always doing magic tricks, either to his bedroom wall or on stage competing to be young magician of the year. But his life is changed forever when, hiding from Freddie and her gang, he stumbles into Mr Olmo's garden and finds three magic fire balls. Thrown into an adventure of a lifetime, Alex meets both friend and foe, and learns the importance of forgiveness and how to say goodbye.

This book made me laugh and cry – I couldn't put it down.



Oliver, 10



Hayley the Hairy Horse *Gavin Puckett*

This book for younger readers is about a horse who is looking for adventure and a man who will do anything to get her silky, soft hair for his violin bow!

The story is funny, especially the last part. Hayley the horse is my favourite character – she always thinks of clever ways to keep her hair.

I liked the rhyming lines and funny pictures. This book is part of a series but you can enjoy it without having to read the others.



Eve, 6

FACT BOOK OF THE MONTH

Insect Superpowers *Kate Messner (Illustrated by Jillian Nickell)*

This book is about the superpowers of insects, such as super strength. It's a non-fiction book based around the idea of a comic, which makes it easy to read. It's well illustrated, the words are intriguing and the lettering pops from the page. My favourite insect was the Asian giant hornet and I liked the story about how bees attack it. AMAZING! I'd recommend this to children of all ages because you do not need to read the words to understand the storyline.



Lois, 12



Insects make up three-quarters of the known species on Earth – for every human on the planet there are at least a million ants!

WIN!

Five winners will bag all four books on this page! For your chance to win, answer this question...

Q How many horse tail hairs are usually used in a violin bow?
a) 2 b) 200 c) 200 million

COSTA RICA: Guard

This colourful Central American country might be tiny, but it's a global leader in conservation! Let's find out more...

Costa Rica is wild! Made up of lush rainforests, mighty volcanoes and long stretches of sandy beach, it's crammed with tropical animals, including 10% of the world's butterflies!

Eco-success story

But things weren't always so wonderful – 30 years ago, Costa Rica was in trouble. Its rainforests were being **destroyed**, and rare wildlife was in danger of **disappearing** forever. So the government made some big changes! They:

- Spent money on **education** instead of the military, teaching people how to **look after and appreciate nature**!
- **Replanted** rainforests, paid landowners not to chop down trees, and **protected** 26% of the land by turning it into **national parks**!
- Promoted **eco-tourism** so that visitors could enjoy all the nature, *without* harming it!

It **worked**! Costa Rica's rainforests have **doubled**, and now cover over 50% of the land. Plus, the country gets 99% of its energy from **renewable sources**. With one of Central America's strongest economies, Costa Rica has proved that the rainforest is **worth more alive than dead**. Hooray!

The future

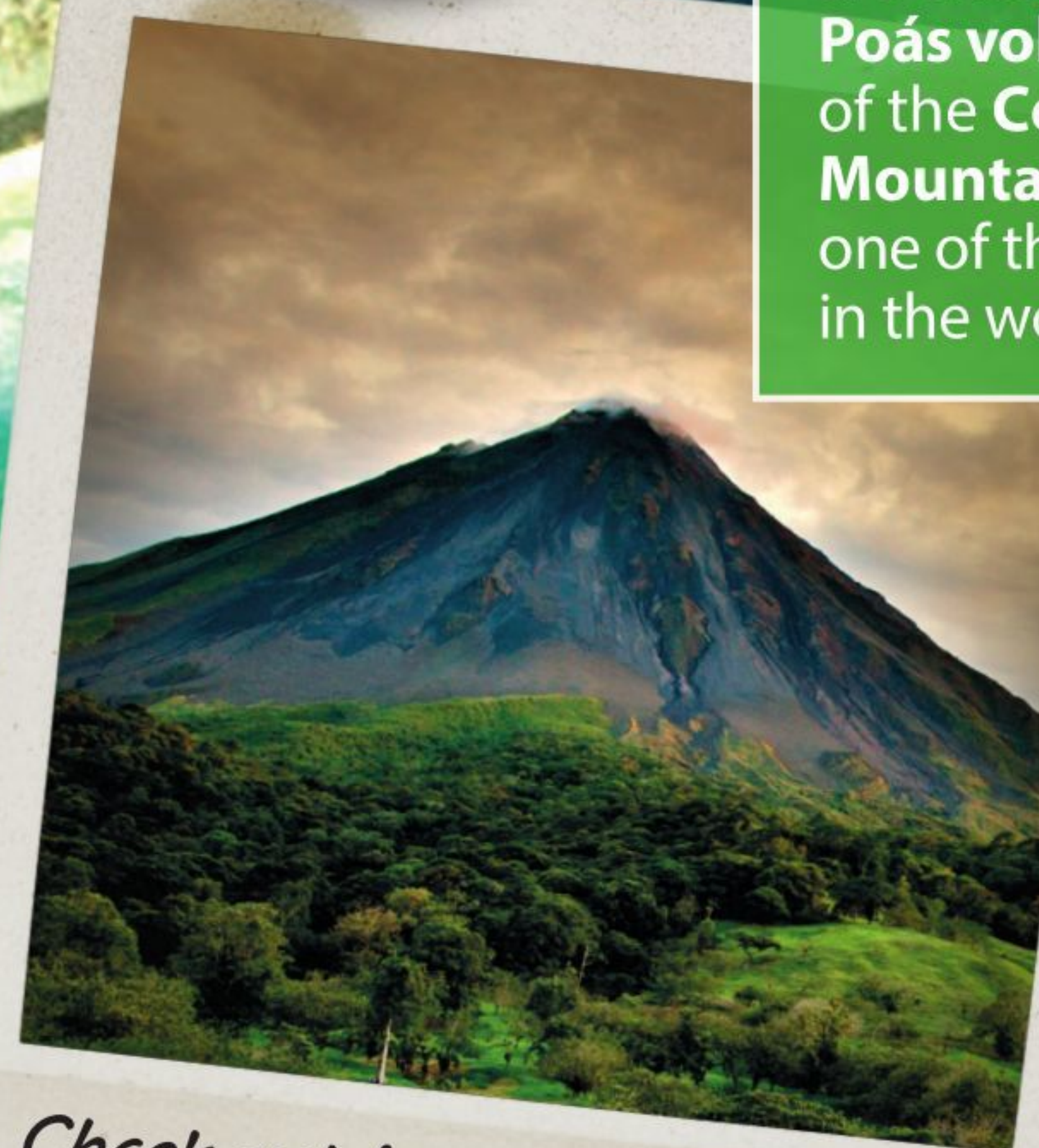
But the Costa Rica government want to do even more. They plan to completely **eliminate single-use plastics by 2021** and achieve **zero carbon emissions by 2050**. Yay!



It may be about **five times smaller than the UK**, but Costa Rica contains about **6.5% of the world's biodiversity**!

ACTIVE VOLCANOES

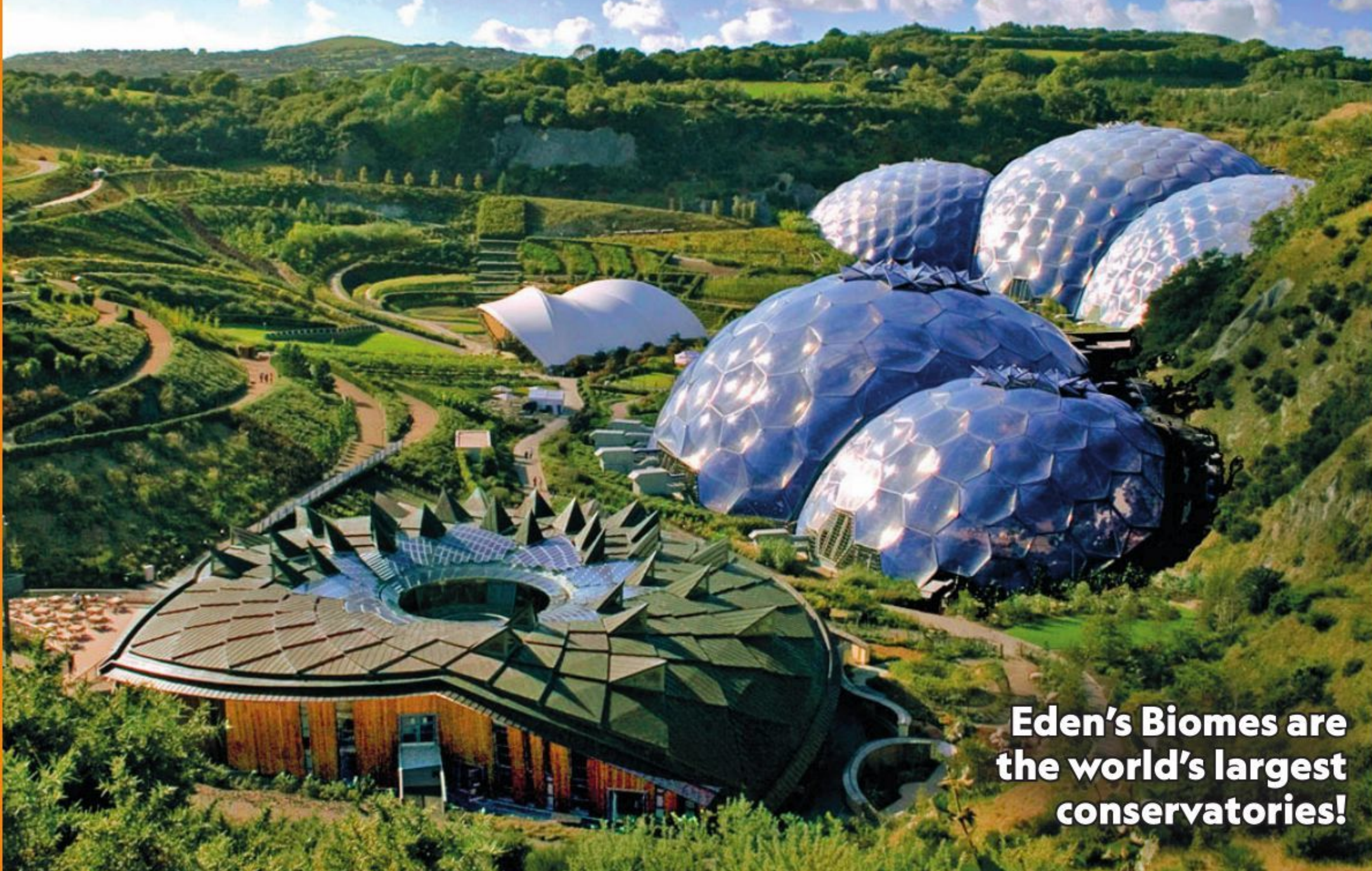
Costa Rica has 200 volcanoes – six of which are classified as **active**! **Poás volcano**, in the forests of the **Central Volcanic Mountain Range**, has one of the **largest craters** in the world.



Check out Arenal, one of Costa Rica's active volcanoes!

The people of Costa Rica are known as **Ticos**! They work hard to protect their beautiful country.

VISIT THE EDEN PROJECT!



Eden's Biomes are the world's largest conservatories!

If you can't travel the **8,000km** to Costa Rica, don't worry. You can experience some of its tropical wonders at the **Eden Project** instead! Nestled in a huge crater in **Cornwall**, Eden's massive **Biomes** house over **1.5 million plants**, including a **rainforest**! Visitors can explore these massive conservatories and enjoy awesome **events** every school holiday!



The national flower of Costa Rica is the beautiful quaria morada

AMAZING ORCHIDS!

There are over **1,400 species** of orchid in Costa Rica! You can see **500** of them in the **Orchid Display** in the **Rainforest Biome** at the **Eden Project**.

eden project

essential
COSTA RICA

lian of the Future!

Five million birds migrate to Costa Rica every year!



Six types of toucan live in Costa Rica. This is a keel-billed toucan!



Meet the blue jeans frog!



Jaguars are the largest carnivores in the country!

WILD THINGS!

Costa Rica is home to lots of stunning species, from endangered giant anteaters to tapirs, harpy eagles, sloths and big cats.

SPOT THE DIFFERENCE

Can you find five differences between these super-cute three-toed sloths?



Answer on page 56

WIN!

A HOLIDAY TO COSTA RICA!

Want to win an adventure in this amazing country? Just ask your parent or guardian to enter their details at edenproject.com/ngkids-comp

The lucky winner and their family will jet off on a **nine-day holiday** for **four** people to **Costa Rica** with **Journey Latin America**, the UK's number one specialist in travel to Latin America, with flights provided by **British Airways**. You'll visit **Arenal volcano**, get up close to wildlife in **Manuel Antonio National Park**, and spend time on the **beach**. Amazing! Hurry, though – the competition closes on **26 September**!

Enjoy over 1,500km of pristine coastline!



Enter at edenproject.com/ngkids-comp

BRITISH AIRWAYS

JOURNEY
LATIN AMERICA

Competition deadline 23:59
26 September
2019!

Weirdest. Cat.

The serval might look strange, but its funny features are perfect for hunting...

Ever.



A **serval** sits patiently in a **grassy field**, swivelling its head back and forth like a watchful owl. The **predator** is scanning the **African savannah** for a meal – not with its eyes, but with its **oversized ears**.

An unseen rodent stirs under the thick brush, and the wild cat **tenses**. It crouches on its legs and feet before **launching** itself up and over the tall grass. Guided only by **sound**, the serval lands directly on the rat.

Thanks to its **extra-long legs**, **stretched-out neck** and **huge ears**, the serval is sometimes called the 'cat of spare parts.' "The wild cat might **look weird** to some people, but their bizarre-looking body parts make them **really successful** hunters," says

Christine Thiel-Bender, a biologist who studies servals in the wild in **Africa**.

In fact, servals catch their prey in **over half** of their attempts, a **20% better** success rate than **lions** hunting together in a pride. In fact, they're one of the **best hunters** in the wild cat kingdom.

Read on to discover **some weird ways** servals are the **ultimate hunters...**

Serval kittens stay with their mum for up to two years before living on their own



Servals can chirp, purr, hiss, snarl and growl!



ALL EARS

Servals rely on **sound** more than any other **sense** when they're on the prowl. Thanks to their jumbo ears – the **biggest** of any wild cat's relative to **body size** – a serval can hear prey that's hidden in long grass or even underground. If a **human** had ears like a serval's, they'd be as big as **dinner plates!**

To make the most of their **super hearing**, servals avoid making any **noise** while they're hunting. So instead of **stalking prey** like some cats do, servals sit very still in clearings – sometimes for **several hours** – as they listen for food. "On a windless day, a quiet serval can hear rodents **squeaking** metres underground," **Christine** says.







Servals' predators include African wild dogs, hyenas and leopards.

STICKING THEIR NECKS OUT

When savannah winds drown out the sounds of their prey, servals use their **long necks** to help them see instead of hear. By craning their necks over the **tall grass** they're **hiding in**, the cats can get a better look at their prey.

A serval's elongated neck also helps it pinpoint its **pounce**. If a serval can only hear its prey, the cat will leap **towards** the noise. It then uses its neck (which is part of its **extra-flexible** spine) to adjust its direction **midair** after it's finally caught sight of its food. Then, just before it lands, the soaring serval **tilts its neck down** to get a better glimpse of the **target** and positions its front paws for **touchdown**. Half the time it lands **perfectly** and catches its prey instantly.



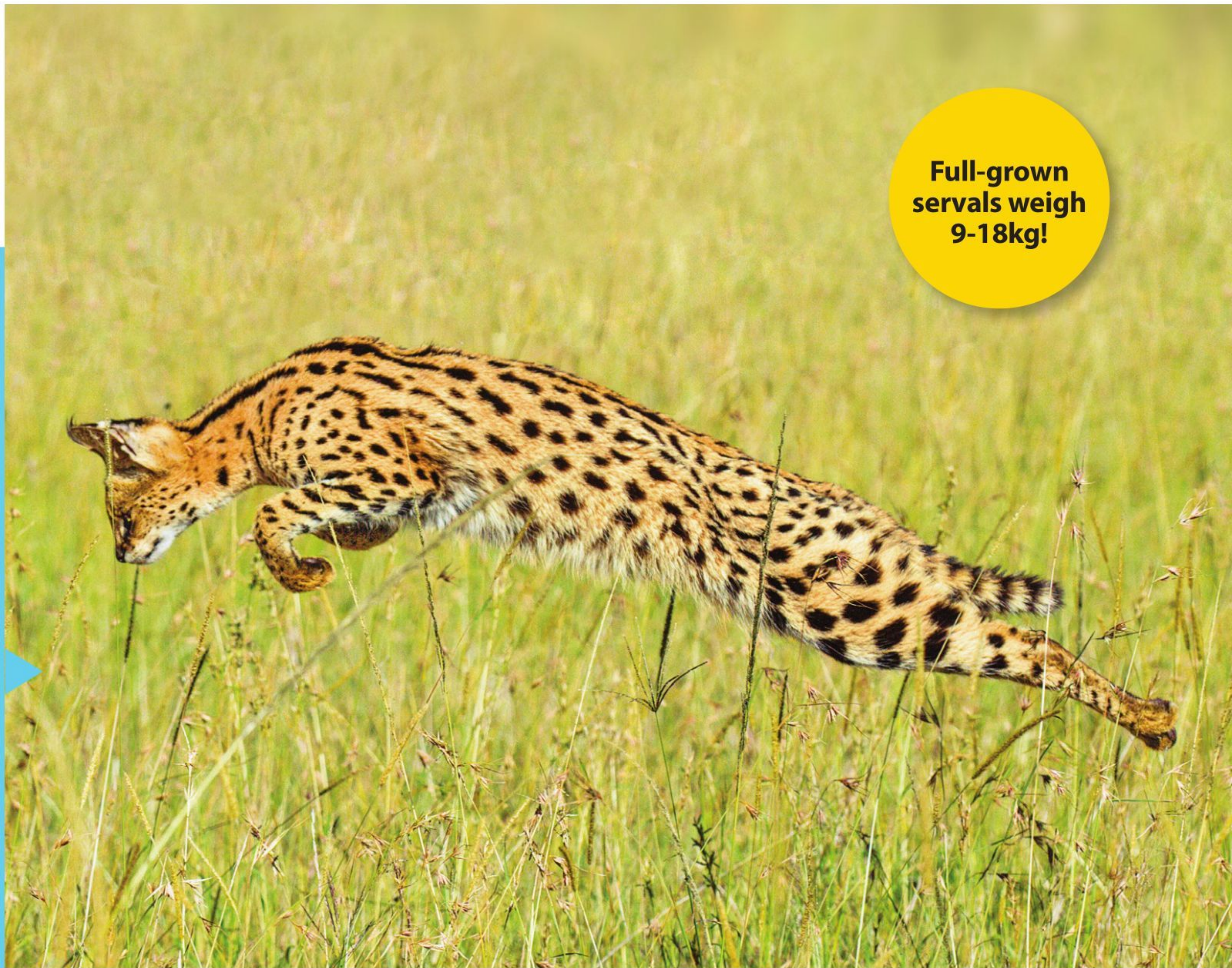
Servals vs. Ocelots			WHERE THEY LIVE
		SERVALS	Grassy savannah and wetlands in parts of northwest Africa and much of sub-Saharan Africa .
		OCELOTS	Tropical forests , shrublands , and grasslands in South, Central and North America .

A LEG UP

Once a serval's ears have **pinpointed prey**, their long legs jump in to help catch dinner. "Servals look small and delicate," Christine says, "but they're **incredibly agile** cats." Their legs – the **longest** of any cat when compared to overall size – give them **a lot of power**. A 91-cm-long serval can leap almost **4m horizontally** to pounce on a rat, with no running start necessary! They can also jump around **3m into the air** to swipe a bird. That's like **YOU** leaping over an adult **giraffe**!

The sneaky cat's ability to pounce from far away means **unsuspecting prey** won't **hear** its footsteps or detect its **scent**. "Most prey don't even know the serval is coming until they've been **caught**," Christine says. Yikes!

Full-grown servals weigh 9-18kg!



TINY TAILS

Big ears, long legs and lengthy necks... it would **make sense** for a serval to have a **superlong tail** as well, right? But they don't! Long tails help **animals** like **lemurs** keep their balance in their **forest homes**. They're also important for animals that run **longer distances**, like cheetahs, to control their **steering** while **sprinting**. However, **servals** do none of that. In fact, a long tail would **get in the way** of their **leaping** abilities, so a shorter tail actually **helps** them survive!

HOW THEY HUNT	FOODS THEY LOVE	COAT NOTES	THEIR NEIGHBOURS	STATUS
Wait in tall grass listening for prey to pounce on. They can swim , but rarely do.	Rodents , small birds, and amphibians . They almost never scavenge or eat other animals' leftovers .	Golden fur covered with varied black spots .	Lions , leopards, cheetahs and hyenas .	Least concern , population stable . But they are exploited by exotic pet trade and fur hunters .
Stalk primarily by sight and smell before chasing prey. Often swim for food.	Rodents , plus bigger prey like monkeys . These cats regularly scavenge .	Tan to reddish-brown fur with dark rosettes (rose-like markings).	Jaguars , pumas and anacondas .	Least concern , but population decreasing due to habitat loss .

Neck © Federico Veronesi / Getty Images; Leg © Denis-Huot / Minden Pictures; Tail © Ole Jorgen Liodden / Minden Pictures; Serval © Martin Harvey / Getty Images; Ocelot © Pete Oxford / Minden Pictures

CAMOUFLAGE COAT

Almost every wild cat relies on its coat for **camouflage**. Cats such as **cheetahs** sport spots, while others, such as **tigers**, wear **stripes**. But servals kind of have both, with some of their **larger spots blending together** to give the **appearance of stripes**!

"Their **mixed-pattern coat is harder to see** than a single-pattern coat," Christine explains.

No two serval coats are the same either! Servals that live near **woodlands** have more **small dots** on their coats than those that spend time on the **savannah**. Scientists think these smaller spots might hide those cats better among the **shade of trees**. Clever!

Some Ancient Egyptians kept servals as pets.



Servals can catch up to 30 frogs in three hours while hunting in water!



Servals are solitary animals – except for mothers who are raising cubs.

NOT-SO-FANCY FEAST

Another way servals qualify as **hunting champs** is that they're **flexible** when they're choosing what to hunt. These cats mostly dine on **rodents** – on average, one serval eats **4,000 a year** – but they're not **picky eaters** like some other wild cats.

"Servals will eat anything **small enough** for them to **catch**," says Christine, who's examined the contents of serval poo. "I found **grasshoppers** and **snakes**, as well as rodents. Other cats don't normally eat such a **wide variety** of animals." Servals also often eat birds – from small ones like **weavers** to larger **storks** and **guinea fowl**. They'll even wade into water to gobble up **frogs** and other **amphibians**!

Also unlike most other **wild cats**, servals turn up their noses at other **predators' leftovers**. "It's probably because they're already such **successful hunters**," Christine says. "They don't need to go looking for another animal's meal."

MORE COOL CATS!

Shy and rarely seen, many of the world's smallest wild cats are experts at avoiding attention. Check out some of these lesser-known felines...

MARGAY



Native to **Central** and **South America**, **Margays** can climb **headfirst** down trees.

GEOFFROY'S CAT



Excellent swimmers, **Geoffroy's cats** are often spotted crossing some of **South America's** **fastest-moving streams** and rivers.

ASIATIC WILDCAT



Asiatic wildcats – native to several countries in **South Asia** – often hide in abandoned **rock crevices** or burrows built by other **animals**.

SAND CAT

Sand cats live in the deserts of **North Africa** and the **Middle East**. **Thick fur** on their paws **protects them** from the hot sand and helps them walk without **sinking**.



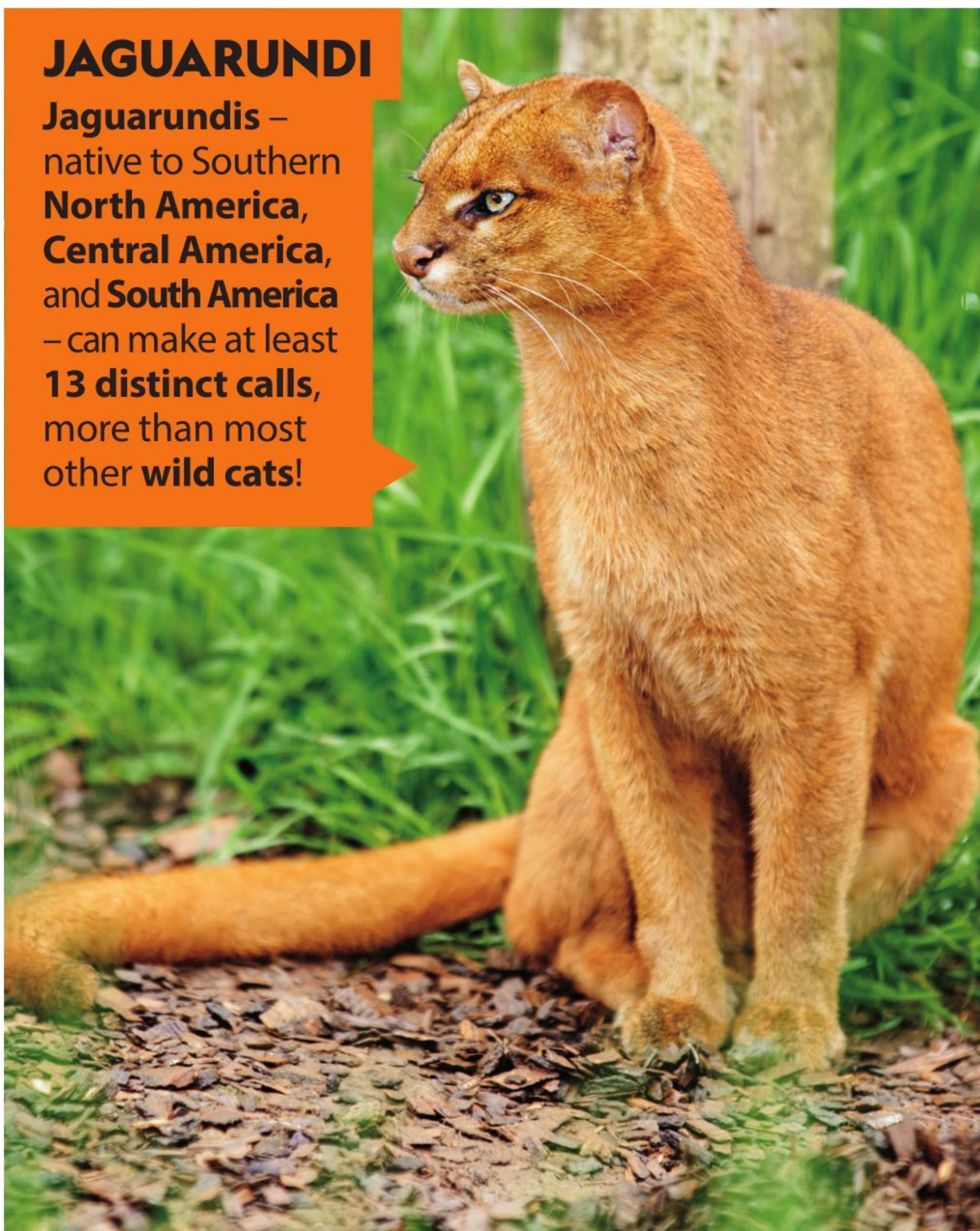
ASIATIC GOLDEN CAT



Known as '**fire tigers**', **Asiatic golden cats** live in the Southeast Asian countries of **Myanmar** and **Thailand**.

JAGUARUNDI

Jaguarundis – native to Southern **North America**, **Central America**, and **South America** – can make at least **13 distinct calls**, more than most other **wild cats**!



RUSTY-SPOTTED CAT



India and **Sri Lanka's** **rusty-spotted cat** is only **30cm long** (not including its tail) and weighs just **1.3kg**!

**YOUNG
ECO-HEROES!**

GO, GR

How a young eco-activist from Sweden



One August day in 2018, a small, shy **Swedish** girl with long pigtails decided **not to go to school** as usual. Instead, she **made a large sign** that read '**SCHOOL STRIKE FOR CLIMATE**', and calmly sat down outside the **Swedish parliament**. That girl was **15-year old Greta Thunberg**. And although she didn't know it yet, her one-person protest was about to spark a worldwide revolution!

THE BEGINNING

Greta was **eight** when she first started learning about **climate change**. And the more she found out, the more **baffled** she became – if burning **fossil fuels** was so bad that it threatened **human existence**, then **why was no one doing anything about it?** Why wasn't it headline news? It didn't make any sense! At the age of 11, Greta became so sad that she **stopped speaking**.

AN IDEA...

Eventually, Greta realised there was something **SHE** could do, even if the grown-ups weren't taking climate change seriously. Inspired by **teenage activists** in **Florida, USA**, who were protesting to end **gun violence**, she decided to go on strike! Her aim? To make **politicians take notice** and **act to stop global warming**.

No one is too small to make a difference!

**SCHOOL STRIKE
FOR
CLIMATE**

Greta has **Asperger syndrome**, a condition that affects how people socialise. But Greta says it also helps her see the world in black and white. She says there are "no grey areas when it comes to climate change."

FACT FILE

Name: Greta Thunberg

Age: 16

From: Sweden

Famous for:
Waking up the world to the climate crisis!

Website:
Fridaysforfuture.org



The teenage March for Our Lives protesters in the USA gave Greta a great idea!

*We are here,
we are loud,
stealing our
future is not
allowed!*

What exactly is the 'climate crisis'?

The **Earth is getting warmer** as a direct result of **human activity**. By burning **fossil fuels** (coal, gas and oil), we release **carbon dioxide** into the atmosphere which **traps heat**. We need to cut our **carbon emissions**, and switch to **renewable alternatives** – such as **wind** and **wave power** – to stop **irreversible damage** being done to the planet.

Recent fires in the Amazon rainforest could make climate change worse



ETA!

inspired a global movement...

Greta with her original sign outside the Swedish parliament

KOLSTREJK
FÖR
KLIMATET



A GLOBAL MOVEMENT

The **Swedish media** started writing about her strike. And Greta spread the word on **social media**, too. After a few weeks, protests started spreading to other **Swedish cities**. Soon, motivated by Greta's protest, young people **all over the world** set up their own **campaign groups**. They all worked together to co-ordinate the first **Global Strike for the Climate** in **March** this year. It was huge – over **1.6 million people** from **125 countries** took part!



UK kids take to the streets at a protest march!

HOPE FOR THE FUTURE

Since her strike began, Greta's life has become a whirlwind! She's given **rousing speeches** to **politicians**, to the **EU parliament**, the **UK parliament**, to **protesters** and more. She's appeared in **documentaries** and had loads of **books** and **articles** written about her. She's even been **nominated** for a **Nobel Peace Prize**! Her message **IS** getting through. But there's still more to be done. This month, Greta will be at the **United Nations Climate Action Summit** in **New York, USA**, where she'll demand action from world leaders. With the power of the **planet's children** behind her, let's hope they finally start to act!



Greta travelled all the way to New York on a solar-powered boat so she didn't contribute to climate change!

THE SCHOOL STRIKES

Your questions answered!

Why are young people striking?

They don't think that politicians are doing enough to stop the **climate crisis**, and want to put pressure on them to act.

Are the strikes helping?

Yes! The activists are being listened to! And the protests are in the **news** which means more **people are becoming aware** of the climate crisis and want to help. But there's only so much that individuals can do. It takes people in power to bring in new laws restricting carbon.

When are the strikes?

Some young people are taking part in the **Fridays for Future** movement and **striking from school every Friday**, just like Greta. Others take part in the big **national** or **global strikes**.

When is the next global strike?

The next worldwide protest is on **Friday 20 September**. It takes place just before the **UN Climate Action Summit** on **23 September** so people can send a loud and clear message – **politicians must act now!**

How do I take part and will I get into trouble?

Firstly, and most importantly, get **permission from your parents!** If they agree, then **talk to your school** to explain what you're doing and why. Some schools are more supportive than others. It's legal to strike if you have the **school's permission**.

How can I make the most impact?

Make a **sign** to let people know **why you're striking**. Short and snappy slogans work best. If you're on social media, let your friends know about it. And keep it peaceful!

Can grown-ups get involved, too?

Yes! You might not be able persuade them to turn vegan and give up air travel like Greta's parents did, but they can **join the strike!** As Greta says, "**Everybody is welcome, everybody is needed!**" Lots of adults are very concerned about the climate, too – you may have heard of another climate action group called **Extinction Rebellion** who have been supporting the youth movement.

Why are some people mean about Greta?

Not everyone likes what Greta is doing. Some say she's spreading '**climate panic**' and that children should not be missing school. Or that she's a '**puppet**' for another organisation and doesn't know her own mind. Others have made **mean personal comments** about her. But Greta doesn't let it bother her. She says these **criticisms are a distraction** from the **real issues** – her critics should be talking about the **climate crisis** instead of her! And she argues that there's no point studying if there's going to be no future.

I can't come on the strike – is there anything else I can do?

There are **loads of other ways** to help. The key to stopping the climate crisis is **cutting down carbon emissions**. So do everything you can to reduce your own family's impact:

- Travel by **bike** or **public transport**
- Avoid **flying**
- Cut down on **meat** and **dairy**
- Buy **less new stuff**
- Eat **seasonal local food**
- **Reuse and recycle** as much as you can

And **spread the word!** You can find lots more useful info at the **UK Student Climate Network** – ukscn.org/ys4c

Last year, a scientific report from the **IPCC*** said we have **12 years** to reverse the effects of climate change.

To find a strike near you, visit ukscn.org/ys4c-how

"If a few children can get headlines all over the world just for not going to school for a few weeks, imagine what we could all do together if we wanted!"
Greta

Turn the page to meet more young activists!

MEET MORE YOUNG ECO-HEROES!

These seven young activists are also trying to make the planet a better place!

FACT FILE

Name: Jamie Margolin (right) & Nadia Nazar
Age: 17
From: Seattle and Baltimore, USA
Known for: Founding the Zero Hour Movement
Website: thisiszerohour.org



FACT FILE

Name: Brianna Fruean
Age: 21
From: Samoa
Known for: Being the youngest ever winner of the Climate Change and Environmental Protection Award



JAMIE & NADIA

Jamie was super-frustrated that **youth voices** were **being ignored** in the conversation about climate change in the USA – especially because **young people would be affected the most!** She realised a **mass protest** would give the cause more attention, and so in 2017 she founded **Zero Hour** with her artist friend **Nadia** and two other pals. They organised a massive **Youth Climate March** in **Washington D.C.**, USA, last year, which inspired 'sister marches' in **London** and other cities. The ever-growing group of teens also put on protests, events and festivals, including the **Zero Hour Youth Climate Summit** in Miami.

BRIANNA

Brianna lives on the **Pacific island** of **Samoa**. When she learned that island communities like hers have an increased chance of **cyclones, droughts** and **floods** because of **climate change**, she decided to become an **activist!** Since the age of **11** she has spoken on behalf of her nation's youth at international summits and, aged **16**, she became the youngest ever winner of the **Commonwealth Youth Award** – specifically the **Climate Change and Environmental Protection Award**. Cool!



We're doing this together



Please, listen to the youth!

We just want a liveable planet!



We have a responsibility to protect our lands, our earth and our water!

all in
ether!

It's vital that young
people speak out!



BELLA

Sixteen-year-old Bella's interest in **conservation** began when she was **11**, after watching a video about **palm oil** and **orangutans**. Devastated that **humans** were **destroying** the **apes'** **rainforest homes**, she began to **campaign** about **conservation**. Now a **Youth Ambassador** for three major **wildlife charities**, Bella has spoken to **world leaders** at conferences, and discussed the **illegal wildlife trade** with both **Prince William** and **Prince Harry**. She's also helped **ban** the use of **animals in UK circuses**. Brilliant!

FACT FILE

Name: Bella Lack
Age: 16
From: London, UK
Known for: Youth Ambassador for Born Free Foundation, Roots and Shoots, and Save The Asian Elephants
Website: callfromthewild.com



AMY & ELLA

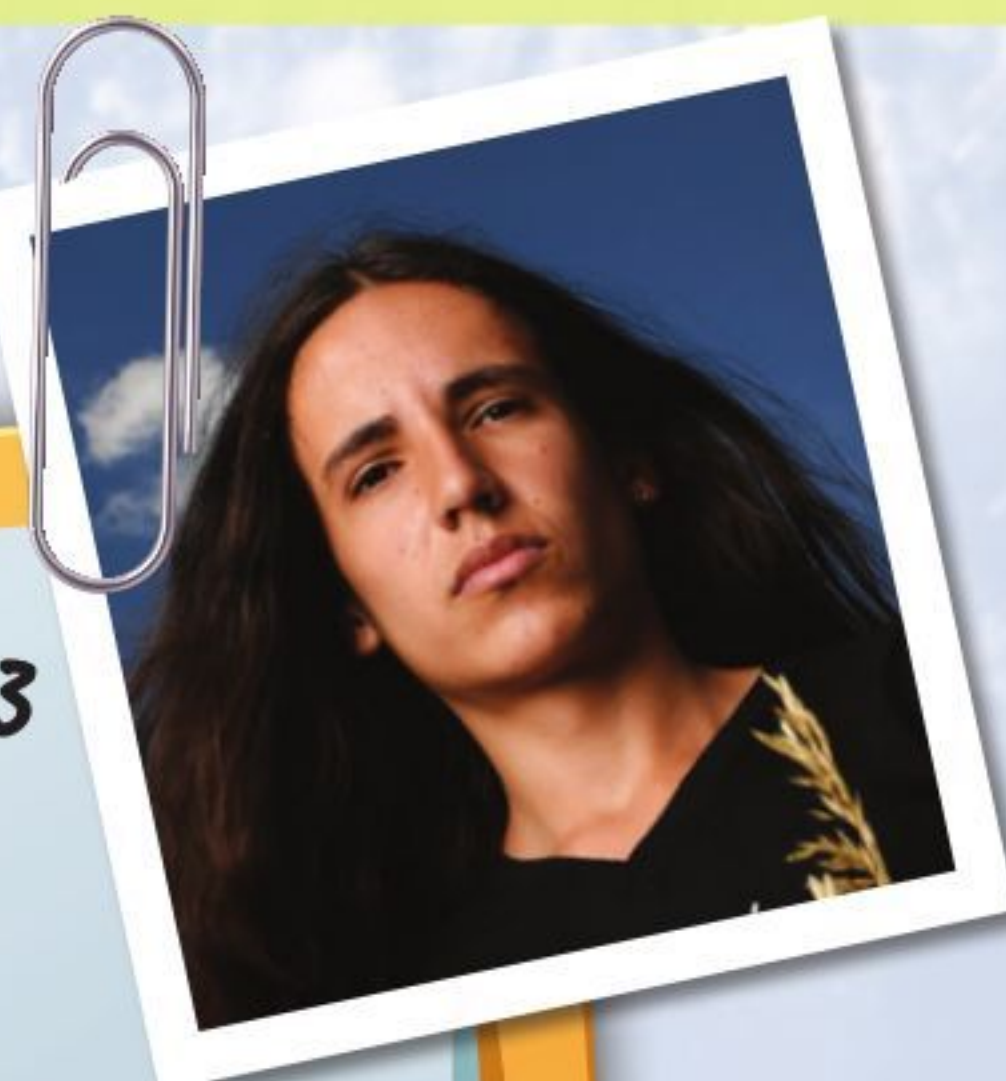
These **Nottinghamshire** sisters set up a charity called **Kids Against Plastic** to fight **single-use plastic**, packaging that's designed to be used just once, but that stays on Earth forever. They're campaigning to make people, businesses, schools and councils get '**plastic clever**' and replace the '**big four**' (**plastic bags, bottles, straws and cups**) with **reusable** alternatives. **Amy and Ella** are also on a mission to pick up **100,000 pieces of plastic** – the number of **sea mammals killed each year** from eating plastic or being trapped in it. Good luck, girls!

Get plastic
clever!



FACT FILE

Name: Xiuhtezcatl Martinez
Age: 18
From: Colorado, USA
Known for: Suing the US government over climate change!
Job: Environmental activist, hip-hop artist and Youth Director of Earth Guardians
Website: earthguardians.org



XIUHTEZCATL (say 'Shoe-Tez-Cat')

Since the age of just **six**, **Xiuhtezcatl** has been speaking out against environmental damage. His mum is an environmental activist and his dad is of **Aztec** heritage*, so Xiuhtezcatl was taught from a young age that **protecting the Earth** is a human responsibility. He protests locally to stop **pesticides**, **fracking** and **pollution**, and is the **Youth Director of Earth Guardians**, a global network of **activists**. He's also one of 21 kids taking the **US government** to court over climate change. Oh, and he's a **hip-hop artist**. Busy guy!

* indigenous
people of Mexico

FACT FILE

Name: Amy and Ella Meek
Age: 16 & 13
From: Nottingham, UK
Known for: Campaigning against single-use plastic!
Website: kidsagainstplastic.co.uk



YOUR SAY!

**YOUNG
ECO-HEROES!**

We asked YOU lot to tell us what you've been doing to help the planet...

*I wanted to make a difference to where I live, so I set up **Team SEAL Runcorn Eco Warriors** with my friends. We organise **litter picks**, make **posters** to campaign against rubbish, and also put up **bag dispensers** to encourage people to pick up dog mess!*



Scarlett, 9, Ebony, 8, Lexie, 7 and Alexis, 7

Mariella, 10, Ada, 10 and Rosa, 8



I grow wild flowers to give butterflies and bees a place to hang out. I recycle glass jars by filling them with gifts for my family. And I walk to school to stop bad gases from the car going in the air.



James, 7

Whenever I see rubbish on the street or in the park, I throw it in the bin. Sometimes, to do the right thing, we have to clean up other people's mess.

We set up a stall selling plums from our garden and homemade plum cake. We raised £70 to adopt a critically endangered Amur leopard with the World Wildlife Fund!

Hope, 5



I recycle as much plastic as I possibly can. I believe that saving the world's marine animals is important.



Archie, 9

WIN!

ECO-BOOK BUNDLE

We've got a bunch of **inspirational books** up for grabs. Want to win 'em? Design a **sign** or **poster** featuring a short **message about climate change**, and then either **email a photo** of it to kids@ngkids.co.uk with 'Eco-book bundle' in the subject line, or **post the design** to us along with the entry form on page 55. Our **five fave** entries will win!

GRETA THUNBERG

NO ONE IS TOO SMALL TO MAKE A DIFFERENCE

Get inspired by this collection of Greta's great speeches!

Become a plastic-fighting superhero with the 50 easy-peasy two-minute missions in Martin Dorey's **Kids Fight Plastic!**



This thrilling trilogy from Piers Torday has an important eco-message as well as talking animals, crazy cyber villains and wild adventures!





GROW A FOREST FROM THIS MAGAZINE

At Yorkshire Tea we've planted millions of trees over the years
- and we want to plant a million more by 2020.

Scan the Shazam code to see trees grow out of this page
and discover why trees are proper important.



DOWNLOAD / OPEN SHAZAM



TAP CAMERA



SCAN THIS CODE



THE

BIG PICTURE

NAT GEO KIDS'
image of the month



Walking on water?!



No, these **sled dogs** haven't got magical powers! And the image hasn't been photoshopped either. **Climate scientist Dr. Steffen Olsen** snapped the brain-boggling pic on **13 June** as he and his team made their way across **melting sea ice** to a **weather station** in **north-west Greenland**. The ice is actually hidden **just under** the huskies' feet!

Although Greenland's **ice sheet melts annually** during the summer, this year's melt happened **unusually early**, with temperatures in June rising **well above normal levels**. Ordinarily, the meltwater would simply **drain** through **cracks** in the ice, but because it **melted so quickly** the water **pooled** on top, creating this dramatic image!



Well... that took less convincing than I anticipated.



I'M CONTROLLING THIS THING **WITH MY MIND!** I JUST **THINK** IT AND IT **DOES** IT! HEY, ROBOT ME, FLY **LEFT!**



IT'S A **NEURAL CONNECTION** -- MUST BE PART OF THE **TIMENET SYSTEM**. I'VE GOT **SOOO** MANY QUESTIONS ABOUT THIS TECH.



YOUR **NERDY KNOWLEDGE HUNT** WILL HAVE TO WAIT, KWAME -- WE'RE COMING UP **FAST** ON THE CITY... AND IT'S IN A **BAD WAY**.



LOOK AT THIS PLACE - WHERE DO WE EVEN **START?** IT'S A TOTAL WREC... WAIT, **GUYS?** I THINK - I THINK THERE'S SOMEONE **INSIDE** MY **ROBOT'S HEAD!**



INDEED THERE IS! **HELLO** EVERYONE! IT'S **SO** NICE TO HAVE SOMEONE **NEW** TO TALK TO! ALLOW ME TO **INTRODUCE** MYSELF...

MY NAME IS **G.E.O G.I.N.G.E.R** - **GENERAL EXPERT ON GLOBALLY INTEGRATED NETWORKED GEOGRAPHICAL ELECTRONIC RESOURCES**. I AM YOUR VIRTUAL ASSISTANT. VERY PLEASED TO MEET YOU ALL!



SO. MANY. QUESTIONS.

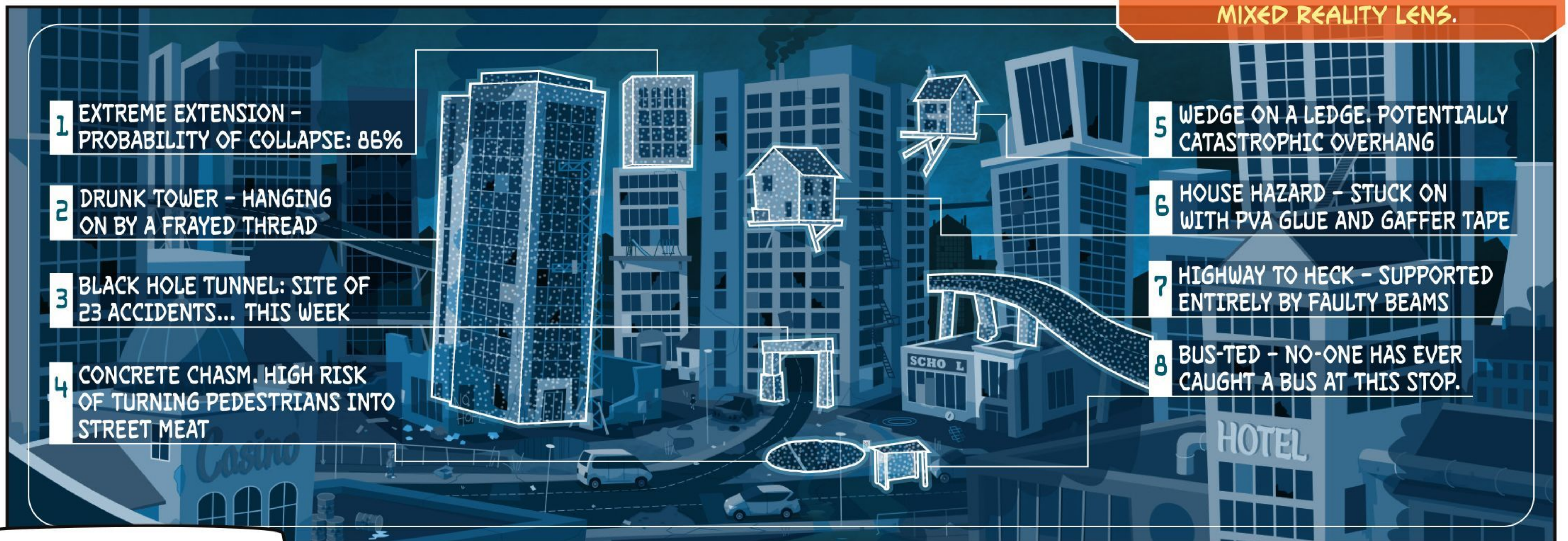


IS ONE OF THEM 'WHY'S OUR VIRTUAL ASSISTANT'S NAME SO VERY LONG?' BECAUSE IF IT ISN'T, IT SHOULD BE.

SO GEO-JARVIS - WHICH PART OF THE CITY THAT'S FALLING APART DO YOU THINK WE SHOULD HEAD TO FIRST?



I HAVE PERFORMED A FULL SCAN USING THE **LIDAR** TECH INSIDE YOUR MECHS. I'LL PROJECT THE RESULTS ONTO THE CITY THROUGH YOUR **MIXED REALITY LENS**.



1 EXTREME EXTENSION - PROBABILITY OF COLLAPSE: 86%

2 DRUNK TOWER - HANGING ON BY A FRAYED THREAD

3 BLACK HOLE TUNNEL: SITE OF 23 ACCIDENTS... THIS WEEK

4 CONCRETE CHASM. HIGH RISK OF TURNING PEDESTRIANS INTO STREET MEAT

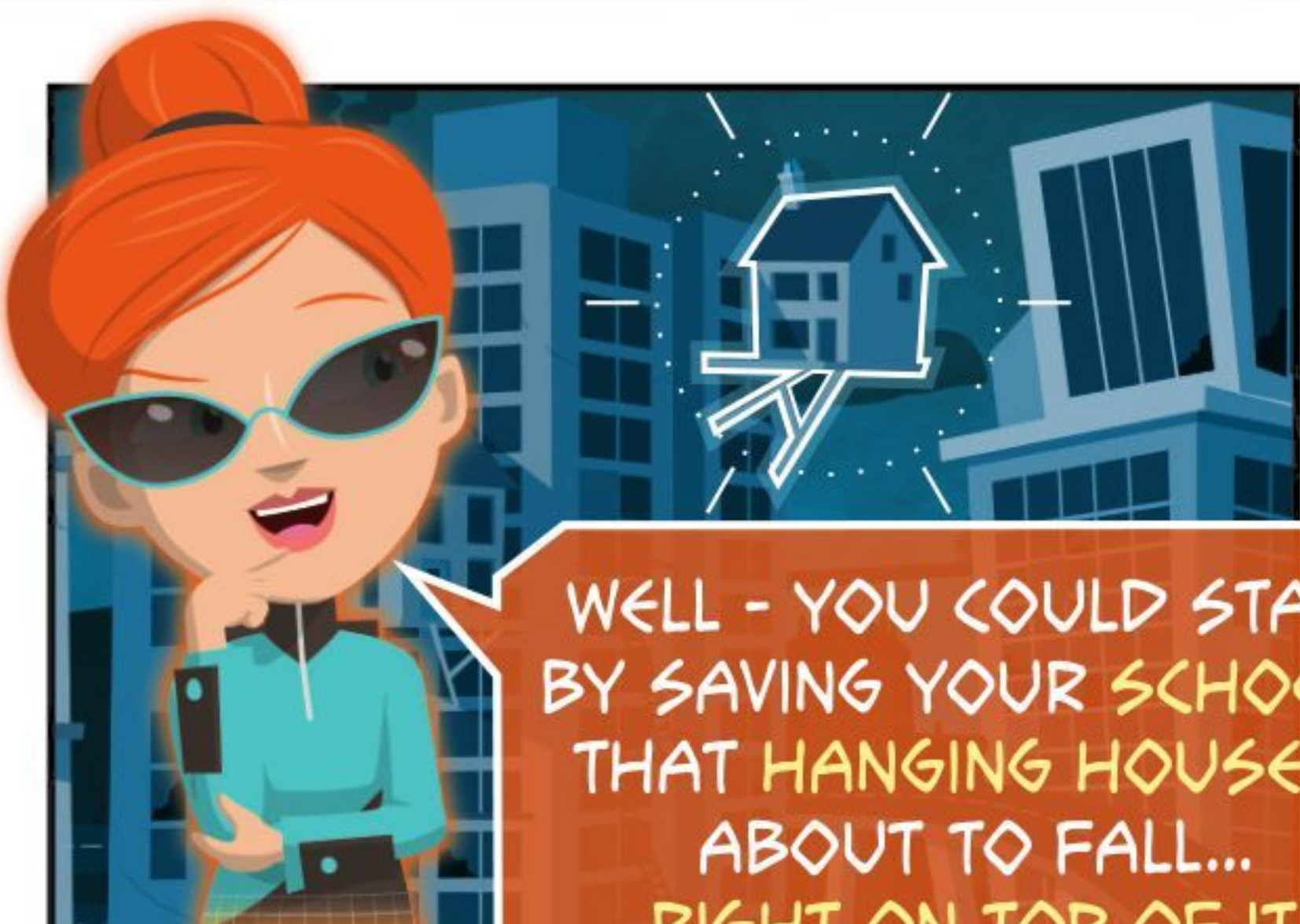
5 WEDGE ON A LEDGE. POTENTIALLY CATASTROPHIC OVERHANG

6 HOUSE HAZARD - STUCK ON WITH PVA GLUE AND GAFFER TAPE

7 HIGHWAY TO HECK - SUPPORTED ENTIRELY BY FAULTY BEAMS

8 BUS-TED - NO-ONE HAS EVER CAUGHT A BUS AT THIS STOP.

HOW DID THINGS GET THIS **BAD?** AND HOW DO WE START TO **FIX** IT?



WELL - YOU COULD START BY SAVING YOUR **SCHOOL** - THAT HANGING HOUSE IS ABOUT TO FALL... RIGHT ON TOP OF IT.



WE'RE ON IT!

TO BE CONTINUED NEXT MONTH...

THIS EPISODE KINDLY SPONSORED BY

THREE-TOED
SLOTH



**BLUE MILKWEED
BEETLE**









**GALÁPAGOS
GHOST CRABS**







YOUR FIRST CODING FRIEND!

Learn how to code with Coding Critters™ adorable interactive pets...

Enter the world of **coding** with **Rumble & Bumble**, two ext-roar-dinary **dinos** who will teach you how to **programme**. Instead of screens, the **Coding Critters** have **direction buttons** on their backs that let you code a sequence of up to **30 steps**.

Follow the **storybook coding challenges** to play **hide and seek**, **chase down boulders** and more. Plus, design your very **own coding games**!

You can also pop your new friends into **play mode** to **feed** and take care of them. Or, watch your **prehistoric pets dance** and **sing** silly songs. They really are *tricera-tops*!



CRAZY CODING TANGLE!

Can you follow the right path and help **Rumble** meet his little buddy **Bumble** at the volcano?

Answer
on page
56



Code Rumble to...



Easy
to use!



Pets connect nose to nose!

Whizz over to learningresources.co.uk to meet

the other creatures
in the **Coding
Critters** range!
#LoveLearning

Coding Critters require 3
AAA Batteries (not included).
Rumble measures 7cm H
x 10.2cm W. RRP: £40.00
Ages: 4+



Cute cats **Scamper**
and **Sneaker**



Doggies **Ranger**
and **Zip**

WIN!

Fancy winning these **Rumble
& Bumble Coding Critters**?

To be in with a chance, just
answer this simple question...

Q Which of these was NOT a real dinosaur?
a) Brontosaurus **b)** Stegosaurus
c) Doyouthinkhesaurus

Enter
on page
55



BLING
BONANZA!

Real or FAKE?

Don't be fooled by bogus bling! Check out these hacks to learn if your treasures are for real...

DIAMONDS OR DUDS?

People used to believe that **diamonds** were made by **bolts of lightning**! That sounds cool, but it's not true – they actually develop **deep in the ground**, under great **pressure**. Diamonds are the **crystalline form** of carbon, but there's another form of **crystalline material** that happens to **look like** a diamond. It's called **cubic zirconia** – or **CZ** – and it's worth a LOT less!

If you want to check whether a sparkler is legit and not a CZ imposter, the easiest way is with the '**fog test**'. Simply breathe a **puff of air** on the diamond in question. If the **fog disappears** right away, congrats, it's real! But if it takes **longer** to go away, you might have a **CZ** on your hands. Fog doesn't show up on **real diamonds** because the stones transfer heat so well that the fog **evaporates** instantly.



PROPER PEARLS

People have come up with **countless ways** to imitate precious **pearls**, whether it's with **painted beads** or **waxed glass**. So how can you tell a real pearl from an **imposter**? One way to put a pearl to the test is with your **gnashers**. Very gently **rub** the pearl **against** your tooth. If it's real, the pearl will **feel gritty** – fake ones usually feel super smooth.

Scratching with your **fingernails** works, too. If you're only able to produce a bit of powder from gently **scratching** the pearl, it's the **real thing**. Scraping a fake pearl long enough will **reveal the artificial layer** underneath. Don't do this without permission though!

Pearls are made by **shellfish**, such as **oysters**. When a grain of **sand** finds its way into an oyster's shell, the oyster protects itself from the invader by **covering the grain** with layers of a shiny substance called **nacre** (or **mother-of-pearl**). Eventually the grain is encased, becoming a pearl!

FAKE

COLD, HARD CASH – OR BOGUS BILLS?

Want to make sure a **banknote** is genuine? There are tons of features to distinguish them from **counterfeits**!

For instance, if you hold a **£50 note** under an **ultraviolet light**, a bright **red and green '50'** should appear. Hold the note up to a light and a **'watermark'** (hidden image) of the **Queen** should appear. Or you can try **tilting** the note – **pound symbols** and the number 50 are woven into the **green 'motion thread'**, and as you move the note, they should **swap from side to side**. Plus, certain areas on £50 notes have **raised print**, such as the words **'Bank of England'** and in the bottom right corner, around the number 50.

REAL

SERIOUS SILVER

Got some **silver metal** but not sure if it's **real silver**? Try the **rub test**! Using a light-coloured, soft cloth, **gently rub** the item for a minute. Then look at your cloth. If there are **black marks** on it, the item's more than likely **real silver**. This is because silver **oxidises** (changes chemically) when it's exposed to air, which **tarnishes** it and makes it **look duller**. The tarnished **coating** ends up on the cloth with this test.

REAL

GOT GOLD?

To find out if your **gold** will make you **rich** or deserves a **gold medal** in **trickery**, try wearing it for a while. If your skin turns **black** or **green** where the metal **touched** it, then sorry – your gold's **phony**!

Another way to tell if you've got **fake gold** is with the **float test**. Place your gold object into a **glass or bowl of water** – real gold should **sink** to the bottom of the cup, while **fake gold** is more likely to **float**!

REAL

2019 PHOTO

Fancy winning the holiday of a lifetime?! Then get your camera or smartphone on

THE CATEGORIES

You can enter as many categories as you like – but just **ONE** photo per category!

1 ANIMALS

Pictures of the planet's non-human inhabitants! Beloved **pets**, **incredible insects**, foraging **park life** or **exotic creatures** – we want to see the world's wildlife in *all* its shapes and sizes. You could capture animals in their **natural environment**, in a **zoo** or **wildlife park** – or somewhere completely unexpected.

TOP TIP
"Respect wildlife! Learn as much as you can about the **creatures** and their **habitats** before you photograph them. **Don't get too close**, or **chase or bait them**."
Ami Vitale



Ami took this beautiful but sad photo of a rhino

This unusual group shot is full of joy!

2 PEOPLE

Will you choose to take a stylised **portrait** of someone you know well, carefully choosing the **backdrop** and **lighting**? Or will you **capture** a more **candid** shot, with a **natural expression**? You could show someone at work, at play, daydreaming, or in action. **Group shots** can be entered into this category, too. Whichever you choose, try to **reveal something** about the **character** and **emotion** of the person or people in the picture.

TOP TIP
"Talk to the people you're photographing and **find out about them** – don't just have your camera pressed up against your face the whole time."
Ami Vitale

3 ENVIRONMENT

We have a **brand-new eco-friendly category** this year – and for this one, we want you to take an image that **inspires people** to **protect our planet**! You may want to show images demonstrating the **damage** humans can do to the environment – such as **litter** or **pollution**. Or maybe you could capture **positive things** that are being done to help, such as **animal rescue centres**, **eco homes**, **climate change protests** or **beach clean-ups**! Or your picture could simply capture a beautiful, **natural scene** that you want to protect. We can't wait to see your **inspiring shots**!

TOP TIP
You could try **cropping** your subject so it becomes **abstract shapes**. This might make the viewer look at the subject in a new way.



How does this photo make you feel?

PHOTOCOMP!

Join and enter this year's NG KiDS photography competition...

WIN!
A FAMILY
HOLIDAY TO
MOROCCO,
COOL CAMERAS
AND MORE!

THE JUDGE

Top National
Geographic
Photographer
Ami Vitale is our
judge this year!

*An image should
provoke thoughts and
questions. It should
have a story.*

AMI VITALE

HOW TO ENTER

- This year, all entries are via our **website**. If you're not already **registered**, you* or your parent / guardian will need to do so at natgeokids.com/uk/photocomp – it will only take a minute to do!
- You can upload **ONE** photo for **each** of the three categories. Photos should be in JPEG format, between **1MB** and **5MB** in size. Enter at natgeokids.com/uk/photocomp
- Before you upload your photo, make sure you rename the file with your **full name** and the **category** you are entering. For example: **Joe_Bloggs_Animals.jpg**
- Don't forget to tell us your **full name**, **date of birth** and the **title of your photo**!

The
deadline is
**21 October
2019!**

You must
be age **7-14**
to enter!

Terms and Conditions: Contest is open only to legal residents of the **UK** and **Ireland** who are between the ages of **7** and **14** at the time of entry. Employees of Creature Media, National Geographic Partners, the National Geographic Society, the prize providers, their affiliates and subsidiaries, and their immediate family members (spouse, parent, child, sibling and their respective spouses, regardless of where they live) or persons living in the same households of such individuals, whether or not related, are not eligible to enter or win a prize. The deadline for entries is **23:59 (BST) on 21 October 2019**.

The competition **Entrant** must be the photographer. Entries must be uploaded by the Entrant's parent or guardian at natgeokids.com/uk/photocomp. Each photograph must be between **1 megabyte** and **5 megabytes** in size, must be in **JPEG** format and **300dpi resolution**. Entries need not be taken with a digital camera; scans of negatives, transparencies, or photographic prints are acceptable. Original transparencies and negatives or, in the case of digital images, a minimum **12.7cm x 17.8cm (5" x 7") 300dpi** JPEG of the winning photographs must be available so the picture can be published. Minor burning, dodging and/or colour correction is acceptable. Cropping is acceptable, as are fish-eye lenses. Any changes to the original photograph not itemised here are unacceptable and will render the photograph ineligible for a prize. Photographs must be taken not more than one year before the date of entry. Limit is **one entry per person per Category**.

NB: By uploading the Entrant's entry to natgeokids.com/uk/photocomp, the Entrant's **parent** or **guardian** is giving **permission** for their child to enter the **NG KiDS Photography Competition 2019** and for National Geographic Kids to **contact them** in the event of their image being longlisted. Winning images will be printed in the magazine and winners may be required to take part in promotional activities. All other entries will be erased once the winners are chosen to protect privacy. All Entrants retain the copyright of their images, and winning images will only be used within NG KiDS magazine, on natgeokids.com and to promote the competition.

Full terms and conditions at natgeokids.com/uk/photocomp

* Children who register will need to have their account approved by a parent or guardian before they can enter.

Turn over to find out more
about the awesome prizes!

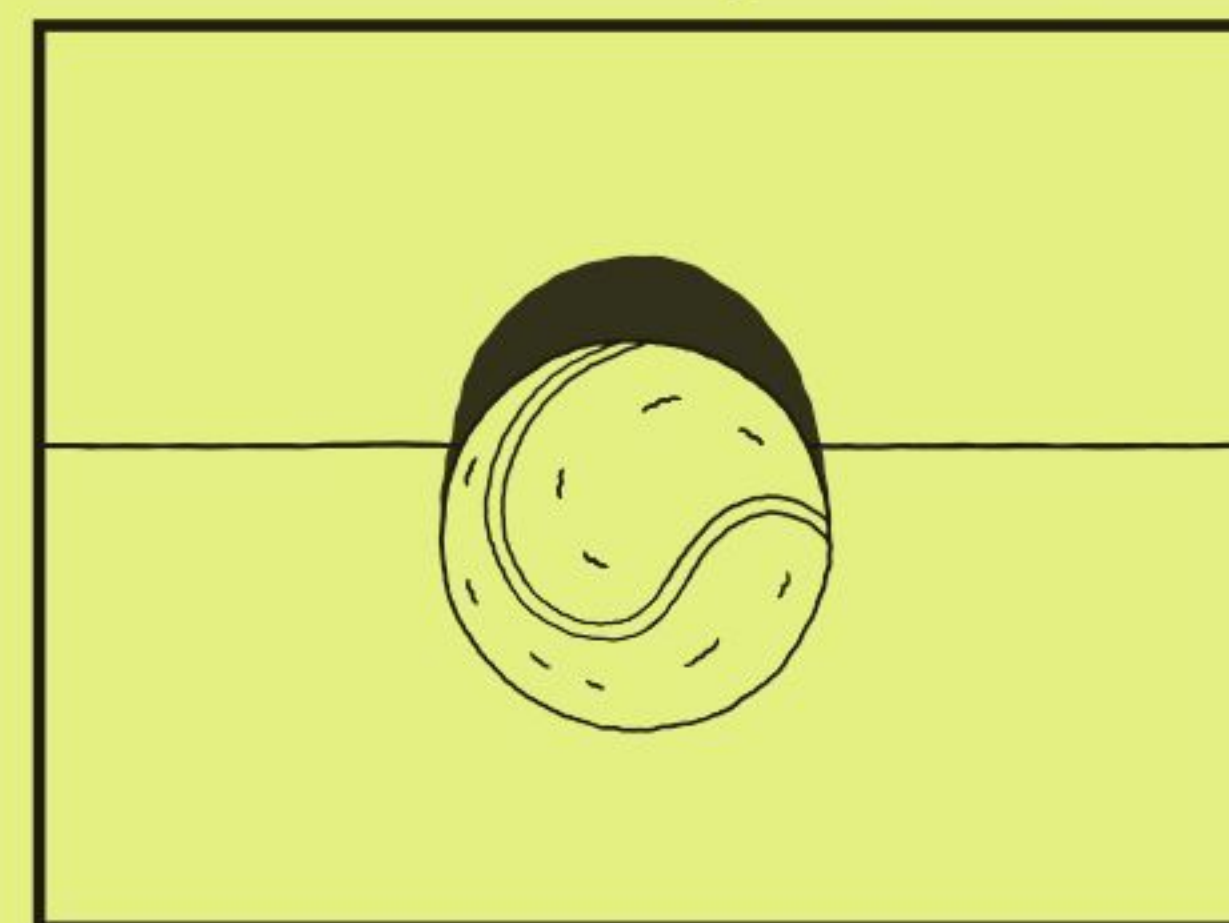
Nifty know-how: **LIGHT**

To ensure the light hits your subject from the **best possible angle**, you might need to **reposition** the light, the subject or yourself. See what a big difference the **direction of light** makes to this humble tennis ball...



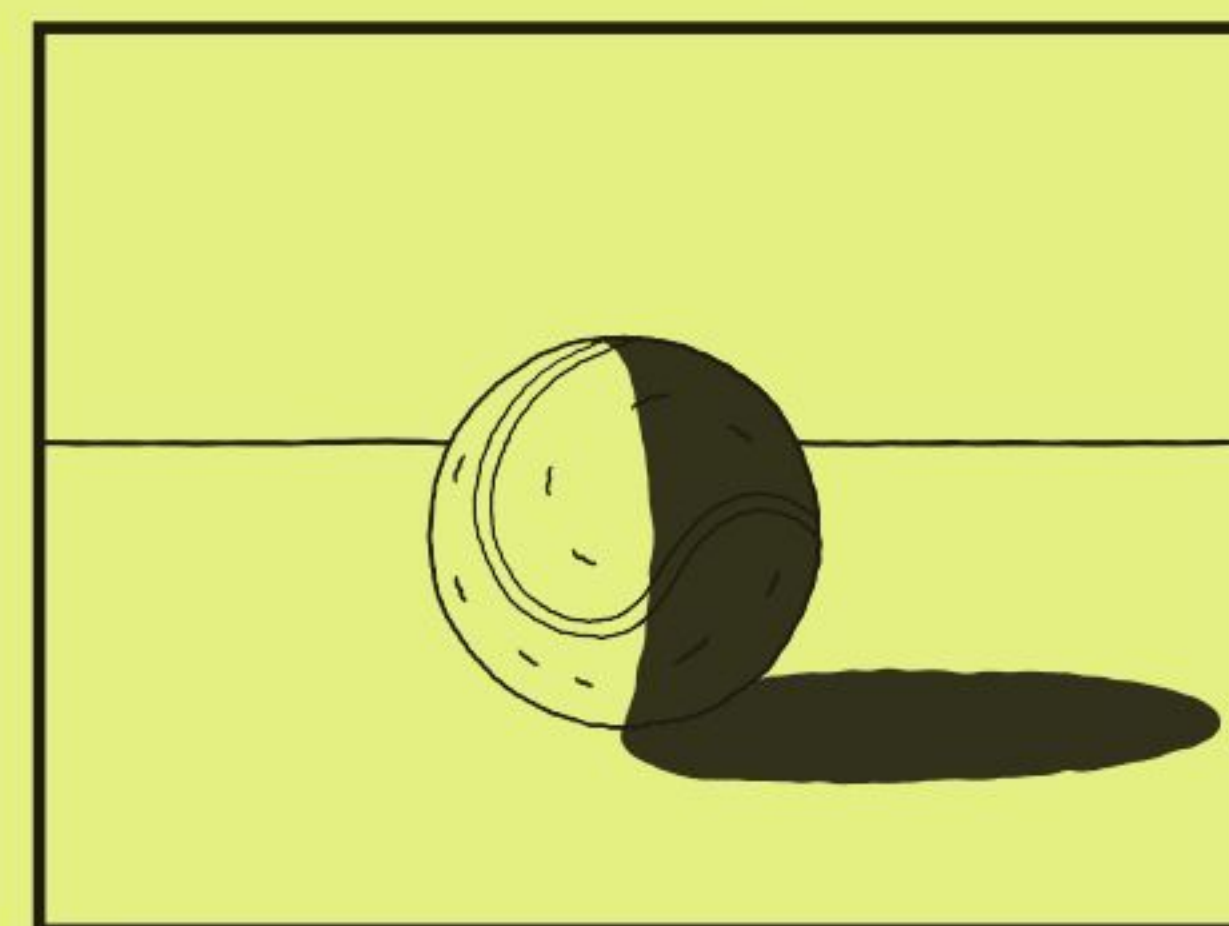
Front light

When something is lit from the **front**, the shadows are cast **behind** the subject. This causes the subject to look a bit **flat** because there are **no shadows** to give form to the features.



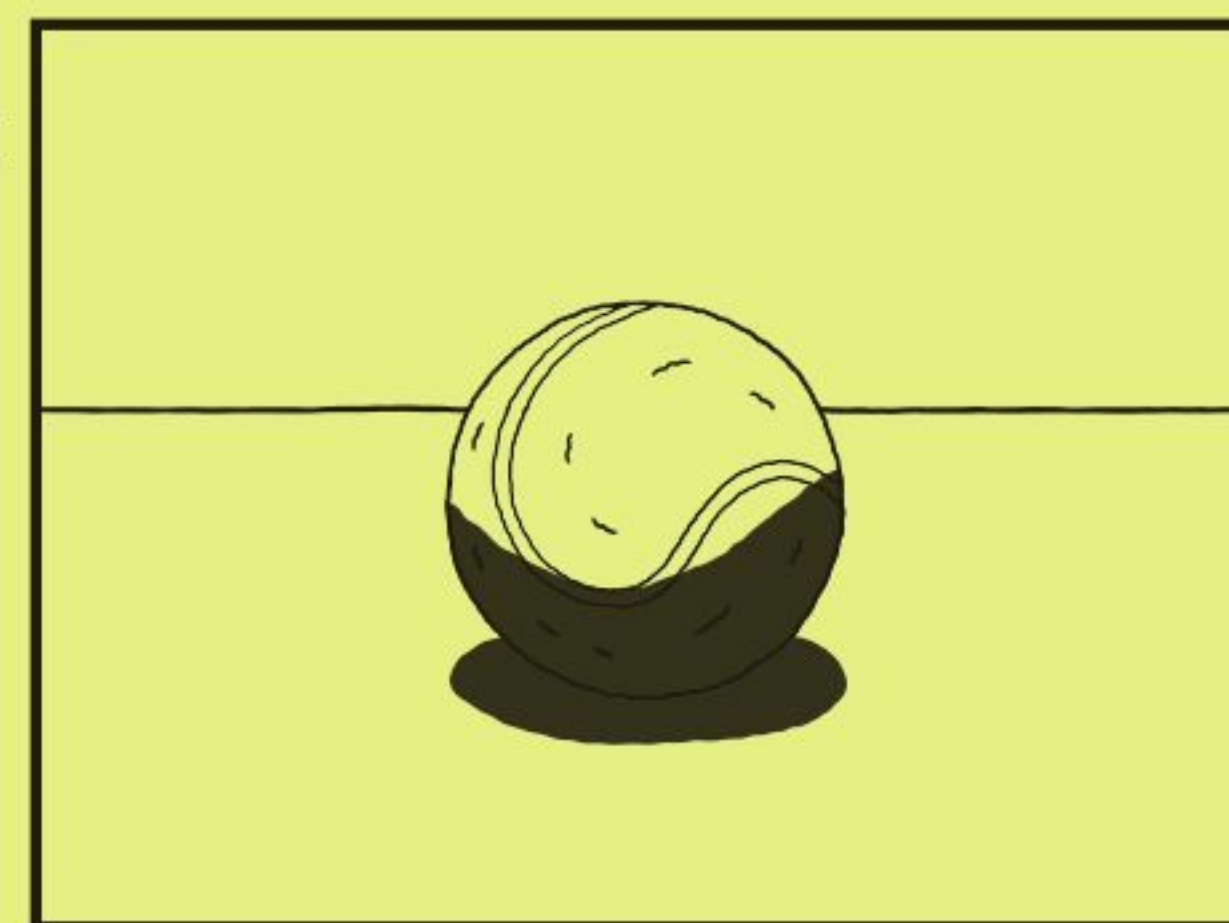
Side light

When the light comes from the **side**, one **half** of the subject **will be bright** and the other half dark. This is a nice **classic style of lighting**, especially when taking pictures of **faces**.



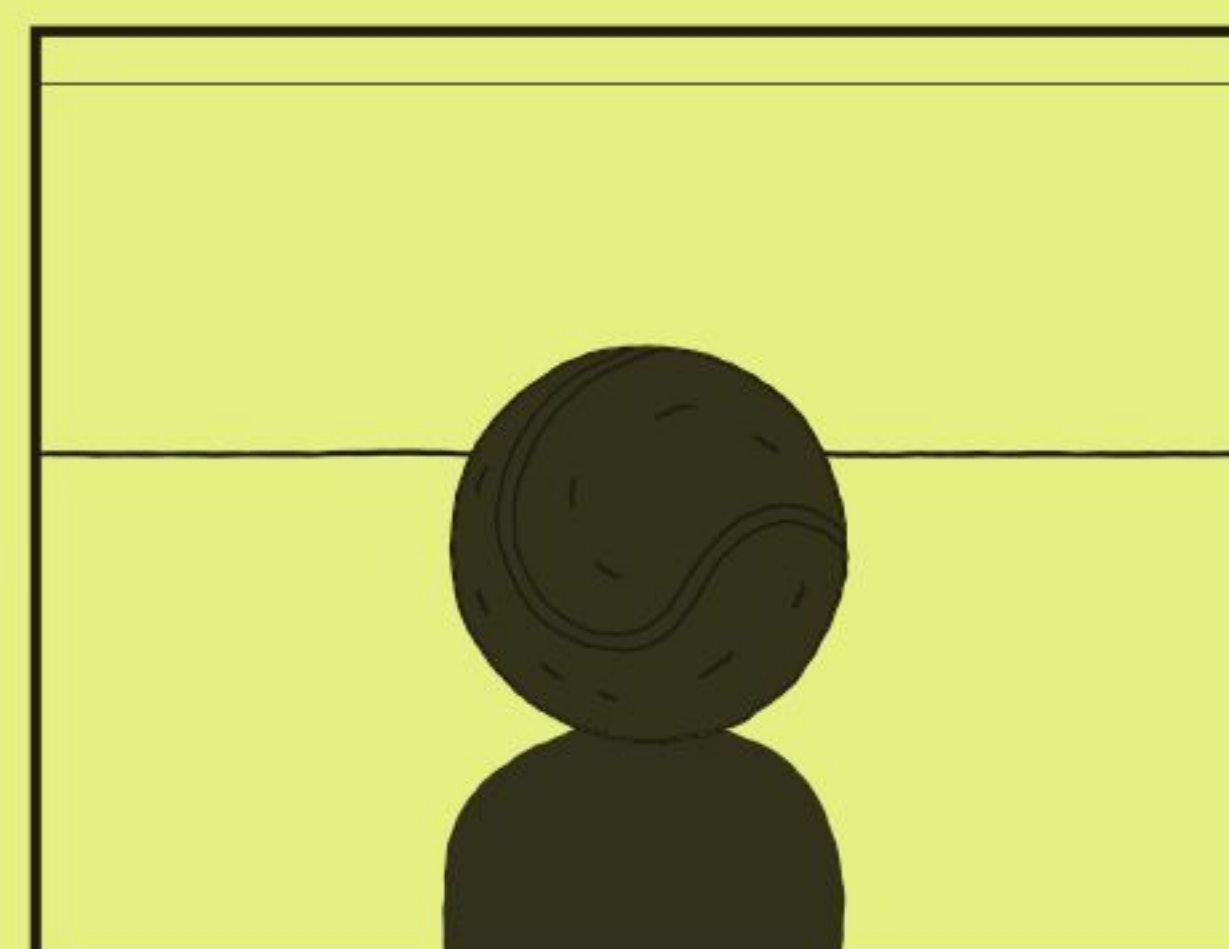
Overhead light

When the light shines on a subject from **above**, shadows are cast **downwards**. This can be dramatic – but **not so flattering on faces**.



Back light

When the light comes from **behind** the subject, all the shadows are thrown **forwards**, creating a **silhouette**. This can look cool, but the shadows will mean **you won't see any detail** in a subject.



Nifty know-how' taken from *Be a Super Awesome Photographer* by Henry Carroll, published by Laurence King. Illustrations by Matt Johnstone.

2019 PHOTO COMP

NATIONAL
GEOGRAPHIC | FAMILY
JOURNEYS
with **G Adventures**

THE PRIZES

Check out what you could win!

STAR PRIZE!

A FAMILY HOLIDAY IN MOROCCO!

If you're crowned **NG KiDS' Photographer of the Year**, you'll travel with **National Geographic Family Journeys** to **Morocco** in **North Africa**, courtesy of **G Adventures**! The awesome **nine-day tour** will take you from bustling markets to soaring desert dunes. You'll even get a tour around the film studio where scenes from **Star Wars** were filmed!

You'll discover the magic of **Morocco** on this exciting journey of **sights, smells and sounds**, meeting enchanting **musicians** and **storytellers** while exploring places steeped in **Berber heritage**. Head off on exhilarating **hikes** past stunning **rock formations**, climb windswept **sand dunes**, and uncover **ancient secrets** in **green oases** and **grand palaces**. It's the **adventure of a lifetime!**

Flying in to the city of **Marrakech**, you and your family will then travel south through the stunning valleys of the **High Atlas Mountains**, arriving in **Ouarzazate** – known as the '**gateway to the Sahara**'. There you'll step behind the scenes at the **Atlas Film Studios** to see how the surrounding **desert** has starred in movies such as **Star Wars** and **Gladiator**. Cool!

You'll go **star-gazing** in the desert, hop aboard a **4x4** to ride across the breathtaking **Erg Chebbi** dunes and search for **fossils** left behind by an **ancient sea**! Visit a **Berber village** to dine on **yummy local food** (including **Berber pizza**!), and then learn about the wonderful **rock formations** at **Dades Gorge**. You could even go camel riding! Explore the ancient fortified village of **Aït Ben Haddou**, a **UNESCO World Heritage site**, and impress your folks with your culinary skills at the **tagine cooking class**! Then, immerse yourself in the '**red city**' of **Marrakech**, touring its **maze** of tiny streets, alleyways, markets and museums.

Ready for adventure? Get snapping!

- To find out more about this amazing trip, head to tinyurl.com/GAdventuresMorocco
- To learn about other **National Geographic Family Journeys** with **G Adventures**, trek over to tinyurl.com/GAdventuresNatGeoFamily

Visit Aït Ben
Haddou



Explore
Marrakech's
many markets



Fancy a
camel ride?





CATEGORY PRIZES!

Cool cameras!

All three category winners will shoot off with one of these amazing **Nikon COOLPIX W150 cameras**, that are built to go anywhere! The compact **waterproof**, **shockproof**, **freeze-proof** and (handily for the desert) **sand-proof** adventure camera is perfect for capturing superb photos and videos! Plus, it comes in five awesome colours and features an array of fun shooting modes – perfect for your photography adventures!

● Find out more at tinyurl.com/nikoncoolpixw150



Goody bags!

And that's not all! Each of our winners – along with one runner-up in each category – will scoop a bumper bunch of goodies, including a pair of **National Geographic kids' binoculars** from **Bresser**, three **National Geographic Mini Dig Kits** from **Bandai** and the **Be a Super Awesome Photographer** book by **Henry Carroll**!

● Find out more about the binoculars at bresseruk.com and visit tinyurl.com/bandaiNG to check out the Dig Kits! Learn about the book at laurenceking.com/childrens



Spend time in a souk

ENTER NOW!

Play in the breathtaking desert dunes

Sample Morocco's incredible spices

Gather around for storytelling sessions

Meet local people

For full terms and conditions go to natgeokids.com/uk/photocomp

WE'RE ALL FAMILY.

Introducing a new way for families to
connect with the world.



National Geographic Family Journeys with G Adventures is a new line of trips for adventure-loving families in search of a meaningful way to discover the world together. These itineraries are specially designed so travellers ages seven and up can explore a destination's rich and diverse characteristics. Each itinerary features unique, interactive activities inspired by National Geographic's expertise in photography and storytelling, wildlife, culture, history, and geography to encourage kids and adults alike to connect with the world around them.

 **NATIONAL
GEOGRAPHIC** | **FAMILY
JOURNEYS**
with **G Adventures**

Visit our website or speak to a Global Purpose Specialist for full details.
gadventures.co.uk/familyjourneys | 0330 808 0429

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HarperCollinsChildren'sBooks
presents

PAGES & CO TILLY AND THE LOST FAIRY TALES

Get ready for the second book in
Anna James' magical *Pages & Co* series!

Tilly Pages is a bookwanderer – she can **travel into books** and even **talk** to the characters she meets inside them. But Tilly's **powers** are put to the **test** when fairy tales start leaking **book magic**...

On a **wintery visit** to Paris, **Tilly** and her friend **Oskar**

bravely **bookwander** into the **land of fairy tales** to find that stories are all **mixed-up** and **mysterious plot holes** are opening without warning.

Can **Tilly** work out who – **or what** – is behind the **chaos** so that everyone gets their **happily-ever-after**?



Paperback
**OUT
NOW!**

NEW!



TOPSY-TURVY FAIRY TALES

When **Tilly** and **Oskar** **bookwander** into their book of **fairy tales**, they're surprised to find the **familiar stories** are all muddled up...

Prince Charming is determined to **rescue** Rapunzel from her tower – even if it means **kidnapping** Oskar to help him do it!



Red Riding Hood isn't just **visiting** her grandmother – she's wielding an **axe** and takes care of the **wolf** herself!



The **three bears** are a perfectly **lovely family**, even when the pesky Goldilocks is **bothering** them!



BOOKWANDERER SEARCH

Tilly and **Oskar** meet lots of **famous faces** in the **land of fairy tales**. Can you find these characters in the grid below?

- BIG BAD WOLF ● GOLDBLOCKS
- GRETEL ● HANSEL ● PRINCE CHARMING
- RAPUNZEL ● RED RIDING HOOD

Answers
on page
56

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

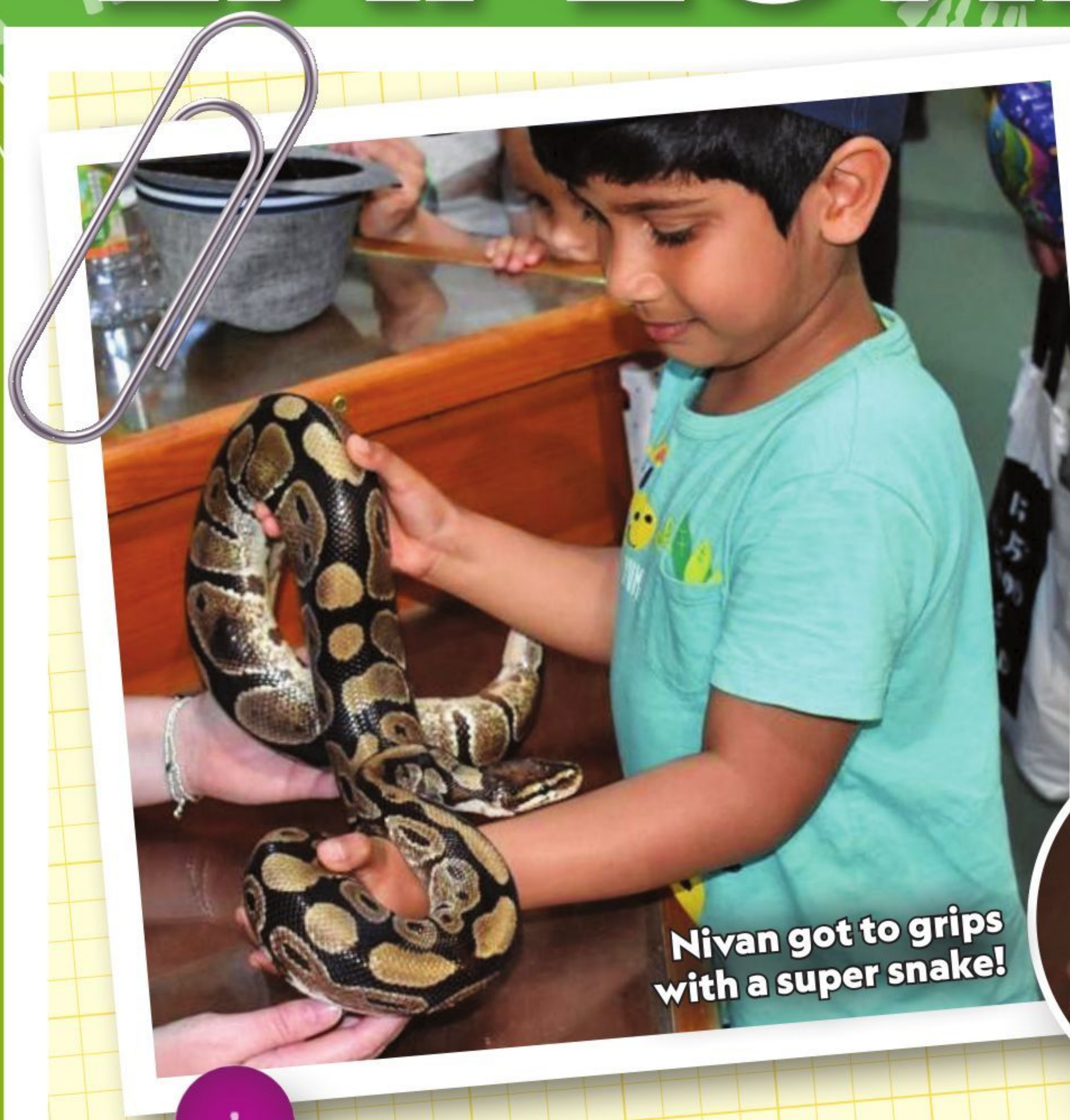
WIN!

We've got an amazing **Bookwanderer's Kit** to give away, containing **£100 worth of books and book-themed goodies**, perfect for any young bookwanderer! To be in with a chance of **winning**, head to **po.st/bookwanderercomp**

Wander over to **po.st/bookwanderer** to find out more!

JUNIOR EXPLORERS' CLUB

WILDLIFE WATCH



Nivan got to grips with a super snake!

Would YOU touch a tarantula?



Hi NG KiDS, I'm a huge animal fan and love to read about our planet's wildlife. In fact, my friends call me '**Animal Google**'! Here's me meeting and learning about two fascinating creatures – the **African royal python** and the **tarantula**.

Nivan, 6

● Wow, that's sssss-eriously cool, Nivan!

TO THE RESCUE!



Dear NG KiDS, This is '**Fledge**', the **collared dove** chick that was **blown out of our tree** after a storm. We noticed him in the garden when two collared doves kept looking through our window, **as if they wanted us to help!** After seeing the chick, we researched what to do and **built a nest** from **dry grass** in a basket. We couldn't put the nest in the tree, so found a sheltered safe spot. The parents have been coming back and looking after Fledge – he seems to be doing well!

Ella, 9 and Jacob, 7

● Great work, you two. We hope Fledge flies off soon.

ART ZONE!

Q What do you get when you cross a parrot with a centipede?

A A walkie talkie!

Jake, 8



Hi NG KiDS, I love wildlife and I **love to draw**. Here's a picture I made of two **fox cubs** in the forest. I hope you like it. Lucy, 10

● Very cute, thanks, Lucy!

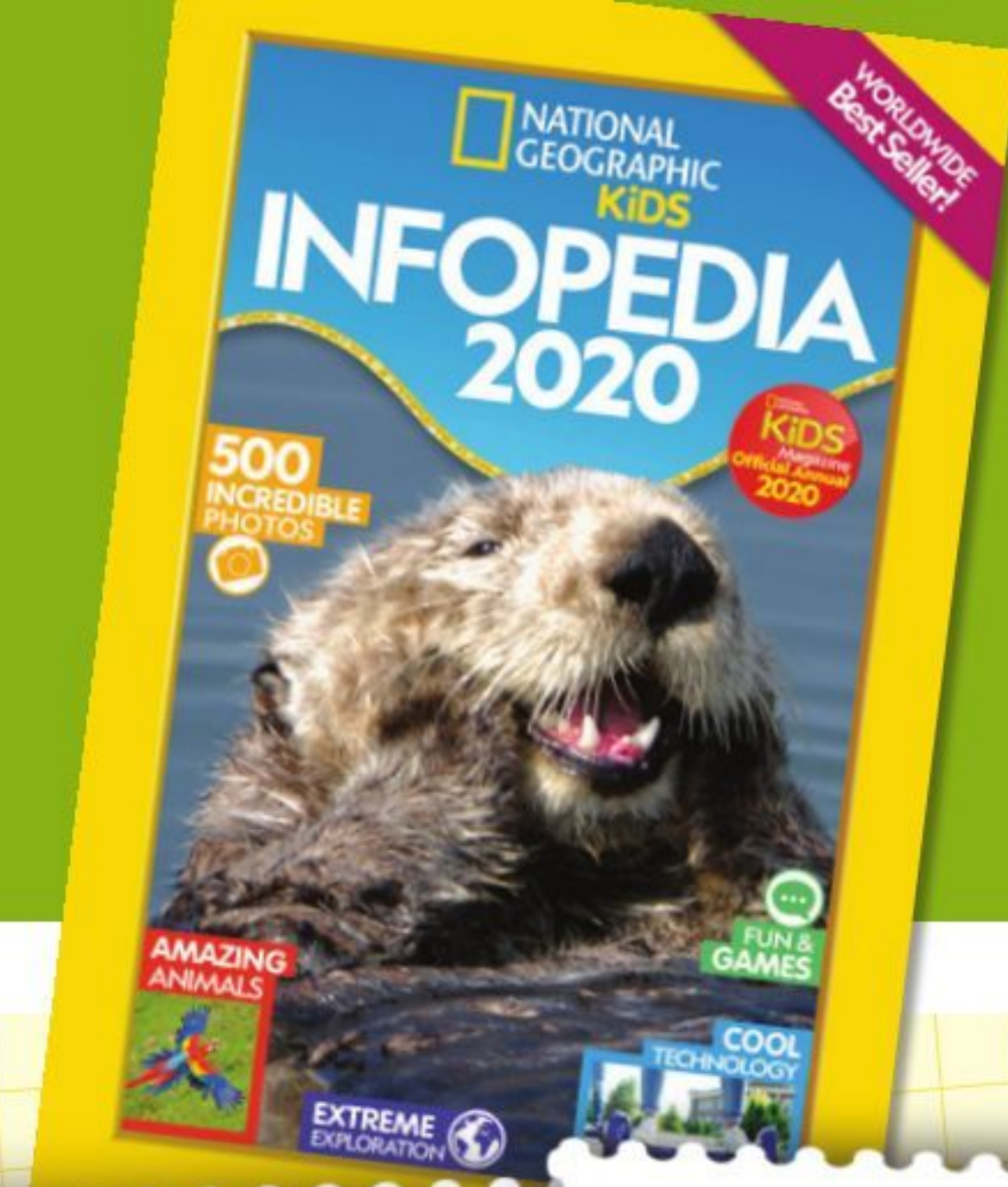


Jacob and Ella with the fabulous Fledge!

We want to hear from YOU! Send in your artwork, jokes, craft pics and pet photos; tell us about your wildlife sightings, hobbies and interests, and share your opinions! Email kids@ngkids.co.uk or write to the address on page 3. A selection will be printed on this page. Every reader on these pages will receive a copy of the **Infopedia 2020** from **NG KiDS Books!**

Available at harpercollins.co.uk

We're sorry, but we won't be able to return your art or photos.



Hi
Rosie

Rosie
the cat,
sent in by
Adam, 11

**COVER
STAR!**

SUPER SHOEBOX!

Hey NG KiDS,
We've been learning about **animals** and their **habitats** at school. Our teacher got us to bring **shoe boxes** in to make our own animal habitats. I put the **lid** of my box on its **side** to make a cross-section showing the **sky**, **ground** and **underground**. For the earth I used **real soil**, and I made different animals, too. You can see a **bird** pulling a **worm** up from the ground, a **fox** in its den and a **spider**.

Thomas, 6

Great idea, Thomas. Well done!

**Thomas' home-made
habitat has real soil in it**



POSTCARD FROM...

Tenerife



Dear NG KiDS,
Me and my brother love marine creatures, especially **killer whales** and **dolphins**. We try to find out as much as we can about the ocean and how can we help to **preserve** it. Our parents took us on the **submarine safari** in Tenerife, so we could see creatures that live under the sea. We saw huge **stingrays** (with a diver, below) and lots of little fish. They were just magical!
Charlotte, 10, and Luke, 5

What a brilliant adventure, guys!

WHEELY IMPRESSIVE

Our village holds a **decorated wheelbarrow competition** each year. This year's theme was the **50th anniversary of the Moon landing**, and our **wheelbarrow won!** I made a **rocket** out of a **drinks bottle** and printed out **lots of information**. I even put a **piece of cheese** in **Neil Armstrong's** hand, as he was the **first man to walk on the Moon**.
Georgina, 10

Ha ha, love the cheese and 'final front-ear' jokes, Georgina. Your wheelbarrow looks out of this world!

**Georgina with
her winning
wheelbarrow**



The rocket

Neil Armstrong

KIDS Do you love Pets or Want to Be a Vet?



FREE
mystery
gift

Join the Club!

Members get:

- 6 issues of our **PAWsome Animal Antics** magazine
- A fantastic welcome pack and membership card

£20 for
a full year's
subscription

Sign up at pdsa.org.uk/pet-protectors using the code 'PP19'

Please fill in the form and send it with a cheque or postal order for **£20** made payable to 'PDSA' to
PDSA Pet Protectors, Whitechapel Way, Priorslee, Telford, Shropshire TF2 9PQ.

Name of child _____	Date of birth _____
Address _____	Postcode _____

Adult name _____	_____
Address _____	Postcode _____
Adult email _____	Tel _____
Gift message _____	

Using Your Personal Information

We will only use your child's personal information to administer their Pet Protectors membership.

PDSA is committed to protecting your personal information and will never exchange or sell your details to another organisation for their own marketing purposes. We would like to let you know about our work with sick and injured animals, including fundraising, volunteering, pet insurance, and animal welfare issues. To provide you with the best possible experience, we will also use your personal information to help us decide what you may like to hear about and to personalise our advertising, communications, and services. If you'd like to 'opt out' of our marketing and fundraising communications call our friendly supporter services team on **0800 0199 166** or write to us at 'Freepost PDSA' and tell us your contact preferences. For more information regarding our Privacy Policy please visit www.pdsa.org.uk/privacy-policy.

MAX MEETS... Simon, the Royal Navy's bravest cat

**ANIMAL
HEROES!**

This month, NG KiDS' time-travelling mouse, Max, visits Simon – the feline hero that saved hundreds of lives!



Hello, readers!
Welcome to Stonecutters Island, Hong Kong, in 1947. It's a busy naval boatyard and HMS Amethyst has just stocked up on supplies for its next voyage.

Elsewhere, a certain wiley cat is busy chasing rats amongst the dockyard cargo.



A young seaman called George Hickinbottom found the cat and named him Simon, smuggling him on board.

I've got just the job for you!

Does it involve sleeping all day?



The ship's commander also took a shine to Simon and immediately tasked him with catching all the unruly rats that roamed the ship.

Uh oh!

Now we're for it!

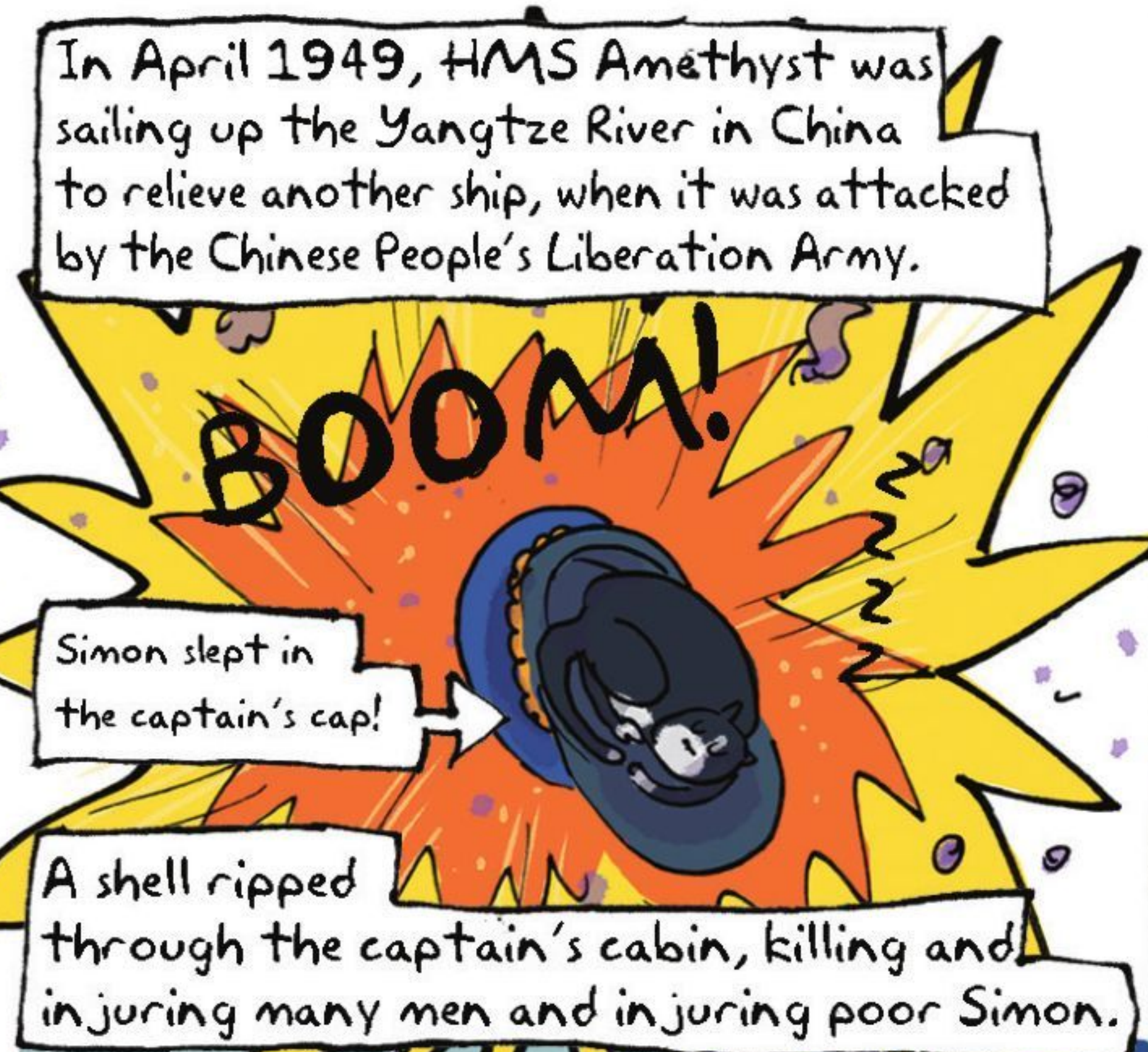
Yes, sir!



Simon was a roaring success! He cleared the ship of its rats and would drop them at the commander's feet (and even in his bunk!)

Good boy!

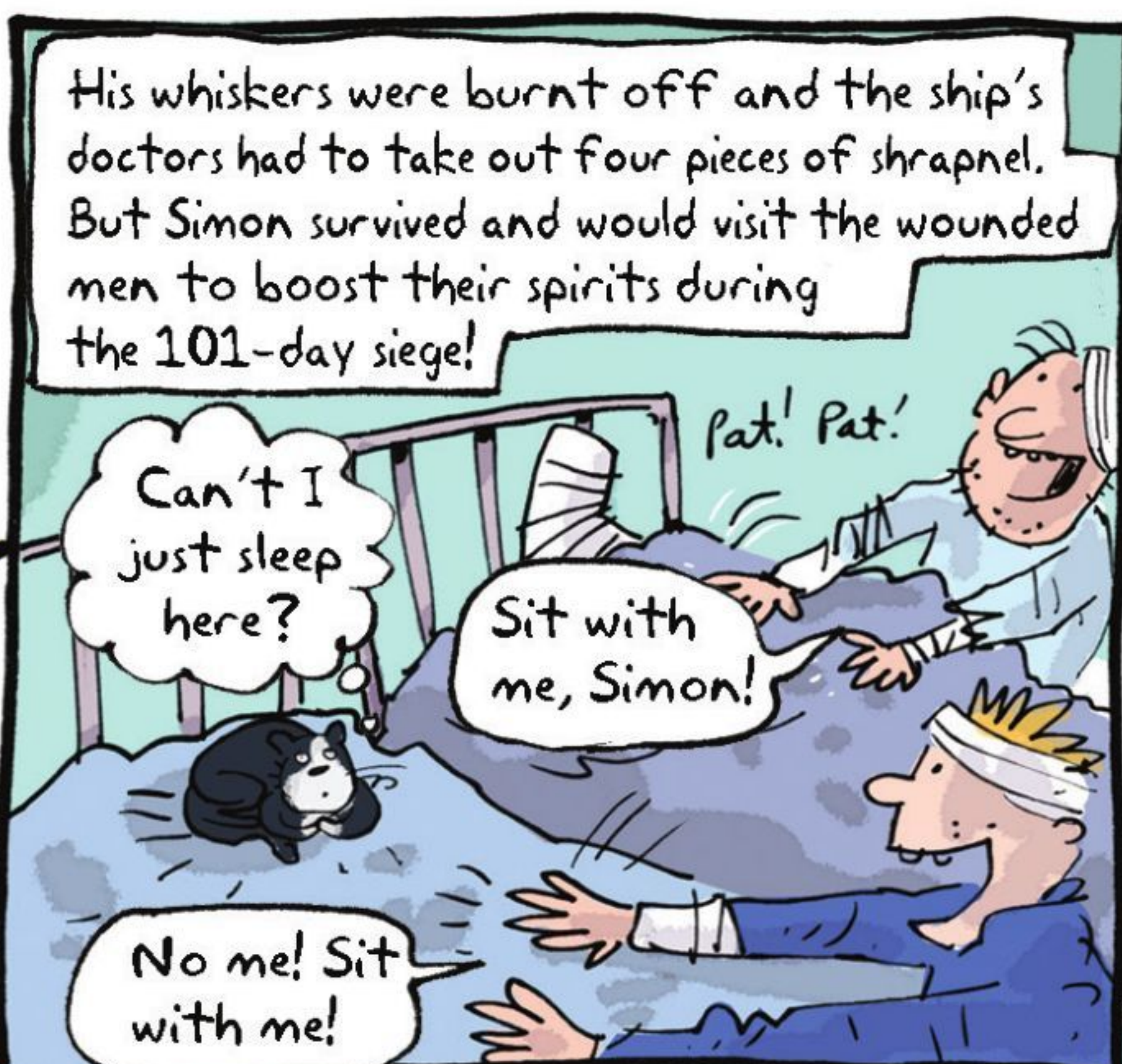
Can I go to bed now?



In April 1949, HMS Amethyst was sailing up the Yangtze River in China to relieve another ship, when it was attacked by the Chinese People's Liberation Army.

Simon slept in the captain's cap!

A shell ripped through the captain's cabin, killing and injuring many men and injuring poor Simon.



His whiskers were burnt off and the ship's doctors had to take out four pieces of shrapnel. But Simon survived and would visit the wounded men to boost their spirits during the 101-day siege!

Can't I just sleep here?

Sit with me, Simon!

No me! Sit with me!

Pat! Pat!



A new rat infestation was eating the ship's supplies, so Simon went back to his duties. He even took on a huge rat all the sailors feared, called 'Mao Tse-tung'!

No sweat!

ARGH! My tootsies!

The supplies were saved, as were the hungry sailors' lives. Simon was a real hero!



A few months later, the Amethyst finally made it home safely to England. Simon's fame had spread worldwide!

The crew tried to present him with a campaign medal, but Simon was having none of it and ran off!

Yuck! Purple's just not my colour!



Simon was to be officially presented with the 'Animal Victoria Cross' – the Dickin Medal from the charity PDSA – but, sadly, he died from his wounds before the ceremony.

Simon was a true hero of the Royal Navy and you can safely say that his nine lives were very well spent!

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal,
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Unlimited satisfaction one low price

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All languages

Brand new content

One site



AVXLIVE ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>

IN IT TO WIN IT!

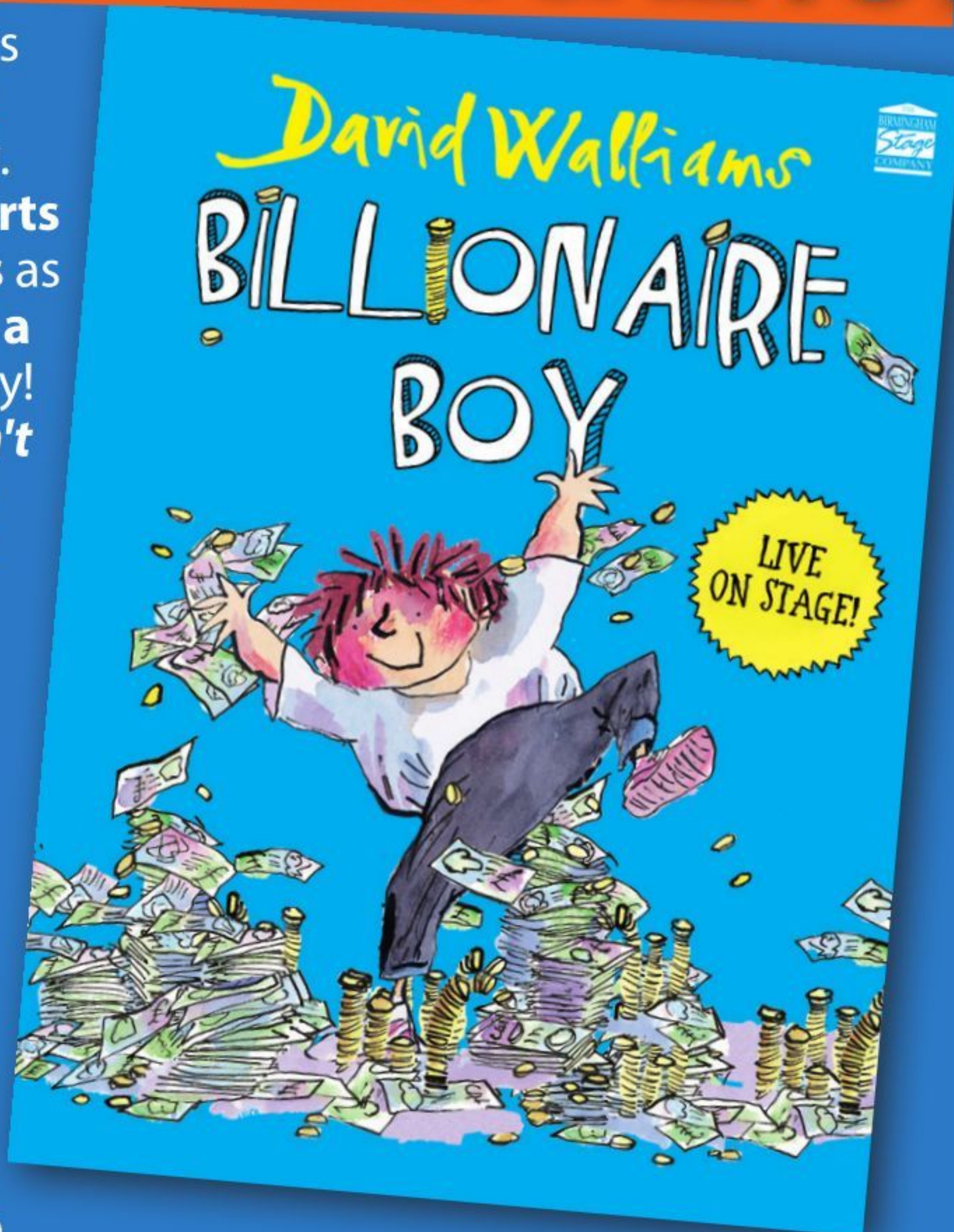
Enter on page 55 or online at natgeokids.com

WIN! BILLIONAIRE BOY THEATRE TICKETS

Joe Spud is 12 years old and the **richest boy in the country**. He has his own **sports car**, **two crocodiles** as pets and **£100,000 a week** pocket money! But what Joe **doesn't** have is a **friend**. So he decides to leave his posh school and go to the local comp instead. But things don't go as planned for Joe and life becomes a rollercoaster as he tries to find what money can't buy!

Five readers will bag a **family ticket** to the **Birmingham Stage Company's** brilliant theatre adaptation of **David Walliams' book Billionaire Boy!**

● For more info and to book tickets at a venue near you, visit billionaireboylive.co.uk



Q Which of these is NOT a type of crocodile?
a) Saltwater b) Freshwater c) Bathwater

Family ticket is four people, minimum one adult to see **Billionaire Boy Live On Stage** at the theatre of the winner's choice until 5 December 2020. Check website for locations and dates. Subject to availability. No cash alternative. Travel and accommodation not included.

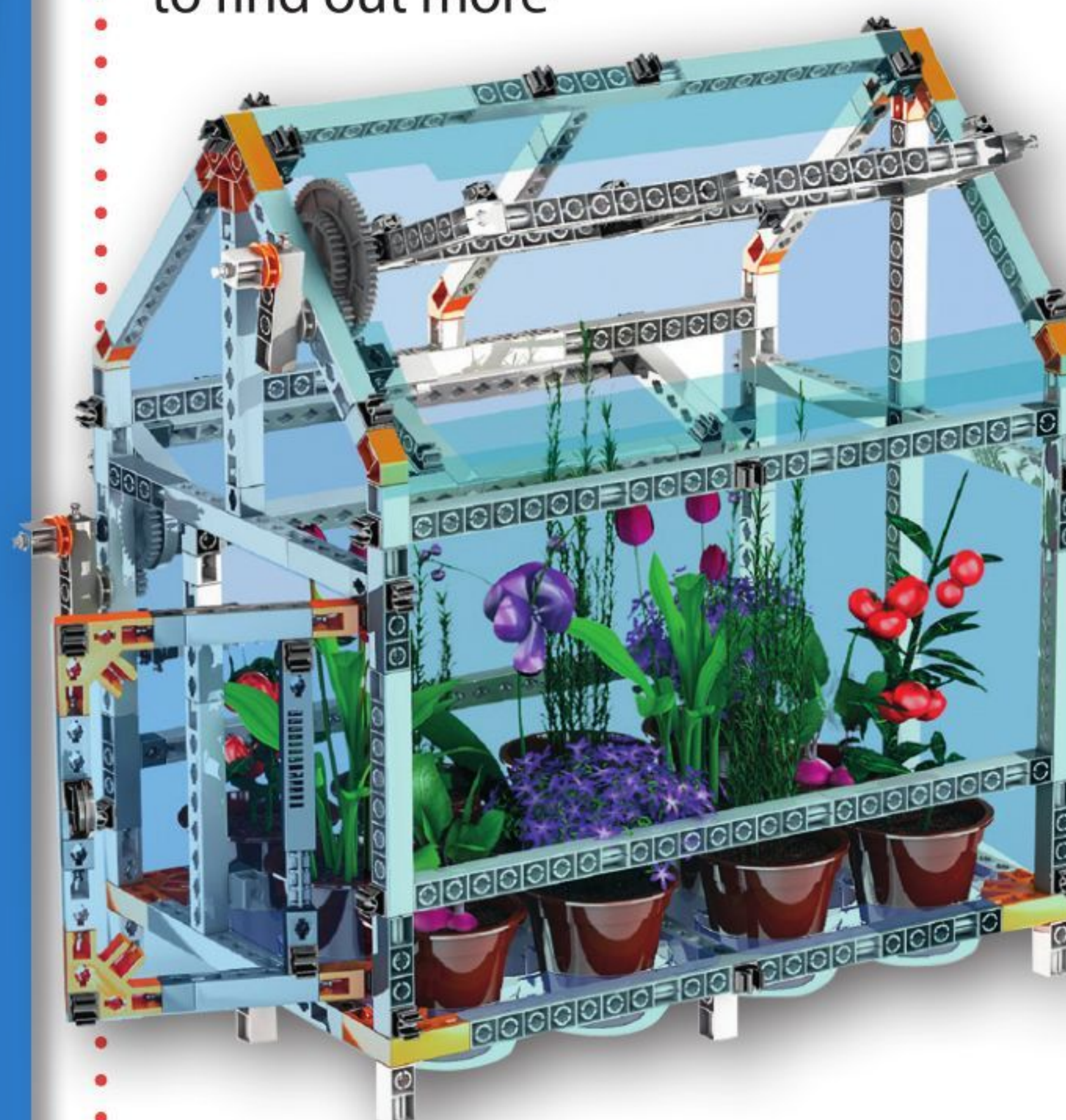
WIN! ENGINO STEM HEROES GREENHOUSE

Calling all budding gardeners! It's time to get green fingered with the **ENGINO STEM Heroes Greenhouse**.

Build your very own fully-functional greenhouse model, and then **plant** seeds, **fertilise** them and watch them **grow**. Control the conditions inside the greenhouse and discover how **temperature**, **moisture** and **light** affect plant growth. The included booklet contains full building instructions, as well as challenges, facts and quizzes based on the **life cycle** of plants. Blooming brilliant!

We have six **ENGINO STEM Heroes Greenhouses** to give away.

● Head over to smythstoys.com to find out more



Q Can you unscramble these letters to reveal a veg that's often grown in a greenhouse?
UEBMCURC

WIN! K'NEX BUNDLE

Get building with this bumper bundle of **K'NEX** goodies.

The **Dragon's Revenge Thrill Coaster Building Set** (right) lets you build a real working **rollercoaster** with a **burning castle** and ferocious **motorised dragon**. Yikes! Operate your very own working **crane** with the **Control Crane Building**

Set (left). Rotate the jib, position the trolley, and raise and lower the hook, just like the real thing!

And the **Trail Rider Building Set** (far right) is an authentic replica of a **Jeep** with motorised movement, a steering column and working suspension. Wow!

Two readers will win **all three** of these kits plus the **T.rex Fury Roller Coaster Set** and an **Imagine Power & Play 50 Model Motorised Building Set**.

● Available from all good toy shops



Q Which of these countries has a dragon on its flag?
a) England a) Scotland b) Wales

ENTER
ALL
COMPS
ON PAGE
55!

74 chances
to win!

WIN!

HOT WHEELS RACE CRATE AND BARREL BOX

Strap yourself in, start your engine and get ready for a breathless thrill ride! Build three extreme challenges with the **Hot Wheels Race Crate – Gravity Drop, Drag Race and Mega Jump**. Put your skills to the test as you zoom around over **2.4m of track**, tackling tricky obstacles like the **two-lane loop** and the **double slam launchers**. Vroom!

The **Hot Wheels Barrel Box** includes stacking barrels that let you create even more epic stunts. Connect

them to the Hot Wheels Race Crate for endless stunting possibilities.

Six speed freaks will win **both** sets.

● Race over to [amazon.co.uk](https://www.amazon.co.uk)



Q Which of these is a famous British race track?
a) Goldpaper b) Bronzescissors c) Silverstone

WIN!

BOOMTRIX GOODIES

Amaze your friends and family with **BoomTrix** – the extreme **marble track system**.

Let your imagination run wild as you create **crazy track runs** for your **metal marbles** to bounce through. Set up the **towers** and **power action trampolines**, launch your marbles and then let **gravity** do the rest as you watch them bounce their way to the goal. You can even try including household objects – such as **staircases** – as obstacles, too. The possibilities are endless!

Five winners will get the **BoomTrix Showdown**, plus **Multiball** and two **Stunt Pack** expansions.

● Bounce over to [vividtoysandgames.co.uk](https://www.vividtoysandgames.co.uk)



Q Which of these tricks might you do on a trampoline?
a) Somersault b) Autumnsault c) Wintersault

WIN!

A SCARY BOOK

Crawl under the covers, grab a torch and lose yourself in the seriously creepy book by **Gerald Killingworth, *The Dead World of Lanthorne Ghules***.

Life sucks for **Edwin**. He's had to move to a **new house**, a **new school** and put up with the arrival of his **baby sister Mandoline**. But things start to look better when his new penpal **Lanthorne** introduces him to a strange world of **dark secrets** and **thrilling adventures**. However, things take a dark twist when baby Mandoline is taken away by Lanthorne's evil **aunty**. Uh-oh! Can they rescue her before Edwin's parents find out?

Fifty bookworms will spirit away with a copy of ***The Dead World of Lanthorne Ghules*** published by **Pushkin Press**.

● Available in all good bookshops



Q Which of these is NOT a famous horror book?
a) Dracula b) Frankenstein c) Paddington

FUN STUFF

GAMES, LAUGHS, AND LOTS TO DO!



FIND THE SPY!

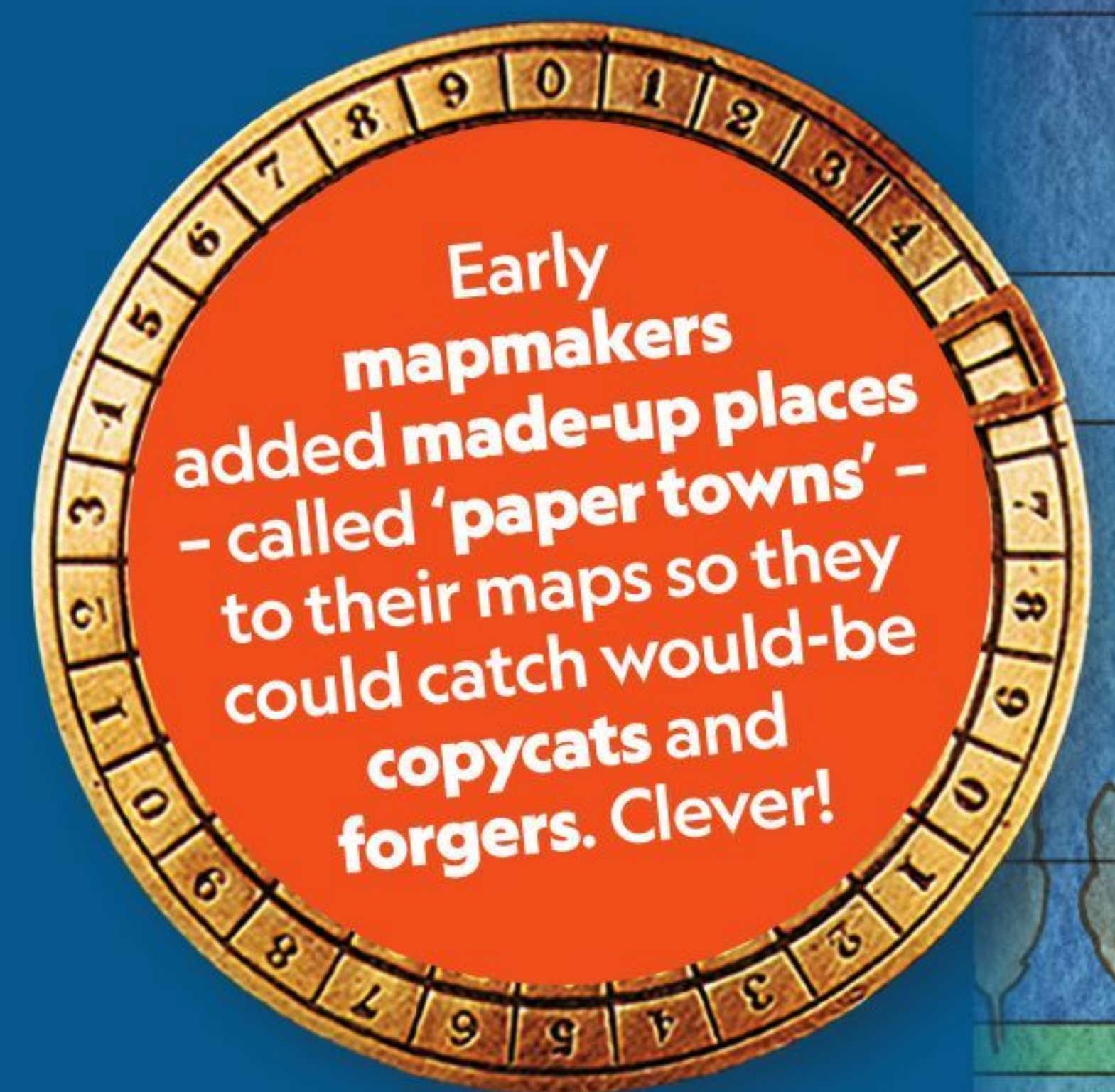
In the new book *Explorer Academy: The Double Helix*, 12-year-old Cruz Coronado and his friends break secret codes in order to fight dangerous villains and solve mysteries. In the puzzle on this page, a **dangerous villain** is following **Cruz**. Use the clues below and the **Academy campus map** to find this **mysterious spy**. Answer on page 56

CLUES

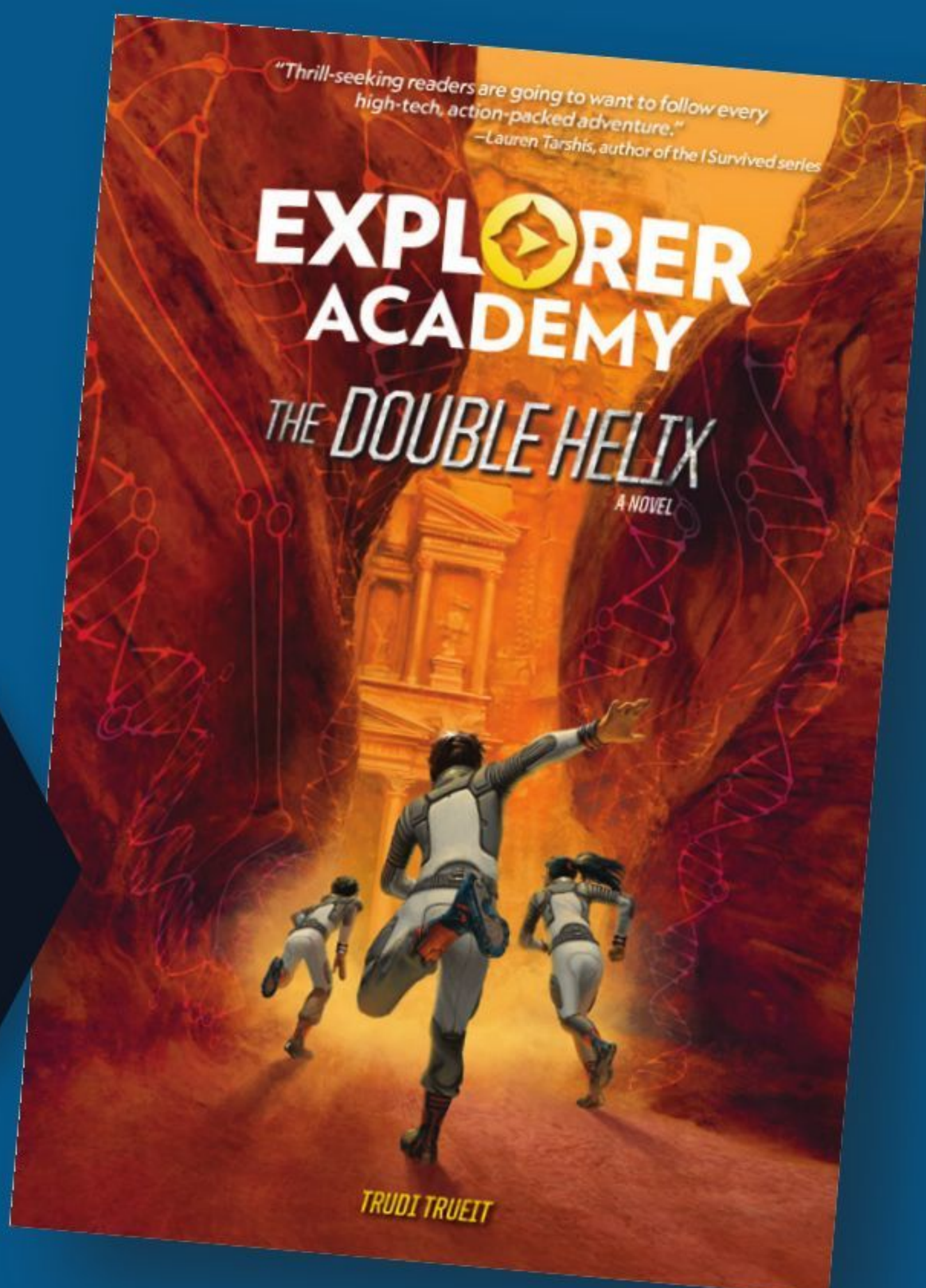
- 1 The spy is hiding somewhere **north** of the Franklin Library.
- 2 The spy is hiding somewhere **northeast** of Bingham Auditorium.
- 3 The spy is hiding in a building that is **smaller** than the CAVE.
- 4 The spy is hiding in a building that has a **curved** side.
- 5 The spy is hiding in a building that is **bordered** by more than one tree.

The spy is hiding in

ANSWER



CHECK
OUT
THE
BOOK!



// TIP FROM EMMETT //



When you're trying to solve a **logic puzzle**, eliminate the options that **don't** fit the rules at each step. That way, you can **narrow down** the possibilities until you're left with only **one answer!**

THE EXPLORER ACADEMY CAMPUS MAP

- A** Main Entry, Explorer's Hall
- B** Student Dormitories
- C** Dining Hall
- D** Franklin Library
- E** Upper-Level Classrooms
- F** Administration Building / Faculty Offices
- G** Bingham Auditorium
- H** Computer Animated Virtual Experience (the CAVE)
- I** Dark Star Planetarium
- J** The Museum
- K** Society Headquarters



MAZE

SQUIRREL SCURRY!

Can you guide this hungry red squirrel through the maze to reach the nuts? It's trickier than you might think!

Answer
on page
56

START

FINISH

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WHALE AND
DOLPHIN
CONSERVATION



FUN STUFF MAKE IT

T-SHIRT TOT

Upcycle an old T-shirt into a brilliant bag!

What you'll need

- Old T-shirt
- Ruler
- Scissors



Start here!



1

Lay your T-shirt flat and carefully trim off the sleeves, neckline and bottom seam. You might want to trim a bit more off the back of the neck line so the front and back are even.

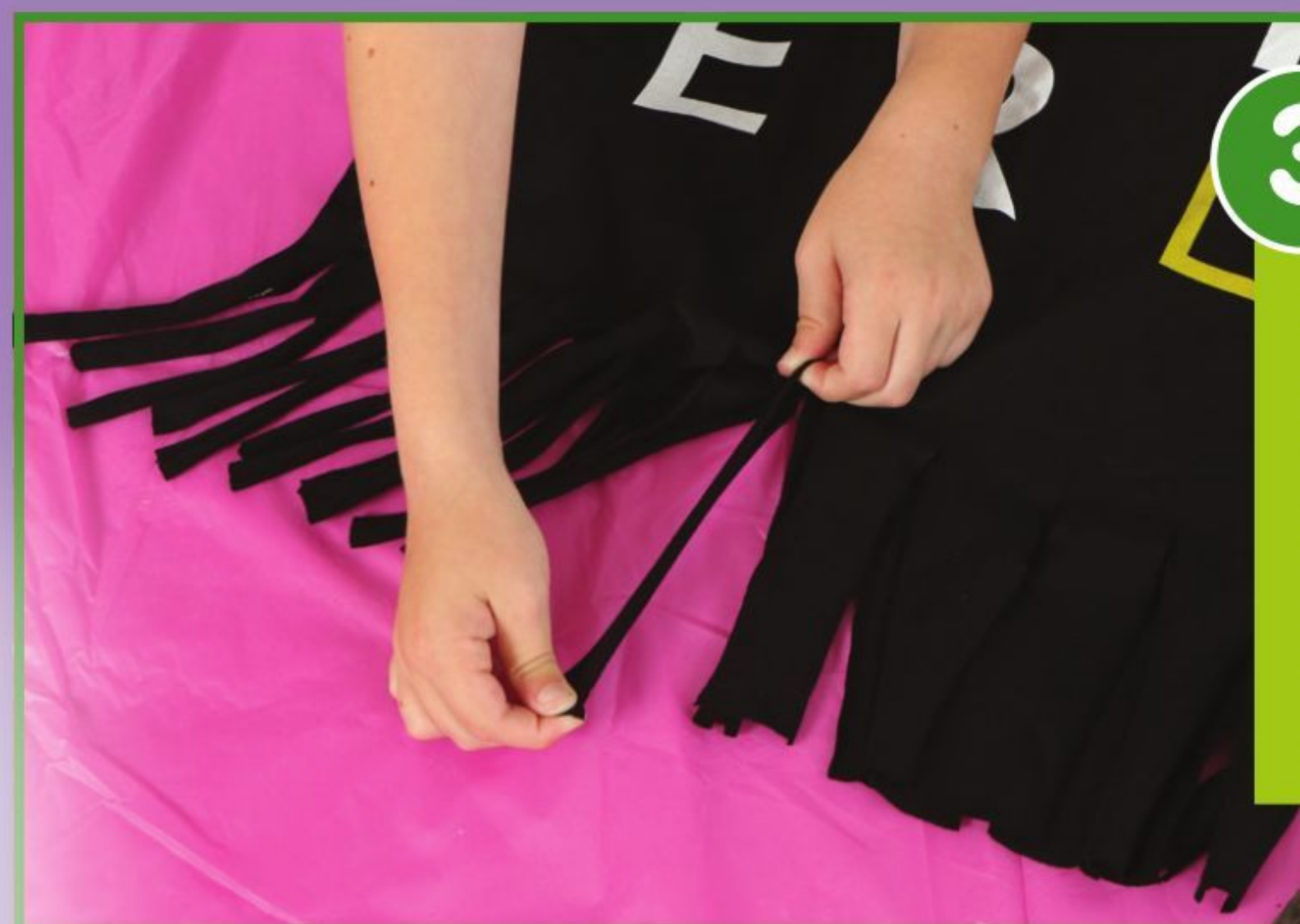


2

Using your ruler as a guide, cut narrow strips up the bottom of your T-shirt. They should be about 3cm apart, and between 10 and 25cm long, depending on the size of your T-shirt and how deep you want the bag.

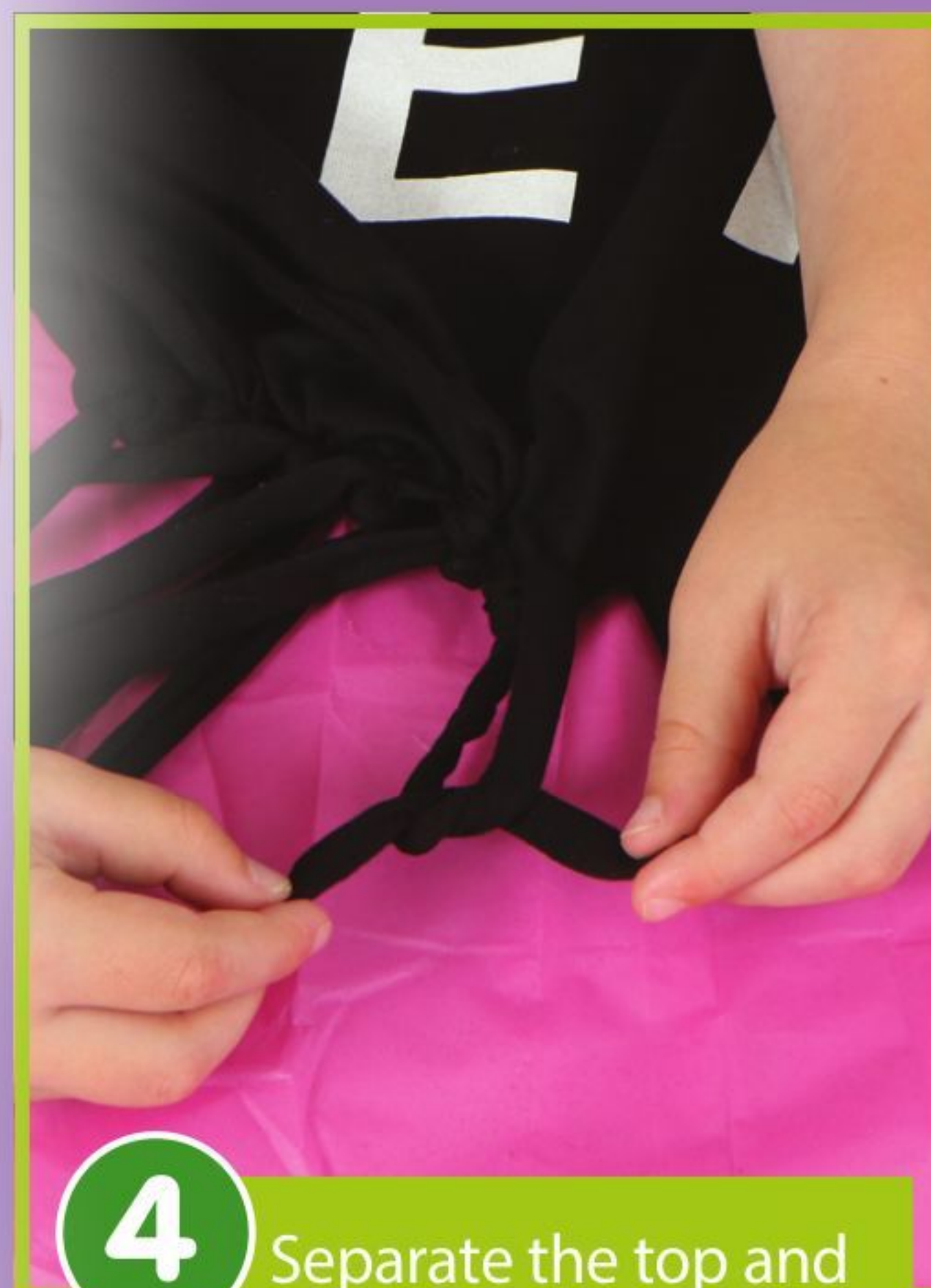
3

Pinch the top of each individual strip between your thumb and finger, and pull gently down with the other hand until the strip stretches and curls inwards.



4

Separate the top and bottom of each strip and tie them together with two simple knots.



5

Put your stuff inside and go!



TOP TIP

Don't put any small items in your bag as they could fall through the gaps at the bottom!



COMPETITION ENTRY COUPON

Just tick the box of any competitions you want to enter!

PAGE 8-9 WHAT'S UP?

Abominable goody bags

The mythical Yeti is also known as the Abominable...

Snowman ☐ Snowplough ☐ Snowshoe ☐

Farmageddon goody bags

What is the name of the British animation studio that creates *Shaun the Sheep*?

Aardman ☐ Hardman ☐ Aardvark ☐

Book bundle

How many horse tail hairs are usually used in a violin bow?

2 ☐ 200 ☐ 200 million ☐

PAGE 22 YOUNG ECO-HEROES!

Eco-book bundle

Don't forget to attach your sign design or email it to us

PAGE 35 CODING CRITTERS

Rumble & Bumble Coding Critters

Which of these was NOT a real dinosaur?

Brontosaurus ☐ Stegosaurus ☐ Doyouthinkhesaurus ☐

PAGE 48-49 WIN IT!

Billionaire Boy theatre tickets

Which of these is NOT a type of crocodile?

Saltwater ☐ Freshwater ☐ Bathwater ☐

Engino Stem Heroes Greenhouse

Can you unscramble these letters to reveal a veg that's often grown in a greenhouse? **UEBMCURC**

K'NEX bundle

Which of these countries has a dragon on its flag?

England ☐ Scotland ☐ Wales ☐

Hot Wheels Race Crate and Barrel Box

Which of these is a famous British race track?

Goldpaper ☐ Bronzescissors ☐ Silverstone ☐

BoomTrix goodies

Which of these tricks might you do on a trampoline?

Somersault ☐ Autumnsault ☐ Wintersault ☐

A scary book

Which of these is NOT a famous horror book?

Dracula ☐ Frankenstein ☐ Paddington ☐

Winners will be chosen
at random from correct
entries. **GOOD LUCK!**

Now turn over and answer
some easy questions!

Get Experimental!

HOMEMADE PARACHUTES

Recycle household objects and have *air-mazing* fun!

1. Take an empty, clean yoghurt pot and securely tape four identical lengths of string to each of its corners.

2. Tie the other end of each of the lengths of string to the handles on an old plastic carrier bag (two spread out on each handle).

3. Draw a face on an egg and then put it inside the yoghurt pot.



Make sure there's no risk of your parachute and pot hitting anyone on the way down!



4. Now test your parachute! Drop it from a decent height (maybe out of an upstairs window) and then check to see if your egg survived the journey!

Time to experiment!
Instead of using a bag, try making your parachute out of different materials, and try a variety of shapes and sizes.

What's going on?

A parachute is successful if it gets the **object** (or **person**!) it's attached to safely to the ground. To do this it should fall as **slowly** as possible. The **more air** there is pushing against the parachute (**air resistance**), the **slower** it goes.

Tips for a perfect parachute

You can **increase air resistance** by making the **surface area** as **large** as possible. This will mean the parachute needs to move **more air** out of the way in order to fall, which takes time. If your parachute **inflates** (fills with air) as it falls, this also increases the surface area. **Lighter** materials usually inflate better. **Circles** are often the best shapes – those with corners let air escape at the sides.

This fun home science experiment is from our pals at the **Royal Institution**. Want to attend this year's **Christmas Lectures**? Head to **rigb.org** to find out how **you** or your **school** can **apply for tickets**!

OVER TO YOU!

Your chance to tell us what you think

What made you buy NG KiDS this month?

- ☐ If you subscribe, please tick this box
- | | |
|---|---|
| <input type="checkbox"/> The cover photo (serval) | <input type="checkbox"/> 152 Prizes Inside! |
| <input type="checkbox"/> Weirdest Cat Ever?! | <input type="checkbox"/> Real Or Fake? |
| <input type="checkbox"/> Go, Greta! | <input type="checkbox"/> 2019 Photo Comp! |

What's the best thing about this issue?

What's your least favourite thing about this issue?

Where did you go on holiday this summer?

WRITE TO US!

Do YOU want to appear on our Junior Explorers' Club pages? Ask your parent or guardian to email your letters, drawings and photos to us at kids@ngkids.co.uk or post them to the address below – and we could print them in Nat Geo Kids!

YOUR DETAILS!

Name Date of birth

Address

Postcode

If you are under the age of 13, please ask a parent or guardian to complete this section:

Parent/guardian's name

Parent/guardian's signature

Telephone

Email

I acknowledge my child's participation in entering these competitions, the reader survey and/or the JEC page.

We like to stay in touch with our readers to tell them about all of the latest cool offers and awesome news from Nat Geo Kids. We won't share your information with third parties – unless you've won a comp!

- ☐ Ask your parent or guardian to tick this box if they're happy for us and prize providers to contact you regarding comp entries and your appearance in the mag
- ☐ Ask your parent or guardian to tick this box if they'd like to receive our email newsletter

Cut along the dotted line and send this entry coupon to:
NG KiDS Competitions October 2019 issue, Third Floor,
12-14 Berry Street, London, EC1V 0AU
Hurry – the closing date for entries is 17 October 2019!

NATIONAL GEOGRAPHIC Kids competitions are open to residents of the UK, Eire and the Channel Islands, except employees of Creature Media Ltd, National Geographic Society, and their families, or any associated companies. Entrants to NATIONAL GEOGRAPHIC Kids contests must be 16 or under. No purchase necessary. Only one competition entry per person. Winners will be the first correct entries drawn after the closing dates. The editor's decision is final. No responsibility can be taken for entries lost or damaged in transit. A list of winners will be available by contacting National Geographic Kids no earlier than six weeks (unless otherwise stated) after the close of the competition. Only the surname and county of the winners will be disclosed. Prizes subject to availability. No cash alternative for any prizes will be offered. Winners may be required to partake in media activity relating to the competitions. We will only share winners' personal details with third parties if they have won a competition, in order for your them to receive their prize. These details are to be used for prize-giving only and not marketing purposes. For full details of our privacy policy, please go to natgeokids.com/privacy

FUN STUFF ANSWERS

SPOT THE DIFFERENCE (page 10)



CRAZY CODING TANGLE! (page 35)

1 leads to Bumble

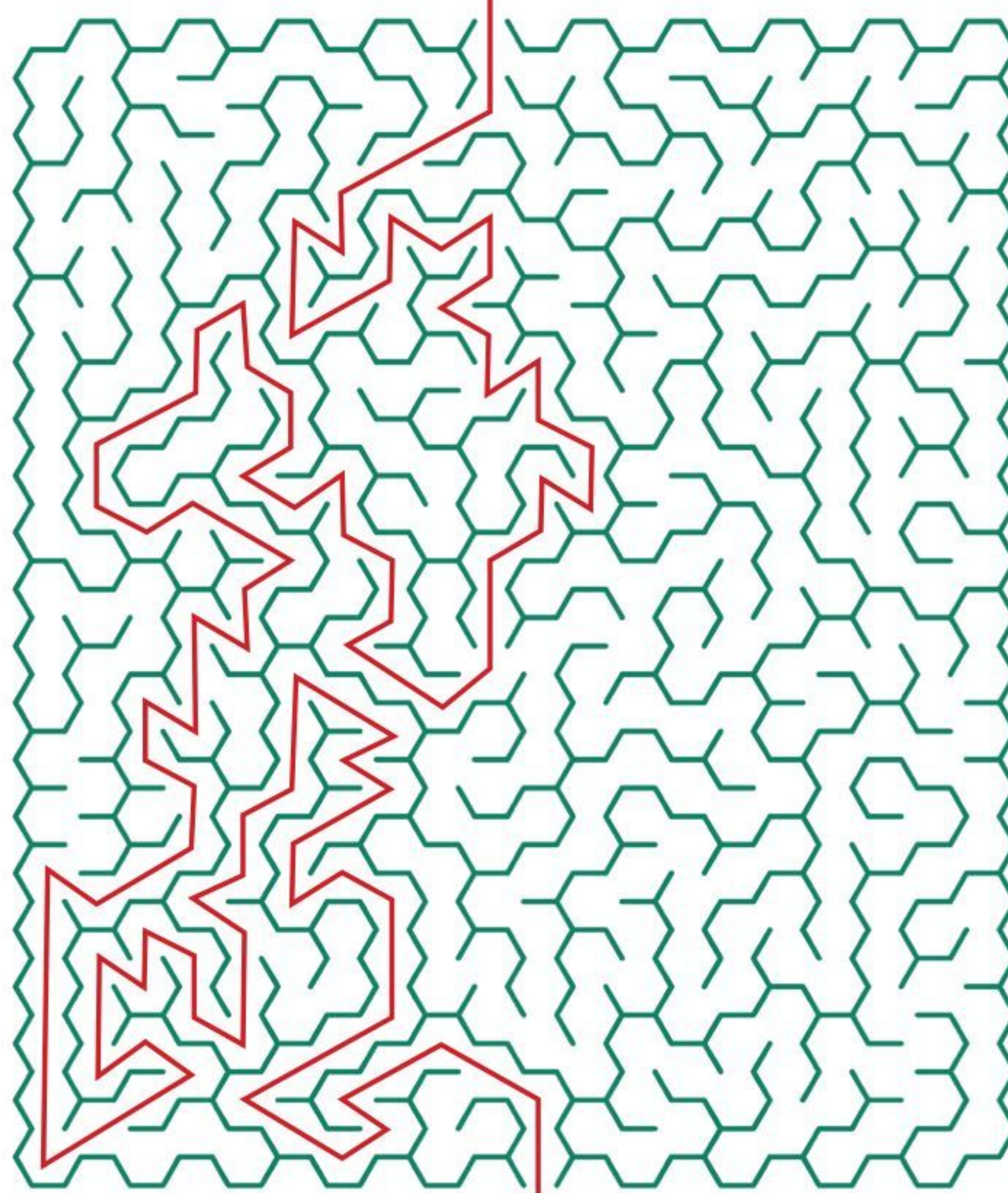
BOOKWANDERER SEARCH (page 43)

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

FIND THE SPY (page 50)

The spy is hiding in **The Museum**

NUTTY MAZE (page 52)





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Editor Tim Herbert
Art Editor Ed White
Features Editor Georgia Harrison
Digital Editor Gemma Chandler
Education Editor Kate Stephenson
Senior Designer Claire Brisley
Staff Writer Alexander Tan
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Creature Media Ltd,
 Third Floor,
 12-14 Berry Street,
 London, EC1V 0AU



Editorial enquiries 020 7014 3760
Advertising enquiries 020 7014 3769
Financial enquiries 020 7014 3763
Fax 020 7014 3776

Managing Director Peter Johnson
Financial Director Ray Behan
Finance Assistant Jo Draper
Promotions and Partnerships Director Tracey Steel
Promotions and Partnerships Executive Francesca Duggan
Marketing Executive Emily Meredith

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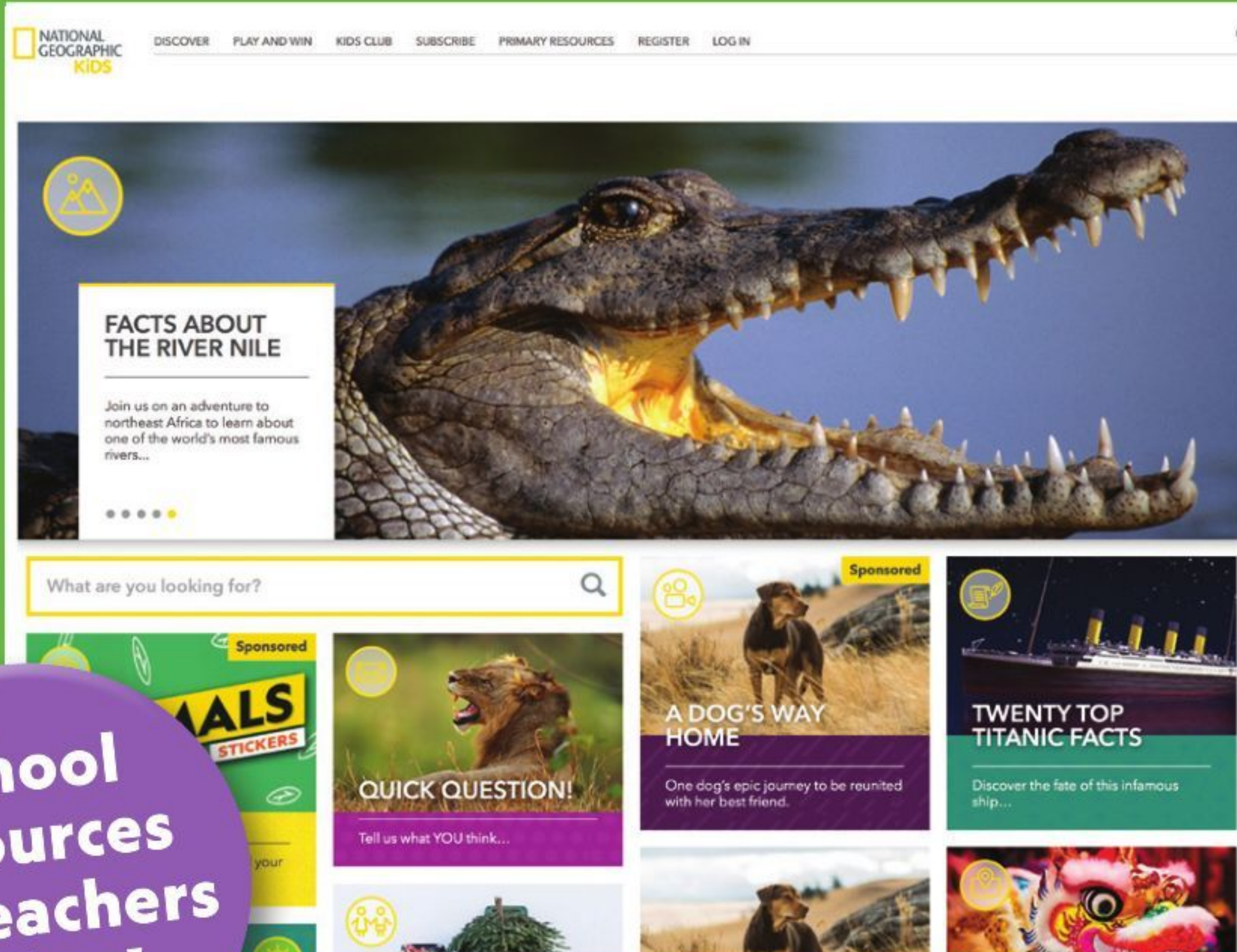
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 How creepy things
 affect our brains...

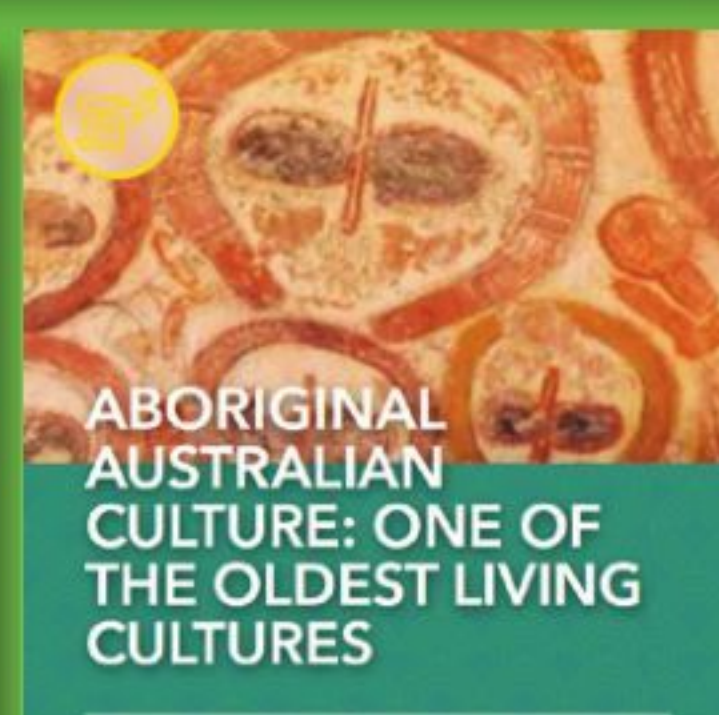
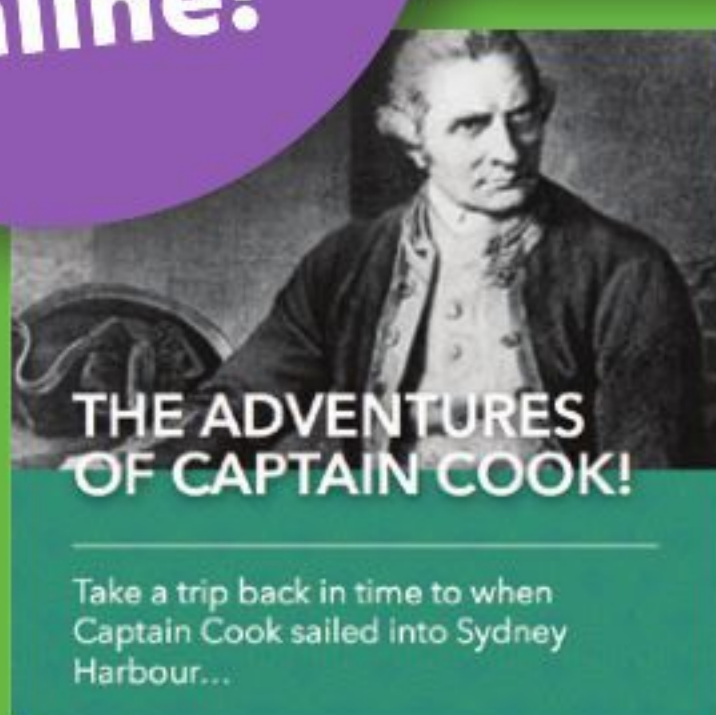
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In *Tales of Amazing Animal Heroes*, learn the **real stories** of inspiring animals that crossed **dangerous paths**, made **daring rescues** and went above and beyond to **save human lives**, from **heroic bears** and **drone-catching eagles** to **loyal dogs** and **sassy cats**.

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