

Made in RSA!

Celebrating 10 Years SUPER NOVA

supernova

The mag for curious kids



Vol 10.4



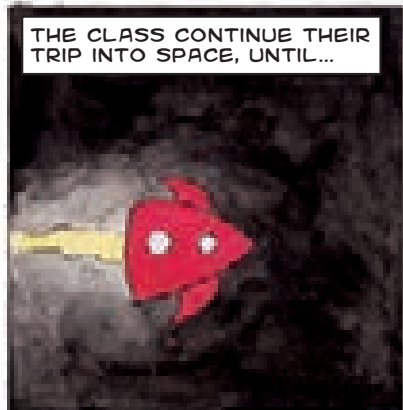
CHAMELEONS

PUZZLES | SCIENCE | NATURE | ACTIVITIES | SPORTS | COMICS

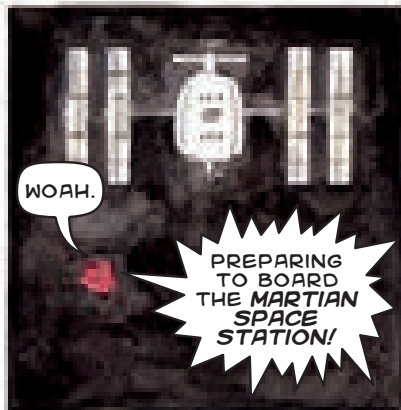


Story and artwork
Maya LeMaitre

MIMI'S LIFE ON MARS



THE CLASS CONTINUE THEIR TRIP INTO SPACE, UNTIL...



WOAH.

PREPARING TO BOARD THE MARTIAN SPACE STATION!



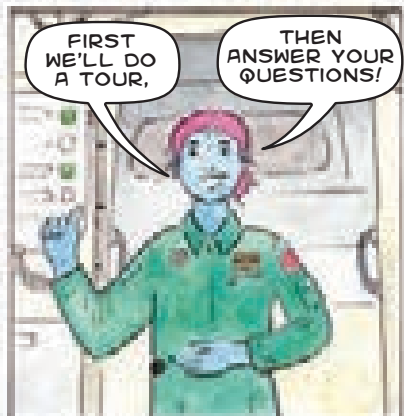
WE'RE ABOUT TO GO ABOARD THE MSS AND MEET SOME ASTRONAUTS!



I KNOW IT'S BEEN A LONG TRIP, BUT PLEASE TRY TO BEHAVE!

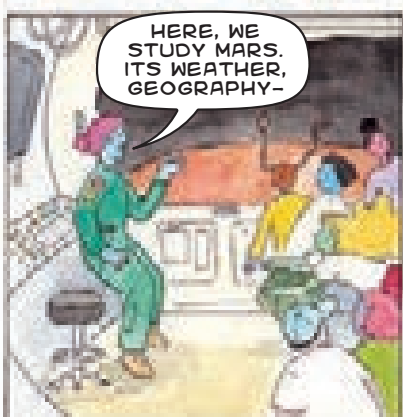


WELCOME ABOARD! WE DON'T GET SCHOOLS VERY OFTEN, SO WE'RE EXCITED TO HAVE YOU HERE.



FIRST WE'LL DO A TOUR,

THEN ANSWER YOUR QUESTIONS!



HERE, WE STUDY MARS. ITS WEATHER, GEOGRAPHY-



AND SEARCH FOR ALIENS, RIGHT?!

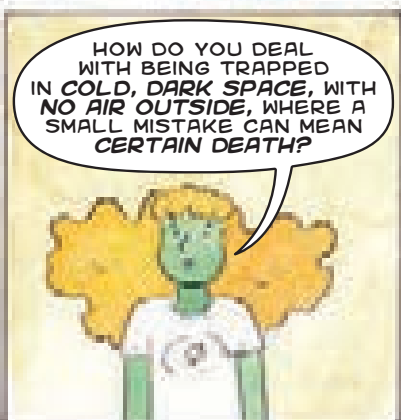
UM, PLEASE SAVE YOUR QUESTIONS FOR-



WHAT DO YOU EAT UP HERE?



AND HOW DO YOU POOP?!



HOW DO YOU DEAL WITH BEING TRAPPED IN COLD, DARK SPACE, WITH NO AIR OUTSIDE, WHERE A SMALL MISTAKE CAN MEAN CERTAIN DEATH?



WHAT?!

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Hi SuperKids



Candice



Wow, what an awesome and jam-packed issue we have waiting for you. This issue's theme is all about chameleons – those unique, crafty and colour-changing wonders found in the most well-hidden places! I loved learning all about the anatomy of chameleons and how they use different parts of their body to hunt, hide and thrive in the wild.

Chameleons also have important lessons to teach us. Just like them, we can adapt to our surroundings and any situation we find ourselves in. Chameleons are also patient. They rely on their specially adapted skills and wait for the perfect moment to make their move. This is part of what makes them so hard to see, and helps keep them safe from predators in the wild. Practicing patience is not always easy, but slowing down is important for us to remember.

Lastly, and most importantly, each of us is wonderfully unique! We should always remember to let the colourful parts of our personalities shine for the world to see – and to delight in seeing the cool colours of others too.

We hope you enjoy this colourful, crafty issue. Stay curious, kids!

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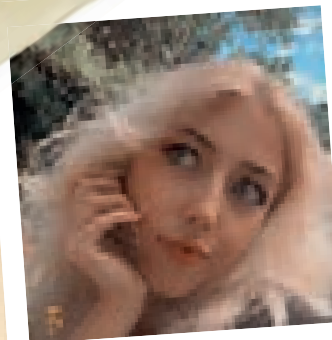
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Get to know the Supernova Team!



Meaghan
Designer and illustrator

What's the weirdest thing you've ever eaten?

I ate a dog biscuit on a dare once! It tasted a lot like how it smells...bad!

I'm Meg! For every cool page design you find, just know that my name may be attached! However, I decided to spice things up and draw some silly little animals that are hiding throughout this issue!

If you could ban one vegetable forever, what would it be?

Brussel sprouts. My mom tells me they're mini lettuces but if that were true, why do they taste like how a foot smells?

What's your favourite thing about being at Supernova?

My favourite thing about being at Supernova is seeing the team and discussing new ideas with them. There's always laughter and smiles in our office and it never fails to make me happy.

If you could meet anyone from history, who would it be and why?

I would love to meet Leonardo Da Vinci. I was stoked that we did a feature on him in Vol 9.5! If I did get to meet him, I'd ask if he really did forget to give the Mona Lisa eyebrows.

My favourite animal is a frog! Did you know that they can drink water through their skin?



Modelling has become my hobby in my spare time. Not only do you get to dress up in awesome costumes, but you also get to help business owners promote their brand!



Looking for more?



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supernovamagazine

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Brain Games

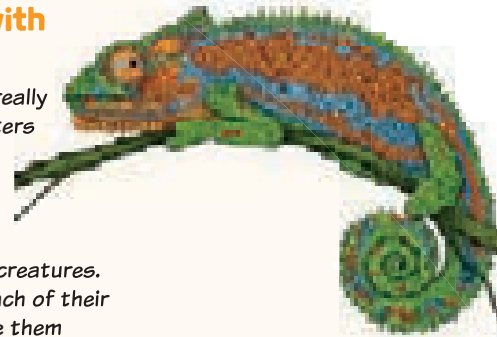
Chameleon camouflage

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The Features

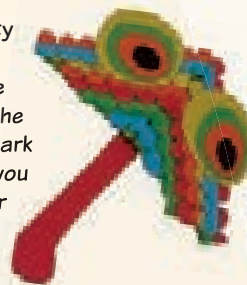
28 Keeping up with chameleons

How much do you really know about these little masters of camouflage? Let's explore their everyday habits, daily threats, and usual hang-out spots, as we spend some time chilling with these cool creatures. Also, take a closer look at each of their unique body parts that make them speedy, agile and hard to spot.



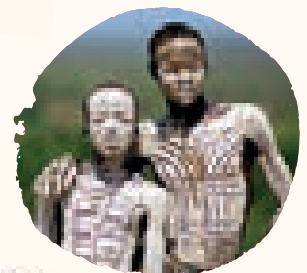
33 Make a chameleon bookmark

Let's get crafty with some paper and glue as we create the perfect bookmark to make sure you never lose your spot while reading ever again!



34 Remarkable body art

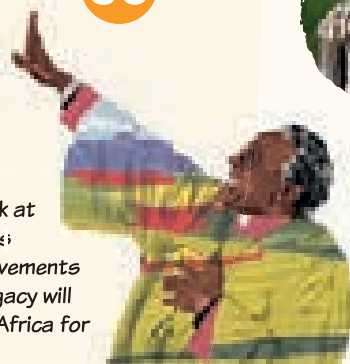
Body art has been celebrated by cultures all around the world for thousands of years. Sometimes it's part of a religious or cultural ritual, sometimes it's for self-expression or beauty, and other times it's just for shock value. Let's explore some body art from around the world!



The legacy of the Arch

Celebrate the life of South Africa's beloved Archbishop Desmond Tutu. We'll take a look at his early life, his greatest achievements and how his legacy will impact South Africa for years to come.

38

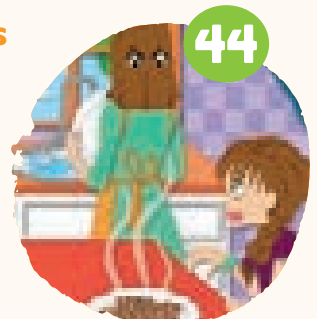


Answers for Brain Games on page 48.

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Silly things adults say

Part 2 breaks down more outrageously silly things that adults say that make absolutely no sense!



44

Adriaan (14)

from Linden asked us:

Ask Jules?

Why do elephants walk so quietly?



Jules

These gentle giants have soft padding on their feet which dulls the sound of their footsteps, helps them to support their weight and stops them from slipping. As a result, elephants can walk silently despite their weight. Interestingly though, elephants can also use their feet to listen to other elephants' sub-sonic rumblings through the vibrations in the ground. Some have even been seen putting their trunks on the ground and carefully positioning their feet to listen to these rumblings!

Packing an Eco-punch!

We know that the future of the planet depends on us, but what should we do? If today's kids are the future, how do we know where to start on this journey? Luckily Rocco Da Silva (12) and Yola Mgogwana (13) know just what to do, and they aren't just telling us, they're showing us!

YOLA

Yola is impacted by effects of climate change on the daily and aims to teach the people around her how to better take care of the planet. She is inspired to make a change in the environment she lives in and hopes that in the future, people will learn to unite. She wants people to focus more on climate justice and start spreading awareness about climate change. Yola advises other kids to be their own 'warriors' and start small at home by reusing materials, cleaning up the community, and motivating their friends so they can grow together.



ROCCO

Rocco has always felt strongly about saving the planet. He is inspired by nature and seeing how it is being contaminated by pollution

in South Africa is what ultimately pushed him to start his club, *The Future Kids*. Rocco hopes that in the future he will have inspired other kids to start their own initiatives that may positively contribute to climate change. He advises children to do some research and find a way to link their passion to climate change. He says that finding your passion linked with a good cause will motivate you more, and that you need to feel happy and inspired to protect the planet and future generations.

What awesome role models to look up to! One thing is for sure: Yola and Rocco's passions have a positive impact on the planet and the people around them. Keep up with these super kids on social media as they work together to move humanity forward and protect our planet for future generations.

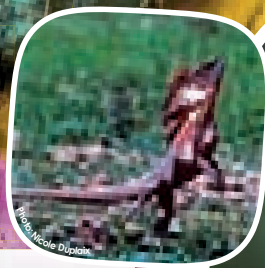


Jules

Send your cool creations or stories to supernova@bkpublishing.co.za and you could be part of our Reader Corner!



Creature FEATURE



The frilled lizard, otherwise known as 'mini dragon', is a creature that does not like to be messed with! Its fierce nickname comes from two frills, or loose pieces of skin, around its head that open when it hisses to ward off predators. Interestingly, these frills are also used to attract female lizards. They also use these flaps to control their temperature since they are cold blooded animals. These lizards are found in Australia and other close-by countries.

No one knows exactly how many of them there are, because of their excellent camouflage. They use their different and unique colours, including yellow, brown, and black, to look exactly like the trees they hunt on. Frilled lizards prey mostly on insects, other smaller lizards, and small mammals, like mice and rats. Another thing this lizard is famous for is running on its hind legs! They do this in order to escape from their natural predators like snakes and large birds. They can reach speeds of up to 48km/h. This may not sound fast to you, but since these little guys are only about a metre tall and weigh as little as 500g, they are lightning quick!



Wildlife's perfectly timed photos

'Ouch!'

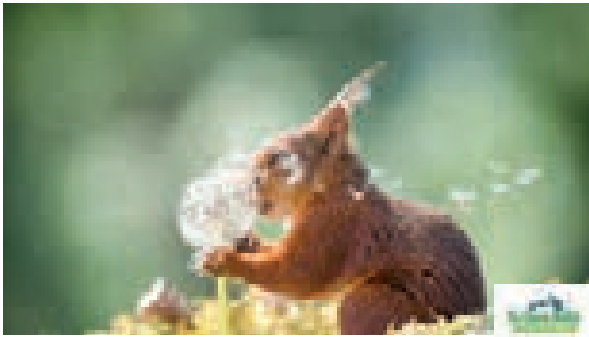
Photo by Ken Jensen

2021's winner of the **Comedy Wildlife Photography Awards** was a photo of a Golden Silk Monkey who appeared to have injured the 'family jewels' by landing on a wire with his legs open. While this is actually a show of aggression, the position that the monkey is in looks quite painful! This made for a hilarious perfectly-timed photo.

Nature photography is very challenging, even on a normal day – your subject may not always be co-operative and hold the pose you want to capture, some animals can be unpredictable and dangerous, there may be changing weather, and you always need lots of patience. These hilarious, perfectly timed photos make it all worthwhile though!



'Squirrel Wishes'
Photo by Geert Weggen



Internationally awarded nature photographer Geert followed red squirrels around his home every day for 6 years and captured some great, memorable shots along the way!
[#luredwithnutsandbutter](#) [#nutacareintheworld](#) [#blownaway](#)



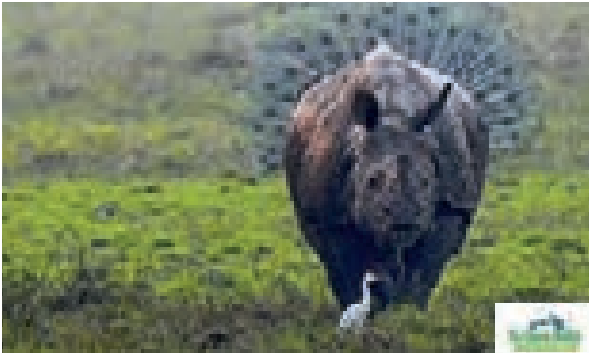
'Grab life by the...'
Photo by Sarah Skinner



Sarah managed to capture the exact moment a lion cub was 'playing' with her father in Botswana. The thought of what could happen next is enough to make your eyes water!
[#goforthemaneman](#) [#theprideofthepride](#) [#lovenotroar](#)



'Rhino peacock'
Photo by Kallol Mukherjee



A rhino-sized tutu would be something spectacular to behold on any day, but this perfectly timed photo is even more special knowing that it is made from unique peacock feathers!



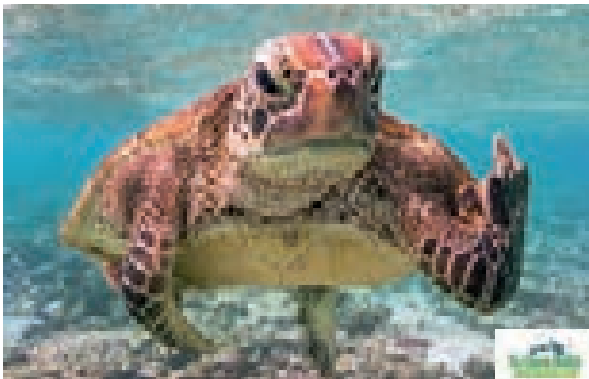
'Shut Up'
Photo by Urs Schmidli



Male sparrows can fight to the death to defend their territories. Hopefully these two managed to resolve their squabble before it went that far!
[#shhhisgoingdown](#) [#firequakers](#)



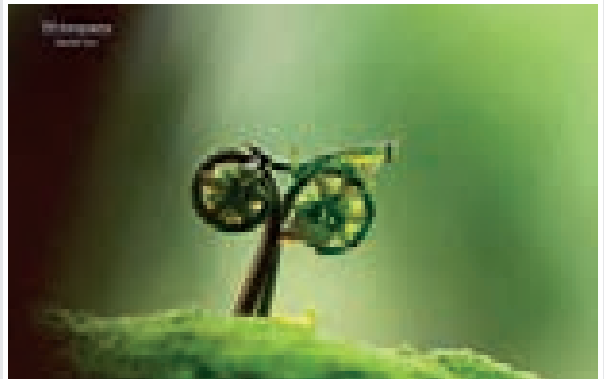
'Terry the Turtle Flipping the Bird'
Photo by Mark Fitzpatrick



While swimming with turtles in Australia, Mark captured the exact moment Terry's flipper pulled back while swimming. Either that or he was really annoyed by the underwater interruption...



'Praying Mantis Riding a Bike'
Photo by Tustel Ico



This amazing shot of a praying mantis 'riding' two sprouting ferns looks just like he is catching a need for speed!
[#wheelygreattiming](#) [#sayyourprayers](#) [#guessitsalifecycle](#)

Grace Moore

New York Philharmonic's youngest composer

Grace Moore, born in Brooklyn, New York, has just turned 12 and has already had her music performed by one of the world's top orchestras!

The young composer's love of music started at the age of two when her mom bought her a piano.

Grace is a member of the New York Philharmonic's *Very Young Composers* programme, an after school course that enrolls students as young as 8 years old and exposes them to the orchestra.

The programme allows students to create, notate, and submit music to be performed by Philharmonic musicians!

Grace immediately took to the programme and had the chance to create a piece of music that debuted in October 2020 in a world premiere by the Philharmonic.

The composition, entitled 'Summer', was inspired by 2020's events, including the coronavirus pandemic and the Black Lives Matter movement.

Do you want to be a musician? Visit our shop and talk to an expert.

MUSICA INSTRUMENTS

Six Fountains Lifestyle Centre, Silver Lakes, Pretoria
Tel: 012 991 4930

Grace spent about three weeks writing 'Summer', featuring a fanciful arrangement that harmonises cellos, flutes and clarinets.

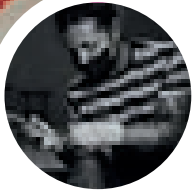
Grace said she composed her piece to give people an escape from the issues of 2020. "Basically, I was thinking about the current events that were all happening at the time," she said. "Like coronavirus and the losses that people were having. And I decided to make a happy piece to get people's minds off all of that."

Members of the New York Philharmonic performed Grace's work in an outdoor, socially distanced setting.

Grace says that this opportunity is about more than just herself – it's about what it means for other young Black girls and how her story can inspire them to create as well.

Grace, who is currently in grade seven, loves math, speaks four languages — she's working on a fifth in Latin — and is a black belt in taekwondo! She also recently started learning to play the saxophone, although her first instrument is always the piano.

Tattoo Artist



Hi, I am Wesley Steyn!

I am a 25-year-old fine artist and tattoo artist from Johannesburg. From a young age, I have always loved creating things, and I've always had a passion for art. I have an Honours Degree in Fine Arts and started my career in tattooing in 2020.

What is a tattoo artist?

A tattoo artist creates permanent body art on another person's skin.

Do you need a qualification to be a tattoo artist?

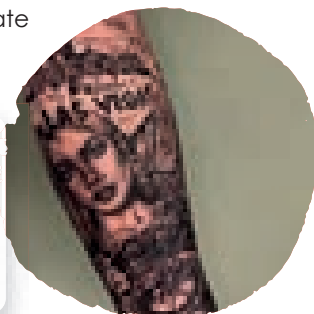
Nope! But you will need a strong artistic background and a good understanding of the formal elements of art. You will also need to complete an apprenticeship at a tattoo studio, not only to learn how to tattoo, but also to learn about sterilisation and how to practice proper hygiene within a studio space.

What are some of the challenges of your job?

Tattoos are a very intimate exchange, as the artist is entrusted to make something beautiful that will be on the client's skin for the rest of their life! Very often, tattoos hold a strong emotional and sentimental value for the client as well. Although I don't work typical work hours, this is definitely a 24-hour job – if I am not tattooing, I am either designing tattoos or communicating with clients. Tattoos can also be a painful experience, so you also need to navigate the fact that clients are hurting.

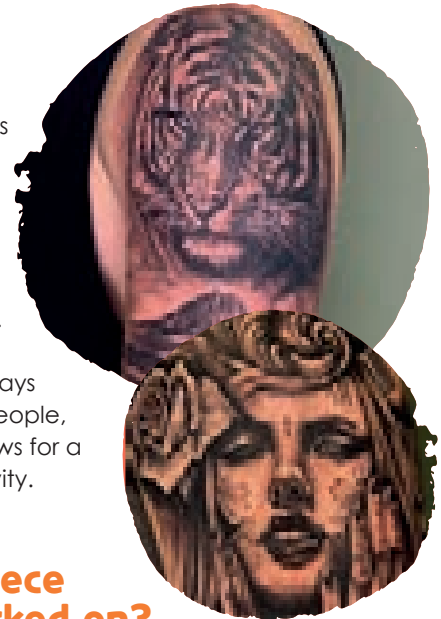
?! Get This

Skin is pierced 50 to 3 000 times per minute by a tattoo machine!



What does a typical day look like for you?

I open up the studio around 09:00 and prepare for the tattoos I have booked for that day. I design the tattoos the night before to make sure they are ready for the clients on the day. I love that no day is the same! There is always a new project, new people, new ideas, which allows for a healthy flow of creativity.



What is a memorable piece you have worked on?

I did a piece for a woman who wanted to cover up some scars on her wrist and inner forearm – a reminder of a very dark time in her life. I created a tattoo of a lady's face, surrounded by butterflies and flowers, over the scars. My client was so grateful for and emotional about this work of art, as it essentially turned what used to be a reminder of her pain into a celebration of her strength.

W Wesley's advice

Never let that creative spark die! The hustle and bustle of life makes it very easy to lose touch with your creative side, but it is such an important part of the human experience to make things and think about things from a fresh perspective.



Singapore



Words by Andrea Vermaak
Layout by Nikita Abreu

I've decided to travel abroad again. I'm so excited to find myself on the island of Singapore. It's a small island, but it's the largest maritime (sea) port in Southeast Asia and one of the busiest in the world!

I met up with my local tour guide, Luna, at one of the most amazing places I've ever seen. I'll tell you more about it later, but first let me tell you a little about what I learnt about Singapore...



A bit of history

Singapore has a long, interesting history. Luna gave me the highlights. It's said that Prince Sang Nila Utama from Palembang, Indonesia, founded the Kingdom of Singapura in 1299. By the 14th century, the island was a trading port known as Temasek. In 1613, Portuguese raiders burnt down the settlement.

It was not until 1819 that Sir Stamford Raffles founded modern Singapore as a British Empire trading post. In 1867, Singapore came under British control.

Japan occupied the island during the Second World War from 1942 to 1945, when Japan surrendered and Singapore became a British colony.

In 1959, the island gained self-governance. In 1963, Singapore became part of Malaysia but was expelled from the federation in 1965 because of a few disagreements. Singapore became independent on 9 August 1965 but is still a member of the Commonwealth.



Singapore is one of the smallest countries in the world. Its name comes from the Sanskrit (a classical language of South Asia) word 'Simhapura', which means 'lion city'.

Gardens by the Bay

This is where I met Luna. I've never seen anything like it and highly recommend a visit. Think of the most beautiful gardens you've ever seen. Now imagine them as works of art housed in three really funky buildings. That's Gardens by the Bay in Singapore's Central Region. I saw plants I've never seen before from all over the world.



Gardens by the Bay is home to over 1.5 million plants that come from every continent, except Antarctica. The huge nature park covers 101 hectares and consists of 3 separate gardens.



UNESCO describes the hawker centre as 'community dining rooms' where people from diverse backgrounds gather and share the experience of dining.

Hawker centres

After visiting the gardens, I was treated to lunch at one of several hawker centres. They're a national treasure where you can find several different food stalls in an outside food court. I decided to try Hainanese chicken rice. Even though it's a Chinese-inspired dish, it's one of Singapore's national dishes. It's delicious!

Squeaky clean

After lunch, I wanted to chew some gum, but Luna warned me that chewing gum is not allowed in Singapore. To keep Singapore clean, you can get a hefty fine for chewing gum, spitting and littering! Thanks for the warning, Luna!



Buildings in Singapore have a height limit of 280m. This is for the safety of military planes that are situated close to the downtown business area and fly close by.

Words by Andrea Vermaak
Illustrations by Joshua Neilson

Super Sunscreen



Supernova

I'm finally soaking up the sun on the beach. I have a big umbrella, sunglasses and a hat, but I know it's very important to apply sunscreen to protect my skin from sun damage. Just this morning, as I reached for the sunscreen before heading out, I wondered who thought of using sunscreen first, how it works and how often I should use it. I decided to get the answers straight from the source – I asked my sunscreen!



Q: I've been sunburnt before and it can be rather painful! Why does the sun burn my skin?

A: German physicist Johann Wilhelm Ritter discovered ultraviolet (UV) radiation in 1801. The sun emits three different types of UV rays, or light radiation. UVC rays are the shortest and the ozone layer doesn't let these rays reach you, so they aren't known to be harmful. UVB rays are a little longer, so they can get through the atmosphere. If you spend time in the sun without sunscreen, these rays can damage the first few layers of your skin. UVA rays have the longest wavelengths. In fact, more than 95% of UV rays that reach us are UVA. They can damage the deepest layers of your skin.

Q: UV rays have made my skin blister when I forgot to apply you! Who was the first person to think of modern sunscreen?

A: Ritter's UV discovery helped us better understand how we get sunburnt. In 1938, Franz Grieter, a Swiss student, is said to have invented the first commercially successful SPF (sun protection factor) sunscreen after suffering severe sunburn while climbing a mountain. He even coined the term 'sun protection factor'. His sunscreen only had an SPF 2 rating. I'll tell you more about SPF later.

?! Get this!

Benjamin Green, a pharmacist from Miami Beach, began the Coppertone sunscreen range in 1944. It was a mixture of cocoa butter and red veterinary petroleum (a.k.a. Red Vet Pet). He used it to protect himself and other American soldiers from sunburn during World War II.

?! Get this!

In 2007, three surfers in Bali got together and combined cacao, coconut, beeswax, vanilla bean, coffee extract, castor oil and zinc oxide to create Surf yogi's 'surfscreen zinc' – a natural, reef safe surf zinc!

Q: How do you help to protect my skin?

A: I have minerals and chemicals that form a protective layer on your skin. This layer helps to reflect UV rays away from your skin and even absorbs them instead of your skin.

Q: What is SPF and why is it important?

A: SPF stands for 'sun protection factor'. It's a measurement that tells you how well I protect your skin. For example, you'll see that I have a label that says I'm SPF 30. This means that I can block 97% of UVB rays for 30 minutes. The higher the SPF, the more we'll protect you and the less often you'll need to apply us. Although, it's important to know that SPF 100 doesn't protect you 100%.

A broad-spectrum sunscreen, that has special ingredients like titanium dioxide or zinc oxide, can protect you from those dangerous UVA rays.

Q: Are you different to past sunscreens?

A: As early as 3100 BC, the ancient Egyptians used jasmine, rice and lupine extracts as sunscreen. The ancient Greeks used olive oil, and the Native Americans used pine needles or sunflower oil.

Grieter's sunscreen was red, thick and sticky. It was only in the 1990s that different types of sunscreens became available. Besides the original cream formulas, gels and sprays became available. SPF 20 and 30 sunscreens also became available.

Q: Why is it important for me to remember to apply you every day?

A: UV rays can cause permanent skin damage. Your skin can age and become wrinkled. It's most important to remember, though, that UV rays can cause skin cancer. Don't take any risks! Lather me on, even on a cloudy day. Take me along and don't forget to reapply me often.

Supernova

*I learnt a few important lessons from my sunscreen.
I'll be sure to take my sunscreen with me wherever I go!*



WHO IS YOUR MODERN - DAY HERO?

Words by Nikita Abreu

Illustrations By Marissa Oerlemans

Most of us think of heroes as people who can fly or pick up busses. But not all heroes wear capes or have superpowers. Some people are heroes simply because they are brave, kind or inspire the people around them. Who do you admire? Who inspires you? Who is your modern-day hero?

?! Get This!

Greta Thunberg was only 15 years old when she protested outside the Swedish Parliament to pressure the government to meet carbon emission targets.



Trevor Noah

Michelle Obama

Greta Thunberg

RuPaul

Malala Yousafzai

MATTHEW (12)

My hero is Miguel Diaz from the Netflix series Kobra Kai. He defends himself against bullies and sticks up for his friends against the bullies.

SN ✓

CLARISSA (11)

Jo Black is my modern day hero. He gives people hope and makes them happy. He always has an important story in his songs.

SN ✓

EYTHAN (16)

My dad is my hero. He's smart, funny, strong and the coolest personality all in one. He's also a Christian, which is a cool bonus. He has the knowledge to help with both academic subjects as well as more practical situations. He knows what to say to help me de-stress. He always seems to know what to say to all kinds of people to be friendly.

SN ✓

JOSHUA (13)

Batman is my hero. He has cool tech gear and is smart. He manages without superpowers and his suit has a utility belt which holds weapons and tools for every situation.

SN ✓

MIENKE (8)

My modern day hero is my daddy. He is very friendly and he helps me when I get hurt.

SN ✓

JOSH (9)

David Muller is my modern-day hero because he couldn't play cricket well at first. But he used tactics and determination to get where he wants to be.

SN ✓

CHRISTI (10)

My modern-day hero is my dad. He is smart and strong. I look up to him. He always makes me laugh!

SN ✓

DANICA (11)

Selena Gomez is my modern-day hero because, even though she has Lupus, she doesn't let that get in the way of being positive and nice to others. It's awesome how she made herself famous and didn't rely on others to get her where she is. She did it all on her own even with her challenges.

SN ✓



The Chatroom

Do you want to contribute to the next Chatroom? Follow *Supernova* magazine on Facebook, or subscribe to the SN Kids Club newsletter and look out for our questionnaires.

You can also **Whatsapp** us on 012 342 5347.

Life the universe everything

£ The most expensive t\$ing

Gadgets, gizmos, and thingamabobs. People spend money on the wildest things! Strap your helmet on tight because this stuff will blow your mind.

Words by Sulé Potgieter

Illustrations by Benoit Knox

Mom, I asked for a real Iron Man suit, not one made of cardboard!



Iron man's suit

Marvel fans, get your tissues. Iron man's crimson and gold suit from the first Iron Man movie is the most expensive superhero suit and costs about R5 million. What makes this lofty price hurt even more is that the suit has been stolen from the props storage facility!

Expedition Everest

This rollercoaster ride takes you on a wild adventure through a mountain where you must escape the legendary Yeti as he tries to capture you. Disney's Animal Kingdom Theme Park needed R1,5 billion and six years of construction to create this adrenaline-spiking rollercoaster.



Party at the Emperor's

In 1971, to commemorate the 2 500th birth year of the Persian Dynasty, the emperor of Iran hosted a party that cost about R9,8 billion. And no, it was not in a lavish castle with a hundred different ballrooms. It was in the middle of the desert, in plastic tents!

We couldn't let those Labrador-able genes go to waste!

Sir Lancelot Encore

This magical R248 million pup may look like the average Labrador, but he is exceptional. Sir Lancelot is the world's very first successfully cloned dog! With frozen DNA of his former self, he was birthed by a surrogate dog. He even fathered a few litters of his own.



Tiaras

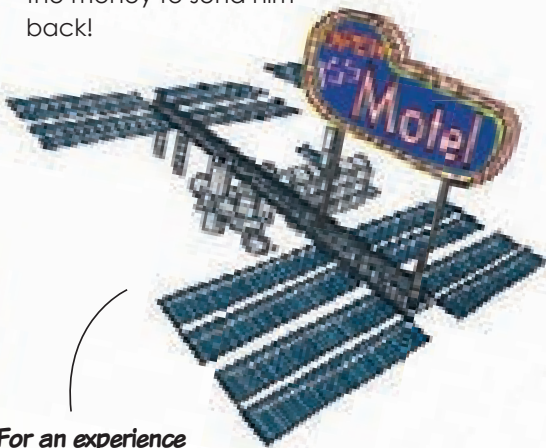
To be a princess is to pay a lot on tiara insurance! Interestingly, the title of most expensive tiara collection is shared by two royal families. The Dutch and British royal families both have tiara collections with an insurance worth R350 million.



Hmmm, which tiara to wear today...

Out of this world

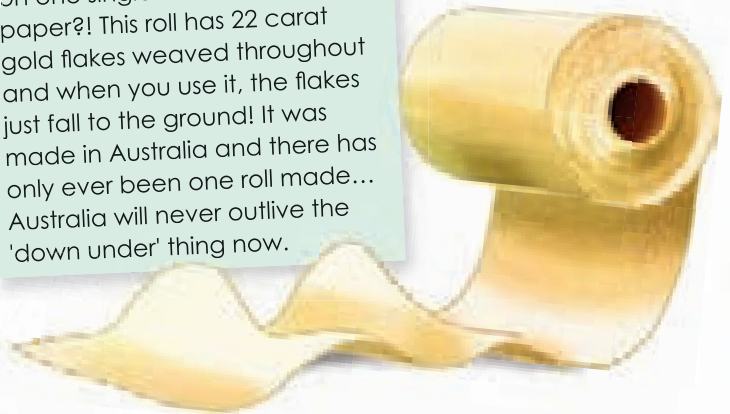
For an eight-day stay at the International Space Station, you get to pay the sky-high price of R852 million. ET had better phone home because we don't have the money to send him back!



For an experience that's out of this world!

Flushed away

Talk about filthy rich! Can you imagine spending R21,2 million on one single roll of toilet paper?! This roll has 22 carat gold flakes weaved throughout and when you use it, the flakes just fall to the ground! It was made in Australia and there has only ever been one roll made... Australia will never outlive the 'down under' thing now.



At least I don't have expensive taste in food!



Precious pandas

If you have ever seen a silly panda video, you would understand why they must be protected at all costs! Due to the threat of their extinction, the giant panda is the most expensive animal in captivity. Because they are indigenous to China, other countries pay an annual

R15,5 million for a pair of pandas, with an additional R9,3 million for each baby that may arrive.

Cirque du Soleil

Clowning around is usually bad, but Cirque du Soleil is allowed to clown on! In 2005, the circus put on the most expensive theatrical production in history, which cost about R2,6 billion. It included a battle scene where acrobats on wires had to fight vertically. Now that must have been spectacular!

SMART PLANTS

Are plants intelligent?

Words by Chanté Vorster

Illustration by Joshua Neilson

Ever wondered if your plants enjoy your pop playlist that you play while watering them? No? Well, it turns out that they may actually like rock music more than anything else. Oh, and they're communicating with each other! I'm not pollen your leg, let's find out more about plant intelligence!

How can plants be smart?

If anything, plants are the real superstars in nature because they can do so much more than animals. They are able to regenerate, maintain long distance relationships, communicate and problem solve!

Plants can regenerate even if 90% of their bodies have been eaten away. Even trees that have been cut off at the ground can regrow over time! They also pass on their genes for future generations using innovative ways. Some plants can fertilise themselves using self-pollination, while others use pollen distributed by the wind or insects (like butterflies and bees) to fertilise.

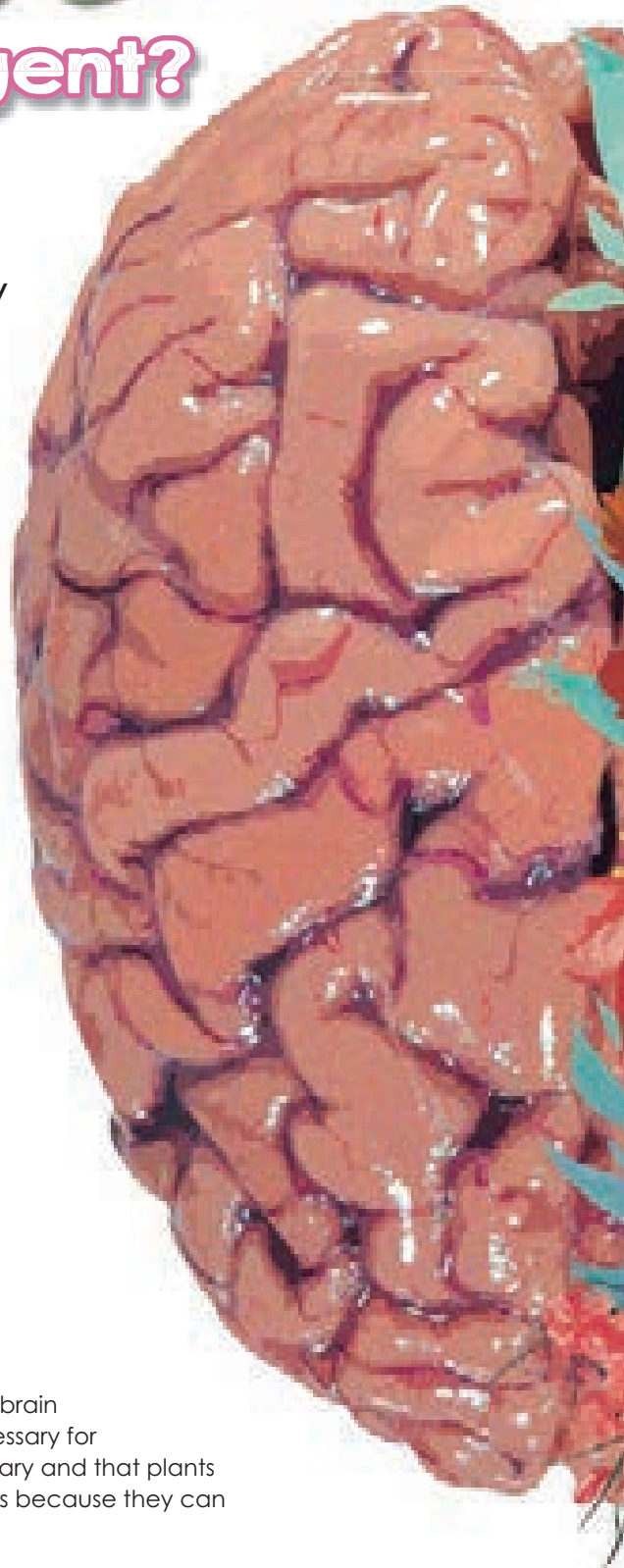
Plants and trees can also communicate with one another using their root systems! This allows them to share information about potential threats, create friendships and even transport nutrients to each other!

?! Get this!

Regeneration is the process of plants and animals replacing lost or damaged parts by growing them anew. Some animals can regenerate their limbs, tails, or even parts of internal organs, such as the liver.

So, do plants have brains?

The short answer would be no. It's true that plants are problem-solving and sensitive which does suggest intelligence. But, plants are unique since they function without a self-consciousness and brain activity (these are two factors that humans normally see as necessary for intelligence). Research has shown that this is not actually necessary and that plants are actually capable of behaving like intelligent organisms! This is because they can store, and learn from, memories of what's happened to them.



What does this mean for plants?

Plants are getting smarter because of their amazing memory retention. They can communicate with one another and recognise the outcomes of certain circumstances using their memories and communications. And it's because of this unique plant intelligence that they are able to adapt to climate change. Having to survive in harsher conditions and changing temperatures means that plants are inheriting stronger characteristics and evolving into more resilient species.

Check out these smart plants!

A new definition of hotmail

Scientists at the Massachusetts Institute of Technology have created spinach plants that are able to detect nitroaromatics, which are explosive materials, in soil and relay the information they find back through email.



Breezy peas

A Western Australia University research team found that pea plants respond positively to a stimulus and reward system by conditioning them to associate the breeze of a fan with their food – light. Every day, the team switched on the fan at the same time the lights were turned on. Four days later, the plants successfully showed memory retention and association between the fan and their food by leaning towards the fan when they felt the breeze.



?! Get this!

Plants can communicate with one another using about 20 more senses than animals!








The Wood Wide Web

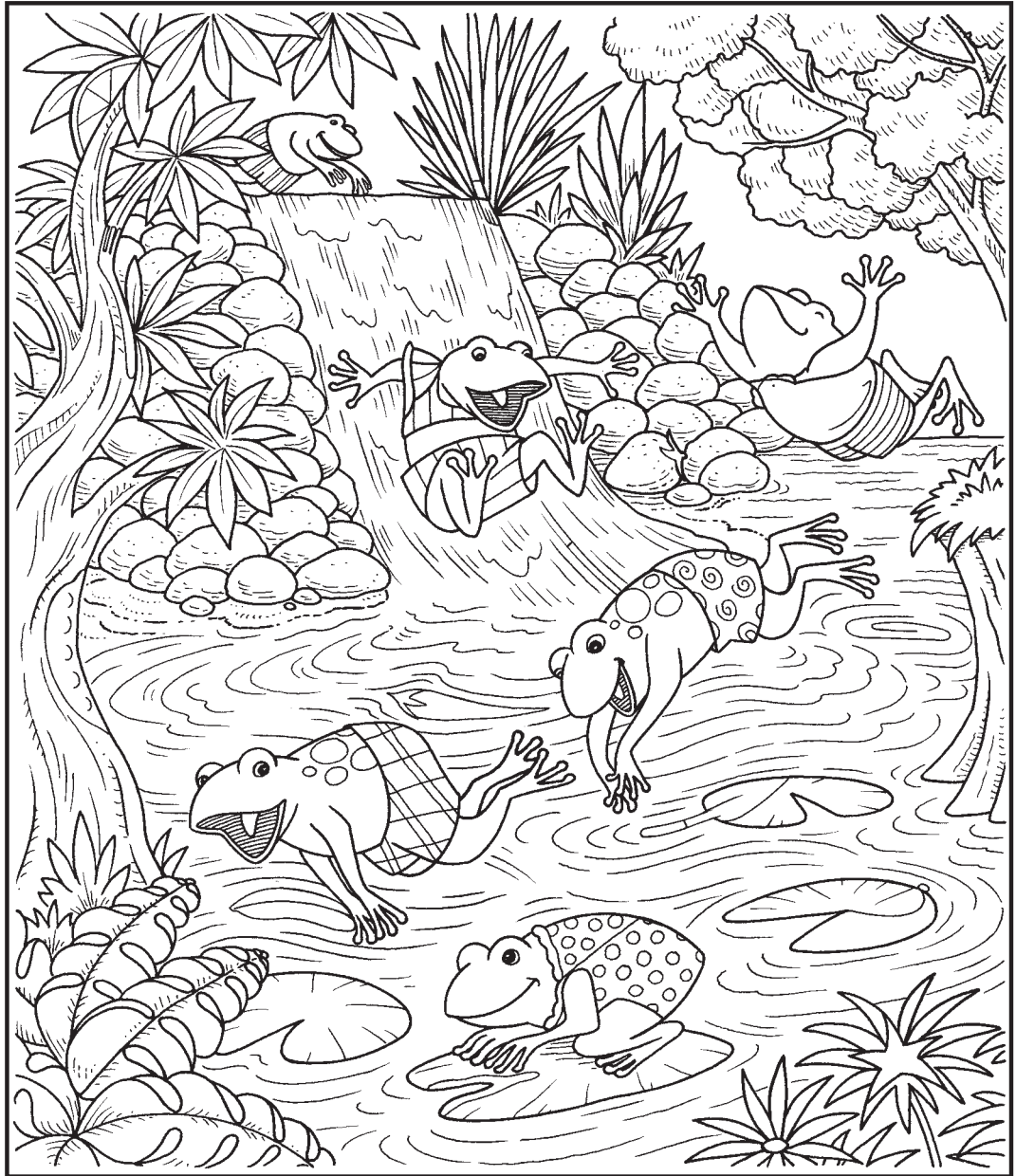
Research has shown that beneath every forest is a complex underground web of roots, fungi and bacteria helping to connect trees and plants to one another. This subterranean social network, nearly 500 million years old, feeds different nutrients to each tree. The trees are also able to warn each other about incoming swarms of insects.




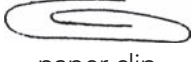









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-  fork
-  chili pepper
-  lollipop
-  banana
-  artist's brush
-  elf's hat
-  strawberry
















-  firefighter's helmet
-  wedge of lemon
-  wishbone
-  paper clip
-  pea pod
-  star
-  trowel
-  chicken
-  taco shell
-  slice of pizza
-  seashell

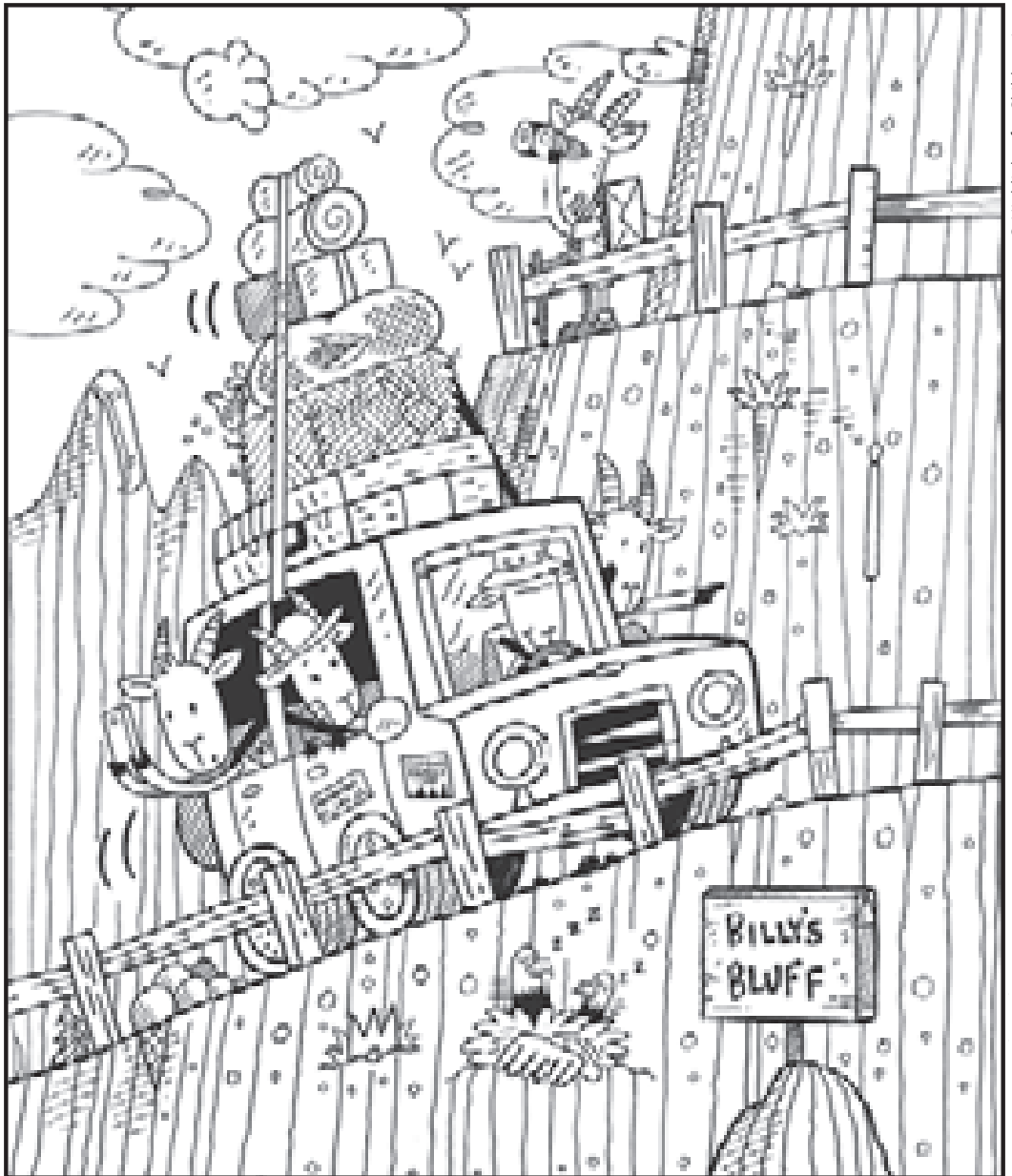











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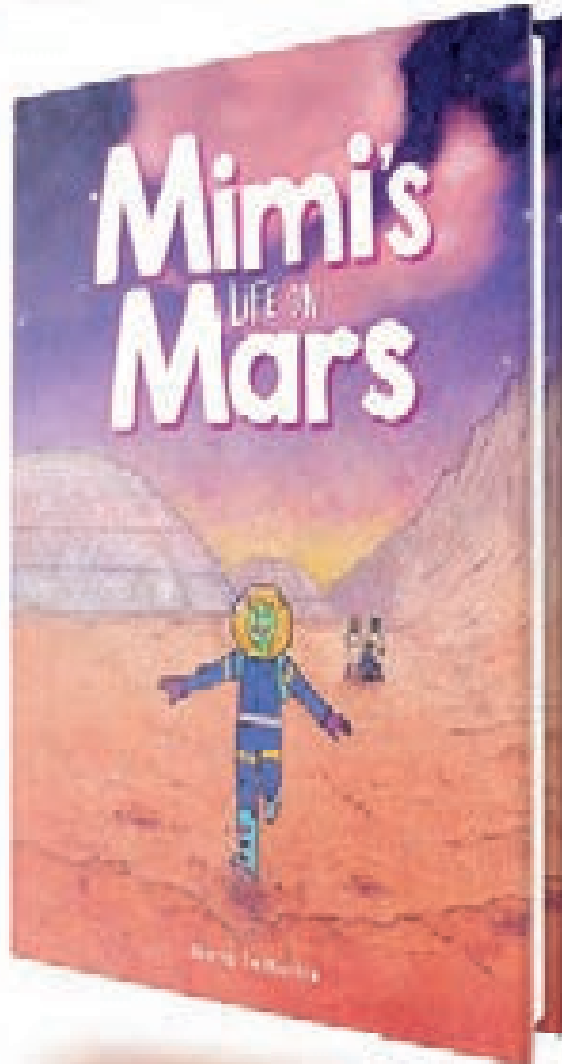
-  candle
-  bandage
-  crown
-  carrot
-  drinking straw
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-  lollipop
-  mallet
-  nail
-  slice of watermelon
-  envelope
-  toothbrush



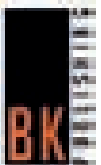
-  paintbrush
-  ice cream cone
-  ruler
-  comb
-  sneaker
-  pencil
-  magnet
-  mitten
-  ring

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Mimi's Life on Mars is a product of BK Publishing Pty Ltd. Book available for purchase in Autumn 2022.



'The Perfect Fear'

Photo by Francisco Negroni

This astounding image shows a perfect 'dirty storm' and one of the most violent moments during the eruption of the Calbuco volcano in Chile. A dirty storm is a rare occurrence also known as volcanic lightning. Electricity is created when ash, rock fragments and ice particles collide in a volcanic plume. What makes this even more interesting is that the lightning does not come from storm clouds but from the ash clouds inside the volcano.



Show Time

Photo by Hasan Baglar

In 2019, the *Perfect Moment Photo Contest* collected photo entries from photographers all around the world. With the theme 'Our World in Focus', hundreds of images of landscapes, people, wildlife and more were submitted. This perfect moment received an honourable mention in the competition.

These beautiful insects are called praying mantises because they look like they are saying grace, but they actually don't pray! They have three small eyes in between two larger ones, which allows them to see in 3D. They are very strong hunters with long, flexible necks that allow them to turn their heads 180 degrees.

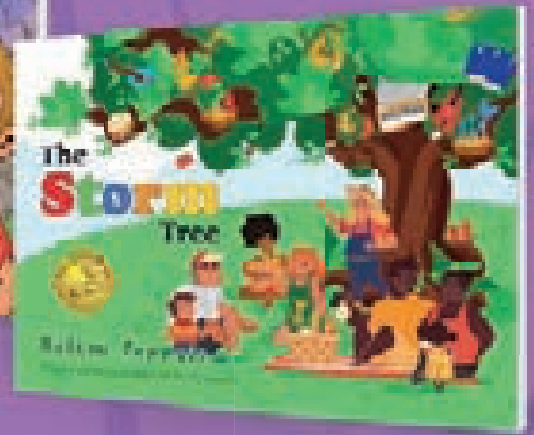
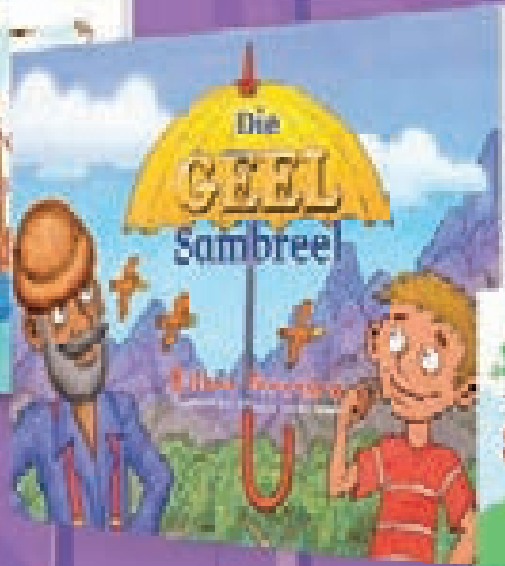
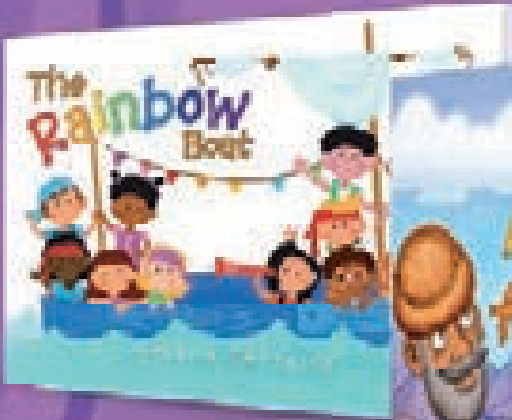




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KEEPING UP *with*

CHAMELEONS

Words by Nadja Botha

Illustrations by Benoit Knox and Vicki Venter

Why hello there, little guy!

Can you see it? These little creatures are masters of camouflage!

Their ability to blend into their surroundings makes them hard to spot, not only to predators but to humans as well!

You are very lucky to spot one in the wild!

?! Get this!

The word chameleon translated from ancient Greek means "ground lion".

?! Get this!

Chameleons are also known as old world lizards, meaning that they are compared to dinosaurs.

Charming Chameleons

Chameleons are solitary animals that live anywhere where there is enough food. They eat mostly insects, but when food is scarce they will nibble on leaves. Depending on the size of the chameleon, they will eat ants, snails, butterflies, crickets, flies and even smaller lizards.

Just like other lizards, most chameleon species reproduce by laying eggs. The female will climb down to the ground, dig a hole and lay around 20 eggs in it. She will then cover them up to keep them warm. It takes the eggs anywhere between four months to a year to hatch. The Cape dwarf chameleon, on the other hand, gives birth to live babies! After being pregnant for about six months, the mother will give birth to between eight and 15 babies.

Chameleons use body language to communicate with other animals. When they feel threatened they will turn sideways and open their mouths to look bigger and more intimidating.



While this chameleon is happy with his tasty fly, larger species of chameleons can catch and eat small birds!



A Namaqua chameleon in threat display.



This chameleon is so well camouflaged, you'd have to look closely not to miss him!

Habitat

There are over 180 species of chameleons across the world, from Madagascar, Africa, and India to Europe and the Middle East. They have adapted to a variety of ecosystems, and they can be found just about anywhere in South Africa, even in the city! If you keep an eye out for them you will be able to find them from the forests, grasslands, and savannah to the fynbos region, karoo scrubs and city gardens.

Colour changing ability

Chameleons are famous for their colour changing abilities! Many people think that chameleons can change their colour to fit into their surroundings, but this is not true. Chameleons change colour as a response to their mood or the temperature.

So, how do they change their colour? They can actually adjust the structure of their skin to change which light waves are reflected.

Chameleons, like other lizards, rely on the temperature outside to regulate their body heat. Chameleons found in desert areas especially need to regulate their body heat using their colour changing ability. They use their lighter colours to reflect light, cooling themselves down, and darker colours to absorb light, warming themselves up.



?! Get this!

Their top layer of skin has yellow and red pigments, with specialised cells that contain crystals.

When the chameleon is relaxed, the crystals are tightly packed together, and shorter light waves bounce off of them and make the chameleon appear green!

When the chameleon is stressed or excited, the crystals stretch out and allow longer light waves to bounce off of them, creating the brighter colours.

When a chameleon is frightened, melanin pigments are pumped to the top layer of skin making the chameleon appear brown or even black.

Eyes

Chameleons have excellent eyesight with a 360-degree view! This means that they can see all around them without moving their heads. As if this isn't impressive enough, their eyes can move independently from each other so that they can look at different things at once! This adaptation gives the chameleon very precise depth perception which means that hunting small insects is no problem at all.

Ears

Just like snakes, chameleons don't have an outer or inner ear. This does not, however, mean that they can't hear. They can only hear sounds that are at certain frequencies.

Nose

They have two small nostrils on the front of their noses that they use to breathe. Experts believe that they have a sense of smell, but they are unsure of what they use it for.

Tongue

A chameleon's tongue isn't only sticky and slimy, but it's super-fast too! It has a modified hyoid bone in it, with accelerator muscles wrapped around that give it enormous power and speed. Their projectile-like tongues can shoot out at around 100km per hour and can stretch to double the length of their body! The tips of their tongues are like suction cups that stick and fold around their prey so that they can pull them into their mouths.

?! Get this!

There are currently eight unnamed chameleon species in South Africa. South Africa's most famous and common chameleon is the Dwarf chameleon with 17 different subtypes.

?! Get this!

In the wild, chameleons can live between four and eight years and in captivity they can live up to 10 years.

Adaptations and Anatomy

Chameleons have some amazing adaptations to help them survive. They are slow-moving creatures which means that they can't run down and kill their prey. So, they have adapted to an ambush style of hunting. They use their colour changing abilities to camouflage themselves so that they can wait for an insect to come close enough for them to catch. But, this isn't their only amazing adaptation. Let's take a closer look at this fascinating little creature!





Body size and skeleton

The chameleon's body and tail are almost equal in length. They have more ribs than a mammal to help support their long bodies. The smallest chameleon species is the Dwarf leaf chameleon (*Brookesia micra*) which is the size of the head of a match. One of the largest species is the Parson's chameleon (*Calumma parsonii*) which is as big as a house cat.

Dwarf leaf chameleon on a match stick.



Photo: Erik & Gray



Parson's chameleon from Madagascar.

Photo: Steve Wilson

?! Get this!

Some chameleon species in Madagascar can glow in the dark! They have tubercles in their bones that fluoresce under ultraviolet light.

Feet

Chameleons have uniquely adapted feet specifically for tree climbing. They have zygodactyl toes, which means that their feet look like tongs, making it easier to grip tree branches. Their toes are very similar to a parrot's toes.

?! Get this!

Chameleons can feel with not only their feet but with their skin as well, although we don't know exactly how sensitive their sense of feeling is or what they use it for.

Tail

They have prehensile tails. This means that their tails can be moved at will so that they can be used to stabilise themselves or hold on to branches while climbing.

?! Get this!

Unlike other lizards, a chameleon's tail will not grow back if broken off.

Threats

No one knows exactly how many species of chameleons there are in Africa, but we do know that there are new species being discovered regularly, especially in forested areas. But, even though new species are being discovered, chameleons are highly threatened.

Chameleons have several natural predators like snakes, birds, and other reptiles. They are also threatened by veld fires. But, the greatest threat to their survival is human activity. Development of the chameleon's natural habitat into residential areas and agricultural areas means that chameleons are in contact with not only humans but with cars, trucks and pesticides that threaten their survival.

There are also some cultures that believe that chameleons are poisonous to humans and that they are a bad omen, and should thus be killed.

On the other hand, chameleons are often sold as pets and even though they have a docile temperament and can be handled, this isn't an ideal environment for them.



The importance of protecting chameleons

Chameleons' role in the ecosystem is very simple. They keep the insect population in check, and they provide larger predators with food. So, what can you do to help conserve these unique little creatures?

- Plant small trees and indigenous plants to provide them with a safe habitat. Indigenous plants will also attract insects for the chameleons to eat.
- Never take chameleons from their natural habitat in the wild. And don't buy chameleons from illegal traders.
- Keep an eye out for chameleons crossing the road so that you don't run over them.



I was so lucky to spot this unique little creature in the wild!

Chameleons are not only amazing creatures, but they are an important part of the ecosystem, and we should do everything we can to preserve them for future generations.

Make a

CHAMELEON

bookmark



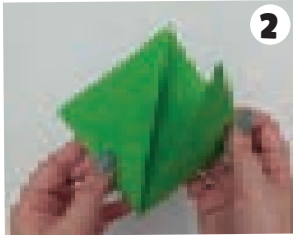
Hunting for your last reading spot in your favourite book can be just as tricky as spotting a chameleon in the wild... but not anymore, with our awesome chameleon bookmark!

What you need:

- Scissors
- Glue
- Coloured paper
- Black marker



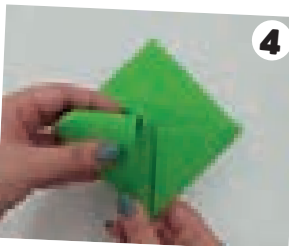
1 Fold a triangle and cut the extra rectangle off.



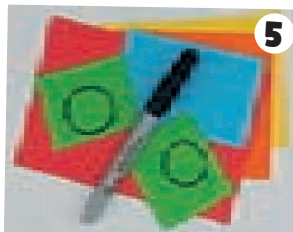
2 Bring the smaller corners to the large one, fold it, and open it up again.



3 Bring the large corner at the top down to the straight edge and fold it.



4 Tuck the two small corners between the front and back triangles.



5 Cut some decorations from coloured paper for your chameleon.



6 Glue all of the decorations onto the chameleon.



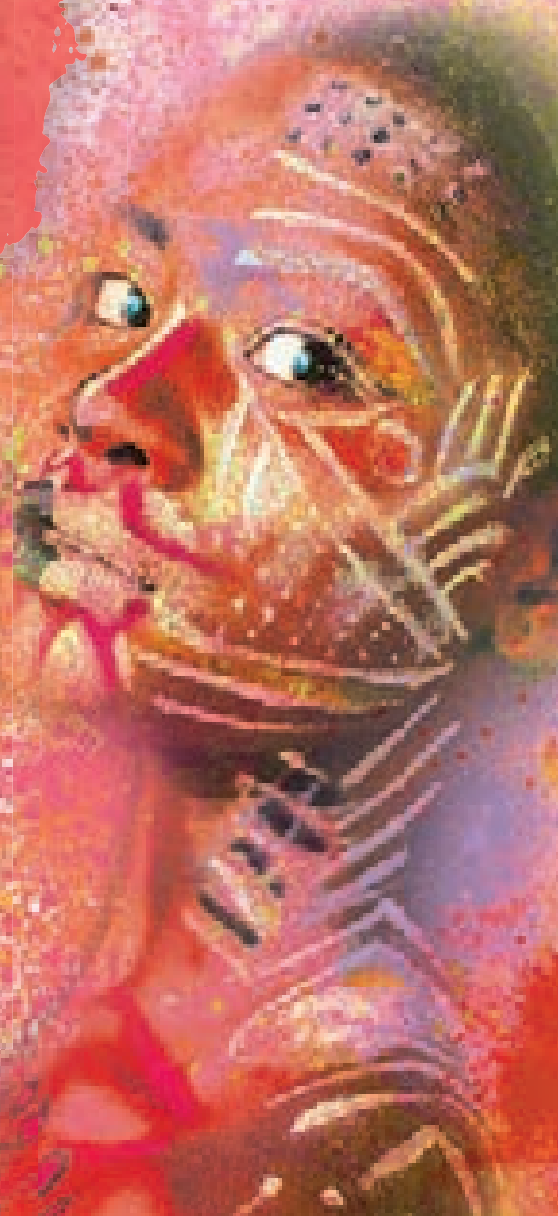
7 Use your funky chameleon bookmark to hold your place in your favourite book!

Remarkable Body Art

Words by Su-Mia Hoffmann

Layout by Joshua Neilson

When someone decorates or modifies (changes) their body in some way, their body becomes their canvas or artwork. We call this decoration of the human body 'body art'. In every culture and for the whole of human history, people have been putting pride and effort into changing their bodies. This is done for different reasons. Sometimes it's part of a religious or cultural ritual, sometimes it's for self-expression or beauty, and other times it's just for shock value. Let's explore some body art from around the world!



Body and face painting

Body and face painting dates back to the Stone Age (as much as 30 000 years ago) when humans discovered how to use colour pigments like red ochre for art.

Face painting was first used to identify important people in tribes, like shamans or chiefs, and as war paint for cultures like the Native Americans. The ancient Egyptians ground natural substances like malachite, lead and antimony into eye makeup for men and women. They even had makeup palettes!

While some cultures, like the ancient Egyptians, only painted their faces, others paint their whole bodies. Body painting has been an important tradition in Africa for thousands of years. Some cultures use body paint for special occasions, while others wear it every day as a uniform or outfit. Colours and designs have very specific meanings.



Tribes from the Nuba Mountains of Sudan use body paint to show changes in status. For example, young women paint themselves with oil and red ochre from puberty to their first pregnancy.



Ethiopian tribes also use different types of body paint to celebrate each stage of their life. Young men are allowed to paint themselves red and white from the age of eight, but are only allowed to use yellow when they are a bit older and black when they are fully initiated into the group.



The painting of henna tattoos (called Mehndi) is very common throughout Pakistan, Bangladesh and India. It is a common part of Hindu wedding ceremonies and other festivals.



Other continents also make use of body painting. The Aboriginal people of Australia use yellow ochre, black charcoal and white clay to paint their bodies.



Today, body painting is still a major part of modern society. From everyday cosmetic makeup worn by millions all around the world, to famous award shows like the Oscars that now have a category for Best Makeup and Hairstyling, and body paint appearing on the front cover of magazines. Body art festivals like the World Bodypainting Festival and the Sydney Body Art Ride are also gaining popularity. Face painting has improved in leaps and bounds when you look at the complicated prosthetics used in film and television!

?! Get this!

Body paint used to be made from natural materials like clay, minerals and plants. Now, industrial paints are often used.

Tattoos

The oldest examples archaeologists have found of tattoos are those of Ötzi the Iceman, a Neolithic human found in a glacier in Europe in 1991. The body is 5 300 years old! He has 61 tattoos all over his body of vertical and horizontal lines. In Egypt, 5 000-year-old mummies with tattoos of animals and shapes were studied in 2018.

Tattoos were viewed negatively

The negative stigma sometimes associated with tattoos possibly originated in ancient Greece, where tattoos were only for prisoners and slaves. Similarly, in Japan, tattoos were originally used as a way to punish and identify criminals. These tattooed people would then cover their whole body in tattoos to hide the marks and later this trend became popular in the big cities.

Later, tattoos became a status symbol

Modern tattoo art comes from the mid-18th century when European explorers encountered the tattooed Pacific Islanders and Native Americans. In the 1800s in Europe, tattoos were very expensive, so they were seen as a symbol of wealth.



In China, southeast Asia and Oceania, people have been marking their skin permanently as early as 2000 BC using feathers, bones, shells, or sharpened sticks.



Denmark's King Frederick IX was known for his extensive tattoo collection.



?! Get this!

The word 'tattoo' comes from the Polynesian word "tatau".

Tattoos in the Māori culture

The Polynesians didn't just influence European culture with their tattoos. The history books say that in the 1700s, trade with Europeans exposed the Māori tribes of New Zealand to tattoos. The legend of Mataora, however, says that the hero Mataora learned the art of "ta moko" (the Māori tattoo) from the king of the underworld. The Māori tribes valued those with tattoos highly: men with tattoos were allowed to build canoe houses, weave nets, carve wood and make weapons. Women with tattoos were allowed to harvest sweet potatoes. Those without tattoos had no social status.

Today, tattoos are accessible to all, and tattoos are seen as an art form. There are tattoo conventions all over the world, including the Tattoo Convention Frankfurt and the South African International Tattoo Convention.

?! Get this!

Tattoos became more affordable and accessible when Thomas Edison modified the tattoo machine in the late 1800s and Percy Walters made his own important changes in the 1920s.

Piercing

One of the earliest pieces of evidence of body piercing is a stone carving in Iraq from the 9th Century BC and a 4 000-year-old clay figurine with multiple piercings in her ears. Ancient Egyptian royalty wore gold rings in their belly buttons to show their status and high class. Gold earrings dating back 2 200 years have been found in Cyprus, indicating that the Ancient Greeks also pierced their ears.



Up until the 1970s, the women of the Arunachal Tribe in India commonly pierced their noses and wore plugs in both nostrils. The tradition started because the women of this tribe were the most beautiful of the Arunachal tribes and wanted to avoid being kidnapped by other tribesmen.

Today, ear piercing is probably the most common form of body art. Some piercings are even used to treat medical conditions, like the daith piercing. This piercing became popular in the 2010s. The piece of cartilage that covers the opening of the ear is pierced in the hope of relieving migraines.



Some warriors in New Guinea and the Solomon Islands would pierce their septums (the part between the nostrils) and wear tusks to make them look fiercer to their enemies.

Body Modification

Other forms of body art are more extreme and alter the body in more drastic ways.

Foot binding

Foot binding originated in China between 618 and 907 and it is believed that as many as four billion women practiced this cultural tradition. The process started during childhood and involved breaking a young girl's feet and binding them into a hoof-like shape. In adulthood, women would show off their tiny feet with beautiful, fancy shoes. This was done to ensure a good marriage and a moral and respectable life.



Women whose feet had been bound could not walk or stand properly, so this practice was also a status symbol, since the woman's family needed to be wealthy enough to support her financially.



Head binding

Cranial deformation, or head binding, has been recorded on almost every continent for thousands of years, with evidence of this practice found in Australia from 30 000 years ago. The Inca, Maya and other North American tribes also practised head binding. It was seen as a status symbol and associated with power, beauty and intelligence. Shortly after birth, the baby's head was wrapped tightly with cloth and this continued for a few years into the child's life, until the desired form was reached, or the baby rejected the wrapping. In the 1950s, the Belgian government outlawed the practice.



The Mangbetu tribe in the Congo call the elongation of their baby's heads "lipombo".

Stretching

Another more extreme form of modifying the body is stretching. People stretch their necks, lips and earlobes.

Neck stretching

Also known as neck elongation, this tradition has been practiced in Africa and Asia for over a thousand years. The Padaung tribes of Southeast Asia have been elongating the necks of their women since the 11th century and continue the tradition to this day. They do this by adding metal rings to their necks from about the age of five. More and more rings are added, and old ones are removed as the girl ages. A full set of rings consists of 25 rings, weighing more than 2kg each. The lengthening of the neck is seen as a rite of passage and a sign of wealth.



Even though it is called neck elongation or neck stretching, the women's necks never actually stretch. The rings press down and compress the collar bones, ribs and shoulders, causing an optical illusion that makes the neck look longer.

?! Get this!

Ötzi the Ice Man, the frozen mummy from 3300 BC, didn't just have tattoos. His earlobes were also stretched to about 8mm wide.

Lip stretching

Lip plates, also called lip disks or lip plugs, are used to stretch the lip by making a cut and inserting a plate into the hole. Over time, bigger and bigger plates are inserted to widen the hole. Evidence of lip plates has been found from 8700 BC in Sudan, 1500 BC in South America and 500 BC in Ecuador.

In Ethiopia, it is believed that the tradition started to make women undesirable to foreign men that might want to take them as slaves. Over time, it became tradition and lip plates are still used today. Now it is seen as a form of self-expression and art.

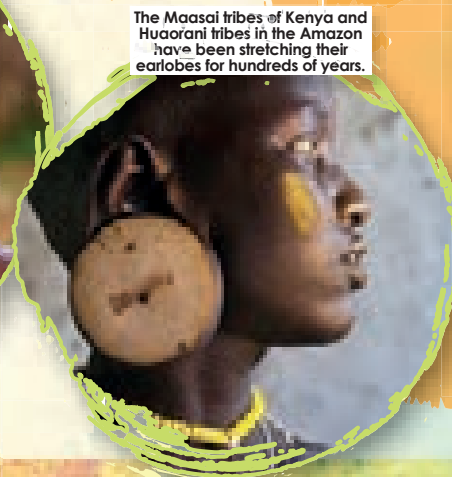
Ear stretching

The ear stretching process is similar to the process of lip stretching. Since stretching takes years, large lobes may be a sign of age and wisdom.

Both these tribes have started to abandon the tradition with the influence of the Western world. Ironically, ear stretching is now very common, just like tattoos, and is offered by most tattoo parlours. Jewellers from all over the world craft unique plugs for stretching in many materials, from natural stone, shell and wood to artificial metal, acrylic and plastic.



Lip plates are still used by the Mursi, Sara and Suma tribes.



The Maasai tribes of Kenya and Huaorani tribes in the Amazon have been stretching their earlobes for hundreds of years.

Scarification

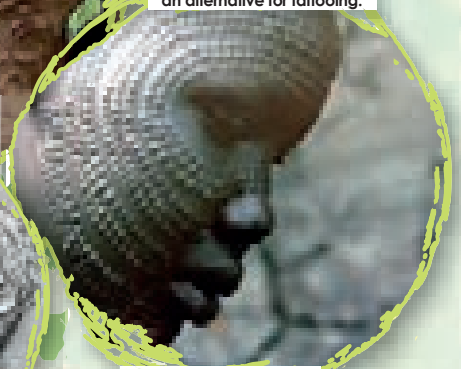
During scarification (also called cicatrisation) the skin is cut or burned and scarred on purpose to make decorative patterns on the skin. Archaeologists have found statues with scarification lines in Jordan that date back to 8000 BC. Other cave paintings from West and Central Africa showing scarification have also been found.

The practice was common in Africa, especially in Chad, Ethiopia, Nigeria, Sudan and Zaire, as well as in Papua New Guinea, the Americas and New Zealand. The Sepik tribe of New Guinea use it as an initiation rite for their men. They test the young man's strength and self-discipline by cutting his chest, back and legs with a sharp piece of bamboo. This tribe believes that crocodiles made humans and the scars represent the teeth marks of the crocodile.

Other tribes use scarification to show social and political roles, as part of rituals, or to identify themselves as belonging to a group or tribe. In most countries, modern governments have banned the cultural practice. Despite this, like ear stretching, scarification is growing in popularity in the Western world as a way for young people to show their individuality and express themselves.



It's generally believed that scarring was developed as an alternative for tattooing.



Scarification can be done mechanically, thermally, and chemically.

Is body art here to stay?

Body art in all its forms is as old as humans themselves. Some types of body art have negative connotations, some types have been banned completely, while others like ear piercing are socially acceptable or even expected. Either way, all types of body art have rich traditions and history and, at some point or another, had deep cultural significance.



The legacy of The Arch

celebrating Archbishop Desmond Tutu



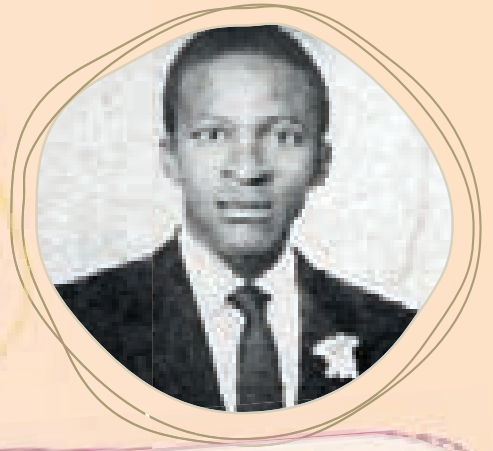
He coined the phrase 'Rainbow Nation', co-authored a book with the Dalai Lama, won a Nobel Peace Prize and spoke out against Apartheid. Archbishop Desmond Tutu (fondly known as 'The Arch') stood for justice whenever he could. He even joined a protest at the age of 86, a few years before his passing in December 2021.

Words by Sawleha Valley

Illustrations by Lana Potgieter

Early life

The Arch was born in 1931 in Klerksdorp, but his family eventually settled in Johannesburg. His father was a school principal and his mother worked cleaning and cooking at a school for the blind. When he was in his teens, he contracted tuberculosis and it took him a long time to recover. This inspired him to become a doctor, but his parents could not afford medical school fees.



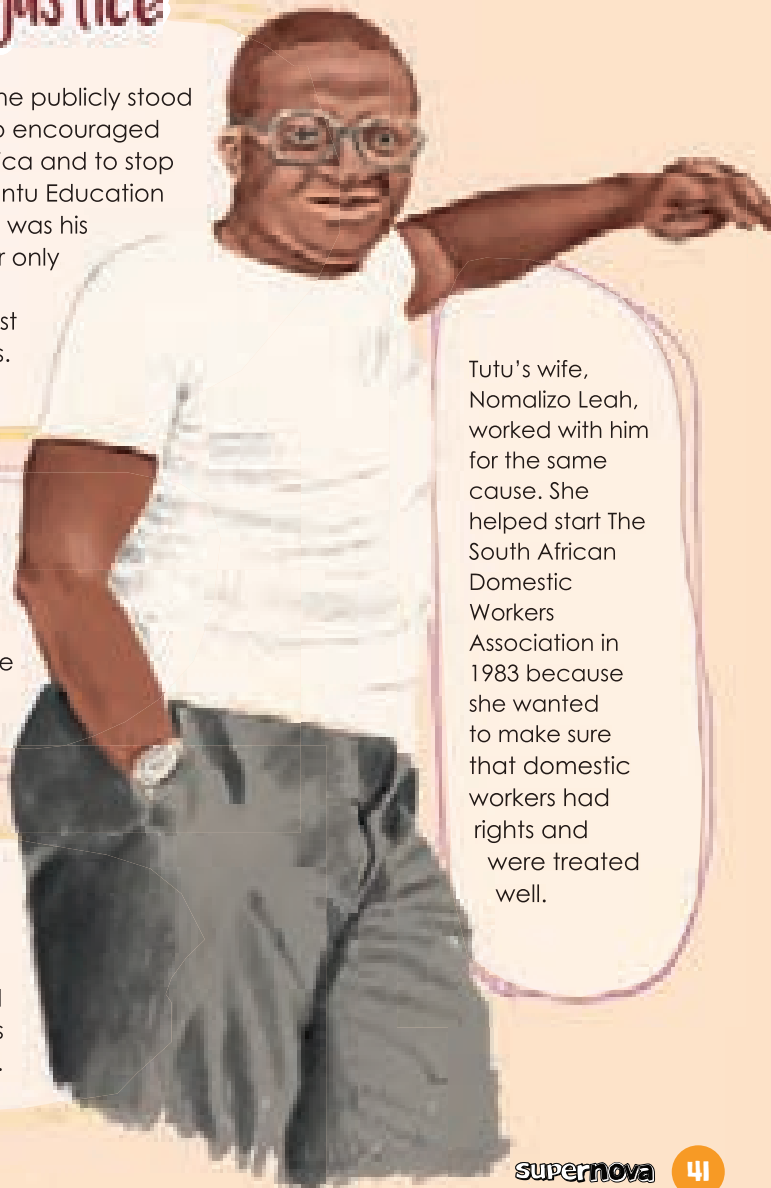
?! Get this!

In his matric year, he used to study at night by candlelight.

Instead, he became a teacher and taught at the same high school he used to attend. He wanted to inspire students by showing them that they all mattered, no matter what their race. He taught them to work hard and to have a sense of pride in themselves.

Leadership, peace & justice

Tutu became famous in the 1980s when he publicly stood against the Apartheid government. He also encouraged other countries to stop trading with South Africa and to stop investing in the country. After the unequal Bantu Education system was introduced, he quit teaching. This was his way of protesting against the government for only allowing Black children to have very simple education. He believed in protesting against inequality and injustice in non-violent ways.



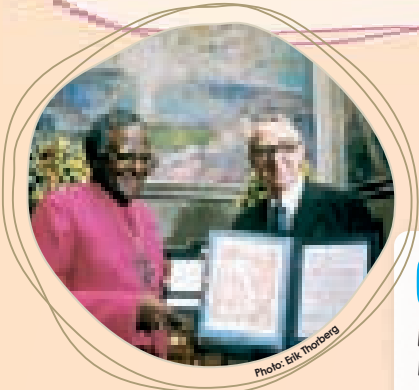
Tutu's wife, Nomalizo Leah, worked with him for the same cause. She helped start The South African Domestic Workers Association in 1983 because she wanted to make sure that domestic workers had rights and were treated well.

From 1958, he studied and lectured in the field of theology until he became the first Black person to be appointed the Anglican dean of Johannesburg in 1975. At this time, he started becoming better-known internationally. He later became the first Black general secretary of the South African Council of Churches.

The Arch eventually became well-known as a voice against the Apartheid government. He even wrote a letter to the South African Prime Minister about the effects of racial injustice, but he did not get any response to it. Tutu continued his efforts to end injustice in a peaceful way.

At home and onwards

Tutu left his homeland and travelled near and far to encourage people to live peacefully together. He went to Greek Cypriot and Turkish Cypriot communities in Cyprus, to Israel and the occupied Palestinian territories, to Côte d'Ivoire, to Sudan and South Sudan, to Ethiopia, India and Iran. He wanted to promote peaceful solutions to any problem or disagreement.

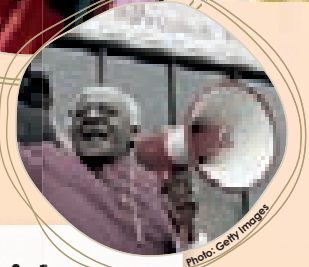


?! Get this!

He became the second Black South African to receive the Nobel Peace Prize. Albert Luthuli was the first.

?! Get this!!

In 2016, Tutu wrote a book with the Dalai Lama, called *The Book of Joy: Lasting Happiness in a Changing World*. He took the Dalai Lama as his best friend.



?! Get this!

He was interested in treatment for tuberculosis, HIV/AIDS prevention and climate change.

Great achievements and awards

In 1984, Tutu (known as Africa's Peace Bishop) received the Nobel Peace Prize. He became so famous and respected that he became a symbol of the struggle for freedom and equality. The entire world came to know about the cause that he fought so bravely for.

Besides this great award, Tutu also received other major awards. Some of them are: the Pacem in Terris Award, the Bishop John T. Walker Distinguished Humanitarian Service Award, the Lincoln Leadership Prize and the Gandhi Peace Prize.



Tutus contribution to the Rainbow Nation

The Arch did not see any change and the injustice continued for a very long time. His passport was taken away and he was not allowed to travel out of South Africa for two years. However, he always stayed positive and dreamt of a Rainbow Nation. He wished that people of different races could live peacefully together as a vibrant society. All his efforts helped to free South Africa. When Apartheid ended, he was given the honour of introducing President Nelson Mandela to the nation as South Africa's first Black president.



Photo: Gaila Images/turnkey image

Later, Mandela chose him to be the Chairperson of the Truth and Reconciliation Commission. In this position, he had to investigate crimes that happened during Apartheid. Truth was needed so that people could forgive each other and reconcile, or unite. Truth and reconciliation helped to pull the society back together after it was divided by Apartheid.

Making his legacy our life

The Arch inspires us to make changes to make the world a better place. No one is too little and no action is too small to make a difference.

Let's stand strong and speak out when any injustice happens, even if it's bullying. Let's treat every person as a human being by being respectful and kind. Let's forgive others so that we can feel better ourselves.

Most of all, let's always stay positive because goodness will triumph over injustice.

He passed away on the 26th of December 2021, but he leaves his legacy behind for us to continue. Let's build our Rainbow Nation together!

"Do your little bit of good where you are; it's those little bits of good put together that overwhelm the world." – Desmond Tutu

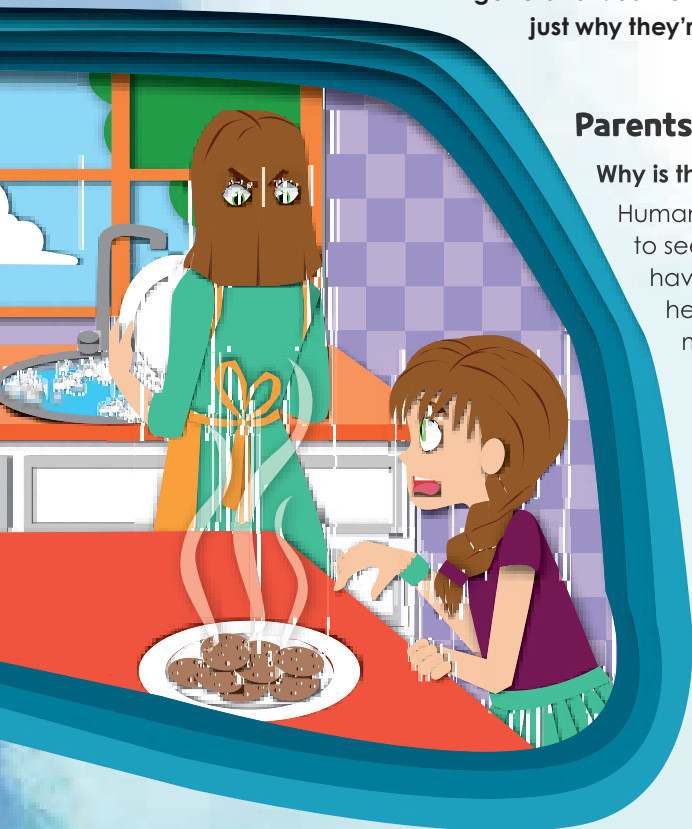


Silly Things Adults Say to Kids

Part 2

Words by Su-Mia Hoffmann
Illustrations and layout by
Alexandra Botha-Green

In Vol 10.2, we had a laugh at some of the silly things adults say to kids. Some of these sayings are to stop kids from doing something that could be bad for them. Other things have been passed down from generation to generation. Some are both. Let's have a look at more silly things and explore just why they're silly in the first place!



Parents have eyes in the back of their heads

Why is this silly?

Human eyes are always in the front of our heads. This allows us to see depth. Many prey animals have eyes on each side of their head. This allows them to see more of their surroundings and watch out for predators.

Why do people say it?

This idiom comes from the Roman times and first appears in the play *Aulularia* by Plautus in about 210 BC. It probably never referred to literal eyes in the back of someone's head. The idiom means that someone is very good at noticing everything that happens around them, like parents often are.

! Get this!

The part of our brain that controls our vision is called the occipital lobe and it is, in fact, in the back of our heads!

If someone jumps over you, you won't grow

"Ba umntu utsiba phezikwakho, awusoze ukhule"

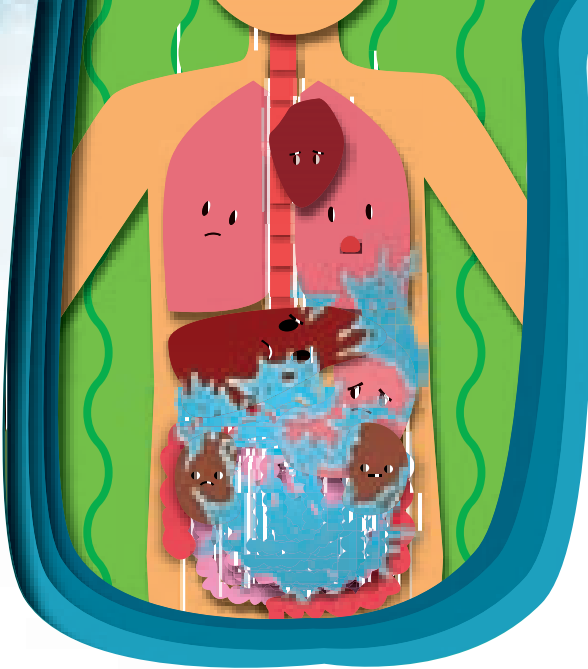
Why is it silly?

Height is mostly determined by your DNA. Some factors like nutrition and exercise can affect height, but someone jumping over you will have no effect on your growth.

Why do people say it?

This and similar sayings are ancient and are prominent in African, Russian, Jewish and even Greek traditions and superstition. Many cultures believe that it is bad luck to step over someone. The origin could possibly be the fact that stepping over someone who is sitting on the ground is considered very rude. It is also a cautionary tale to keep children from hurting someone by jumping over them.





If you swallow bubblegum your insides will stick together

Why is it silly?

Your intestines cannot stick together from gum and the gum will pass through your system in a few days, just like watermelon pips.

Why do people say it?

Unlike seeds, swallowing a large amount of gum can be dangerous, especially to children. The gum can cause an intestinal blockage that might need to be surgically removed. Swallowing one piece of gum won't kill you, but don't make a habit of it!



Get this!

An idiom is a sentence which usually has a deeper meaning.

If you eat from the pot it's going to rain on your wedding day

"Ba utyela embizeni, kuzonetha ngemini yakho yotshata"

Why is it silly?

Chances are, nothing you do will affect the weather. Rain is caused by water evaporating from the Earth's surface, condensing into clouds, and then falling back to the ground.

Why do people say it?

Eating directly from the pot transfers your germs onto the spoon or fork and into the food that will be served to the whole family. Yuck! The same thing happens when you double dip a chip. So, keep your utensils and tortillas to yourself!



If you keep making that face, it'll freeze that way

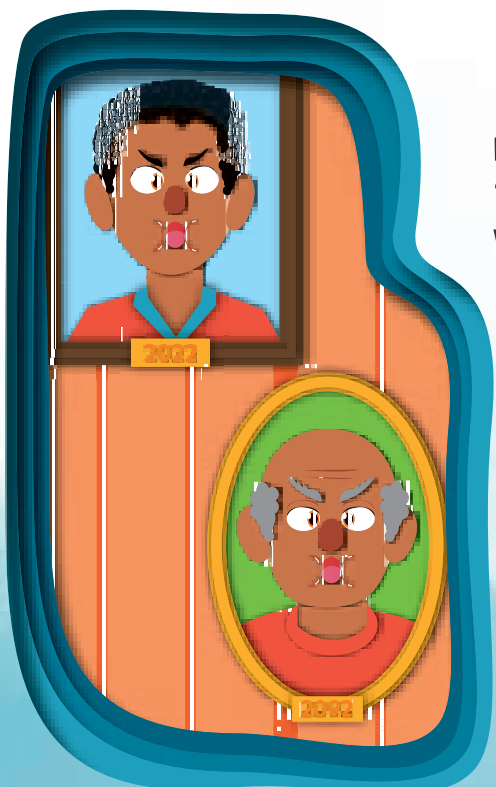
"As die windrigting verander gaan jou gesig so bly"

Why is it silly?

In normal circumstances, your facial muscles won't get stuck in a position. However, there are actually a few neurological and muscular disorders, like spasmodic torticollis, blepharospasm and strokes that can cause the muscles in the face and neck to spasm uncontrollably and even get stuck in a position.

Why do people say it?

This old wives' tale has apparently been around since the 1800s. In the 1937 Enid Blyton book *Adventures of the Wishing-Chair*, a little boy pulls a face, the wind changes and he cannot change it back. Even though the wind getting your face stuck in a certain position is silly, there is some wisdom to this saying. Making a frowny face all the time when you're young will cause frown wrinkles when you're older.



DISCOVER ANOTHER WORLD BY GOING SNORKELLING

Words by Kendall Behr
Illustrations by Lené van Jaarsveld

Did you know that the idea of breathing through a tube to look at the creatures in the ocean goes back thousands of years? The ancient Greeks used hollow reeds and even pig skins to hold air to help them dive down deeper into the ocean.



What is snorkelling?

When snorkelling, we wear large goggles and breathe through a plastic pipe. This allows us to stick our heads into the water and wait patiently for ocean creatures... until they're comfortable... to come out and show their colours off! You can do it in a tidepool, lying on top of the water, or over a reef, and hold your breath while you dive down to look at fish, eels, and coral.

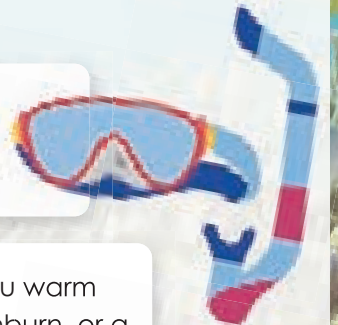


?! Get This!

Even though there is no exact record of when snorkelling was invented, many people suspect it began in 350 BC when Aristotle observed an elephant underwater, using its trunk to breathe. Leonardo da Vinci drew designs for breathing underwater as early as the 15th century.

Snorkelling gear

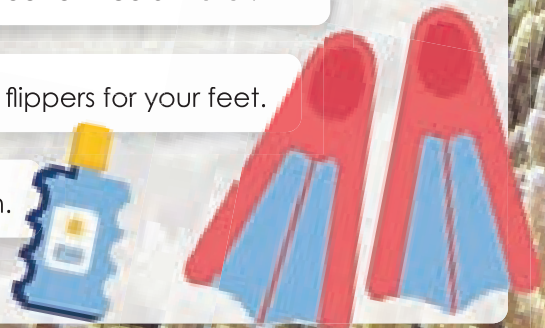
A pair of goggles and a snorkelling pipe with a mouthpiece.



A water shirt to keep you warm and protect against sunburn, or a wetsuit if you're in cold water.

Booties or flippers for your feet.

Sunscreen.



Things to keep in mind when snorkelling

1

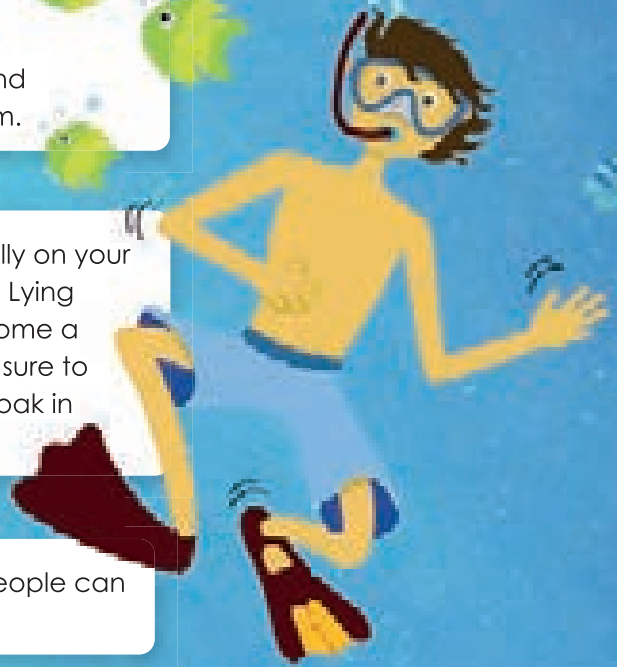
Snorkelling is a super fun and wonderful way to observe wild animals, but it's important to remember the creatures are exactly that: wild! Even if you're super tempted, don't touch anything unless you know it's safe. Some coral can be poisonous, or the oils and sunscreen on your hands could poison them.

2

Speaking of sunscreen... lather up! Especially on your back and the backs of your legs and neck. Lying down snorkelling is the perfect time to become a braaied human if you're not careful. Make sure to use a biodegradable sunscreen and let it soak in before getting in the water.

3

Always go snorkelling with a buddy. Two people can help each other if one person gets hurt.



Protect marine life

Starfish are an example of some of the wonderful creatures you could see while snorkelling, but they should stay in their homes. They can't breathe out of water, so if you pick them up to show someone, they could suffocate and die within a few minutes. They also find it very stressful to be handled, and the chemicals in sunscreen can kill them too.



How to prepare

Location, location, location

Find a place, like tidal pools, that will be safe at high tide, or a reef that you can get to with a boat.

The day before

Make sure that you have good weather for snorkelling. Overcast days are best, although sunny days are fine too. Stormy days don't have good visibility.

On the day

Remember to stay hydrated – take lots of water and a packed lunch. Make sure your mask fits by breathing in with your nose while you're wearing it. You shouldn't be able to breathe, and it should stick to your face firmly.



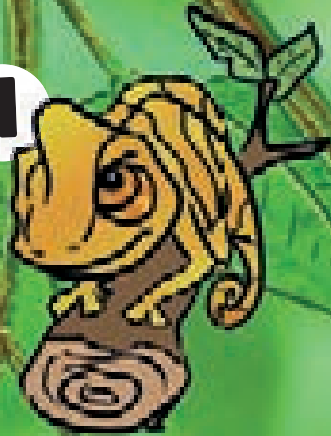
Chameleon Camouflage



How to play

These six sneaky creatures are hidden across some pages in the magazine. Look closely to find them – they're camouflaged to blend in!

1



Found on page:

2



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Illustrations by Meaghan Koen

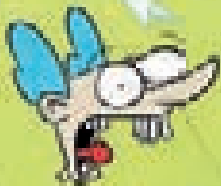
DOCTOR RIP

WE DIE SHOCKINGLY!

DOCTOR RIP EXPLAINS



IT'S ESTIMATED THAT LIGHTNING STRIKES THE EARTH BETWEEN 30 AND 100 TIMES A SECOND.



A BOLT OF LIGHTNING IS LIKE AN ENORMOUS ELECTRIC SPARK...

THE LIGHT IT GIVES OFF IS AS BRIGHT AS 100 MILLION LIGHTBULBS.



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EVEN SO, 4 OUT OF 5 PEOPLE STRUCK BY LIGHTNING SURVIVE THE SHOCK.



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