

Made
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supernova

The mag for curious kids



Vol
11.4



Africa's
DEADLIEST
mammal

PUZZLES | SCIENCE | NATURE | ACTIVITIES | SPORTS | COMICS



Story and artwork
Maya LeMaitre

Mimi's LIFE ON Mars



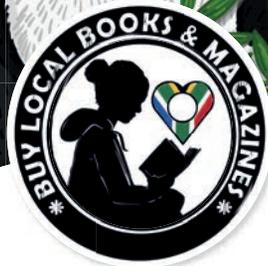
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Hi SuperKids



Candice

We have another awesome issue for you, jam-packed with lots of action! We'll take a look at Africa's most dangerous mammal, learn more about a mysterious artist whose graffiti sells for millions around the world, and unpack the facts about the growing tear in our continent.

When planning the main feature for this issue, I got really excited. There is so much to learn about hippos! They are amazing because they basically defy logic. They're the only sub-aquatic animals that can't actually swim! The heavy bones in their legs prevent them from swimming, so they run along the river floor instead. But hippos definitely don't let their massive size stop them – they are still fast and agile in the water, and even on land. That is definitely a message we can all learn from! You can achieve anything you set your mind to, even if there are some obstacles to overcome along the way.

Hippos can also hold their breath for up to five minutes under water. But, for the most part, they tend to stay submerged while keeping their nostrils above water. This allows them to breathe and stay cool at the same time! So, when things get tough, remember not to get swept up in the current: remember to breathe! And, most importantly... stay cool!

Happy reading and stay curious, kids!

Siya's top picks in this issue!

I love that this issue covers so many topics. Some of my favourite are the geography, art and history articles!

The Photo Feed (page 20) is so interesting. It's amazing seeing some of the unique animals that make up our world.



Did you know that sea turtles can live up to 100 years?! And they can even sleep underwater! The cool facts in *Supernova* always leave me feeling mind blown.



Siya
Operations Manager



Hey guys! These are my absolute top picks that you **HAVE** to check out in this new issue!

Who knew that the peaceful-seeming Hippo is actually Africa's deadliest mammal? From their insane strength to their fierce teeth, these animals are not to be messed with!

My favourite article in this issue is about **Electric Cars** (page 13). I'm a bit of a petrolhead (now electrichead?) and seeing the recent advancement in electric cars is so exciting.



Trick-shots (page 38) are a fun and challenging game to get you up and moving! They are definitely challenging, and can test your patience and resilience – trying a single trick hundreds of times just to get it right!

Looking for more?



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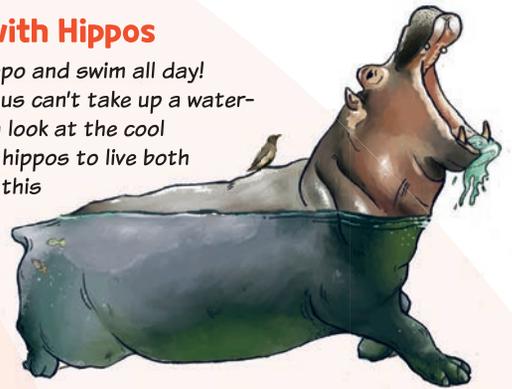
I feel left out

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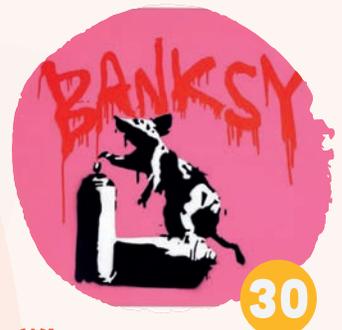
24 Hanging with Hippos

Oh, to be a hippo and swim all day! While most of us can't take up a water-dwelling life, let's take a look at the cool adaptations that allow hippos to live both in water and on land! In this Ant's Eco Adventure, we'll also take a look the dynamics inside a group of hippos, how baby hippos are raised, and even some of the threats facing these majestic giants.



29 Make a pink hippo milkshake

Did you know that hippos produce pink milk? We'll recreate this in a fresh, new, tasty drink for you to try - using beetroot!



30

Who is Banksy?

Have you heard of this anonymous graffiti artist? Banksy paints famous graffiti in public spaces all around the world, and is considered one of the best artists of our time. But, he keeps his identity top-secret! He will not do TV interviews, he won't release his real name, and he will not allow photos or copies of his artwork to be made and sold.

The African continent torn in two

Africa has a crack running through it, and it is growing bit by bit in a process called rifting.



This means that eventually Africa will be split in two and Earth will look a little different!

34

Answers for What'cha Reading, page 41:

- | | |
|---------------------------|---------------|
| 1a. tear - rift | 2a. island |
| b. nine - seven | b. tectonic |
| c. hundreds - millions | c. coastlines |
| d. magnetic - radioactive | d. ocean |

42 Comics

Supernova features four awesome comics! Check out a new Mimi's Life on Mars, Dr RIP, Young Leonardo & Marine Animals in every issue! Let us know which one is your favourite!



Ask Jules?



Jules

Spider webs are made using spider silk, which has chemical properties that make it glossy, strong and light. It's stronger than steel and has a lot of tensile strength, meaning that it can be stretched a lot before it snaps!

Spiders have a few silk-spinning organs on their abdomens. They use these spinnerets, as well as their eight legs, to build their webs. The silk is in a liquid form when it is inside the spider and is pulled out by gravity or by the spider's hind leg. When the silk comes into contact with the air, it hardens, allowing the spiders to create and build their webs. They create their webs in circles, working from the outside to the inside by attaching segments of silk with its legs. It ends with a centre spiral of sticky silk that traps much-needed prey – since all of the energy they use to build the web empties their protein store. Most web building happens at night. Sometimes spiders eat their own webs when they are done with them, as a way to refill their silk supply!

Amber (15)
from Colesburg asked us:

How do spiders make webs?

Turning plastic into portraits

South African artist Mbongeni Buthelezi uses plastic litter he collects from local rubbish dumps and city streets to create his beautiful works of art.

This unique painting technique takes upcycling to a whole new level! Every year, millions of tons of plastic waste ends up in the ocean, threatening marine life. Even though there are regulations and measures in place, this is not enough. Through his art, Mbongeni raises awareness of and combats plastic pollution. Mbongeni says that his work is not about impressing everyone – instead, he wants to create an important conversation about climate change.

His works have been showcased at the United Nations Climate Change Conference.



Still crawling at 46 000 years old

Microscopic worms, called nematodes, have been found in Siberian permafrost – still alive after a whopping 46 000 years. Scientists say that these worms enter a state of hibernation that allows them to stay alive for tens of thousands of years.

In a similar case in the 1930s, a Russian scientist found a crustacean buried in permafrost. Once the crustacean thawed, it was able to move and even eat! Since then, scientists have been able to revive other microscopic species as well, like water bears, and have even made ancient seeds sprout. Do you think scientists will be able to use this research to allow humans to hibernate in the future?!



Creature FEATURE

These little-known nocturnal primates are about the size of a tennis ball. They get their name from their extraordinarily long tarsus bones in their feet. They can jump 40 times their body length in a single leap! Tarsiers also have the largest eyes relative to body size of any mammal. Each eyeball is around 16mm in diameter, which is as large as their entire brain. Their eyes are so large that they can't rotate them. Instead, they have to twist their necks a full 180 degrees in either direction, just like owls. They use this ability to wait silently for their prey to approach, rather than moving around to hunt. They don't eat any plant matter, instead feasting on insects, reptiles, frogs, birds and even bats. Tarsiers are the only entirely carnivorous primate. Tarsiers are some of the oldest primates on the planet, dating back at least 55 million years. They are now limited to the Southeast Asian islands of the Philippines, Malaysia, Brunei, and Indonesia. Tarsier babies are born with their eyes open, and are ready to climb trees within an hour of birth.



The Pinboard

Did you know?

Elephants can be right- or left-trunked



CHOC KIDS CORNER

This September, we are celebrating Childhood Cancer Awareness Month! The theme for this amazing initiative is: "Better Survival is achievable #throughourhands", encouraging everyone to be the change for those going through the childhood cancer journey.



The month of September is considered a month of hope for better treatment outcomes, and for a brighter and healthier future for young cancer patients!



Danica's Book Review



JonathanBallPublishers

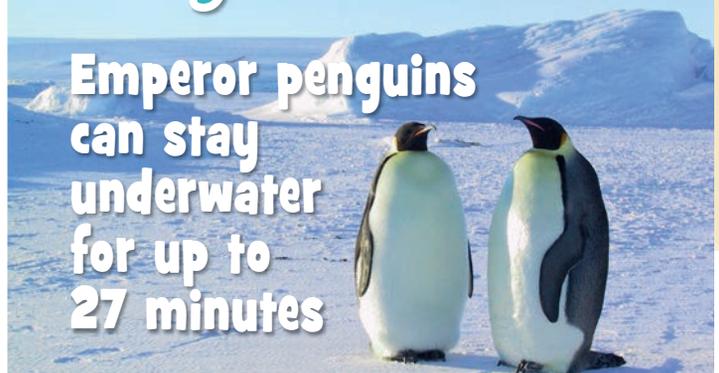
Danica (12) read 'My Life on Fire' by Cath Howe. Here's what she thought:

I loved reading *My Life on Fire*, because it is filled with so much raw emotion. While Ren and her family were going through a tough time, people supported them and showed them love. I loved that I could read the perspectives of different characters in this book – it taught me to always be thankful for everything I have. This book has an extremely happy ending, and it was an emotional rollercoaster to read. I was fascinated with this book from the first page and would definitely recommend it!



Did you know?

Emperor penguins can stay underwater for up to 27 minutes





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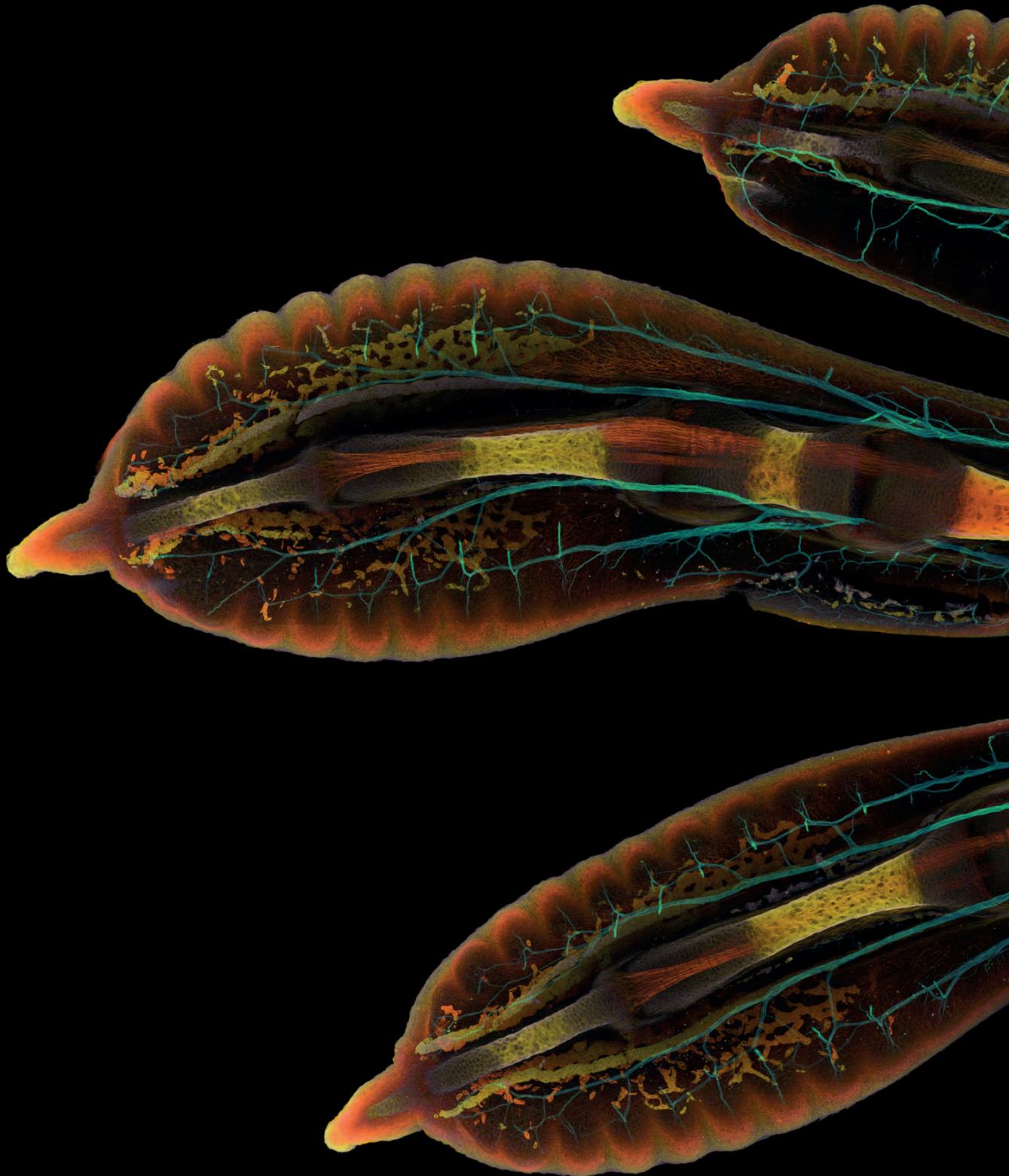
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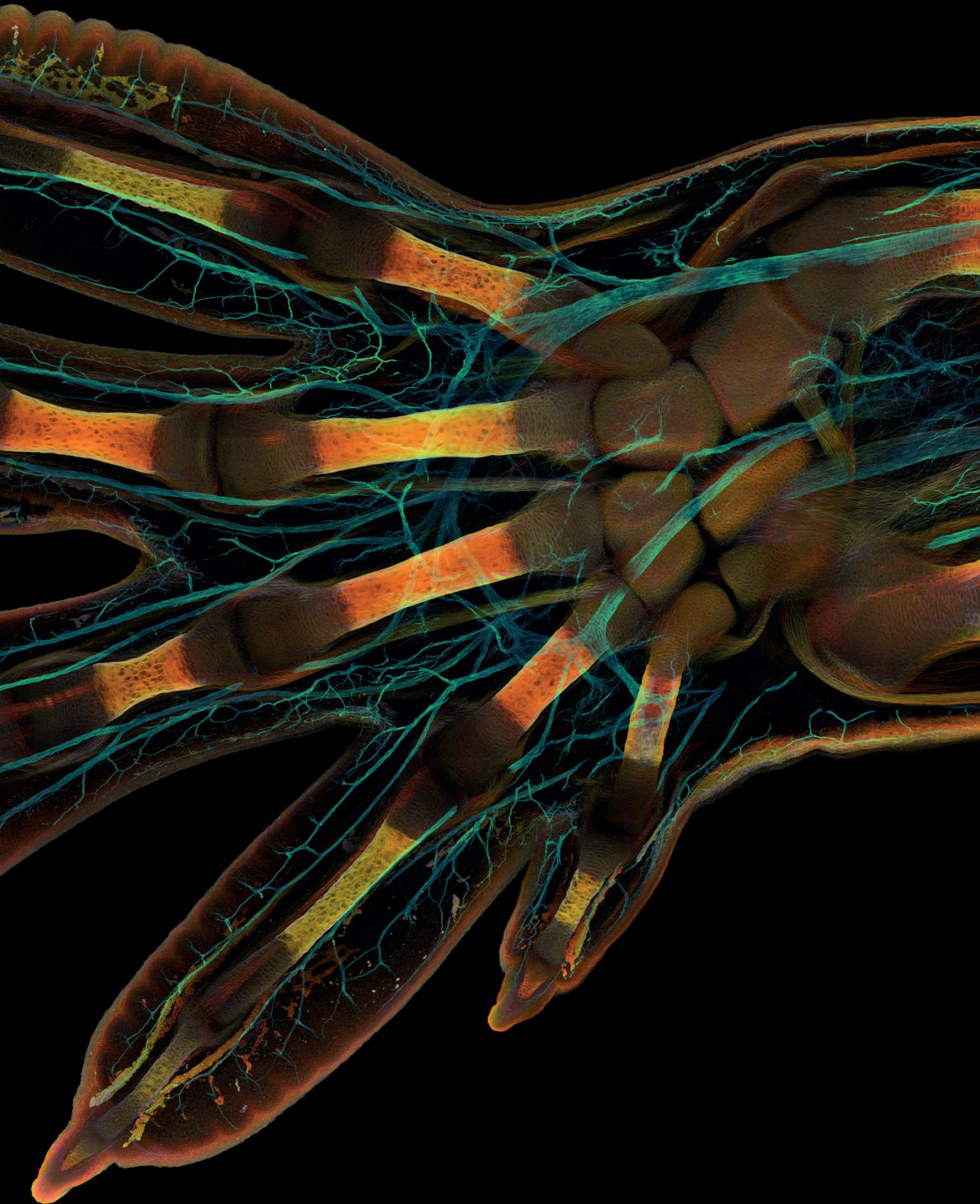
KORG



Embryonic hand of a Madagascar giant day gecko

Photo by Dr. Grigori Timin and Dr. Michel Milinkovitch

This amazing photograph won the 2022 *Nikon Small World Photomicrography Competition*. To create the image, Timin and Milinkovitch used high-resolution microscopy and image-stitching to merge hundreds of images together to create the final image of this gecko. This unhatched gecko's hand is only about 3mm in length, so this is an amazing accomplishment!



Mozart

The master of classical musical genres

Wolfgang Amadeus Mozart was born on the 27th of January 1756, in Salzburg (which is now Austria).

His father, Leopold, was a successful composer, violinist and assistant concert-master. Wolfgang and his older sister, Nannerl, were introduced to music at an early age.

When he was three, Wolfgang watched his seven-year-old sister learn to play the piano. He started to copy her playing and showed that he understood music and could play himself!

He wrote his first piece of music when he was five years old, and learnt how to play the harpsichord, the violin, the piano, organ and the viola.

At only six years old, Wolfgang's father took him and his sister across Europe to play music in different cities for the aristocrats who paid to hear them play.

During this tour, Wolfgang met many musicians and got to know their music. This included Johann Christian Bach in London, who had a big influence on Wolfgang.

Mozart mastered all of the styles of music that were popular in different cities in Europe. He also published his own musical compositions.

His first opera was performed in Salzburg in 1769.

Over the years, Wolfgang worked as a conductor, organist and composer.

During his lifetime, Wolfgang composed over 600 works, including some of the most famous and loved pieces of symphonic, chamber, operatic, and choral music.

Mozart died at the young age of 35 from rheumatic fever.

At the time of his death, Mozart was already considered one of the greatest composers of all time!

His music continues to be popular and his work has influenced many great composers that followed, most notably Beethoven.



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LOSING YOUR TEETH AROUND THE WORLD

Losing your baby teeth is a journey we all go through into adulthood and every human culture in history included rituals around getting rid of a child's lost baby teeth. Most of us are familiar with leaving them under a pillow, but let's take a look at some other modern and surprising methods to celebrate a lost tooth!

Illustrations by Alexandra Botha-Green

When children in Greece lose a tooth, it is tradition to make a wish for strong adult teeth! When they make their wish, they throw their lost tooth onto the roof of their house, which is said to bring good luck.



In Japan, children either throw their teeth in the air or on the ground, depending on the tooth that has fallen out. It is best to throw the teeth in the same direction they grow in. So, if they are bottom teeth, they are thrown into the air and if they are top teeth they are thrown to the ground. The straighter the throw, the straighter the new teeth are supposed to grow back!

In Mongolia, children give their lost tooth to an elder, who wraps the tooth in fat or bread. Then, the wrapped tooth is fed to an animal with strong teeth such as a dog, squirrel, or mouse. The hope is that in return for the baby tooth, the spirit of the animal will make sure the child's new tooth grows in strong and well-rooted.



The History of Underwear

Layout by Sulé Potgieter
Words by Elaine Carr

Thinking back to the loincloths worn by cavemen and women in 5000 BC, it's easy to see why underwear started out as a basic necessity for protection, especially in colder areas. But did you know that over time, different fabrics and lengths of underwear actually determined your status and how much power you had?

To underwear or not to underwear...

How many pairs of underwear do you own? Whatever the number, King Tutankhamen definitely has you beat. He was entombed with 150 pairs of ancient underwear! These ancient undies were actually loincloths and cloth wrappings, mostly used for protection rather than dignity, like they are used today.

Under where?

Underwear gained additional uses in the Middle Ages in the colder Northern climates. This is when people realised that layering their clothes helped to protect them much better against the cold weather. At this point, it became a lot less common to swap underwear and outerwear.



Loincloths, union suits and boxers

Underwear went through many changes (especially for women) before transforming into the garments we know today.

At the beginning of the 20th century, it was very popular for men to wear 'all-in-ones', known as union suits. Eventually, in the 1930s, these combined tops and bottoms went out of style in favour of separate briefs and boxers, and the word 'underpants' entered the dictionary for the first time.



?! Get this!

In Thailand, it is illegal to leave your house if you aren't wearing underwear!

?! Get this!

The British Army issues underwear that you can wear for three months at a time!

Electric CARS

?! Get this!

The first full-sized electric vehicle was actually created in 1832!

Words by Chanel Roux
Illustration by James Dufana

While we haven't yet reached the stage of flying cars, electric vehicles are fast becoming the new technology that all drivers need. Not only are they low maintenance, quiet and offer better performance, but they are stylish, safe and help the environment!



How?

Electric vehicles use electricity to move. They are powered by rechargeable batteries instead of petrol and are charged at electrical outlets or charging points.



Why?

Electric vehicles don't contribute to air pollution because they do not release carbon dioxide. They can travel four times as far as a conventional car with the same amount of energy because of their efficiency!



Hybrids

There are a few different types of electric vehicles. Some run purely on electricity, while some can also be run on petrol or diesel. These are called hybrid electric vehicles.



?! Get this!

Electric cars have a regenerative braking system which takes the extra kinetic energy from slowing down the car and uses it to recharge the car's batteries!



While electric cars are more expensive to buy than normal cars, the cost savings and other bonuses they offer make it worth it! With rapid progress in technology and increasing benefits, electric vehicles will one day become the norm. Will you drive an electric car in 10 years?

Carpenter



Hi, I'm Hosea!
I am a carpenter and I am very passionate about my work. I owe the art industry a great deal for everything it has taught me.

What does a carpenter do?

A carpenter builds and repairs things made from wood. They do woodworking, and make furniture and frames. They can also make bigger structures, like houses and buildings, from wood.

What is a typical day like for you?

Most of my day involves working with wood. I build the frames for furniture, as well as frames for beautiful mirrors. I have to do a lot of measuring to be 100% sure that all the pieces of my work will fit together perfectly. I especially enjoy making chairs and tables.

What is the best part of your job?

I love seeing the final product of my work! It is a great feeling to know that all of the hard work has paid off, and the end result looks good!

Building beautiful pieces with my own hands is very enjoyable and rewarding.

Do you need qualifications to do your job?

It is important to know what you are doing when you are a carpenter, as you work with some dangerous tools. You need to have a Grade 12 certificate with a good Mathematics mark. You also need to have a good eye for design, since this is a form of art.

What are some challenges in your job?

The biggest challenge that I experience is getting my work into the marketplace. This is mostly because of a lack of transportation. Because of Covid-19, and transportation problems, there is also a lack of employees. Before Covid-19, I had about seven employees, but now I do not as it has challenged everyone in the last few years.

H Hosea's advice

Don't rush through your work. Being patient and taking your time are very important when you want good results.



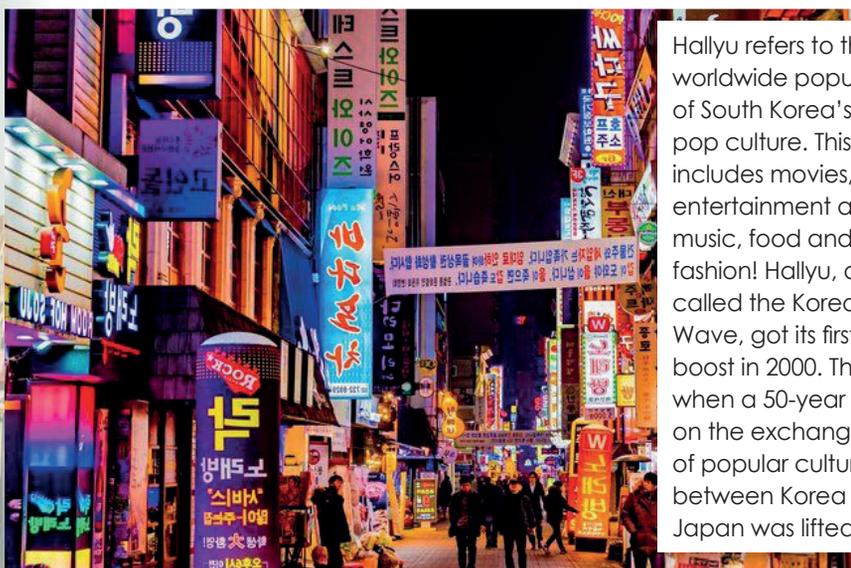
Korean Culture

The rise of the Korean Wave

Words by Elaine Carr

Have you listened to K-pop, watched a K-drama or eaten Ramyeon? Then, you have experienced the effects of Hallyu!

Hallyu refers to the worldwide popularity of South Korea's pop culture. This includes movies, entertainment and music, food and even fashion! Hallyu, also called the Korean Wave, got its first real boost in 2000. This is when a 50-year ban on the exchange of popular culture between Korea and Japan was lifted.



Let's have a look at some examples of popular Korean culture trends:

- **K-pop:** BTS is undoubtedly the most popular K-pop group – even people who aren't fans of K-pop have heard their name. BTS stands for *Bangtan Sonyeonda* in Korean and this translates to 'Bulletproof Boy Scouts'.
- **K-drama:** Thousands of people are massive fans of South Korean drama series. K-dramas give viewers a look into what it's like to live in South Korea and can even help you learn Korean! These dramas are realistic and deal with everyday issues that people all over find extremely relatable.
- **Ramyeon:** As one of South Korea's favourite comfort foods, these dried, curly noodles, freeze-dried vegetables, and sachet of powdered soup are quick and easy to make! They were invented as an easy way to feed people after the Korean war and initially sold for the equivalent of 1 cent.



?! Get this!

Today, South Korea is the world's 12th largest economy!

?! Get this!

Can you imagine eating 80 packets of ramyeon in a year? That is how much ramyeon the average Korean eats in just a year!



Namibia

Life in an arid land



Words by Andrea Vermaak

When you visit Namibia, you're there to experience raw nature.

I learnt so much more about the desert and its hidden treasures than I could ever have wished for!



Oldest desert

Namibia has a few of the greatest sites in the world, including the Namib – the oldest desert in the world, with some of the world's driest regions. The Namib stretches more than 2 000km along the Atlantic coasts of South Africa, Namibia and Angola. There are more than 6.5 million hectares of dunes and plains.

Highest sand dunes

Speaking of dunes, Dune 7 in Walvis Bay is the highest in Namibia. It's over 383m high. It's a steep climb to the top, but worth every slippery step for the breathtaking view and the fun sandboarding ride down!



Photo by Chidirim Ndeche

Many of the sand dunes in Sossusvlei are also over 300m high and are 32km long. These dunes are only second-largest to the Badain Jaran Desert dunes in China.



The Fish River Canyon has one of Africa's most famous hiking trails, stretching about 85km. This trail is for experienced hikers only, and is closed from October to March, when summer temperatures can reach about 50°C!

Second largest canyon

The Fish River Canyon is a mountain range that was eroded by the Atlantic Ocean. It's about 161km long, 27km wide and 550m deep. It's the largest canyon in Africa and second largest canyon in the world (after the Grand Canyon, USA, which is the largest).

Desert wildlife

In the Nàmá language, Namib means 'an area where there is nothing'. Despite this and it being severely dry, there is so much life. We spotted rhinos, elephants, giraffes, gemsbok, zebra, springbuck and lions while on game drives. I even saw a ground pangolin – a rare and special spotting!



Photo by Warren Photographic

Some strange plants dotted on our way to Swakopmund... welwitschia! These unique plants have two permanent leaves that just continue to grow along the ground. Most are about 500 to 600 years old, but larger plants may be 2 000 years old!

Luckiest people alive



To us regular folk, a stroke of luck means winning a free hot chocolate. To some people, however, it means something completely life changing. Here are six of the luckiest people to ever live!

Words by Sulé Potgieter
Illustrations by Benoît Knox

Tsutomu Yamaguchi

They say that cockroaches can survive nuclear attacks, but could they survive two? Tsutomu certainly has some cockroach-like powers, because not only did he survive the nuclear attack on Hiroshima in 1945, but he survived a second attack just a few days later in Nagasaki. Although he got injured, he is still one lucky fella!

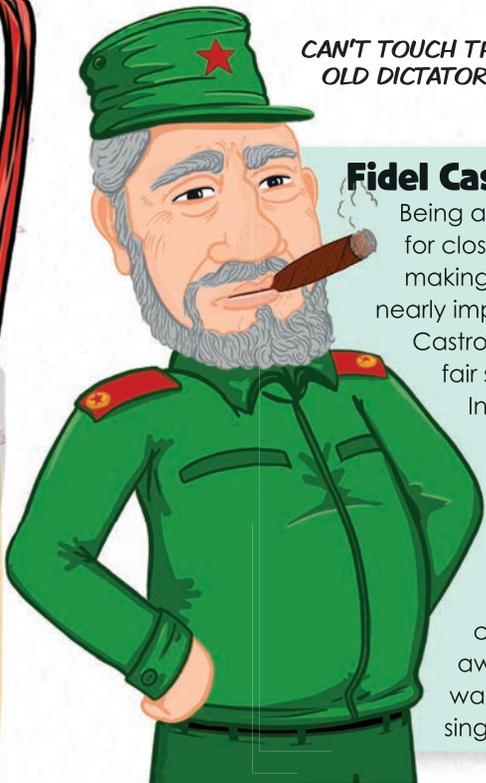
WHAT DO YOU MEAN, LUCKY?

WE'LL BE LUCKY IF WE NEVER HAVE TO EXPERIENCE THAT AGAIN!



Joan R. Ginther

The odds of anyone winning the lottery are almost one in 14 million, so how on earth does someone win more than once?! Well, Joan R. Ginther not only won the lottery once or twice, but a whopping four times! With all of her wins combined, she got over \$20 million.

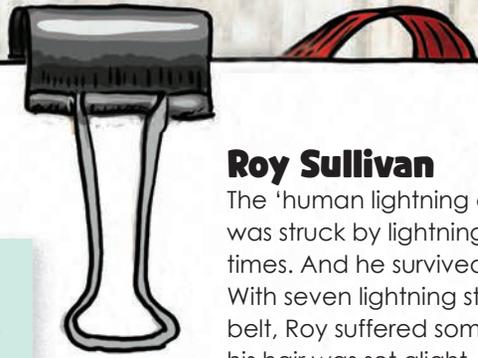


CAN'T TOUCH THIS OLD DICTATOR!

Fidel Castro

Being a ruler over a country for close to 50 years without making any enemies seems nearly impossible – and Fidel Castro definitely had his fair share of enemies.

In fact, in his lifetime, Fidel survived a shocking total of 638 assassination attempts. From an exploding cigar to a diving suit contaminated with awful diseases, Fidel was able to survive every single attempt on his life!



Roy Sullivan

The 'human lightning conductor' was struck by lightning multiple times. And he survived all of them! With seven lightning strikes under his belt, Roy suffered some bad burns, his hair was set alight, and one of his toenails even fell off. All in all, Roy basically got off unscathed in comparison to anyone else who was ever struck by lightning!



IF I DIDN'T KNOW BETTER, I'D BELIEVE THAT THESE CLOUDS HAVE GOT A GRUDGE AGAINST ME!

Concetta Antico

Imagine having a rare superpower that makes your favourite thing in the world a thousand times better! Concetta is what we call a tetrachromat, which means that she can see about 10 million different colours. What makes this even better is that she is an artist, which means that she can appreciate art on a very different level than most people can.

OOOOH! SUCH PRETTY COLOURS!



UHM, LET ME SEE. I'LL TAKE THE 9:30 FLIGHT. NO, RATHER 10:20. OR 12:00? WHICH ONE SEEMS MORE LUCKY?



Maarten de Jonge

Imagine making a last-minute decision that saves your life. You'd feel pretty lucky, right? Funnily enough, Maarten de Jonge successfully managed to avoid getting on two planes that would have cost him his life. Whether it was because he wanted to take a cheaper flight or he wanted to get to his destination faster, his decisions have saved him from flights that ended in absolute disaster.

OUR AMAZING PLANET



White rhinos, South Africa
Photo by RedCharlie

Seeing these beautiful animals in the wild is such an exciting experience. Since they're endangered animals, there is nothing as rewarding as spotting one gracefully grazing in the grass.

This is why it is important for us to look after our planet, so that our animals and nature can be protected for many years to come!



Giraffes, Namib Desert (Namibia)

Photo by Mark Nissenbaum



These magnificent necks can whip around at such a terrifying speed, that giraffes actually kill each other by fighting like this! Isn't it funny how even the gentlest of animals can lose their temper? [#whataretheysopressedabout](#) [#spotthedifference](#)



Puffins, Sallee Islands (Ireland)

Photo by Wynand van Poortvliet



With bills that change colour throughout the year and what are probably the cutest puppydog eyes ever, these birds definitely steal tonnes of hearts. If this is what fully-grown Puffins looks like, imagine how cute their baby pufflings are. [#areyoupuffinkidding](#)



Short-fingered gecko, Negev Desert (Israel)

Photo by Limor Bachar



Looking at this cutie's smile will brighten up anyone's day! While most of us would be offended, he's definitely taking the 'short-fingered' label in his stride... [#eye'mwatchingyou](#)



Ibexes, Negev Desert (Israel)

Photo by Amit Eshel



As if goats weren't silly enough already, these wild goats have some curly horns and long, funny beards to match their awesome personalities! [#you'vegoattobekidding](#) [#curlysue](#)



Sea turtle, Aruba (Carribbean)

Photo by David Troeger



For these guys, reaching adulthood is rare. Luckily for the ones that do become fully grown, they can live up to 100 years. That's older than most humans get! [#oldiebutagoodie](#) [#whysblue](#)



Elephant, Chobe National Park (Botswana)

Photo by Fabian Michelangeli



These gorgeous giants sure know how to make us fall in love with them. Whether they're playing in the water or just holding each other's tails, we can't help but stare in awe! [#elephantastic](#)

The **BIG** Picture





Spotted hyena cub

Photo by Chanel Roux

When thinking of spotted hyenas, what comes to mind first? Scavenging? Cackling cries? Well, it turns out there's so much more to these incredible creatures! This spotted hyena cub was born in an underground den in the Kruger National Park. Spotted hyena cubs are born with their eyes open and get their spots when they are just a few weeks old. Since spotted hyena clans are led by females, the cubs are left with male 'baby sitters' when the female hyenas go out to hunt. Spotted hyenas are also known as laughing hyenas. This is because of their loud yells, whoops and cackles – some of which can be heard almost 5km away!

Hangin' out with HIPPOS

Words by Nadja Botha

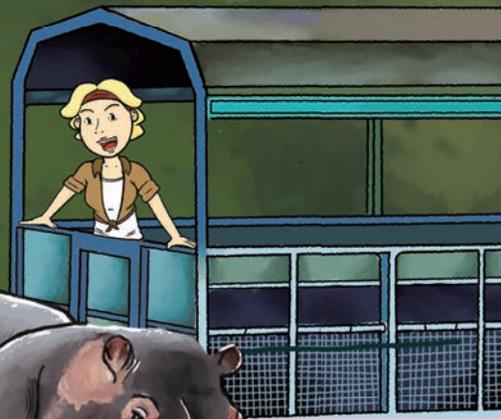
Illustrations by Belinda van Niekerk & Benoît Knox

Welcome to the wonderful world of hippos! Can you see them lounging in the water down there?

You may not see them clearly right now, but once they step out of the water you will be amazed at just how big and vulnerable they are.

?! Get this!

The name hippopotamus comes from the Greek word meaning 'water horse' or 'river horse'.



Habitat

Hippos live in a semi-aquatic environment, which means that they live on land and in water. They spend most of their time in the water, sheltering from the harsh African sun, and come out onto land mostly during the night to graze. Large amounts of hippos were once found throughout sub-Saharan Africa, but in recent years their numbers have been dwindling due to habitat loss, hunting and poaching.



Photo: Bibhas Banerjee

The name for a group of hippos is a bloat! Hippos can't swim, but they can run underwater.



Photo: Alan Lucas

Habits & Diet

Other than chilling in the water all day, hippos are mostly active during the night when they come onto the land to forage for food. As herbivores, hippos eat mostly grass and they can eat up to 35kg of grass per day!



Photo: Luciano Zoo

Hippo calves are known to ride on their mothers' backs at times! They can close their eyes and nostrils to prevent ingesting water and can maintain this position for several minutes.

Female hippos are called cows and they give birth to one calf every two years. They have a gestation period of 243 days (8 months) and soon after the calf has been born, the mother and calf will join a group of other mothers to help each other protect their young against predators like crocodiles, lions and hyenas. Hippos can live to be around 40 years old in the wild and more than 50 years in captivity.

Social groups

Hippos live in large social groups of between 10 – 30 members that are led by one large dominant male.

The rest of the group is made up of females, calves and some young non-breeding males. The dominant male is very protective and aggressive to threats, including humans. This makes them one of the most dangerous land animals on Earth.

The males will show their large canine teeth, make loud grunts and aggressive splashes in the water to ward off rival males and other predators.



Photo: Vittorio Nanni



Photo: Luciano Zoo



?! Get this!

Hippos' size, weight and teeth make them the deadliest land animals on the planet. Their closest living relatives are whales and dolphins.

Adaptations and Anatomy

Despite their large and bulky appearance, hippos have many adaptations to their semi-aquatic environments that allow them to move swiftly both in water and on land. Let's take a closer look!

Body

They have a barrel shaped body. Males can be 3.5m long and 1.5m tall and they can weigh up to 3 200kg. Females can weigh up to 1 500kg and a newborn calf can weigh anything between 23 and 50kg at birth.



Tail

Their flat, paddle-like tails may look comical but they are actually very handy. Hippos use their tails to spread excrement around to mark their territory against rival males. They use middens or outdoor areas to poop in. Here they can sniff out who is friend and who is foe.



! Get this!

Hippos make their own sunblock. The oil that they sweat out works just like sunblock does for us.

Skin

Hippos have very thick skin, with the exception of the outer layer of the skin, which is actually very thin and makes it easy for them to get hurt in a fight. They are virtually hairless except for the thick bristle-like hair on their head and tails. Their skin tone can vary from purple and grey, to a darker slate colour with brownish pink around their eyes, ears and mouth. Even though hippos live in water they still sweat, but unlike us humans they sweat oil! This oil helps protect their skin from drying out in the sun.



Pygmy Hippo

There are only two species of hippos, the common river hippo and the smaller pygmy hippo. The pygmy hippo stands about 100cm tall and can weigh up to 275kg. They are mostly found in West Africa. The pygmy hippo, unlike the common river hippo, is a solitary animal and only come together during the mating season.



Common river hippo

Pygmy hippo

Eyes, nose, and ears

Their eyes, nose, and ears are located on top of their enormous heads so that they are able to breathe while still submerged. They can hold their breath for up to five minutes. While underwater, their ears and nostrils fold shut to keep the water out.

?! Get this!

They can sleep underwater! They don't even need to wake up to go up to the surface to take a breath. They have a reflex that allows them to go up to the surface without waking up.

Mouth, jaw & teeth

They can open their mouths to display long curved canines to ward off rival males. Their large canine tusks can grow up to 50cm in length and their incisors can reach up to 40 cm. Along with those big tusks, hippos have an incredible bite force of 12 600kPa.



Legs

Hippos have very short, strong legs to help propel them through the water. They have four webbed toes on each foot. The webbing helps to distribute their enormous weight when they are on land. It doesn't look like it but hippos can reach a top speed of 40km per hour.



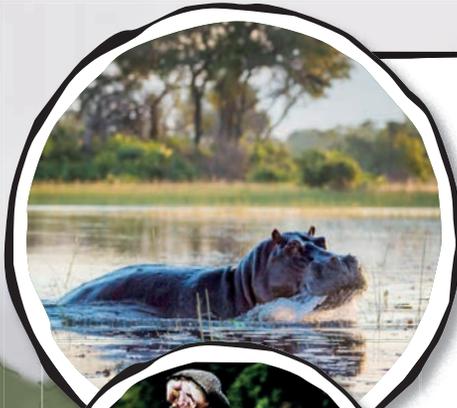
Impact on the ecosystem

These large mammals play an important part in the ecosystem. They create microhabitats for smaller organisms like fish in rivers and dams. Hippos are creatures of habit and will walk on the same pathways from the water to the shore. This means that they take plants and insects from the land into the water for water organisms to feed on.



Vulnerable IUNC status

Hippos aren't seen as endangered yet. But they are on the IUCN's Red list, which means that they are vulnerable to extinction if we don't look after them. Their numbers have been dwindling over the past 200 years due to habitat loss and poaching. There is currently no specific organisation that only focuses on the conservation of hippos, so it's up to us to help protect them. The best way to do that is to protect their habitat – they need fresh water rivers and dams to live in, enough space to graze in and a safe space to raise their young.



Threats

Humans are a hippo's biggest threat, because the expansion of our towns and cities is taking up the hippo's habitat. Hippos, like elephants and rhinos, are shot and killed for their canines/tusks.



Hippos are amazing creatures, aren't they?

But don't let their size fool you, even though they are huge animals they still need us to look after them and their habitat.



Make a BEETROOT Milkshake



Hippos are herbivores and produce pink milk! Let's make our own refreshing beetroot milkshake!

?! Try this!

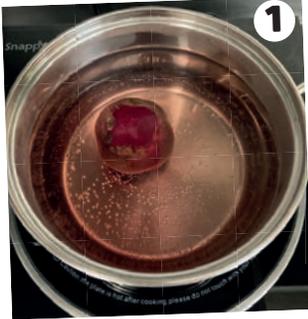
Instead of using long-life milk, try using milk alternatives like almond milk, oat milk or soy milk.

What you need:

- 1 beetroot
- 6 scoops of vanilla ice-cream
- 125ml milk, chilled
- 1/2 tsp cinnamon powder
- A blender

!! Warning

Ask an adult to help you boil and cut the beetroot.



Boil a beetroot. Then, peel and cut it in half. Use one half of the beetroot.



Cut the half into smaller pieces before putting it into a blender.



Pour half a glass of milk into the blender and blend.



Add six scoops of vanilla ice-cream.



Add half a teaspoon of cinnamon.



Blend everything together.



Pour the blended mixture into a glass and enjoy!

WHO IS Banksy?

Words by Candice Robertson
and Chanel Roux

Have you heard of the famous street artist who comes out at night to paint graffiti all over town? His work is known all over the world, and he is one of the most famous artists of our time – but no one knows his real identity! All we know is that he goes by the nickname 'Banksy'.

WHERE DID BANKSY COME FROM?

Banksy first sprayed — or 'bombed' — the trains and walls of Bristol in the southwest of England in the early 1990s. His colourful, freehand graffiti made political and social comments that criticized governments, world leaders and people in power.

When he moved to London in the early 2000s, his fame soared. Since then, he has left his mark on cities around the world, from Bristol to Barcelona and Bethlehem!

! Get this!

Writing, sketching, or painting messages or images on a wall is referred to as graffiti.

WHY IS HIS WORK SPECIAL?

Banksy uses his creativity to provoke, surprise, and share messages with the world. His art is often controversial, and usually has a powerful political or social message. Banksy displays his art in public spaces, like walls and bridges, making it accessible to a wide audience and creating excitement.

?! Get this!

In July 2019, Banksy was voted Britain's favourite artist, beating Leonardo da Vinci, Pablo Picasso and Claude Monet!

?! Get this!

In an age of watchful surveillance and social media, the secret of Banksy's true identity is becoming increasingly difficult to keep. But, Banksy has an extensive team behind him that helps protect his secret!

WHY IS BANKSY ANONYMOUS?

Banksy works quickly and quietly, often disguised as a construction worker wearing a mask. Since street art and graffiti are considered criminal damage, Banksy partly stays anonymous to stay out of danger. He also continues to paint secretly in order to avoid attention.

By doing this, he protects the message of his art – instead of having people focus on his own biography.

PROTECTING BANKSY'S ART

Banksy's use of public spaces for his artwork is controversial. Some people see it as vandalism, while others see it as a form of art that adds beauty to dull spaces. Some cities and property owners have embraced his work, and protected it from removal or destruction. However, in other cases, Banksy's art has been removed or painted over by authorities who view it as a form of graffiti.

?! Get this!

By painting his art in public spaces, Banksy transcends traditional art boundaries and encourages people to think about their surroundings in new and different ways!





Perhaps one of the world's most well-known and celebrated graffiti artists, Banksy has produced an incredible number of works during his career. Here are some of his most iconic:



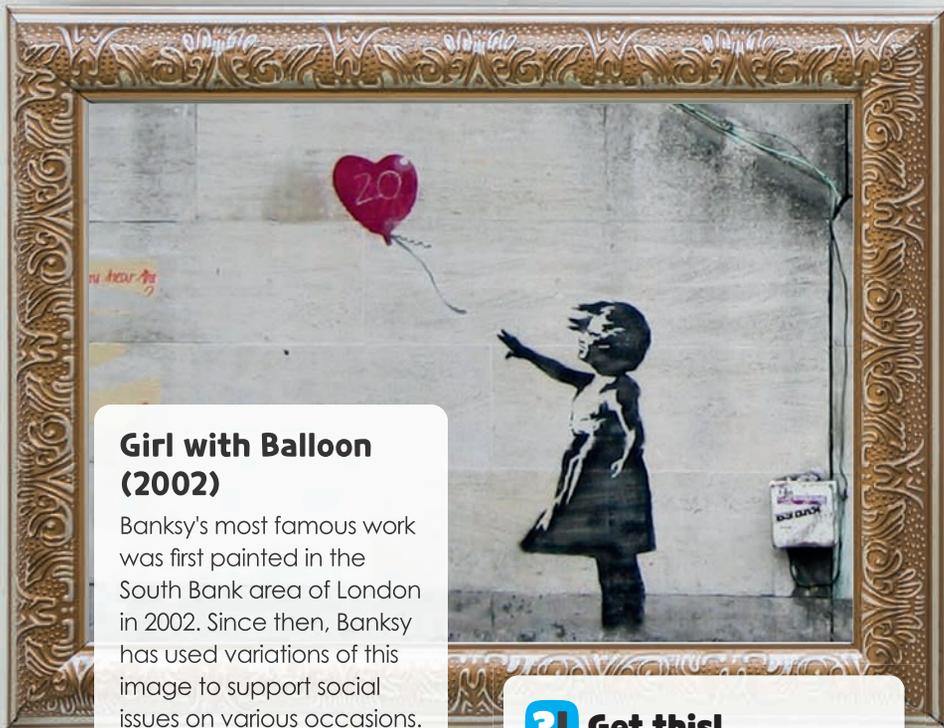
Sweep it Under the Carpet (2006)

In this piece, Banksy comments on the denial and reluctance of western countries to deal with different global issues which are 'swept under the carpet'.



Love is in the Air (2003)

In 2003, Banksy painted this 'flower thrower' in Jerusalem, on the wall dividing Palestine and Israel. It shows a masked man throwing a bouquet of flowers across the border. By replacing a grenade with colored plants, Banksy expresses his desire for peace. This same work was later reproduced in 2005 in Bethlehem.



Girl with Balloon (2002)

Banksy's most famous work was first painted in the South Bank area of London in 2002. Since then, Banksy has used variations of this image to support social issues on various occasions.

?! Get this!

While this work was already iconic for years, it made art history in 2018. Its signed reproduction had just been sold at auction for over one million euros when it self-destructed and shredded itself!





?! Get this!

Banksy makes use of stencils when graffitiing his works of art – mostly to save time so that he isn't caught in the act!



Child Soldier (2011)

A recurring Banksy theme is children and weapons. This artwork appeared in Los Angeles to highlight the innocence of children being corrupted with weapons, especially in some countries around the world where this occurs.

Dove of Peace (2005)

Often, doves are associated with feelings of peace and security. However, in this artwork in Bethlehem, it is dressed in a bulletproof vest with a red target from a gun placed on its chest, suggesting the exact opposite.



Keep your coins, I want change (2015)

This piece, found in Melbourne, Australia, depicts a homeless man who does not want physical money but seeks real, lasting social change.

The African continent TORN IN TWO

Words by Sulé Potgieter

Layout & illustrations by Benoît Knox

Could an entire continent be cleaved apart and change the way our world looks? Africa has a crack running through it, and it is growing bit by bit in a process called **rifting**. This means that eventually Africa will be split in two and Earth will look a little different.

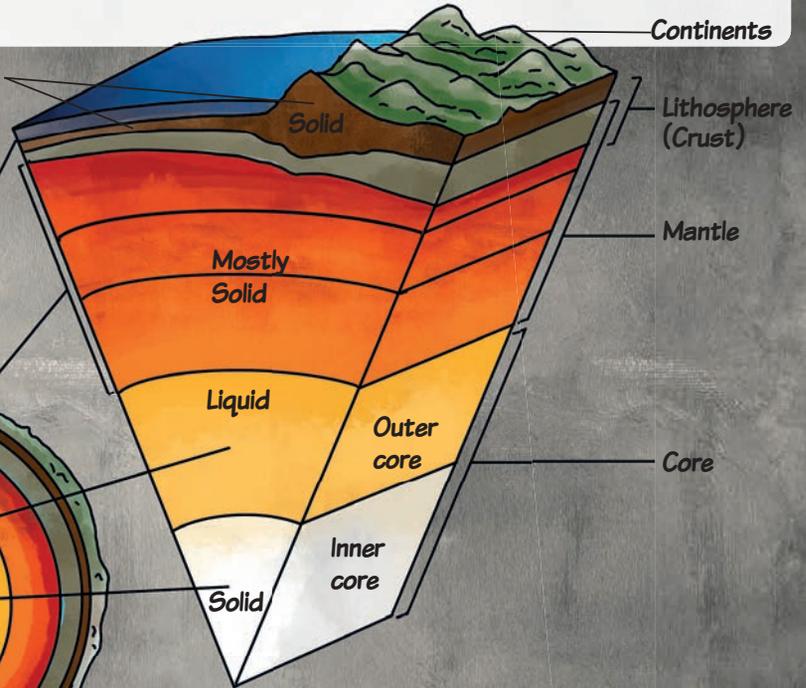
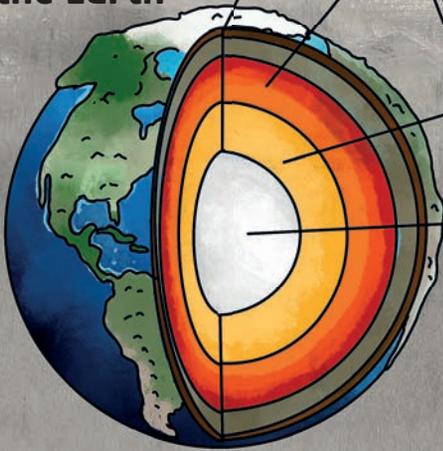
What is rifting?

A rift is a crack, break, or a split that runs through something (in this case, an entire continent). This happens when tectonic plates start moving in the Earth's lithosphere. The lithosphere is the part of the Earth that we walk on, the hard shell that protects us from the heat inside our planet.

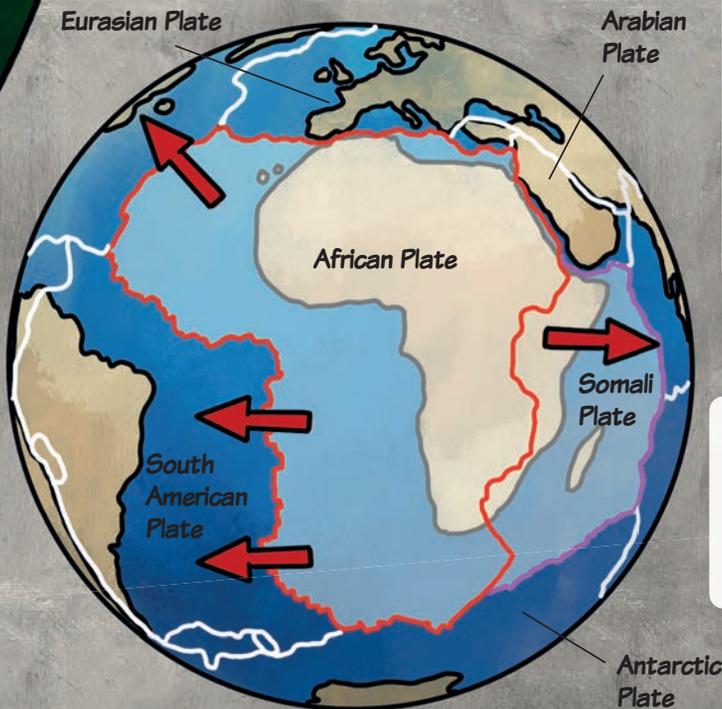
Get this!

The Earth's lithosphere has between 15 and 20 tectonic plates.

Layers of the Earth



Africa's Tectonic plates



What causes the rifting?

Imagine pieces of a cracked shell that fit tightly together and cover a ball of molten rock – this is how tectonic plates work! The heat from the radioactive processes inside Earth causes the tectonic plates to shift. When they shift, it is either away from or towards each other. Africa sits on two tectonic plates which are moving away from each other. This is why we are seeing a split forming along the East of the continent.

Get this!

When these plates move and grind against each other, we experience earthquakes and volcano eruptions.



The African Rift Valley is dotted with active volcanoes.

225 Million Years ago



How has rifting affected our world today?

If you have a look at the world map, you will see that the continents all look like they fit together like a puzzle. That is because, millions of years ago, they actually did! Once upon a time, we had only one continent called Pangaea. While we are used to a world with 7 separate continents, there was a time when they were all connected in one supercontinent.

150 Million Years ago



?! Get this!

Pangaea comes from the Greek words *pan* and *gia*, and it means 'all earth'.

100 Million Years ago



?! Get this!

It took Pangaea up to 120 million years to completely split and form new continents.

Today



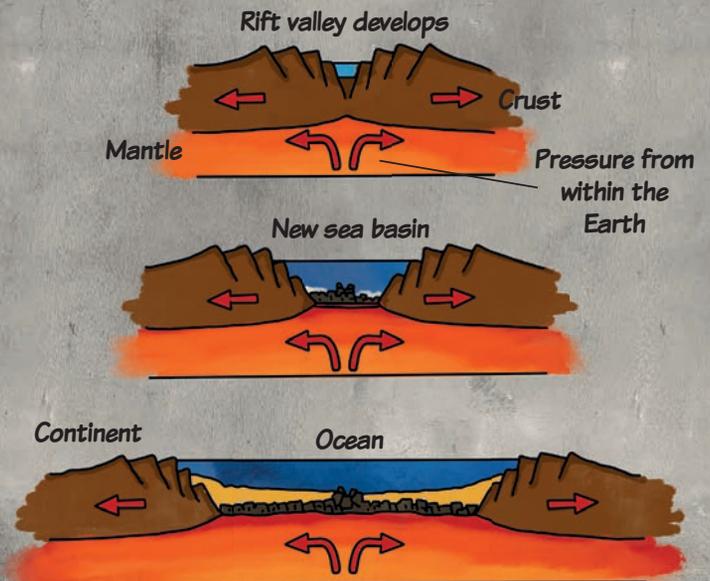
?! Get this!

Before Pangaea split, we only had one ocean called Panthalassa.

How did our oceans form?

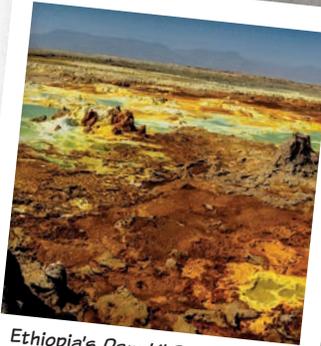
More than 200 million years ago, a split started forming between what we know today as Africa, South America, and North America. When they moved apart from each other, new oceans formed between the continents. Today, we have five oceans: the Arctic, Atlantic, Pacific, Indian, and the Southern (Atlantic). While these are technically still just one big ocean, humans decided to divide it up so we can navigate and study it better.

How rift valleys turn into oceans

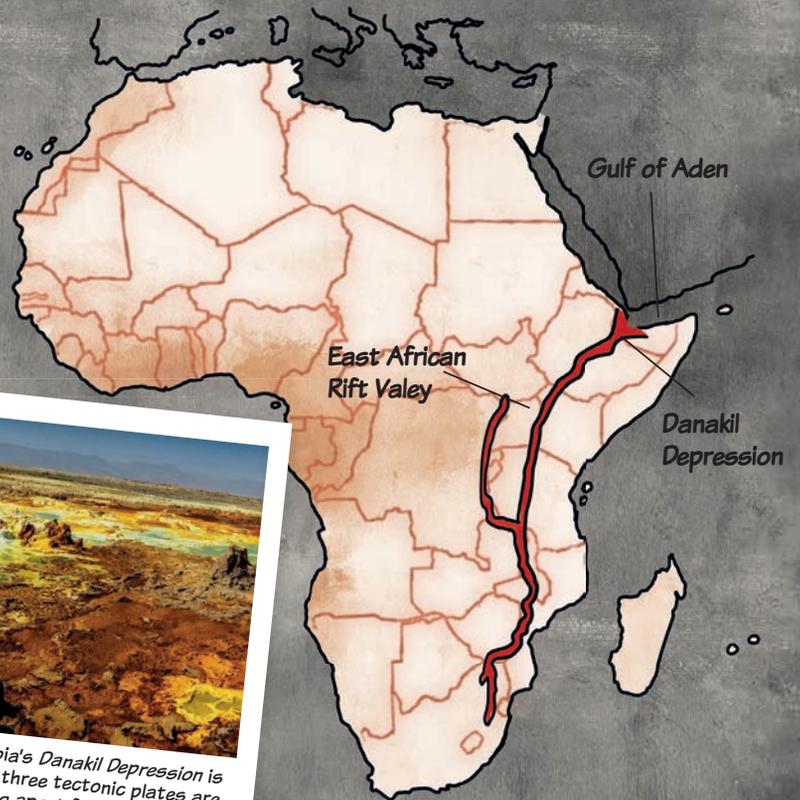


What will happen to Africa?

When the split finally happens, Africa won't be splitting into two continents. The southeastern part that is separating from the rest of Africa will become an island and a new ocean will form from Ethiopia to Mozambique. This ocean will form by the Red Sea and the Gulf of Aden flooding the East African Rift Valley.



Ethiopia's Danakil Depression is where three tectonic plates are tearing apart from each other.



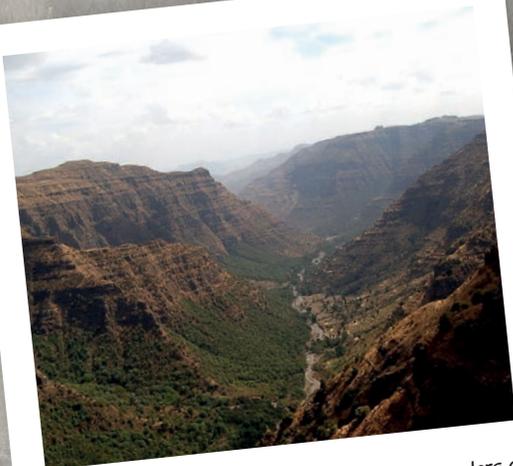
How will the countries be affected?

As the continent gradually rips apart, there will be a range of effects on the countries and the world. Some of the disasters that can occur are earthquakes, tsunamis, loss of ecosystems, and effects on the climate. Some countries will be split in two and some entire countries will detach completely from the continent.

On the bright side, land-locked countries will develop their own coastlines.

How long will it take for Africa to split?

While this may be a super exciting discovery for us, none of us will live long enough to actually see Africa split in two – and neither will our children's children. The split is only growing a few centimetres every year. This means that, like Pangaea, it is going to take millions of years to happen.



The African Rift Valley is one of the natural wonders of the world and a famous tourist attraction.



Getting tricky

Master the art of trick shots

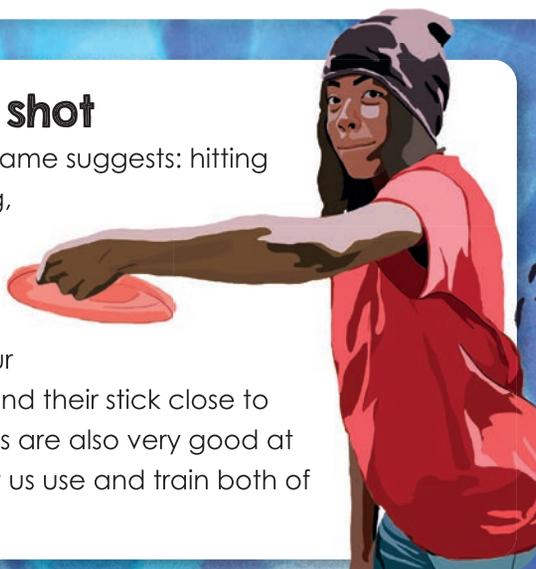
Words by Edward Allemann

Illustrations & layout by Zibusiso Zulu and Jake Williamson

Have you ever thrown a basketball into a hoop with your back towards it, or even thrown a jellybean into a friend's mouth while they were standing a few paces away? Then you have participated in humanity's love for trick shots!

What makes a trick shot

Trick shots are exactly what the name suggests: hitting a target in an interesting, exciting, challenging, or new way. Throwing has always been something that humans can do very well, so it's fun to imagine our palaeolithic ancestors trying to land their stick close to the fire without it burning. Humans are also very good at looking for patterns. Trick shots let us use and train both of these skills in a very fun way.



BOING!



For a shot to be a trick shot, it has to be tricky! Landing something in a gap it barely fits in, balancing items where they don't want to stand, bouncing a ball off of different surfaces, landing two shots at once, dodging obstacles, and even just sinking a shot from far away could all be trick shots. There are no specific rules, you just have to hit targets in interesting ways.

?! Get this!

The world record for the longest basketball shot is almost 35m (that's about 6 giraffes!). The tallest is about 52 giraffes, and it took them 25 hours to get right!



What you can use

Trick shots can be done almost anywhere, with almost anything. Here are some ideas:

Projectiles (Things to throw):



Cards



Pens



Elastic bands



Water bottles



Paper planes



Tennis or ping pong balls

Targets (Things to throw at):



Baskets



Flat surfaces



Small spaces



Plastic cups



Dustbin (make sure it's clean)



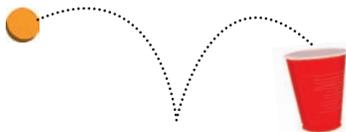
Paper targets

Try this basic trick

Throw a ping pong ball into a cup.

Step 2

Set everything up how you want it. Start with something easy and then challenge yourself to more and more difficult setups.



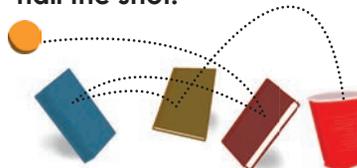
Step 1

Collect what you're going to be throwing, your target, and your trick elements.



Step 3

Throw, throw again, throw some more until you get your aim in and you can nail the shot!



Be Creative

You can use things like pots and pans, books, or boxes to make bouncy surfaces. Move your targets around the house, and use doorways, stairs, or corners to make the shot trickier!



Warning

Don't use anything that can break or that you're not allowed to use.

Trick shots are awesome to watch and even better to accomplish yourself! You can challenge your friends and families, and practice makes perfect. If you happen to film a great trick shot, share it with the Supernova team and we'll feature it in the next issue.

Layout & illustrations by Cara-May Warschkuhl and Jake Williamson

Snakes & Ladders

African Edition



How to play

Starting at 1, follow the numbers up to 49. Roll the dice with each turn, and move your token forward the number of spaces shown on the dice. If your token lands at the bottom of a ladder, you can move up! The first player to reach block 49 wins.



Bonus

If you land at the feet of a giraffe or elephant, take a lift up to their head!



Beware

If you land on a snake's head, it will swallow you down to its tail. You'll have to continue from that block!



Scan the QR code for digital dice. You can grab any small item from around you to use as a token, e.g. paperclips, pebbles, bottle caps, etc.

Scan Me

| | | | | | | |
|--------------|----|----|----|----|----|------------|
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| | | | | | | End |
| 42 | 41 | | 39 | 38 | 37 | 36 |
| | | | | | | |
| 29 | 30 | | 32 | 33 | 34 | 35 |
| | | | | | | |
| 28 | | 26 | 25 | 24 | 23 | 22 |
| | | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | | | | | | |
| 14 | 13 | 12 | 11 | | 9 | 8 |
| | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Start | | | | | | |

Test yourself

How much did you understand about rifting?



Read the article, *The African Continent Torn in Two*, on page 34-37.

Then, answer the following questions from the text.



1. Read the sentences below, then circle the incorrect word in the sentence. Write the correct word on the line next to the sentence.

a. When a crack runs through something, it is called a tear. _____

b. Pangaea was a big continent that split into nine separate continents. _____

c. It will take hundreds of years for Africa to split completely. _____

d. Tectonic plates shift because of the heat from magnetic processes. _____

2. Unscramble the words, then use them to fill in the blanks.

encao

neslistoac

ctioncte

ndlisa

a. The smaller part of the split will become an _____.

b. The lithosphere has between 15 and 20 _____ plates.

c. Countries that never had _____ before will have them now.

d. A new _____ will form and flood the Rift Valley.



Here's a fun new book to read!

Available now
Bookshoponline
 SHOP.BKUBLISHING.CO.ZA

! Reading Tip

Reading makes you smarter – it's a fact. Be sure to keep up good reading habits:

- Read anything
- Find a topic that excites you
- Read something difficult sometimes
- Ask someone to recommend a book
- Talk about the things you've read – reading is contagious!

MARINE ANIMALS

THE COMIC

Giant squid

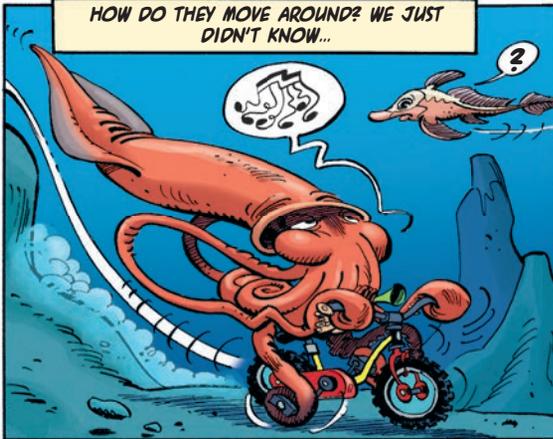
THE GIANT SQUID HAS BEEN A CREATURE OF LEGENDS FOR A VERY LONG TIME.



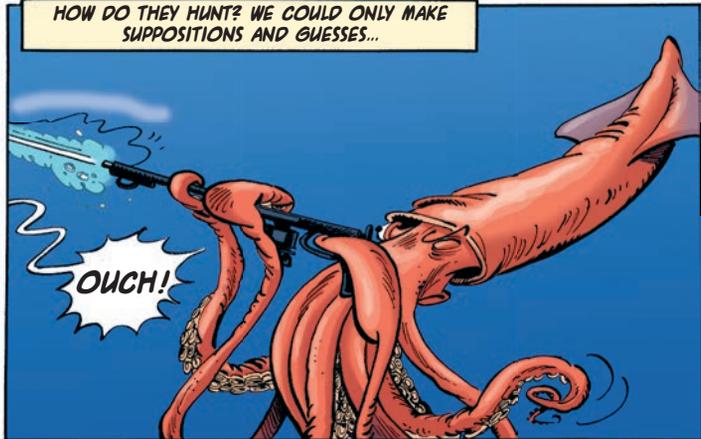
VERY FEW PEOPLE HAD EVER SEEN A LIVE GIANT SQUID.



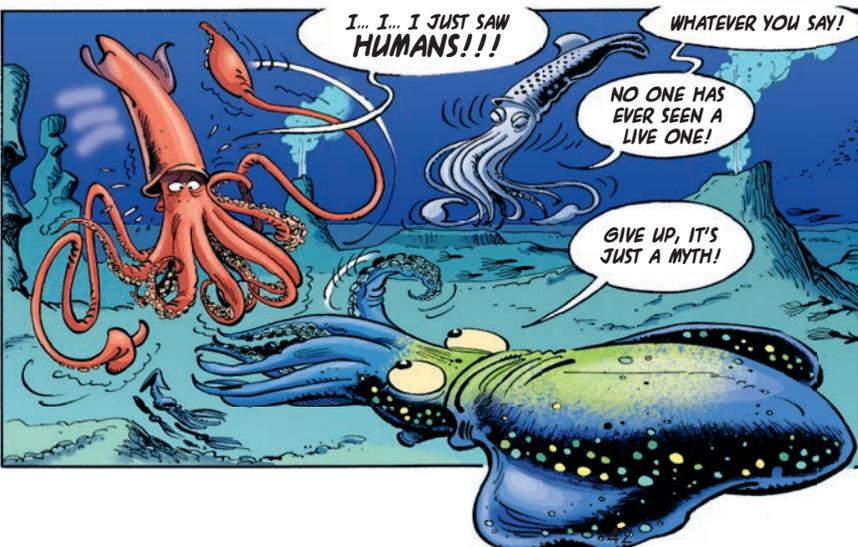
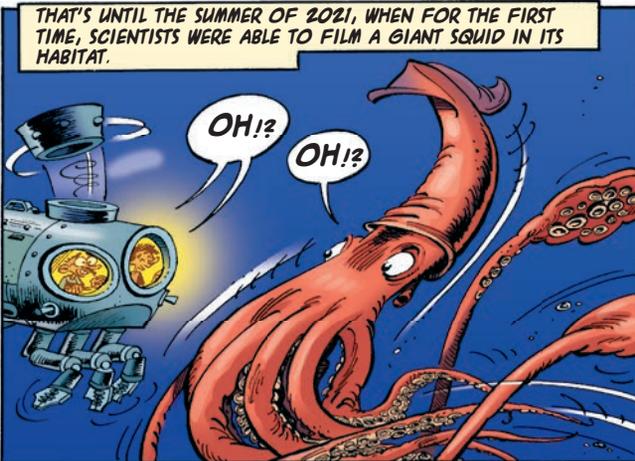
HOW DO THEY MOVE AROUND? WE JUST DIDN'T KNOW...



HOW DO THEY HUNT? WE COULD ONLY MAKE SUPPOSITIONS AND GUESSES...



THAT'S UNTIL THE SUMMER OF 2021, WHEN FOR THE FIRST TIME, SCIENTISTS WERE ABLE TO FILM A GIANT SQUID IN ITS HABITAT.



Giant Squid

Architeuthis dux

CREATING GIANT

- **Size:** 2 - 20 metres. Perhaps even bigger
- **Diet:** Carnivore
- **Habits:** It can give off flashes of light from the end of its tentacles to blind its prey when hunting.

Depth: 200 to 1000 m | NE* | Locations



*Extinction Index. NE= Not Evaluated, there is not enough data for this species.

I feel left out



Being left out by a group of friends is painful at any age. Even though everyone experiences rejection sometimes, it can still make you feel lonely and sad.

Bianca 11 years old

I only have one close friend at school. Lately, she has been hanging out with a bigger group of popular girls. She keeps trying to get me to join them during break time, but the other girls don't like me and I feel left out every time I sit with them. I don't have any other friends, so I don't know what to do.

Everyone feels left out now and then—it's normal! We all get feelings of wanting to be liked and accepted by a certain group of people. Make sure to tell your friend how you are feeling. A supportive friend will cheer you up and make sure you don't keep feeling excluded. Also take some time to draw up a 'friend' tree. This is a great way to help you realize that you have

lots of different friends in life! Fill the tree branches with all of the friends you know (they could be from sports, extracurricular activities, church, etc). Working on building relationships with other friends is also a great way to make sure that **you** are making **other** people feel included. Most of all, remember that it is completely ok to not be friends with everyone!

Have a question for Candice?

Do you have a burning issue on your mind? Need advice? Send your questions to supernova@bkpublishing.co.za and Candice could give you advice next!

ENTER & WIN

SA HOMESCHOOLING AND BEYOND'S
2023 DRAWING COMPETITION

Its our 2023 Drawing Competition!

This initiative is aimed at encouraging children to express themselves through drawing, inspiring creativity, stimulating the imagination and encouraging artistic skills. There are four age categories, all with the same theme.

Theme: Why I love South Africa

**5-8 years, 9-12 years,
13-17 years and 18-21 years**

Entries must be e-mailed to:
sahomeschooling@isikhova.co.za
with "Drawing Competition"
clearly stated in the subject
line along with:

Your full name
Contact number
Child's name and age
Title of drawing

The competition will run for two issues, this being the first. Every fortnight we'll post a section of entries from each category on our social media pages. Winners' names will be announced in our last issue of the year, online in November.

**Follow us on
social media
for more on the
exciting prizes
up for grabs**



WE DIE BY ERUPTION

DOCTOR RIP EXPLAINS

EXPERIMENT
NUMBER B23-221.
VOLCANOES...

VERY DANGEROUS
THEY ARE,
VOLCANOES.

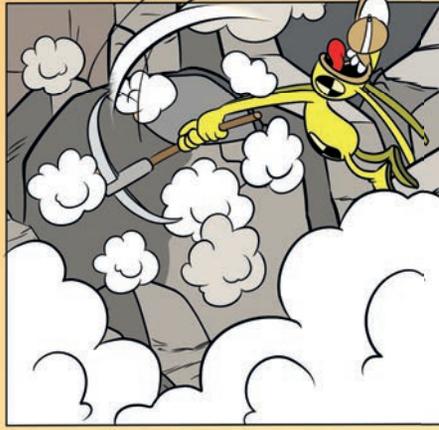
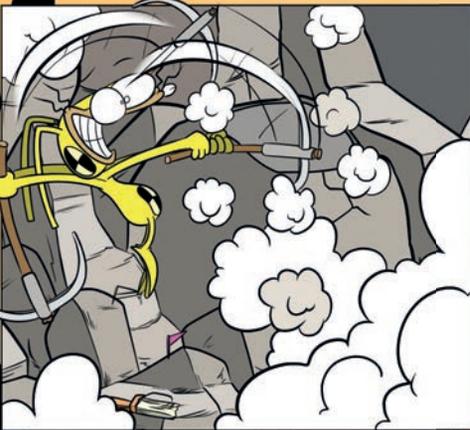
SINCE
THE YEAR 1500,
VOLCANOES HAVE KILLED
280 000 PEOPLE.

EVERY YEAR,
WE SEE AROUND 60
VOLCANIC ERUPTIONS
AROUND THE
WORLD.

HOWEVER, JUST
6 ERUPTIONS HAVE
CLAIMED OVER 60% OF
ALL THE VICTIMS TO
DATE.
170 000.

MOUNT TAMBORA
IN INDONESIA HOLDS
THE TITLE FOR THE MOST
MURDEROUS VOLCANO IN
HISTORY. ITS ERUPTION
IN 1815 CLAIMED
92 000 VICTIMS.

HEY, DARWIN!
ARE YOU UP FOR
MORE? I'VE GOT
LOTS TO SAY
ABOUT
VOLCANOES!





Floaties

