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WHY DO BABOONS HAVE BARE BOTTOMS?

The pads of skin that cover a baboon's bottom are called ischial callosities.

They're like a travel cushion, so the baboon can sit and be comfy. Baboons can even sleep sitting up, thanks to their hardened bottoms!



8
HOW MANY ANIMALS ARE THERE IN THE WORLD?

WITH DR NICK CRUMPTON

This is very difficult to count, and scientists are still discovering new species, but we think there could be anywhere between ten and 100 million animal species.

Even if you tried to count all the insects near your home, it would be hard to count them all! There are probably over five million types of insects on Earth, but only about one million have been discovered. Maybe one day you'll become the scientist who discovers a new species!



10

WHY DO SAGUAROS HAVE ARMS?

The saguaro is a type of cactus.

They grow reeeeeally slowly!

They usually start to grow arms when they're between 70 and 100 years old. Some grow up to 25 arms, and some never grow any. It might be that the arms allow more flowers to grow, which helps create more baby saguaros! Their flowers only bloom for one night, and they smell like melons!

11
HOW DO OUR BODIES MAKE EARWAX?

There are little parts, called glands, inside our ears that make earwax. Earwax is made inside the ear and slowly moves through the ear to the opening. Then it usually falls out on its own. Earwax moisturizes your ears, stops them getting infections and cleans out dust and dirt.



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HOW DO WE GROW?

Children are a bit like plants! They need water, food, fresh air and warmth to grow. Plus lots of cuddles and fun! Inside our bodies, we have chemicals called hormones that give messages to our muscles, bones, joints, heart, lungs and energy systems to make our bodies grow.



12

WHY ARE THERE SO MANY SNAILS WHEN IT RAINS?

WITH JONATHAN ABLETT

Most snails are nocturnal, which means they only come out at night, but sometimes they do come out in the daytime if it's been raining. Snails do this to keep their skin moist and avoid drying out, since they use up lots of water when they make slime. When it's hot and dry, snails often retreat into their shells to keep moist. Some also produce sticky mucus plugs for their shells so that they don't lose too much water.



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WHAT IS THE DIFFERENCE BETWEEN A JAGUAR AND A LEOPARD?

In the wild, jaguars and leopards live on different continents. Jaguars are found only in Central and South America, whereas leopards are found in China, parts of Russia and India, to the Middle East and down into Africa. Although they look similar, there are also a few ways to tell jaguars and leopards apart. Jaguars are more muscular than leopards, with a wider head and big strong jaws. Leopards are much nimbler when it comes to climbing trees, and have longer tails, which help them to balance.

Leopards kill using a bite around the throat or mouth. Jaguars kill by biting through their prey's skull or back. Ouch!

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WHAT NOISE DOES A ZEBRA MAKE?

Zebras bark, which sounds like a high-pitched dog. They also bray like a donkey, but with a low roar at the beginning and a squeal at the end like a pig! Male zebras bray to call out to females or when they're annoyed. Zebras also blow air through their noses and lips to make a sound called a nicker.

Try blowing air through your lips so that they vibrate. Prrffff! That's what a nicker sounds like!

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WHY DO TIGERS HAVE STRIPES?

Tigers have stripes to make it hard for other animals to see them. The stripes break up the outline of the tiger's body, so as it stalks through the grass it might look like shadows. This is particularly useful in the moonlight, which is when tigers like to go out and hunt because it's cooler than in the heat of the day. If a tiger lost its furry coat, its skin underneath would look just as striped as its coat! The darker hair makes a pattern on its skin.

A tiger's stripes are like fingerprints - no two tigers have the same pattern.

21

DOES A LEOPARD NEVER CHANGE ITS SPOTS?

Leopards actually do change their spots! When leopard cubs grow into adult leopards, their baby spots change into a more grown-up type of pattern called rosette markings, which look a bit like roses.

In 1952, a mathematician named Alan Turing came up with a maths formula to explain how different animals get their spots, stripes and swirls, but he couldn't work out exactly how the patterns on cubs changed into the patterns on the big cats.

1 HOW DO PENGUINS FIND THEIR WAY HOME?

WITH DR ALEX BOND

Penguins return to the place where they were born when it's time for them to start their own families. Every year they'll go back, sometimes to the same burrow or nesting area. Penguins find their way home by using a few different senses. Birds, including penguins, can find their way around by sensing patterns on Earth. Just like a compass points to the north, we think penguins can use invisible patterns around the planet, called magnetic fields, to find their way home. When they're close to home, they use their smell and sight to find their individual nests.

2 WHY CAN'T PENGUINS FLY?

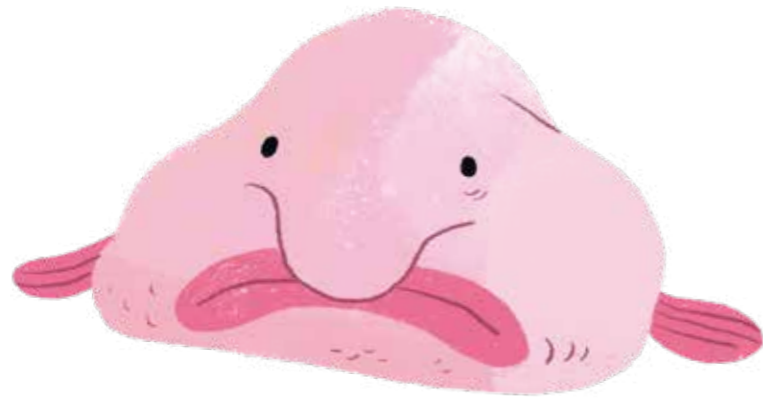
WITH SUZI HYDE

Penguins can't fly for a few reasons. Firstly, they have thick bones like you and me. Birds that can fly have bones with a honeycomb structure, which makes them light and easy to get off the ground. Penguin bones are hard and thick to help them dive underwater quickly and swim. Secondly, penguins don't have the correct type of wings to fly. Over time, penguin wings have evolved into flippers to help penguins swim. Penguins fly through the water instead of the air!

3 WHY DO THE FEATHERS ON BABY PENGUINS CHANGE WHEN THEY GET OLDER?

Most baby penguins hatch with soft, fluffy brown or grey feathers. These feathers are great for keeping penguin chicks warm. When the chicks are tiny, they don't need waterproof feathers because their parents feed them fish, but when the chicks are big enough to look after themselves the parents head off to the ocean where they need to be waterproof. The chicks lose their fluffy feathers and grow black and white adult feathers, which have a warm layer underneath and a waterproof layer on top so that they can swim and catch their own fish!





The blobfish was named the "world's ugliest animal" in the Ugly Animal Preservation Society's vote to choose a mascot. It won by almost 10,000 votes!

**17
WHAT IS THE STRANGEST-LOOKING ANIMAL IN THE WORLD?**

The blobfish is often called the ugliest animal in the world, but this is a bit unfair! Up on dry land, blobfish look like big tadpoles or a blob of jelly, but deep down in the ocean where they live, the blobfish's jelly-like body gets squashed into a normal fish shape by the pressure of the water.

**18
WHY DO ROCKETS GO TO PLANETS?**

ANSWERED BY SIR RICHARD BRANSON

Rockets fly to explore and study other planets, often carrying robots and other tools to help scientists find out more about other worlds. No people have ever flown in a rocket to another planet, but one day we might see people living on Mars, or even further away. Perhaps one of those people might be you?



**19
HOW DEEP IS THE RIVER THAMES?**

The depth of England's longest river varies depending on where you measure it. At its deepest, where it flows into the North Sea, the Thames is about 20 metres deep.



**20
WHY DO SNAKES SHED THEIR SKIN?**

When a snake grows to be an adult, its scales get too tight, so it sheds its entire skin to get a new set of scales.

The fancy, scientific name for this is ecdysis. It's a bit like when your feet grow and you need new shoes. Snakes continue to shed as an adult, for example, if they put on or lose weight. Sometimes they just do it to keep their scales in good condition.



**21
WHY DO ROSES HAVE THORNS?**

Thorns, also known as prickles, are useful to roses because they stop animals from gobbling them up!

An animal might sniff the rose and think it smells yummy, but when they try to take a nibble they get spiked by the thorn. Ouch! So they give up and leave the rose free to grow and enjoy itself blooming in the world.



**22
WHY DO TREE FROGS HAVE RED EYES?**

Not all tree frogs do! But one of the most famous – the red-eyed tree frog – does have red eyes. They have green bodies to blend in with their surroundings. If a predator comes close, they open their bright red eyes and show their huge orange feet and blue-and-yellow legs to shock the predator. This gives the tree frog time to leap away to safety!

