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in **RSA!**

INCLUDES
Hidden Pictures™

supernova

The mag for curious kids

Let's talk about
PETS



p.34

Make a rad
shell necklace



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Spectacular SHELLS

and the animals that live inside them

p.28

Vol
9.6



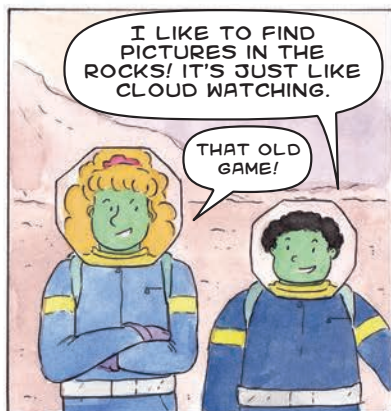
BK
PUBLISHING

PUZZLES | SCIENCE | NATURE | ACTIVITIES | SPORTS | COMICS



Story and artwork
Maya LeMaitre

MIMI'S LIFE ON MARS





2021 AWARDS ARE OPEN AND ACCEPTING ENTRIES!



Last year's competition saw Noodles (pictured above), a rescue dog from Germany, win the top prize for his cheeky impersonation of a goofy guard dog. The photo was brilliantly captured by his owner, Elke Vogelsang. This year, the competition will once again encourage us all to pick up a camera or phone and capture those hilarious pet moments, either in a shot or a video clip, and enter them into the Awards.

Absolutely anyone can enter, and all photographers of all ages are welcome, whether amateur, aspiring enthusiast or professional! Get involved for a chance to win the cash prize of £2,000 and be crowned the 2021 Animal Friends Comedy Pet Photographer of the Year!

To enter a funny photo or video of your pet, please visit:

www.comedypetphoto.com/login.php

Sign up with your email address to register.

Hi SuperKids



Candice

There's truly no better feeling than sinking your toes into soft white sand, hearing the roar of mighty waves crashing in the distance, and feeling the saltiness of the ocean air stick to your skin. Even the smell of sunscreen makes me long for the beach now!

The beaches in South Africa are some of the most beautiful in the world. How lucky we are! I love that the sand is always scattered with beautiful shells and curious animals that call it home. However, it is more and more common now to spot litter, sewage, plastic, and other pollutants ruining the beauty of our beaches. This contaminates our coasts, destroys marine life, and can make people and animals seriously sick!

Beaches play an essential role in the environment, so it is important for us to protect them. They help to mitigate climate change, and provide permanent habitats for thousands of marine plants and animals. Of course, this all depends on our coasts being safe and healthy.

Beaches are for all of us to enjoy, and it is also our responsibility to help keep them clean. So, next time you're collecting beautiful seashells to take home, why not collect some litter to throw away too? Every little bit counts towards keeping our beaches beautiful and healthy.

Get to know the Supernova Team!

What do you like daydreaming about?

I daydream about the sea. It's been years since I bodyboarded, scuba-dived, free-dived and did underwater photography. I wish that the sea could be part of my life more often.

Hey SuperKids! I'm Benoit. I have the best job in the world! I run the business, make big decisions and manage the Supernova team. I also illustrate the cover, take photos, and write articles.



Benoit
Director and Publisher

What's your favourite weird food combo?

I love a banana covered in Nutella on my pancakes!

What's your favourite thing about being at Supernova?

I get to share my love for nature, learning and discovery with all of our readers. I feel like I can change the world, one kid at a time.

If you could be any emoji, which one would you be?
I'd be this one:



I love travelling and introducing my business to people around the world.

How would you spend a rainy day?

Read, play music and play indoor games with my daughter, Hannah.

I've liked holding my breath since I was really young. My favourite place is under the waves.



supernova

ISSN: 2224-1442
EMAG ISSN: 2413-8207
Legal deposit: 06/2021

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Published every two months by:

BK Publishing (PTY) LTD

Reg: 2015/060893/07



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0001
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T: +27 12 342 5347
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Printed by:

Zero Plus Printers

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33 Make your own shell necklace

Turn a special memory of an awesome holiday or a trip to your favourite beach into a wearable keepsake!

The wonderful world of pets

From the typical animals we love to cuddle, to the more unusual ones that amaze us, the SN Pet Guide dives into the world of pets and how they came to be our lovable companions.

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38 Waves of Eco-Cleanups

Here's a rundown of the revolutionary inventions from scientists across the world that could help our marine ecosystems.



Answers for Brain Games on page 48.

5	2	8	4	6	7	3	1	9
9	6	3	8	1	5	4	2	7
1	7	4	2	9	3	5	8	6
2	3	1	9	7	6	8	5	4
8	5	7	1	2	4	6	9	3
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7	1	6	8	9	5	3	2	4
8	3	5	2	6	4	1	9	7
4	9	2	1	7	3	5	6	8
9	2	8	3	4	1	7	5	6
6	4	3	7	5	2	9	8	1
5	7	1	9	8	6	4	3	2



44 When more is less

Every year the prices of products increase. But have you noticed that the size of the product also decreases? Learn all about shrinkflation – and getting less for the amount you pay!



TIFFANY (12)

from Queenswood asked us:

Ask Jules?



Jules

What is the colour of a mirror?

What an interesting question, Tiffany! When we think about a mirror, we often picture it as white or silver. That's usually how mirrors are described in books or movies! But the colour we are actually seeing is whatever is reflected onto the mirror. A perfect mirror has specular reflection and reflects all light in a single direction that is equal to what it receives. The human eye can tell the difference between 10 million colours! But most mirrors we use aren't perfect and in fact, our mirrors reflect one wavelength of light slightly better than others – light in the 510-nanometre range, which we perceive as green. This is the reason why when we look at the reflection of an object in a mirror, it seems to have a greenish tinge to it. So, in reality, mirrors are actually a very tiny bit green! You might have seen this for yourself without realising it when looking in a mirror tunnel.

Reader Corner

Picture Perfect Pets Galore!

Supernova reader, Katelyn Holton (11), sent us an awesome drawing and letter all about her puuuuurfect pets. She has two dogs, two cats, three guinea pigs, and six fish tanks with all kinds of fish. Check out her drawing to see who's who in the zoo!



Jules

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



Khayelitsha kayak tour kicks butt



Along the Kuils River, on the border of the Makhaza section of Khayelitsha, you'll find a unique man with a unique plan.

Siyanda Sopangisa operates a one-of-a-kind township tour on kayaks! His initiative started in 2016 when he came up with the unique idea to attract more tourists to the neighbourhood while simultaneously creating jobs and cleaning the wetlands.

Siyanda also wanted to create a safe space for children to play, and started a canoe club in the area. Over two years, Siyanda and his team cleaned up the river and transformed it from polluted waste into a wetland oasis where kids could learn to paddle for free – a first of its kind in a South African township!

Last year's lockdown impacted Siyanda's plan for kayaking tours. But, he has found another way to keep busy and give back! Siyanda and his team spend every Saturday cleaning up the banks of the Kuils river and discarding waste that has gathered. Thanks, Eco-Warriors!



Photos by Jay Cobb



Creature FEATURE



Blue dragons, or more properly *Glaucus atlanticus*, are part of a group of creatures known as nudibranchs or sea slugs. They are also known as blue sea slugs, blue angels, and sea swallows. These creatures float freely in currents of temperate and tropical ocean waters worldwide, specifically the Atlantic, Pacific, and Indian oceans.



Blue dragons have developed the perfect colouring for hiding while floating on the sea surface! The sapphire side of the body faces upward and blends perfectly with the blue water, while the silver part faces downward so it can't be seen by predators from below. These pretty sea slugs are not poisonous, but can gather poison from what they eat, concentrate and store it, and use it if they get attacked.

In many locations worldwide, blue dragons are being spotted for the first time! This may be because of the warming ocean, combined with increased storm activity, which has led to them floating further into different coastlines.



Photo: Sylke Rohrbach

NEW

7 Wonders of Nature

New 7 Wonders of Nature

For many hundreds of years there have been lists of wonders, usually seven or more. You've probably heard of the **7 Wonders of the World**, which include the Colosseum and the Great Wall of China. In 2007, an initiative was started to create a list of seven natural wonders chosen by people through a global poll. There were 77 nominees from over 220 countries! In the end, more than 500 million votes from all over the world were cast, and these were the 7 winners!

Table Mountain, Cape Town

As South Africans, we all love this awesome landmark that creates an iconic backdrop to the city of Cape Town. Table Mountain is one of the most popular tourist attractions on the entire African continent and around 25 million people have visited the top of the mountain since the cablecar system opened in 1929.



Amazon Rainforest and River

River runs mostly through Brazil and Peru



The Amazon Rainforest spans across nine South American countries, covering 5.5 million km²! It is known as the lungs of our planet, since it produces more than 20% of our oxygen.
[#takeadeepbreath](#) [#protectourrainforests](#) [#tropiclikeitshot](#)



Jeju Island

South Korea



Jeju Island was formed through volcanic activity several million years ago! Hallasan, the dormant volcano on the island, is 2 000 metres above sea level, and is surrounded by lots of smaller volcanoes! [#hotspot](#) [#soundslikeablast](#) [#livealoughlava](#)



Ha Long Bay

Vietnam



Around 1600 small limestone islands that seem to magically rise out of the sea have earned Ha Long Bay its name as the "descending dragon bay". [#scalyback](#) [#keepyoureyesonthesky](#) [#lookingfly](#) [#roarsome](#)



Komodo Island

Indonesia



This tiny island is one of 17 000 in the Indonesian archipelago! It is home to the world's largest living lizard species, the Komodo Dragon. [#youarebeingmonitored](#)



Iguazú Falls

Between Argentina and Brazil



The Iguazú Falls are made up of hundreds of different waterfalls and cataracts, making it the largest waterfall system in the world!
[#gowiththeflow](#) [#mainstream](#) [#literallylivestreaming](#)



Puerto Princesa Subterranean River National Park

Philippines



This underground river and cave system, along with all of its shy inhabitants, is best experienced by boat. Mind your head on the ceiling stalactites though! [#wowthatstite](#) [#youfloatmyboat](#)

The Ukulele

The correct pronunciation of Ukulele is "oo-koo-lay-lay" and not "you-ka-lay-lee"



Ukulele means "jumping flea" in Hawaiian!

The very first 'uke' was made in 1879.

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

The ukulele is not a Hawaiian invention; it's originally from Madeira, Portugal!



There are 4 ukulele sizes: the soprano, concert, tenor, and baritone.



After the moon landing, Neil Armstrong entertained himself by playing the ukulele during his 21 days of quarantine.

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Professional Bodyboarder



Hello! I'm Iain Campbell.

I am a Durban-born, professional bodyboarder who won a world title in 2017. In my career I have won 6 international events and been on the podium 21 times in the past 7 years. For the last 5 years, I have been living in Cape Town. I travel all around the world to compete in events.

How did your love for bodyboarding start?

I started out as a nipper, racing bodyboards through the waves and around buoys. This love grew into a passion that soon became my life. Now I am making a living doing something that I really love to do – riding waves on a bodyboard.

What does a typical day look like for you?

It all depends on the waves! Usually, I get up early, have a coffee and check the tides. Most waves are tide dependent, so I try to make the right decision on where to ride. Then, I have a session in the water or go to the gym to train.

What does bodyboarding training entail?

Being fit is paramount to getting good results and staying injury free! I do this by swimming and going to the gym to help me to get strong. Then, I get in the water and ride my board, which is the best training by far. I also work with a high performance trainer to keep me fit and injury free.

Photo by Alex Perez



I Iain's advice

Have a strong mindset and believe in yourself, and you can achieve anything you set your mind to!

What is the highlight of your bodyboarding career?

After spending the last 7 seasons traveling to Hawaii, I won the Pipeline event. I spent a lot of time in the water at this famous break and that one event made it all worth it. I won the event by getting a 10-point ride in the final five seconds of the heat!



Photo by Alex Perez

What does it take to become a world champion?

Dedication, hard work and a supportive team of trainers, as well as friends and family that are willing to sacrifice to get you to the top. I am fortunate enough to have a great group of individuals taking me through the process of getting me to the top.

What are some of the risks and challenges?

Injury is a big risk. The majority of bodyboarding moves take place in the air, so taking hard impacts is always a risk. Also, the sport is small and the money is not great, but I have found ways to make a living doing what I love. And then there is always the risk of sea creatures too...



Sterkfontein Caves

Words by Andrea Vermaak
Layout by Nikita Abreu



Sterkfontein caves



Andy



I love visiting Sterkfontein! Let me tell you more about this important historical cave complex right here in SA!

Ancient caves

Sterkfontein is a complex of limestone caves that form part of an area known as the Cradle of Humankind in the Muldersdrift area of Gauteng. The caves are a South African National Heritage Site and a UNESCO World Heritage Site. Here's why...

An important site

Sterkfontein is one of the most important sites in the world for palaeoanthropologists. These are people who study fossils of hominids. In other words, they study the old bones of humans, their ancestors and a few of the great apes.

About 500 hominids have been excavated at Sterkfontein. That's more than a third of early hominid fossils ever found before 2010. Sterkfontein is truly a rich deposit of early hominid fossils.



Photo by Anrie

The Sterkfontein caves were discovered in the 1890's.

Photo by Anrie



A statue of Dr Broom holding 'Mrs Ples', found in 1947.

Important hominid discoveries

One of the most important discoveries in the caves was the first complete skull of an *Australopithecus africanus*, nicknamed 'Mrs Ples'. South African palaeontologists, Robert Broom and John T. Robinson, found her 2.3-million-year-old remains in 1947.

Ronald J. Clarke, also a palaeontologist, uncovered an almost complete skeleton of a 4.17-million-year-old *Australopithecus* in 1997. The hominid was named 'Little Foot' as the bones of a foot were found first (in 1995).

You can see these fossils and more at the visitor centre at Maropeng. I highly recommend a visit!



Excavations continue

The University of the Witwatersrand (Wits) owns the caves. Wits' scientists are responsible for the site's main excavation, even today.

The Palaeo-Anthropology Scientific Trust sponsors over 90% of research at Sterkfontein.

What else do you think they may find?



Photo by John Walker

Sterkfontein has given us the best collection of early homonids and is why the caves were named a World Heritage site.

WOULD YOU LIKE FRIES WITH THAT?



Supernova

The other day, I ordered a burger and was asked if I want chips with it. I said, "Yes, why not? Please." Sometimes chips are the best part of a meal! Then, I remembered that some people call chips 'French fries' and I began to wonder why...

When I sat down to my meal and picked up a chip, I also wondered where potatoes originated and who first thought to cut a potato and deep fry it in oil before eating it. Of course, the best thing to ask was the chip in my hand...

Words by Andrea Vermaak

Illustration by Benoit Knox

Q: Hey, so I always thought potatoes originated in cold, wet countries like Ireland. I believe that's not actually the case. Where are your ancestors from originally?

A: Potatoes first grew in Peru around 8 000 to 5 000 B.C. The Incas farmed with us. It was not until 1536 that my ancestors found themselves in Europe, after the Spanish conquered Peru, and took a few home with them.

Sir Walter Raleigh introduced a few of my family members to Ireland in 1589, where my family grew larger after being planted. When the rest of Europe saw how easily my family grew, they wanted to plant us too. We just kept on spreading from there...



Get this!

In the Belgian town of Bruges, you'll find an entire museum dedicated to fries! It's called the Frietmuseum, and it features two stories of crispy, golden history.


Q: Now, potatoes like you, in a thinly sliced, fried form are also known as French fries (particularly in the USA), but are you originally French?

A: There are so many stories, we don't even know what to believe! Some say that either France or Belgium can take credit for us. The Spanish believe that they invented us!

The story that fits our French origin best is that when King Louis Phillipe arrived late to dinner one evening, his chef, Collinet, invented us accidentally when he plunged already fried potatoes into very hot oil to reheat them. The potatoes puffed up. Both the king and chef were surprised and delighted.

Bonjour!





But I believe that poor Belgian villagers actually invented us during the 1600s. It's said that they fried pieces of potato instead of fish during winter when the rivers froze.

The Americans called us 'French fries', despite our Belgian origin, around 1802 after Thomas Jefferson, the then US president, asked for "potatoes served in the French manner". Then again, 'French fries' does make sense because French is spoken in Belgium...

?! Get this!

Many people think of fries as one of the worst foods you can put in your body. But, they actually have some nutritional benefits! They contain vitamin B6, vitamin C, magnesium and iron.

Q: How did you become so popular (besides being delicious!)?

A: We're not only a great accompaniment to just about any takeaway meal, we're also cheap, and quick and easy to make. We were first sold as fast food in Europe in the late 1700s.

It seems like we really took off with the rise of modern takeaway outlets after World War I, particularly in the USA. It's said that when American soldiers returned home from Europe, they craved the popular frites they had eaten with steak (popular in France) or mussels (popular in Belgium).

Q: Who's your best friend? Ketchup? Vinegar? I, personally, love mayo!

A: Many enjoy us with just a sprinkle of salt, but we're often paired with ketchup, mayonnaise or ranch dressing, especially if we're served with burgers. Did you know that ketchup was invented as early as 1812 and was only made popular after Heinz bottled it?

You could also eat us with salt and vinegar if you're having fish and chips, for example. This is particularly popular in the UK.

However you choose to eat us, we're delicious!

?! Get this!

There are at least 15 different styles of fry in existence: standard, waffle, thick-cut, belgian, curly, steak, shoestring, crinkle-cut, sweet potato, cottage, side-winding, tornado, wedge and smiley face!

Supernova

As I finished my meal, I not only savoured my tasty chips, but really appreciated their wonderful journey from mere spuds in the ground, originally farmed in Peru hundreds of years ago, to the delicious chips, a.k.a. French fries, on my plate.

Would you want to live forever?

ELIZUR (9)

I will certainly NOT want to live forever because that means I will have more chores, more homework, and more kids to spend all my time and money on. I enjoy the fact that we don't get to live forever on Earth. That would be strange and uncomfortable.

SN ✓



ALEXIA (12)

I wouldn't want to live forever because I don't know what will happen in the centuries to come and that scares me.

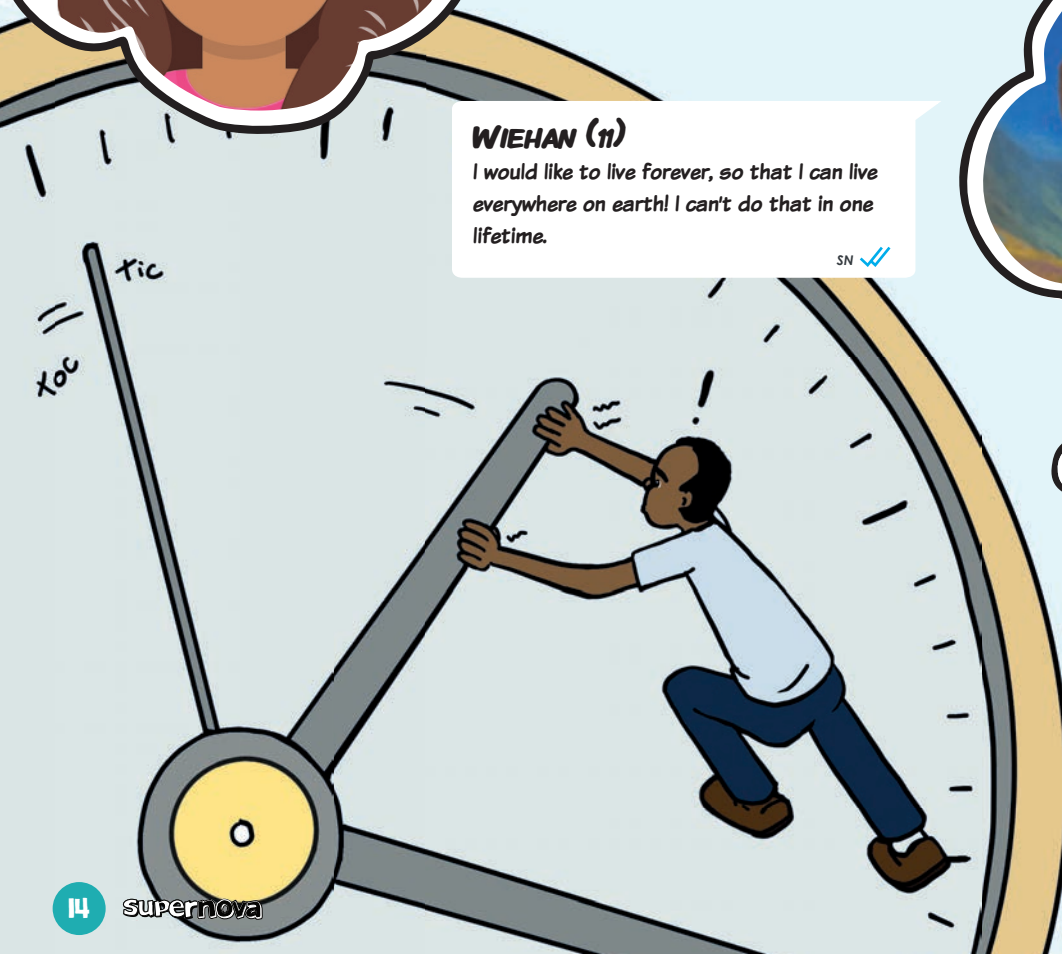
SN ✓



WIEHAN (11)

I would like to live forever, so that I can live everywhere on earth! I can't do that in one lifetime.

SN ✓





NKAZIMULO (7)

No, because if I lived forever, I would be the last child alive. Also, who would make me food and how would I get electricity?

SN ✓✓



CAYLEN (12)

I wouldn't mind living forever because then I get to see what happens in the future and how things have changed over time.

SN ✓✓



KAYLEE (13)

No, that's too long. I would like to travel the world, see new places, make new friends and experience different things, but once I did all of that, I wouldn't know what to do with the rest of my time. I would like to live for a long time, but not forever.

SN ✓✓

LEXI (7)

No. When I am old, I want to go to heaven to see my grandfather and our dogs, Ziggy and Fudge.

SN ✓✓



LWANDILE (7)

I want to live forever because I love myself, my family and friends. I also love going to school because it is fun!

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 and everything

Words by Su-Mia Hoffmann
Illustrations by Benoit Knox

China is a manufacturing powerhouse, and we are used to seeing "Made in China" on clothing, toys and electronics. Today, China makes and sells more goods than any other country in the world. But it's not just modern everyday goods that come from our friends in the east. We can thank the Chinese for many of the things we use (and eat) every day.

中国制造 Made in China



Hello, I mean, Nǐ hǎo! I'd like the gōng, uhm, gōng bà, uhm, gōngbào jīdīng... number 25, please.

Some rice on the side

Rice originated in the Pearl River valley region of China between 8 200 and 13 500 years ago in the early Neolithic era. That's a very long time ago! Many different people, including Alexander the Great's soldiers, brought rice from Asia to their home countries and spread this little grass seed across the world.

?! Get this!

All types of Asian rice are domesticated (farmed) variants of the wild grass *Oryza rufipogon*.

That's the Kung Pao chicken, sir (uhg, tourists!)

Menu, please!

You might think restaurants are a 20th century invention, but you would be wrong! The first restaurants appeared in the early Song Dynasty (960-1279) in the Chinese capital of the time. The economy and trade were booming, and merchants and shopkeepers did not have time to go home to eat. Cue the creation of the restaurant! Foreigners and Chinese from rural areas were flocking to the cities. This created a demand for a variety of flavours and led to the creation of the menu.



We have a big order for 16 thousand sheets of paper.

And they need them fast!

It's a slow process, the people at Supernova can wait!



The Land of Paper

Paper in all of its forms originated in China. Evidence of Chinese paper as old as 200 B.C. has been found. Pair this with the development of woodblock colour printing in the 6th century, and you get inventions like playing cards. Playing cards were used across Asia by the 11th century.

?! Get this!

The clocks we use today are based on the same principles used in ancient Chinese clocks.

?! Get this!

The silk trade was so popular in the pre-industrial era that the trade routes between Asia and Europe are called the Silk Road.

What time is it?

You can thank the Chinese for the watch on your wrist. In the 8th century, they came up with a device that used dripping water to turn a wheel. Every hour a bell would chime and every quarter hour, drums would beat. In 1092, the design was refined and made more accurate. Europeans only developed mechanical clocks in the 1200s. The Chinese also developed the compass as early as 221 B.C.



You are descendants of a long line of noble insects who have dressed queens and emperors through the ages.



Silky sweet

Silk and white mulberries go together like salt and pepper. The earliest examples of silk are 8 500 years old and are found in ancient tombs. The mulberry has been used for thousands of years to feed the larva or caterpillar of the Bombyx mori moth that produces the silk.

?! Get this!

Making silk from silkworms is called sericulture.

I knew I wasn't just a worthless worm!



This is only a taste of the many items that came to us from China. Our lives would be completely different today if it weren't for our Chinese friends. The next time you eat some rice, or pay for something with a bank note, order from a menu or check the time, think how lucky we are to have all these things that were first made in China!

Selfies from Mars



Words by Vasalya Moodley
Layout by Meaghan Koen

Have you heard? NASA's Mars Rover, Perseverance (or "Percy") had an astronomical breakthrough this year: it sent back photographs of the planet Mars! Percy made it to Mars safely on 18 February 2021 after eight months of travelling through space. Percy's exploration is monumental, as it will help us to see if any life actually existed on Mars and if, potentially, humans can explore it too. Gripping stuff!

Meet Percy!

Perseverance was designed to perform a multitude of functions with advanced technology, from collecting samples to carrying out experiments. Through exploring, Percy can search for past life on the Red Planet. More fascinatingly, it can administer a test for oxygen production, which will determine if humans will be able to survive on Mars.

What we want to know

NASA's mission is to find out if there was ever life on Mars. In the past, rovers have found evidence of basic things necessary for life, such as water. Percy's mission is to roam Mars to collect data from rocks and air. What makes Percy special is that this rover will help to determine if a human mission to Mars can be done.

Photo by NASA/JPL-Caltech

5 ... 4 ... 3 ... 2 ... 1 ...

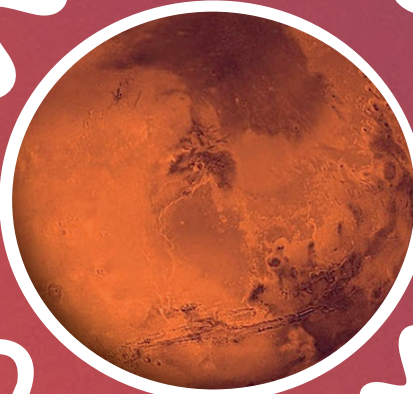
Blast off!

On 30 July 2020, Percy began its journey to Mars. The rover lifted off into space in the Atlas V Rocket at almost five in the morning. The rocket left Earth at Cape Canaveral Air Force Station in Florida, in the United States of America.



Far, far away...

Percy flew over 400 million kilometres at over 20 000 kilometres an hour to reach Mars! Upon reaching Mars, the space craft carrying Percy slowed down as it entered the atmosphere. This caused the craft to get extremely hot, however, our Percy was well-protected inside. Once Percy got closer to Mars, it slowed down even more and cables were deployed to lower it to the planet. When it finally landed, these cables were released from Percy and the craft landed safely somewhere else.



The expedition

Percy was set to land in Jezero, a wide crater of about 40 kilometres. Formerly a lake system, it is believed that this will be a great place to begin the quest for microbial life. In the future, NASA plans to bring back the findings and samples Percy acquires from Mars. It is set to perform experiments for approximately 687 days, which is one Martian year!

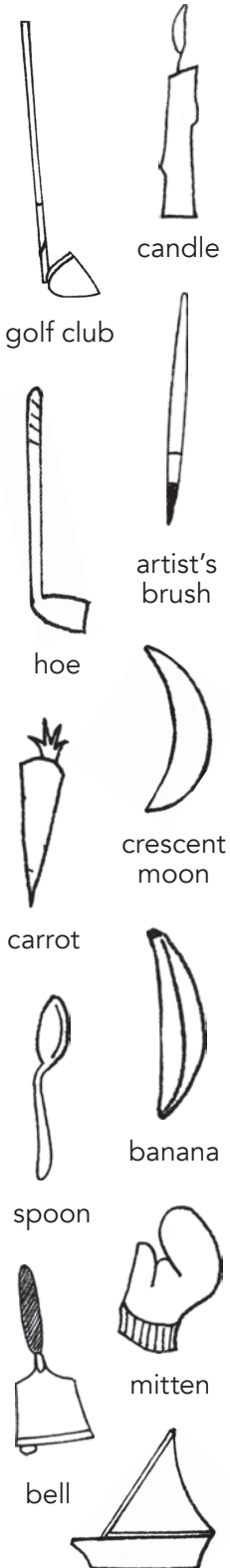
! Get This!

You can follow Percy's adventure on social media @NASAPersevere and @NASAMars.

Space exploration is exciting and intriguing, and is bursting with unanswered questions that scientists are just itching to answer. Through NASA and Percy's triumphant efforts, humanity is one step closer to uncovering more secrets about Mars and, maybe, the possibility of human exploration there. Who knows, maybe that theory could become a reality!

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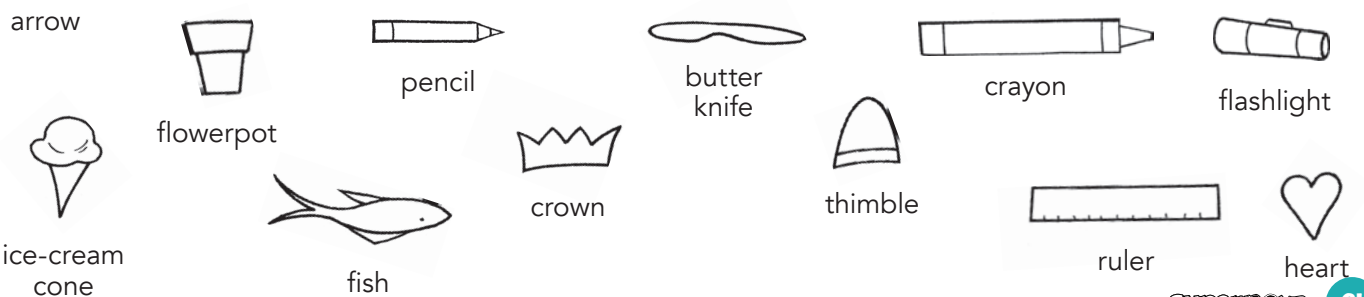


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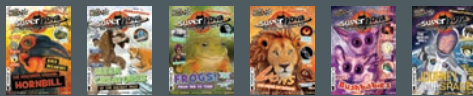
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'Why are you upside down Mum?'


Photo by Malgorzata Russell

Remember the hilarious photos from the *Comedy Wildlife Photography Awards* in our previous issue? Well, here's another giggle-worthy competition, all dedicated to our beloved pets. Meet the *Comedy Pet Photography Awards* – a competition that celebrates all of those wonderful furry, feathery, scaly and hoofed pals keeping us fit, sane and in good company!

The *Comedy Pet Awards* shares positive, feel good, funny pet images to encourage people to start supporting small animal welfare charities and make life better for the animals we share this planet with.

This photo of Basil the kitten won the cat category called "Our Fabulous Feline Friends". As you can see, Basil is very playful and agile, and a real garden lover. Every morning, Basil and his owner chase each other around the garden. That's how this sneaky shot was captured!





Guard dog
on
duty



'Guard Dog on Duty'

Photo by Elke Vogelsang

Meet the overall winner of the 2020 *Comedy Pet Photography Awards* – Noodles!

Noodles is a Spanish sighthound (Galgo Espa) who still acts like a pup, even though she's 13 years old. She is clumsy, eager, curious, friendly, open-minded and super funny! Judging from this photo, she's the perfect winner for the Comedy Pet Awards.

Elke (Noodles' owner) tells us that she rescued Noodles from a Spanish kill-shelter and brought her to Germany when she was eight months old. Noodles spends most of her time with her humans, when she's not getting up to mischief and adventure!

Check out more winners from the Comedy Pet Photography Awards, and enter your own photos in the competition now! Entries close on 15 August 2021.





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Spectacular SHELLS

and the animals that live inside them

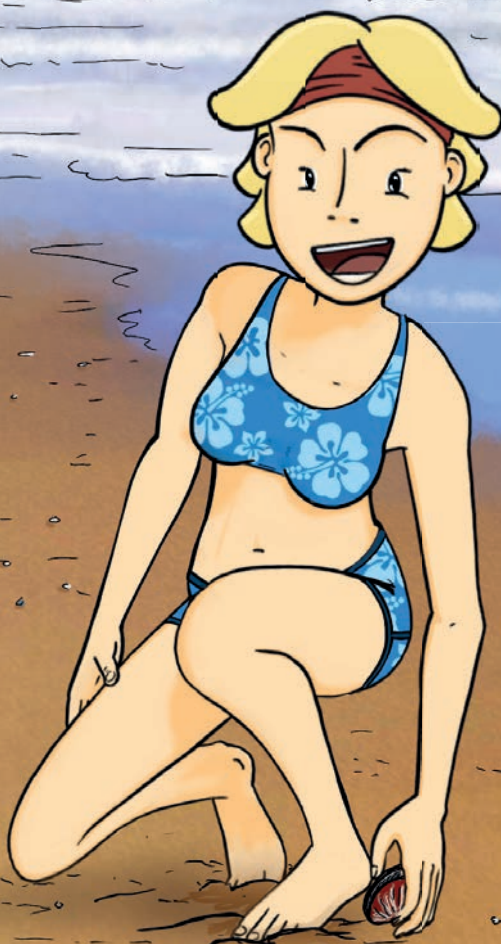
Words by Candice Robertson

Illustrations and photos by Benoit Knox

If you take a walk along the beach, you're bound to find hundreds – if not thousands – of different types of shell.

Some are large, some are small, and some are so beautiful it's hard to believe that an artist did not carefully paint them.

You could spend all day long looking at all of these beautiful shells, but have you ever thought about their lives below the waves and the animals that live inside them?



Get this!

Common types of shells include sea shells, snail shells, turtle shells and eggshells.

What is a shell?

Seashells are the external skeletons of a class of marine animals called molluscs. People and mammals have their skeletons on the inside of their bodies, but molluscs have their skeletons on the outside. How rad! Shells are used to protect molluscs from predators, strong currents and storms. Any empty shell you find on the beach was once home to one of these small, soft-bodied creatures.

?! Get this!

Not all molluscs have shells. For example, an octopus is a mollusc, but does not have a shell.

?! Get this!

It's unknown how many seashell species exist, but there are as many as 85 000 different species of molluscs.



Plough snail



A mollusc living inside of a conch shell

What are shells made of?

Seashells may look very different, but almost every shell you can find on the beach is made of calcium carbonate. Another word for this is mineral calcite, which is actually the same material that makes up stalactites and stalagmites found in caves. Along with the calcium carbonate, shells also have a small amount of protein. This makes the shell light, but very strong, and provides protection for the soft, slimy, vulnerable animals that live inside them. An organic protein also covers the outside of the entire shell, which makes it water resistant and durable.

Mollusc eggs



Photo: Lee Barry Selby

How are shells made?

It all starts with baby molluscs hatching from tiny eggs. When they are a few days old, they start to build their shell, layer by layer, using a body part called the mantle. They use some protein from their own bodies to build a strong frame, and fill this up with calcium carbonate taken from the salt and chemicals of the sea.

As their bodies grow, molluscs have to enlarge their shells by adding new layers of calcium carbonate and proteins. Sometimes, you can see how a mollusc has grown by looking at markings on the inside and outside of its shell. If their shell gets damaged, molluscs can repair it using the same ingredients.

?! Get this!

Molluscs can live for a long time! The oldest known individual animal is actually a shellfish – the ocean quahog, *Arctica islandica*. This shellfish lives in the cold waters of the north Atlantic, and the growth banding of one shell sample showed that it lived to be 507 years old!

Over time, molluscs grow shells that best help them to survive in their environment. This might mean having an extra hard shell that protects them against animals that want to eat them, or having a shell design that makes it easy for them to dig into the sand and escape quickly.



A damaged shell that was repaired by a mollusc

Photo: Norbert Nagel

shells of our shores

There are more than 85 000 types of mollusc shells! Some open like clam shells, while others are spiral shaped and have one opening where the animal enters and exits the shell. Let's have a look at the animals that create these beautiful works of art.

Bivalves

These are the most common type of seashells that wash up on beaches. They are made up of two half-shells, called valves, that are connected by a dorsal hinge at the back. Molluscs that live inside these shells keep the hinge slightly open for breathing and eating. Their strong muscles can close the shells very tightly. Most bivalves bury themselves in sediment, while others lie on the sea floor or attach themselves to rocks or other hard surfaces.

Tellins

Tellin shells can be round, triangular or oblong. They are very pretty shells and come in different shades of pink and yellow.



Cockle

Cockles look similar to clams, but when you turn the shell sideways they are rounded and heart-shaped with a slightly ribbed texture.



Oysters

Oyster shells are usually oval or pear-shaped. The outer shell is generally whitish-gray and the inside is a porcelain white.



Scallops

Scallops have a fan-shaped corrugated shell which is hard to break, even if you drop it or hit it. These corrugations are called ribs and make the scallop shell strong and heavy.



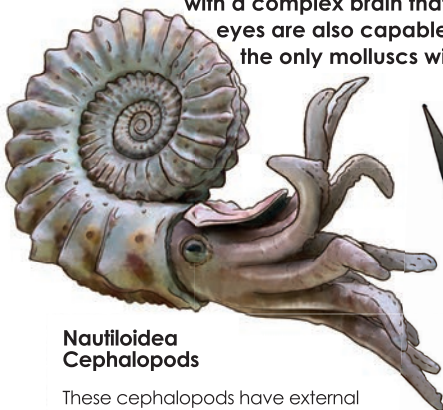
Clams

A clam has two oval-shaped shell pieces that are attached by a stretchy ligament. The clam's muscular foot extends through the open end of its shell and helps it burrow into the sand or mud.



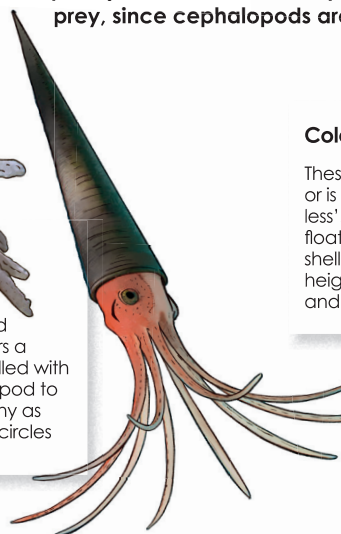
Cephalopods

These molluscs are unusual in a number of ways. They have a highly developed nervous system with a complex brain that allows them to learn and remember information! Their eyes are also capable of forming images, unlike other molluscs. They are also the only molluscs with a closed circulatory system, and some can move very quickly! This comes in handy when stalking their prey, since cephalopods are all carnivorous.



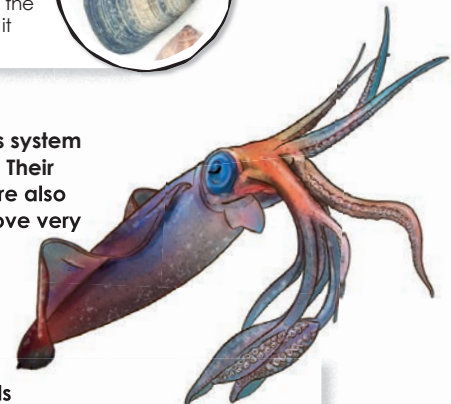
Nautiloidea Cephalopods

These cephalopods have external shells that are long, short, straight, curved and even coiled! The smooth shell covers a large body of subchambers which are filled with an inert gas. This gas allows the cephalopod to float in the water. They can have as many as 90 tentacles which are arranged in two circles around their mouth.



Coleoidea Cephalopods

These cephalopods have a shell that has been internalised or is absent entirely. They are known as 'soft-bodied' or 'shell-less'. Coleoids have an internal cuttlebone that helps them float in the water. Since they do not have a shell to help protect them, they rely on their heightened intelligence, talent for hiding, and strong, flexible arms.

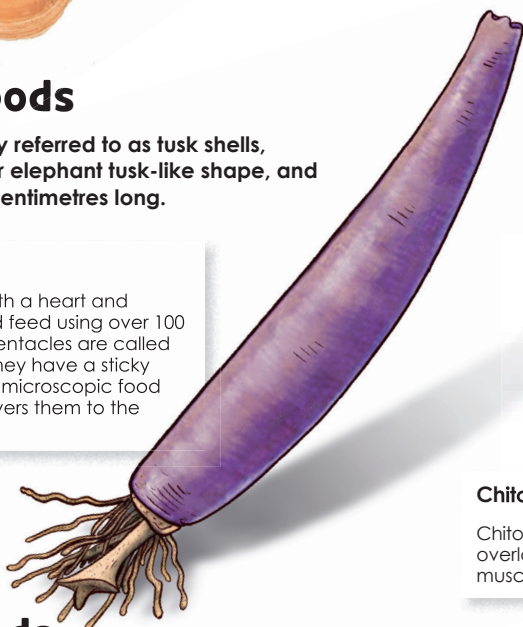


Scaphopods

These are mostly referred to as tusk shells, because of their elephant tusk-like shape, and are about two centimetres long.

Tusks

Tusk shells lack both a heart and blood vessels, and feed using over 100 tentacles! These tentacles are called captacula, and they have a sticky surface that traps microscopic food particles and delivers them to the mouth.

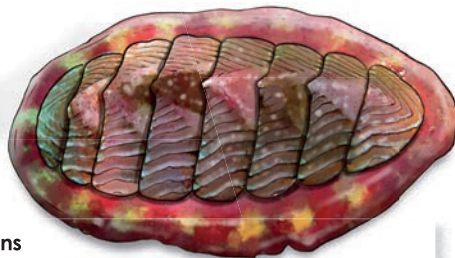


Polyplacophors

These are shield-shaped shells; mostly found in the Caribbean and South America. There are roughly 900 Polyplacophora species alive today.

Chitons

Chiton shells are made up of eight distinct but overlapping plates surrounded by a circle of muscular tissue called a girdle.

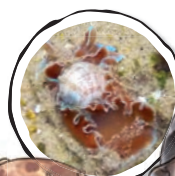


Gastropods

Gastropods make up the largest class of molluscs and account for more than 80% of all living mollusca species! These molluscs have a single shell that is often coiled with one opening. They have a trap door over the opening called an operculum. Most gastropods have a head with tentacles, eyes, and a foot that is modified for crawling. They are most well-known for their beautiful shell structures.

Limpets

The limpet shell is a low, flat, oval shell that covers the entire soft body of the mollusc living inside. Molluscs living in limpet shells stick tightly to rocks, and use the shape of their shell to act as a barrier to waves.



Cowries

These shells are smooth and shiny, and shaped like an egg. Cowries have a natural coating of enamel on the outer surface, which gives the shell a brilliant polished look.

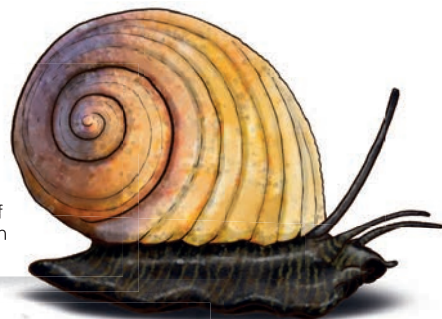


Abolones

In South Africa, we call these Perlemoen! Abalone shells have a low, open spiral structure, and are most-known for the breathing pores near the shell's edge. The thick inner layer of the shell is composed of nacre (mother-of-pearl). Abolones are hunted for their tasty flesh and are endangered!

Periwinkles

Periwinkle shells are smooth and brown or brownish-gray. There are six to seven whorls in the shell, with some fine threads and wrinkles. Periwinkles may live out of the water for several days and can survive in challenging conditions.

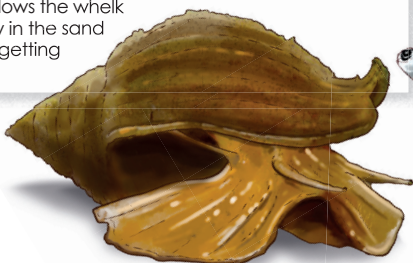
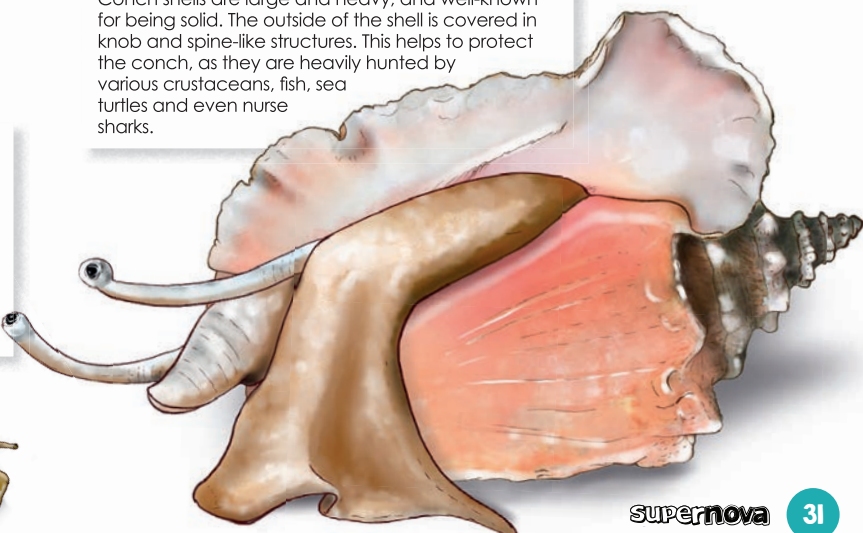


Conchs

Conch shells are large and heavy, and well-known for being solid. The outside of the shell is covered in knob and spine-like structures. This helps to protect the conch, as they are heavily hunted by various crustaceans, fish, sea turtles and even nurse sharks.

Whelks

Whelks have a spiraled shell which varies in size and shape. The largest whelk is the trumpet whelk, which grows to over 60 cm. Whelks breathe through a long tube-like organ which brings in oxygenated water. This siphon allows the whelk to burrow in the sand while still getting oxygen.





Why is there such a diversity of shells?

There are many different types of molluscs living in the ocean, which means many different shapes, sizes and colours of shell. This wide range in size, colour, shape and texture is for good reason – to ward off predators!

The colour of a shell depends mainly on what a mollusc has eaten. The large diversity of food in tropical waters gives molluscs more colourful shells. Colour also plays a large role in how the mollusc camouflages itself from predators.

Shells from tropical areas, where there is a large diversity of food and a large diversity of predators, often have elaborate spikes or horns that act as protection. Shells also come in all sizes. This can be related to the environment where the mollusc grows. Colder regions generally mean slow-growth, so the molluscs do not grow very big here.

When a mollusc dies, its shell washes up along the sea shore.

?! Get this!

The perfect holes you sometimes see in shells were most likely made by predators who tried to drill their way in.



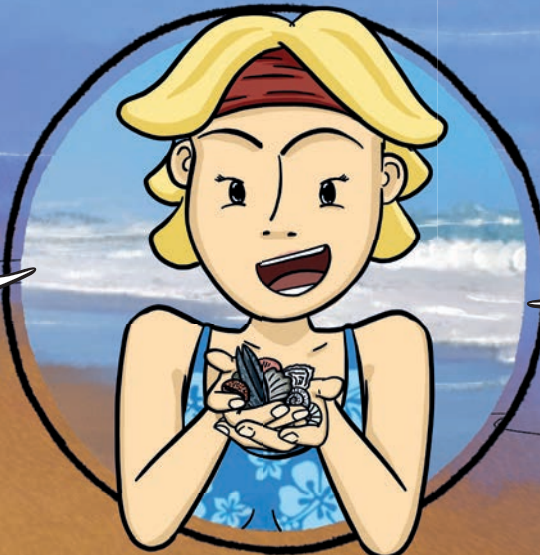
Shells are important

Shells are very important to the environment in a number of unique ways. They may no longer be homes to molluscs, but they can still be used as homes by hermit crabs or young fish. Shells help to stabilise beaches and anchor seagrass, and when they break down, they provide nutrients for the organisms living in the sand.



Now you know where shells come from and what animals made them.

Picking up shells that wash up on the beach is a memorable way to spend a day in nature.



Hermit crab

?! Get this!

Hermit crabs use discarded mollusc shells for protection. As the hermit crab grows, it will look for larger shells to use for protection.

Shells at risk

Large and beautiful shells are sold as decorations in many tourist areas. These shells are not found on the beaches, but rather the molluscs are taken alive out of the sea and killed for their shells. This causes the unsustainable depletion of some molluscs and has a knock-on effect on the diversity of the undersea environment.



Don't buy shells from market places

You can take a few empty shells, but remember to leave living molluscs alone and leave some for the hermit crabs.

Make your own

SHELL necklace

Making your own shell necklace is a really cool way to remember a special beach you visited on holiday.

Make sure to only use one special shell (or even pieces of a broken shell) and leave the rest for the crabs!

What you need:

- Small shells
- 1 cup of flour
- 1/2 cup of salt
- 1/2 cup of water
- Food colouring
- A tray
- A stick
- A piece of string long enough to tie around your neck



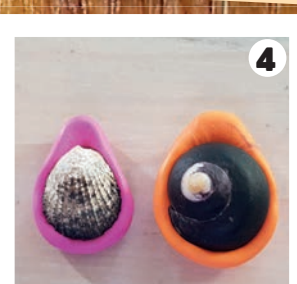
1 Make your salt dough by mixing the flour and salt, and slowly adding water.



2 Split your dough into equal portions and add food colouring to each.



3 Roll a small ball of salt dough. Flatten it a little using your finger.



4 Press your shell into the dough.



5 Make a hole above the shell using a stick.



6 Put your necklaces on a tray and dry them in the sun. You can also put them in the oven.



7 Thread some string through the hole of your necklace, and it's ready to wear!

Pro Tip!

Make sure the hole is not too close to the edge, as it can break later.

Warning!

Ask an adult to help you use the oven. Use a low heat (80°C) and turn them over every 10-15 min. Bake until they are dry and hard!

Pro Tip!

The shells should stay securely... if not, you can always glue them in place afterwards!



PETS



Words by Caitlin Brown

People love having pets for the enjoyment and companionship that they provide. Pets also add a lot of fun and happiness to their owners' lives!



Some pets also help or protect their owners. Sled dogs carry goods or people across the snowy wilderness, farm dogs herd sheep or cows and guide dogs go everywhere with their blind owners.

People haven't always had pets. So, how did this come about? To find out we first must look at how animals were domesticated.



The History of Pets and Domesticated Animals

?! Get this!

Studies have shown that owning a pet is good for your health because they lower your stress levels.

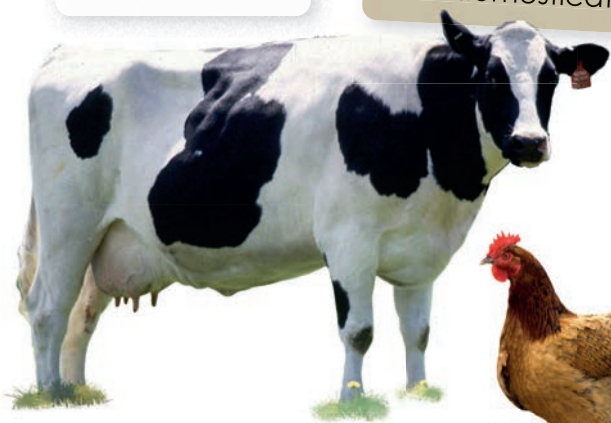
What is domestication?

Domestication involves making a wild animal used to living with or working for humans. Do any animals come to mind? There are some familiar ones that we know, like cows, chickens, sheep, and horses.

?! Get this!

Cats domesticated themselves around 12 000 years ago!

And let's not forget the first domesticated animal, the dog! Dogs have been our companions for around 10 000 years – that's probably why they're known as man's best friend! Some scientists believe that the ancestor of all dogs, both wild and domesticated, is the small South Asian wolf.



But can't we domesticate every animal?

No, we can't. We can tame them to make them less afraid of us and used to living with us, but they will always be wild. This is why animals like lions and tigers can't be pets.

Domestication takes many years, and happens through a process of selective breeding.

?! Get this!

Selective breeding involves choosing parents with particular characteristics. When they are bred together, their children are likely to have more desirable characteristics. Animals are selectively bred to make them larger, stronger, faster and more intelligent.

There are specific characteristics that animals must have in order for them to be domesticated. They must be docile, able to eat whatever's available, mature quickly, have babies in captivity, realise humans are in charge and not panic and run away easily.



SN Pet Guide

Here are some of the animals you might want to keep as your pet!

CATS

?! Get this!

A cat always lands on its feet because of its superb sense of balance and its flexible spine! The vertebrae (bones in the spine) are not joined which is why a cat can twist itself out of your arms when you're holding it.

Cats live for 15-20 years

Cats are perfect if you want an independent animal that likes occasional attention. Remember that some cats may need occasional to constant grooming depending on their fur.



Needs

- ☒ Litter box
- ☒ Scratching post
- ☒ Toys
- ☒ Wet and dry food which is protein-rich

DOGS

?! Get this!

A dog's sense of smell is much better than ours. It can smell at least 10 000 times better, which is why they make great sniffer dogs as well as search and rescue dogs!

Dogs live for 12-16 years

Dogs are family friendly, so be prepared for love and cuddles! Keep in mind that puppies need lots of attention, as well as training. If you're not up for a puppy, consider adopting an older dog.



Needs

- ☒ Wet and dry food
- ☒ Grooming
- ☒ Walks and exercise



Listen up!

Adopt, don't shop!

HAMSTERS

?! Get this!

The word "hamster" comes from the German word "hamstern" which means "to hoard". Hamsters store food in special pockets in their cheeks.

Hamsters live for 2-3 years

If you're awake late at night, then a cute, furry hamster is the pet for you! Hamsters are nocturnal, which means they sleep during the day. Remember to keep watch, because hamsters can be like escape artists!



Needs

- ☒ A cage with natural bedding
- ☒ Water bottle
- ☒ Food dish and treats
- ☒ Explorer tubes
- ☒ Exercise wheel & toys



Listen up!

As a **Supernova** curious kid, you should always do some research before you get a pet. First, find a pet that will suit your lifestyle, your home and family. If you can't adopt a pet from an animal welfare, always buy from a reputable pet shop.

BIRDS

Get this!

Birds don't have teeth which means they have to swallow food whole! They have an organ called a gizzard which grinds up their food and helps them digest it properly.

Birds live for 4-100 years

Birds come in a variety of species with different colours and sizes. Recommended birds for beginners include budgies/parakeets, cockatiels, and canaries.

Listen up!

Birds can live surprisingly long lives and many birds have been known to outlive their owners! Make sure you're ready for a life-long commitment.



Needs

- ☒ Balanced diet
- ☒ Cage
- ☒ Exercise
- ☒ Sunlight
- ☒ Lots of fresh air

FISH

Listen up!

Want more than one fish? Make sure that the types you want will get along.

Fish live for 1-5 years

Fish are great for those who want pets of various colours, sizes and types. Remember that the difference between saltwater and freshwater fish will affect the type of fish tank you need. And remind yourself to feed them because they speak in bubbles and can't complain if you forget!



Needs

- ☒ A tank & water filter
- ☒ Decorations designed for aquariums
- ☒ Water conditioner
- ☒ Net (for transferring fish)
- ☒ Fish food

SNAKES

Listen up!

Snake species range from 10cm – 9m long, and some can weigh up to 50kg! Make sure to research the species you are considering, so that you know how big the snake might ultimately be.

Snakes live for 10-30 years

These cold-blooded animals are fascinating creatures who are mostly easy to hold (just not too often), easy to look after and are quiet.



Needs

- ☒ A big-enough tank
- ☒ Humidifier (depending on breed)
- ☒ Heating/cooling element
- ☒ Shallow water dish
- ☒ Live mice/rats 1-2x per week

Unusual pets

For those who want a different best friend, here are some other options!

HISSING COCKROACHES

They live up to 5 years



Madagascan hissing cockroaches are very different to the ones you might see hiding in the corners at home. For one thing, they're huge! They're vegetarians, and their hissing sounds almost like spraying deodorant... quite cool!



Needs

- ☒ Secure enclosure
- ☒ Constant food source
- ☒ Shallow water dish
- ☒ Heating & humidity element

MICE

Mice live for 1-3 years



White mice are cute, clean, warm-hearted, quiet, intelligent, omnivorous and nocturnal animals. They are very active, and love balancing, climbing, and jumping. Remember that training and taming your mouse takes time and a lot of patience.



Needs

- ☒ Well-ventilated cage
- ☒ Food dish and water bottle
- ☒ Bedding
- ☒ Exercise wheel and toys

SCORPIONS

Scorpions live for 1-3 years



Scorpions are interesting pets but not the cuddling type! Around 30-40 of the 2 000 species are deadly, so not all scorpions can be pets. They are clean, quiet and eat bugs and insects like crickets and spiders.



Needs

- ☒ Secure enclosure
- ☒ Heating & humidity element
- ☒ Water dish
- ☒ Live prey

TARANTULAS

They live for 20-25 years



Tarantulas are docile but will bite when scared. They are fascinating to observe but cannot be handled like a mouse or hamster. They are also quite shy and reserved!



Listen up!

Be careful when handling your tarantula! Falls are nearly always fatal for tarantulas, as their abdomens rupture easily.



Needs

- ☒ A clean terrarium
- ☒ Live prey
- ☒ Heating & humidity element
- ☒ Water dish



The exotic pet trade

Why can't I keep wild animals – they do it on TV!

Untamed creatures could potentially harm you or a loved one, not just through physical attacks but through diseases they may carry. At the same time, if wild animals get used to humans they can never go back to their natural habitats since they are dependent on people to survive.

?! Get this!

If you really want to support an exotic animal, why not sponsor its care and upkeep instead? Many zoos and conservation centres offer this option.

The ugly side of the pet trade

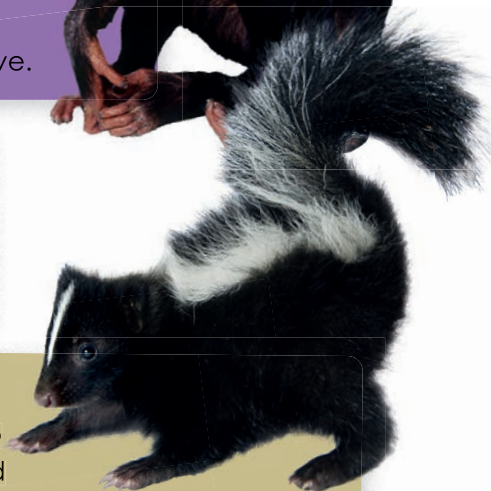
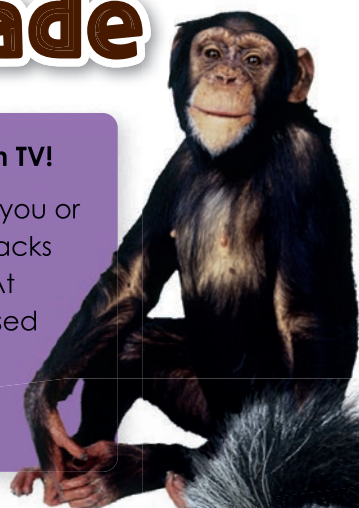
Some animals are not allowed as pets because it is illegal to own them. But some people want to own an "exotic" pet. This means wild animals are being caught and sold as pets. This is a multi-billion rand industry. However, people do not realise what goes into acquiring their exotic pets...

Wild animals are caught in their habitats, causing their numbers to decrease. They are then kept and transported in horrible conditions. Many do not survive and those that do, often suffer from diseases.

They are bought by people who often have no idea how to look after them. Exotic animals have very specific needs and need special care, which the average person is not able to give. Over time, their owners may lose interest – their new pet is now boring or looking after them is harder than they thought. If the animals are lucky, they might be rescued by an animal welfare organisation, or they are "freed" back into the wild.

This can also have disastrous effects, as they could make other animals ill from diseases they might be carrying, which will affect the delicate balance of that ecosystem.

Therefore, it is very important to do your research before getting a pet! Don't get a wild animal and make sure you know where your animal comes from. You don't want to unknowingly help the illegal animal trade.



WAVES OF ECO-CLEANUPS

Words by Sabrina King
Layout by Kadi

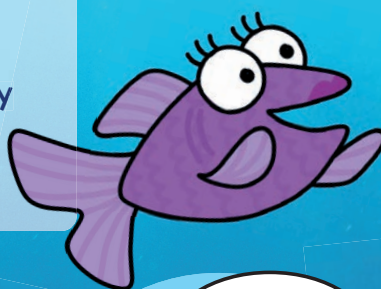
Inventions from and for the ocean

All over the world, scientists are trying to find new ways that might help our planet. We think the following inventions could be revolutionary in the next few years, especially to our marine ecosystems (not to mention we are witnessing pure awesomeness).

Waste no longer wasted

British design student, Lucy Hughes, has created a material that biodegrades in six weeks. The material feels and looks like plastic, but is actually made from sea waste like fish scales and algae! Her product – MarinaTex – is nontoxic, but it is also flexible, transparent and stronger than regular plastic.

This is a great alternative to single-use plastic that we can use to bottle water and carry groceries. Hughes was awarded the prestigious and international James Dyson Award for her awesome design!



Why, Hello there!



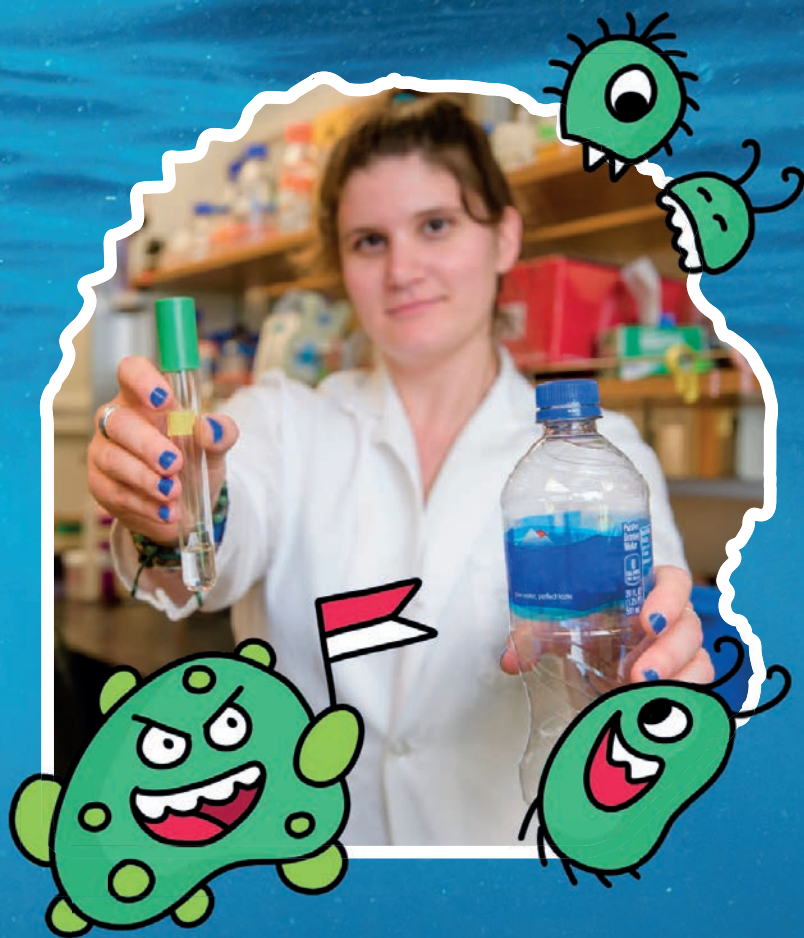
Here she goes again!



Bacteria get hungry too

Another option which could help fight the current plastic problem could be found with Oregon student, Morgan Vague. She discovered a way to combine bacteria to produce an enzyme.

This enzyme is actually able to eat plastic from the oceans and transform it into harmless products! At the same time, it acts as a fuel source for the bacteria. Plastic usually takes centuries to break down, so it is quite phenomenal that this solution is almost all-natural. However, this solution can only begin making a difference once the bacteria eat at the same rate that people discard plastic. This means we either need a lot more of these bacteria or we must decrease how much plastic we use and throw away.



Get this!



An enzyme is a substance that speeds up the natural degrading process.



Mini islands

The Recycled Island Foundation have been working to create floating water parks made from garbage. In Rotterdam's Nieuwe Mass River, the recycled island is used by people, but is also home to many animals above and below the water (such as ducks and fish). Traps are constructed to collect trash from the water, which is then recycled and pressed into floating blocks of plastic and strung together to create a floating island. The island can then be uniquely decorated.



Get this!

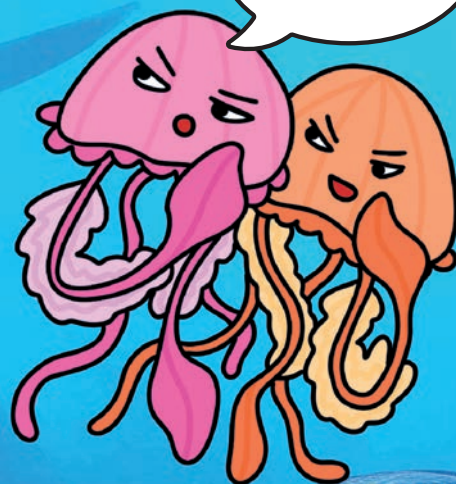
According to the United Nations Environment Programme, 13 million tons of plastic end up in the ocean each year, which wreaks havoc on the global marine ecosystem.



One runner at a time

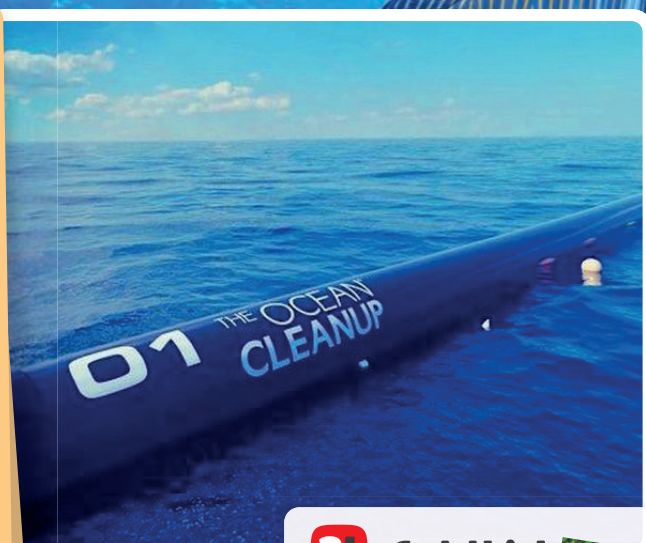
The 2019 London Marathon set a good example when they substituted 200 000 plastic bottles of water by giving runners water pods that look like heavy, squishy bubbles. These transparent pods were produced by Skipping Rocks Lab and are made from seaweed extract. So, they are both edible and biodegradable! This company was founded in 2014 and we only heard about them five years later, which proves that big events like the London Marathon can truly help spread awareness about global issues and spark hope for the future.

"Yo, that guy's pretty sus..."



Go big or go bigger

The most impressive inventor of the lot is probably Dutch student, Boyan Slat. At age 18 he created a floating boom system, known as the Interceptor, which forms a U-shape to effectively pick up plastic on the surface of water. The Interceptor is a part of (and designed by) the non-profit Ocean Cleanup, which was founded by Slat. The Interceptor follows currents and has been deployed to clean up 1.8 trillion pieces of garbage in the Pacific Ocean. This nifty contraption can also be used in rivers and other bodies of water. Once the boom is full of trash, a boat meets it, empties it and brings the garbage back on land where it can be sorted and recycled.



Get this!

Read more about Boyan Slat and the Interceptor in Vol 9.2.



Interview

We asked Dian van Brakel, an Environmental Sciences student at the University of Pretoria, what he thought:

Hi, Dian!

Why are you studying Environmental Sciences?

I have always been interested in the ways that the natural environment, man-made buildings and people interact with each other. I also hope that the tasks I complete in the workplace will benefit the Earth. I strive to make a difference in the lives of others and I can't think of a better way to do this than by improving the systems that ensure a more sustainable future for people and their environment.

Choose two inventions listed above. What do you think they mean for the future?

I think that the plastic degrading enzyme is the best way to battle the growing problem of plastic pollution which we have created. I also think that research should be done to ensure that the enzyme isn't harmful to the environment in another way. The key to the success of this enzyme is the way in which it will be introduced into the marine and freshwater systems.

Lastly, I think that the boom system will be massively beneficial to the damage which plastic causes to coral reefs. Since coral reefs are one of the biggest oxygen producers, this will eventually lead to cleaner air for us to breathe.



How do you think our readers can be more innovative?

If you have a great idea, you should also provide a strategy to 'sell' your idea, to ensure that the plastic reduction movement always has a continuous flow of funding behind it. This will help to improve the success rates of all the eco inventions.

Did you notice that all of the inventors were students? It really is so cool that we are part of a generation making big changes with their designs! Their sheer desire to make our world a place that we can safely inhabit for many years to come is inspiring.

When more is less

Words by Sawleha Vally
Art by Alexandra Botha-Green

Why we pay more and more for less and less



Ever heard your parents saying, 'When I was younger I could buy a packet of crisps, a cold drink, and a train ticket for 30 cents'?

Isn't it fascinating how the prices of products change over time? You might not have noticed, but the sizes of products you use almost all the time may also have changed. Sometimes, the price of a product may remain the same but the jar or packet may just get a little smaller, or sometimes bigger, but probably with a slight price increase.

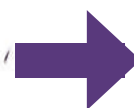
Why do you think this happens? There are a number of interesting reasons. Let's explore some of them.

'Shrinkflation'

Your packet of crisps seems to have less crisps and more air every year, and the bag of biscuits has less inside, but the price hasn't changed... that's shrinkflation! Shrinkflation stands for 'shrink' + 'inflation'. It means exactly what you see – you get less for the amount you pay.

New & improved!

Shrinkflation works together with advertising, to make smaller products seem better so that you don't notice that it's gotten smaller. Cereal boxes may have a new design, with large, bold labels advertising them as 'new' or 'improved recipe' or 'fortified with 12 vitamins'!





Less plastic, more fantastic!

Plastic doesn't break down, and not all types of plastic can be recycled, which is bad for the planet. That's why many things are now being made from materials that can be recycled or composted, like paper straws and paper or cardboard packaging for pasta. But, you may just be getting less in the package...

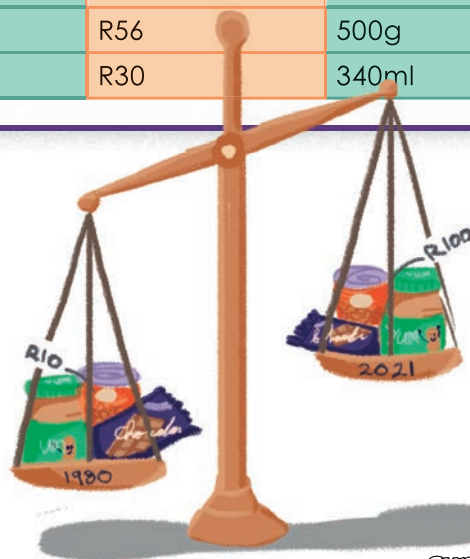
Not again!

Imagine that you have a business that sells cakes. Prices increase all the time, especially of food items. So, if the price of cocoa goes up, and you're selling a chocolate cake, you could have some fun working your way around it. You could change your packaging to something that's environmentally-friendly, which is produced less than plastic, so it's more expensive. And there you have it. An excuse to practise shrinkflation. And advertise your product as 'friendly to nature'!

Let's see how some products have developed in price and size from the 1980s to now.

PRODUCT	80s PRICE	80s SIZE	CURRENT PRICE	CURRENT SIZE
Potato chips	99c	150g	R13	125g
Peanut butter	R1,55	410g	R27	400g
Chocolate bar	75c	100g	R31	135g
Canned beans	43c	420g	R18	410g
Cold drink	R1,99	Pack of 6	R15	2L
Ice cream	R2	2L	R50	1,8L
Bran cereal	R1,19	300g	R56	500g
Salad dressing	R1,59	250ml	R30	340ml

Aren't you glad you can now notice whether products you buy and use all the time are shrinking or getting more expensive? Now that you're empowered, remember to educate others about the reasons why product prices and sizes change.



Schoolyard games

Words by Candice Robertson

Illustrations by Madelein Myburgh

part 2

Your favourite schoolyard games are back with a Part 2! This time, learn how to play Broken Telephone, Chinese Jump Rope and Marbles! With so many fun games to choose from, you'll be busy for hours.

Broken Telephone

Broken telephone can be played by anyone and in any situation! Not only is it a really fun game to play, but it also teaches us that information we receive via word of mouth is not always accurate! In fact, if you don't receive information directly from the source, there is a good chance that at least part of the message is incorrect.

How to play:

1. Players sit in a circle or stand in a straight line. You need to be close enough that whispering is possible, but not so close that players can hear each other whisper.
2. The first person in the line or circle whispers a word or phrase into the ear of the person sitting or standing to their right.
3. Players must whisper the word or phrase to their neighbors until it reaches the last player in line.
4. The last player says the word or phrase out loud so everyone can hear how much it has changed from the first whisper at the beginning.

Check out Part 1 on **Hand Tennis**, **Hopscotch**, and **Ultimate Ninja** in Vol 9.5!



?! Get This!

'Telephone' is derived from the Greek words τήλε (far) and φωνή (voice). Together they mean distant voice.

Rules:

1. You may only whisper the word or phrase once.
2. Try not to use familiar words or phrases.



Chinese Jump Rope

If you're good at hopscotch and a pro at skipping, why not combine your skills to play Chinese Jump Rope?

How to play:

1. Stretch the elastic rope between the holders' ankles. Make sure they stand with their feet wide enough apart so that you will have space to jump.
2. Choose a pattern for the jumper to follow. There's a big variety of jumping patterns and rhymes that you can use. This includes commands like on, off, in, out, right, left, turn and straddle!
3. Chant the pattern while the jumper jumps. If they complete the pattern correctly, you can speed it up or make it more difficult.
4. Once the jumper makes a mistake, someone else can have a turn.

What you need:

- Long elastic rope
- 3 players



Game of Marbles

Marbles is a game that has been around for centuries... because it's a firm favourite! Make sure to establish at the beginning of the game whether you are playing for 'keeps' or if everyone will receive their original marbles back after the game.

How to play:

1. Make a circle on the ground using the chalk or string.
2. Place the marbles inside the circle in a X pattern.
3. To take your turn, flick your shooter marble using your thumb and try to knock one of the marbles out of the circle.
4. If the player knocks a marble out, then they get to keep the marble for the rest of the game. They also get to take another turn. If no marble is knocked out of the circle, the other player then gets a turn.
5. The player with the most marbles at the end of the game is the winner.

What you need:

- Marbles
- Chalk or string

Rules:

1. When another player hits your shooting marble, they get to keep all the marbles you've won so far and you are out.

?! Get This!

Marbles were invented thousands of years ago and were a popular item in Ancient Egypt and Rome.



Super SUDOKU



How to play

In Sudoku, there is a 9-by-9 grid. The grid already has some numbers in place, which will help you solve the rest of the puzzle. You can only use the numbers 1 through 9. The goal is to find the right placement for the numbers in each row, column and box – without repeating a number more than once in each row, column and box.

Easy

5			4	6	7	3		9
9		3	8	1		4	2	7
1	7	4	2		3			
2	3	1	9	7	6	8	5	4
8	5	7	1	2	4		9	
4	9	6	3		8	1	7	2
				8	9	2	6	
7	8	2	6	4	1			5
	1					7		8



ProTip

Use a pencil and eraser to make notes in the corners of blocks.



Hard

for the pros

1	6	7		2		8		
			6	1				
2	8							
					5		2	4
8	3	5	2	6	4	1	9	7
4					3	5		8
	2	8	3	4	1		5	
		3	7					1
5				8	6	4	3	2



Find the answers on
page 3 or on SN Online –
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Look closer

Things are not as they seem! Look closely at the two photos and circle the 10 differences.



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