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- * INTELLECTUAL * CAPS ALIGNED * INSPIRES LIFELONG LEARNING
 - *** LOVED BY SOUTH AFRICAN KIDS SINCE 2011**



Hi SuperKids



Candice

Welcome to another exciting issue of Supernova magazine! In this issue, we're diving into a few exciting articles with a super important theme - learning from the past in order to create a better future!

Reading through this issue's amazing feature articles, the '6 Extinctions of our Earth' and 'What the Ancients Knew', I couldn't help but realise just how much we can learn by looking back. From ancient civilizations using the stars and nature to solve problems, to the jaw-dropping extinctions that changed our planet forever, it's clear that nature has been sending us clues for centuries. And guess what? It's up to us to pay attention!

Learning about the past isn't just about facts and dates — it's about understanding how we can make smarter choices today, so we protect our future (and all of the awesome creatures that we share this planet with). This issue will open your eyes to just how much we can learn from Earth's history and why listening to nature is more important than ever!

So buckle up, have fun, and let's get inspired to make tomorrow even brighter for all of the generations to come!

Happy reading, and stay curious kids!

Benoit's top picks in this issue!

Learning about the 6 **Extinctions of our Earth** is extremely important because it makes us realise how much we, as human beings, impact the world.

> I was lucky enough to see Tina Turner live when I was younger! I've always loved her, and she is one of my heroes.



With summer on it's way, it's so much fun to learn about other summer traditions from around the world in our Culture Corner (page 11)!



Benoit Publisher



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

I think the Ant's Eco Adventure on sungazer lizards (page 24) is so cool! Did you know that their scientific name is Smaug giganteus, named after Smaug the dragon from the Hobbitt

Did you know that sungazer lizards are also a threatened



One of my favourite things to do on summer evenings as a kid was to lie and watch the sky with my brother. Check out our awesome Get Active article on Stargazing (page 38)!



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The Regulars

The Pinboard By you. For you.

The History of... Masks

12

Tech Talk Bluetooth

13

The Pro-Files

Anti-poaching ranger

14

Trends

Streetwear

15

Andy's Atlas

Argentina

16

Life, the Universe and Everything

18

Photo Feed

School lunches

20

Get Active

Stargazing

38

Brain Games

Wordsearch

Convos with Candice

Embarrassed in class



The Features

The Sungazer Lizard

Get ready to meet the amazing giant girdled lizard, a true survivor of the wild! In this fun article, you'll discover how this tough, armour-plated reptile thrives in grasslands, what it loves to snack on, and how it stays safe from hungry predators. From its super cool sunbathing habits to its ability to squeeze into tiny cracks, this lizard has all kinds of awesome tricks to thrive in its harsh environment.

Make Lizard **Keychains**

Get crafty and create your very own colourful beaded lizard kevchain! In this fun activity, you'll learn how to string beads together to make a cute, little lizard vou can carry with you wherever you go.



Extinctions of our Earth Buckle up for a wild ride

The 6

through time as wa

explore the five mass extinctions

that changed life on Earth forever!

From the dinosaurs downfall to the creatures of the deep seas, you'll see how life was shaken to its core.

But here's the big question: could we

be heading toward a 6th extinction? Find out what scientists think and how

we can help protect our planet!

Answers for Brain Games, page 40:

What the

civilisations used their deep

and the world around

them to build

the land, and

cities, farm

even create

medicines -

all without

technology!

modern

understanding of nature, stars,

Ancients Knew

Discover how early

1. Sweden 2. Southern 3. Willow bark

4. Insects

5. Volcanic

6. Chitterlings

7. Blue whale 8. Anna 9. Salt 10. Fifth

Answers for What'cha Reading, page 41:

a. True b. False c. False I. Navigators 2. Hunting 3. Babylonians

d. True 4. Survival



kidsmag.co.za

II. Tanad

12. Enkosi

The Pinboard

Ask 7

Paige (8) from Roodepoort asked us:

Why do stars twinkle?



Jules

Have you ever looked up at the night sky and wondered why the stars seem to twinkle, almost as if they're winking at you? Well, it's not because they're trying to communicate (although that would be cool). Stars twinkle because of a fun trick played by our atmosphere! As starlight

travels through space to reach your eyes, it has to pass through Earth's atmosphere, which is filled with moving air, different temperatures, and pressure changes. This constantly shifting air bends and distorts the starlight, making it seem like the stars are flickering.

Imagine looking at a coin at the bottom of a swimming pool—the water's ripples make the coin appear to move or shimmer. The same thing happens with starlight passing through our atmosphere! The stars themselves are steady and constant, but from down here on Earth, all that atmospheric turbulence makes them look like they're twinkling. Interestingly, planets don't twinkle as much because they're closer to us and appear as larger disks of light, which are less affected by the atmosphere. So, the next time you see those twinkling stars, know that you're witnessing a dazzling light show caused by Earth's very own air currents—pretty cool, right?

South Aftication wins Cold Line Cold

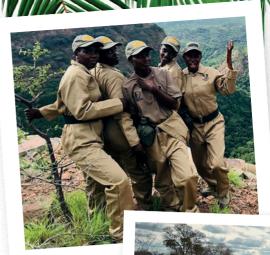
South Africa totally rocked the 2024 Olympic Games, bringing home an impressive 6 shiny medals! Our athletes gave it their all, whether it was sprinting like lightning on the track, making a splash in the swimming pool, or dominating in team events like rugby sevens.

From start to finish, South Africa's spirit and determination were on full display, showing the world what we're made of. Our athletes set new records, created unforgettable moments, and inspired the whole nation to dream big! Our six Olympic medals included one gold, three silver and two bronze. Tatjana Smith went on to win gold and silver in the 100m and 200m breaststroke, the men's 4x100m relay team and javelinist Jo-Ane van Dyk took two silver medals, and the men's rugby sevens team and mountain biker Alan Hatherly collected the two bronzes. South Africa proved that we're a nation that can take on the world—one medal at a time!



Female Familalife Kangers

Wildlife rangers work hard to protect animals from extinction, especially endangered species like elephants and rhinos. Across Africa, rangers stay busy stopping poaching, clearing snares, and patrolling vast wild areas. The training is tough and requires skills that women don't often receive, which is why only 11% of rangers are female. Despite this, women are making a huge impact, forming successful anti-poaching teams in at least 18 African countries! These awesome ladies are part of the Akashinga Anti-Poaching Unit in Zimbabwe, and are doing a fantastic job at keep the local animals safe.





The 23rd of June is World Female Ranger Day!

Creature FEATURE

If you don't think of spiders as cute and cuddly, then you've never met Sparklemuffin! This colourful, dancing arachnid is just one of the new peacock spider species that's been found in eastern Australia. Discovered in 2013 by a student named Madeline Girard, these little spiders are famous for their bright, flashy colors and their amazing courtship dance. The males show off with their bold blues, reds, and oranges by spreading their peacock-like fan with cool stripes and dots, while the females have more boring colourings of brown and grey. During their courtship dance, males must impress the ladies, or else they might end up as lunch! Despite its cute appearance and interesting dance moves, the Sparklemuffin is a formidable predator. It is a type of jumping spider, which makes it an agile and efficient hunter. Its large, forwardfacing eyes provide excellent binocular vision, allowing it to accurately judge distances and precisely target its prey.







TEMPERA PAINT













WIDE RANGE OF COLOURS











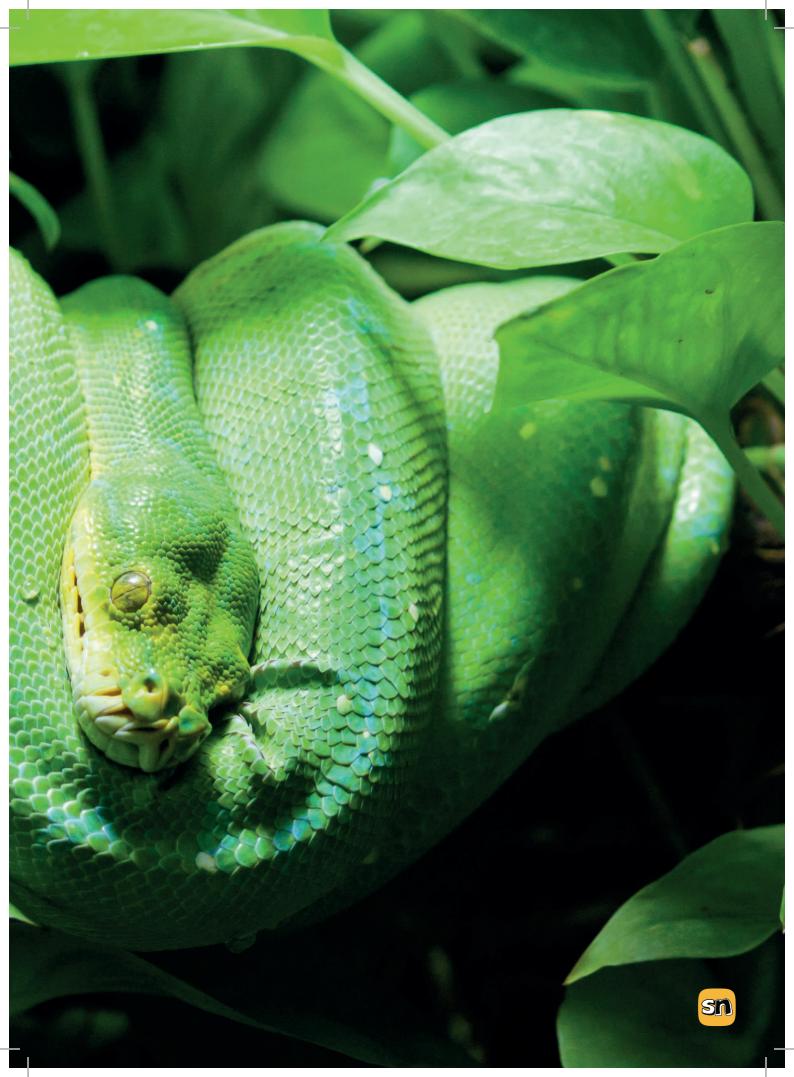






500 ml





Composers

Tina Turner

The Queen of rock 'n roll

Tina Turner was born as Anna Mae Bullock on the 26th of November, 1939, in Nutbush, Tennessee.

She began singing in her church choir as a young girl and developed her passion for music.

When she was 18, she met a musician, Ike Turner, at a nightclub in St. Louis, where she was invited to sing with his band, the Kings of Rhythm.

Three years later, the duo released their first big hit, 'A Fool in Love', and Ike convinved Anna to change her name to 'Tina'.

Tina and Ike got married in 1962, five years after they met in St, Louis.

Tina Turner became a huge star with hits like 'River Deep – Mountain High', and she became known for her electrifying stage presence.

Tina was unstoppable, performing with unmatched energy – spinning, dancing, and singing her heart out!

In 1971, Ike and Tina Turner recorded their biggest hit, 'Proud Mary', which earned them a Grammy Award, and officially cemented their place in music history!

After years of personal struggles, Tina left Ike Turner in 1976, ending their professional and personal relationship. Tina reinvented herself in the 1980s and became an even bigger solo star. With hits like 'What's Love Got to Do with It' and 'Simply the Best', she proved she was a force to be reckoned with.

Her concerts were like mini rock festivals, filled with epic guitar solos, crazy costumes, and tons of energy!

In 1991, Tina and Ike Turner were inducted into the Rock and Roll Hall of Fame.

At 61 years old, Tina announced her semi-retirement after a massive world tour, but she remained active in music.

> In 2008, she went on her final world tour to celebrate her 50th anniversary in the music business.

In 2021, Tina was inducted into the Rock and Roll Hall of Fame as a solo artist.

Today, Tina holds the Guinness World Record for the most concert tickets sold by a solo performer! Millions of fans have seen her live.

> Tina Turner passed away at the age of 83 in 2023, leaving behind a legacy as one of the greatest performers of all time!

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

UNIQUE SUMMER TRADITIONS * AROUND THE WORLD*

Summer isn't just about sunny days and ice cream cones – around the world, people celebrate the season with vibrant festivals and unique traditions! Let's take a trip to check out some of the coolest summer traditions that'll make you want to pack your bags and join the fun.

Illustrations by Alexandra Botha-Green

In Sweden, summer gets a serious welcome with the Midsummer Festival! Held during the longest days of the year, when the sun almost never sets, Swedes dance around flowery maypoles, eat delicious food like pickled herring (yep, fish!) and tons of strawberries. People wear flower crowns like kings and queens of nature, and some even believe that Midsummer magic can bring good luck.

Imagine the sun never really going down – well, that's what happens during the White Night in St. Petersburg, Russia! Approximately 144km from the Arctic Circle, St. Petersburg is the world's most northern city and experiences almost round-the-clock daylight during the summer! From late May to mid-July, the city stays bright all night long, and people go wild with concerts, ballet, and fireworks. The best part is the Scarlet Sails, a giant boat with bright red sails that cruises down the river surrounded by an epic light show and fireworks. It's like a summer fairytale come to life – no bedtime required!

In Japan, the Aomori Nebuta Matsuri
Festival is all about giant, glowing, and super
colourful floats shaped like fierce warriors
and mythical creatures. Constructed out of
washi, a traditional Japanese handmade
paper, these floats are huge, and take the
whole year to make! Paraded through the
streets with drummers, dancers and cheering
crowds, this August festival lights up the night
and brings ancient legends to life.

The History of mask

Words by Kyria-Zoe Tshimewenka Layout By Janko Collyer

Masks aren't just for superheroes and Halloween – they've been used by people all around the world for thousands of years! Whether it's for celebrations, ceremonies, or even just to look mysterious, masks have an epic history that's way more fun than you might think.

Ancient masks

Long, long ago, masks were used in rituals and ceremonies. In ancient Egypt, people wore

masks during burials to honour the dead.

Pharaohs were buried with golden masks,
like the famous mask of Kina Tut, to

help guide them to the afterlife. Meanwhile, in ancient Greece, actors wore masks in theatre performances to show different emotions. The masks had exaggerated expressions, making it easy for everyone in the audience to see whether a character was happy, sad, or super mad!



Get this!

In wars and battles, masks were not only for protecting the face but also a method of intimidating the enemy.

Party time

Fast forward to the Middle Ages in Europe, where masks became a big hit at fancy balls and parties, known as masquerades. People would wear elaborate masks and super glamorous costumes, and no one knew who was who! It was like a game of "guess who" but in real life. Masked balls became a way to have fun and be a little sneaky, letting people act out of character without anyone knowing it was them!



Get this!

The Carnival of Venice is one of the most famous carnivals around the world, and is famous for its intricate Venetian Masks.



From Party to Protection,

During the 20th century, masks took on a new role—keeping people safe! Think of gas masks during World War I, which protected soldiers from harmful gases. Later, doctors and nurses started wearing surgical masks to keep germs at bay during surgeries. And today, we've all seen how important masks can be during the COVID-19 pandemic, helping people stay healthy and protect one another.

BLUETOOTH

Have you ever wondered how your favourite music travels from your phone to your ears without a cable? Or how your game controller talks to your console without any wires getting tangled up? That's bluetooth magic at work! Although bluetooth isn't actual magic (though it feels like it), its super cool technology has made our lives easier and a whole lot more fun!

WHAT IS BLUETOOTH?

Remember when everything needed a cable?

Now, you can listen to music, play games, or transfer files from one device to another, all without a single wire in sight. From connecting your smartwatch to your phone to using wireless earbuds at the gym, Bluetooth has made tech life way more convenient.



Get this!

Bluetooth is everywhere! You can find it in cars, TVs, speakers, fitness trackers, and even some refrigerators!



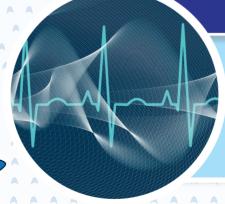
Get this!

Every second, around 4 million Bluetooth devices are being connected all over the world.



Get this!

The name 'Bluetooth' comes from an ancient Viking king, Harald Bluetooth, who united warring tribes in Denmark. Just like King Bluetooth, this technology united our gadgets!



HOW DOES IT WORK?

Bluetooth uses invisible helpers called radio waves to transfer information through the air, from one device to another. The farther away these two devices are, the weaker the radio wave. And why the small distance? Bluetooth uses low power to make your phone battery last as long as possible. Smart, huh?!

THE FUTURE OF BLUETOOTH

As Bluetooth keeps evolving, it's becoming faster and even more powerful. One day, it might even connect devices we can't imagine right now! A company called Auracast™ is making waves in the field, introducing a way to broadcast your music for anyone to listen to. With this new broadcasting capability, Auracast™ can capture teachers' voices and broadcast them live to the classroom, allowing those who are hard of hearing to follow along using their earphones.





What does a ranger do?

An anti-poaching ranger is the guardian or security guard of wild game and plants. We protect our wildlife from people who try to steal or poach them. We have a special priority to look after endangered species like rhinos and pangolins.

What does a typical day look like for you?

A regular day includes patrolling long distances around the reserves that we are assigned to protect, logging the movements of key species, and looking for their tracks. We sweep the land for traps and snares. There is also a chance that we'll respond to gunfire on the reserve, meaning that there will be a big search, where we track, lay ambushes and arrest poachers.

What is the best part of your iob?

I love being outside all day, and it is important to me to protect what Hove most - the



Do you need qualifications to do your job?

Yes, you need a PSIRA qualification, and must complete vour firearm competency. It is also beneficial to receive training from your antipoaching unit to learn how to track humans and animals, how to become untraceable yourself, and to have a good understanding of the plants and animals you are looking after.

What are some challenges in your job?

To be an anti-poaching ranger you have to be happy walking very long distances – up to 40km per day! You also have to be wary of ticks, mosquitoes and dangerous game such as leopards, lions and elephants. Poachers are often armed too, so you have to be very cautious while tracking them.



Mathew's advice

Training will be difficult, but it won't last forever. As long as you work hard and stay disciplined, there will be a space for you in this career.

SRESTIES.

The new wave of fashion

Words by Sinekhaya Fikeni

Streetwear—what started as casual outfits for skaters and hip-hop fans is now one of the biggest trends in fashion! From oversized hoodies to limited-edition sneakers, streetwear has taken over runways and closets around the world.



Streetwear has its roots in the skateboarding and hip-hop scenes of the 1980s and '90s. Skaters in New York and surfers in California didn't care about dressing fancy – they wore whatever was comfortable and durable, like baggy jeans, sneakers, and graphic tees. Around the same time, hip-hop artists were rocking bold outfits with logos and oversized clothing. These styles collided, and streetwear was born. The look was all about comfort, attitude, and creativity - plus, it didn't hurt to have the freshest kicks on your feet.



Get this!

Streetwear started in the 80's when a surfer named Stussy started selling his signed T-shirts out of his car.



Get this!

Sneaker culture is a huge part of streetwear. Some sneakers are so rare that they can sell for thousands of dollars! Streetwear isn't just a trend – it's a movement. It blends comfort, creativity, and self-expression. Here are the three core influences of streetwear, and how you can combine them to create your own unique look:

- California Surf Cat: Baggy jeans and a graphic T-shirt are essentials for this look. Surfers, who often also skate, prefer loose clothes for easy wet suit changes and cushioning during skate tricks
- Japanese Avant-Garde: Monochrome, bold patterns, and unconventional cuts define this style. It's all about unique textures, exaggerated designs, and standout colours.
- New York Urban Edge: Incorporate jewelry, bomber jackets, and cool sneakers. This look blends rap culture's love for bling with sneaker culture to create an iconic streetwear vibe.









Food for thought

My friends welcomed me with an asado, a traditional barbeque. The steak and chorizo (a type of smoked pork sausage) were delicious.

For dessert, we had tortas fritas (fried cakes). They reminded me a bit of fat cakes in South Africa, except they were triangular, and sprinkled with cinnamon and sugar. Yuml



I wanted to try Argentina's most famous dance – the tango. The dance developed from a combination of European, South American and African dance styles. The tango is so important to Argentina that it was added to the UNESCO Intangible Cultural Heritage Lists in 2004.



I was not brave enough to try the chitterlings though! This traditional dish is made from a cow's small intestine, and are typically boiled, fried, or stuffed with mincemeat.

Pato vs football fever!

Although pato is Argentina's national sport, football is by far the most popular. We went and watched both. Pato is a horseback game that originated in the early 1600s. It combines elements of polo and basketball.

Although pato is fun to watch, Argentines absolutely love football. With some of the world's best players to come out of the country, like Alfredo Di Stéfano, Diego Maradona and Lionel Messi, how could you not love it?

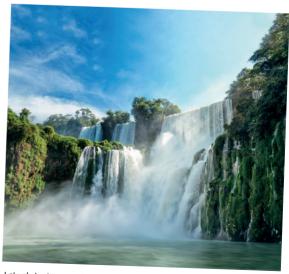
Rock on

You may remember that I've visited Patagonia before.

It's a region that southern Argentina and Chile share.

This time, I stopped at the Cueva de las Manos (Cave of the Hands), where hundreds of hands are stencilled on the cave walls. Early hunter-gatherers used bone pipes to spray paint around their hands to create the rock art between 7300 BC and 700AD.

The cave is a National Historic Monument and C



I simply had to see the famous Iguazu Falls. This spectacular site, on the border of Argentina and Brazil, is the largest waterfall system in the world. They're higher than the Niagara Falls (USA) and wider than the Victoria Falls (Zimbabwe).



When we think of things falling from the sky, rain, snow, and the occasional pigeon are the usual suspects. But did you know that Mother Nature (and sometimes humans) have dropped some seriously strange things from the sky?

THAT'S THE LAST TIME I PLAY LEAPFROG IN A STORM!

Frogs: The Original Skydivers

Imagine walking outside during a rainstorm and seeing frogs bouncing off the pavement instead of raindrops! Sounds like a scene from a movie, right? Well, it's real! 'Raining frogs' has been reported in various places throughout history. It's usually caused by strong winds or tornadoes sucking up frogs from ponds and lakes, then dropping them far away. Talk about an unexpected shower!

Fish: Surprise Seafood Delivery

You've heard of flying fish, but what about fish falling from the sky? Just like with frogs, tornadoes or waterspouts can scoop up fish from bodies of water and carry them into the clouds, only to dump them miles away. In some places like Yoro, Honduras, this happens so often they even have a festival to celebrate it! Free fish, anyone?

Spiders: Nightmare Fuel

If you're afraid of spiders, look away!
In some parts of the world,
such as Australia and Brazil,
spiders have been known
to 'rain' from the sky. This
phenomenon happens when
spiders climb to high places
and release long threads of silk
that act like parachutes, carrying them
away on the wind. Imagine a spider
landing on your head – it's
enough to make
you run for cover!



...DOWN CAME THE RAIN AND WASHED THE SPIDER OUT...





As if frogs and fish weren't enough, we've also got space junk falling from the sky! That's right - old satellites, used-up rocket parts, and other debris orbiting Earth can sometimes make their way back down. When space junk re-enters our atmosphere, it burns up (creating a mini light show) or, in some cases, pieces of it might actually hit the ground. Luckily, most of it lands in the ocean or remote areas. But hey, space junk is a small price to pay for all those cool space



missions!

Get this!

There are almost 10 000 metric tons of man-made space waste currently orbiting our planet.



Golf Balls: Fore! From the Sky

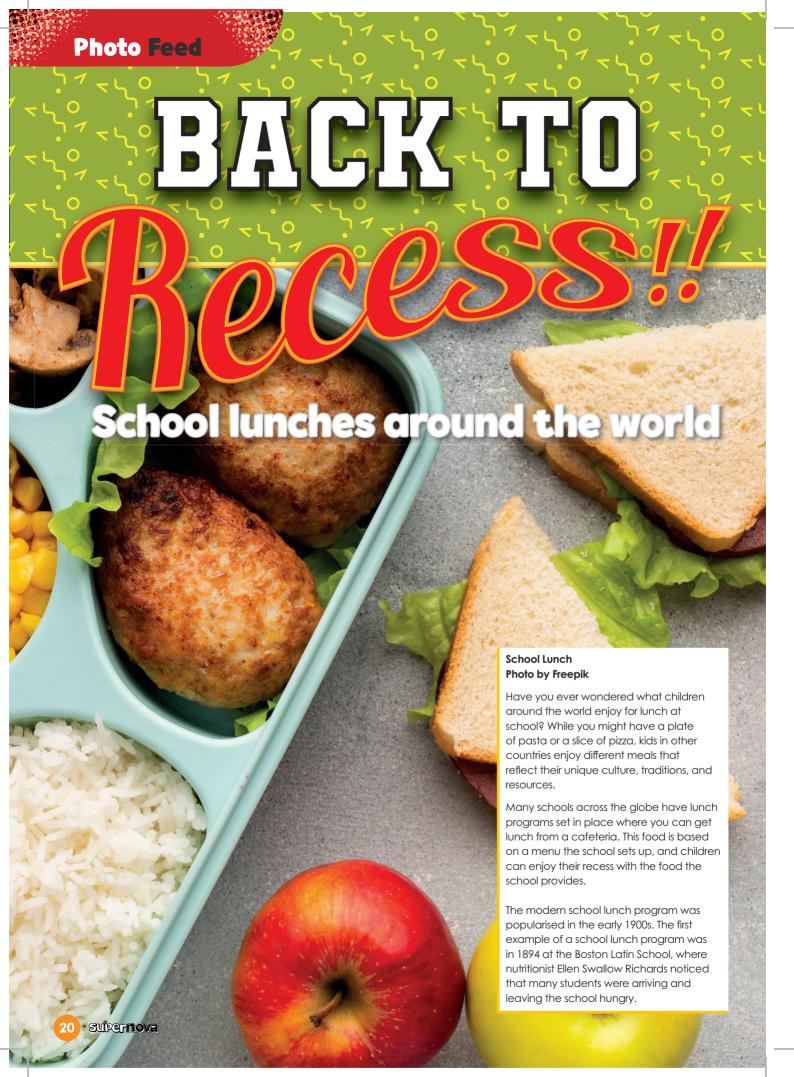
In 1969, people in Florida were caught off guard when golf balls started falling from the sky during a rainstorm. Turns out, they weren't dealing with a rogue cloud from a golf course; a waterspout had scooped up a bunch of stray balls from a local course's pond and released them into the sky. That's one way to improve your swing!



Meat: The Kentucky Meat Shower

Meat falling from the sky? That may sound like something out of a science fiction book. But it isn't! It's straight out of history. In 1876, large hunks of flesh fell from the sky over Bath County, Kentucky. In the coming days, many neighbors stopped by to see the result of the meat shower for themselves. Two unidentified gentlemen turned up to taste the meat-rain and declared that it had the flavour of either venison or mutton! Expert scientists theorised that the most likely theory was a flock of vultures that vomited while flying high above Kentucky county. Then, the light breeze caught the meat vomit, causing it to fall across the farm like rain!









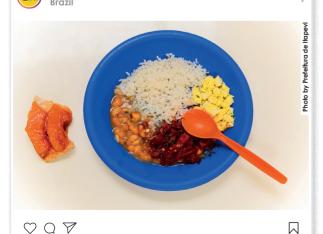
This lunch at an elementary school in Japan contains a hearty variety of rice, miso soup, a carton of milk, a packet of tiny dried fish, and pork fried with vegetables! #FishyBusiness #RiceIsNice #MisoHungry #PorkAndPlay #TinyFishBigFlavor #LunchGoals

A Homecooked School Meal



Sweden likes to show off with their healthy and free cooked meals at schools. This meal is an example of their vegetarian week meals and boasts a bean salad, coleslaw, carrots, and potatoes. #ScandiSnack #VeggieBrag #ColeslawSwagger





A big bowl of everything you need for a balanced diet! This Brazilian dish contains rice, beans, scrambled eggs, and some sweet sun-dried tomatoes and oranges. #BrazilianBowlOfJoy



Made from two traditional Ethiopian foods, tibs and injera, this meal keeps kids full and focused during those long Math classes, with its dense helping of cubed meats and bread.
#TibsAndTables #StayCubed #MeatAndMath #FullBellyFocus



 \bigcirc \bigcirc \bigcirc



A happy helping of everything yummy! America loves to stick to the basics to keep students invested with hamburgers, roasted Brussels sprouts, baked potato fries, cantaloupe wedges, and milk #BurgerBliss #FriesBeforeGluss #MilkAndChill

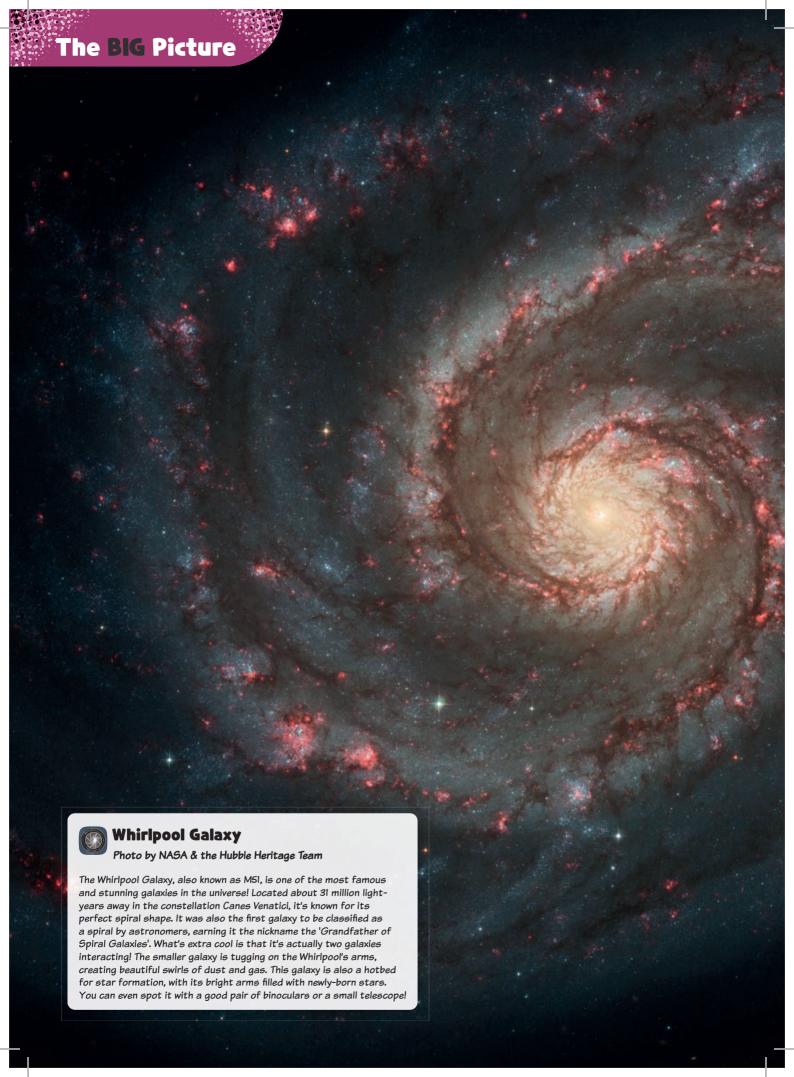


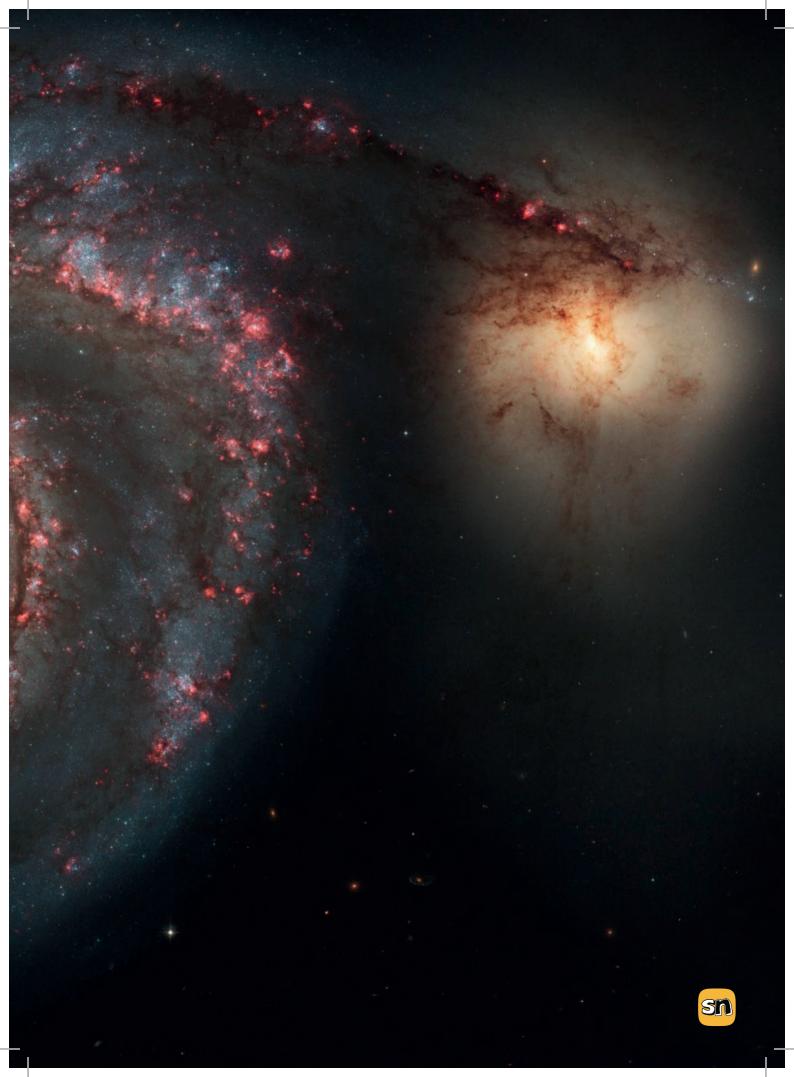
Diverse and Rich Tastes

South Korea



South Korea ends off strong with a vastly varied and healthy helping of food! This tray contains cabbage kimchi, squid, corn rice, greens, and a savoury soup. #KimchiKrazy #SquidSquad







Habitat

The giant girdled lizard, also known as the sungazer, is native to the highveld grasslands of South Africa. They prefer to live in open, sunny areas with plenty of rocks and burrows. These burrows aren't just any holes in the ground – these lizards dig deep, complex burrows that they use as homes and shelters from predators and the harsh environment.



Get this!

The giant girdled lizard is endemic to South Africa, meaning it is found nowhere else in the world!



Giant girdled lizards can live for up to 25 years or more in the wild. Their long lifespan makes them one of the oldest living reptiles in their ecosystem.



Burrowing Behavior

Sungazers, unlike other girdled lizards which live on rocks, are expert burrowers. They dig burrows that are usually deep and complex, offering a safe retreat from predators like birds of prey, snakes, and even larger mammals.

The burrows also help regulate their body temperature, providing a cool shelter in the heat of the day and warmth at night. Interestingly, the burrow's design allows sungazers to stay in an alert, watchful position at the entrance, ready to retreat or defend if danger approaches.

Giant girdled lizards are highly territorial creatures. Males are particularly protective of their burrows and will fiercely defend them against intruders. Unlike many other reptiles, these lizards tend to be more social, often living in family groups. This social structure helps protect them from predators and makes it easier to guard their burrow systems.



Giant girdled lizards are primarily insectivores, which means they love to snack on insects! Their favourite meals include beetles, grasshoppers, and other small invertebrates. However, they are also opportunistic feeders, meaning they'll eat other small animals or even plants if insects are scarce. Their strong jaws and sharp teeth help them crush the hard exoskeletons of their prey with ease.



Sungazers are extremely loyal to their burrows. They rarely stray far from them and will return to the same burrow for many years.

Adaptations and Anatomy

Each part of the giant girdled lizard's body has evolved to help it survive in its specific environment. From its protective armor and spiked tail to its strong claws and burrowing abilities, every feature is designed to protect the lizard from predators, regulate its temperature, and help it thrive in the harsh, open grasslands of South Africa.



Get this!

Since they are cold-blooded, girdled lizards rely on outside heat sources to control their body temperature. Their ability to efficiently soak up the sun's rays helps them stay warm and active!

Skin

The skin of the giant girdled lizard is thick and durable, helping them lose as little water as possible in dry, hot grassland environments. This adaptation helps them retain moisture and survive in areas where water is often scarce. Their dull, earthy colouration also help them blend

into their surroundings, providing camouflage against the sandy and rocky terrain of the grasslands.



Tail

Along their backs and tails, girdled lizards also have sharp spikes, which serve as an extra defense mechanism. If threatened, the lizard will wedge itself into a rocky crevice, puffing up its body and curling its spiked tail over its back to make it nearly impossible for predators to pull

it out. The spiked tail can also be used as a weapon, delivering painful strikes to any would-be attacker.

Segmented body

The segments of scales along the lizards' body give it its name. These 'girdles' provide flexibility while still protecting the lizard, allowing them to twist and wedge themselves into tight spaces to avoid predators.



The giant girdled lizard has short but powerful limbs that are adapted for burrowing and climbing over rocks. Their strong legs help them dig complex burrows that protect them from extreme weather and predators.

26 Supernova

Eyes

With eyes on the sides of their head, these lizards have a wide field of vision! This means they can detect predators and threats from many angles. Their vision is adapted to pick up movement quickly, making them aware of approaching dangers.

Tongue

Like many reptiles, the giant girdled lizard uses its tongue to gather sensory information about its environment. By flicking its tongue in and out, it can 'smell' the air, detecting chemicals and pheromones that signal the presence of food, threats or even mates!

Get this!

Sungazers can secrete chemicals (hormones) from their epidermal glands to communicate with each other!

Jaws

These lizards have powerful jaws and sharp teeth, which are crucial for crushing the hard exoskeletons of insects, their primary food source. The strength of their bite also comes in handy when defending themselves from predators.

Scales

The body of giant girdled lizards is covered in thick, bony scales called osteoderms. These scales act as natural armor, protecting the lizards from predators like birds of prey, snakes, and small mammals. The tough armor also reduces the risk of injury when moving through rocky crevices.



Their claws are adapted for digging and gripping onto rocky surfaces.

They also help them escape quickly over uneven terrain when threatened!





Vulnerable



Threats

Despite their tough exterior, giant girdled lizards face several threats.

Habitat loss due to farming and urbanisation is a significant problem, as it reduces the open grasslands they need for survival. Additionally, the pet trade poses a threat, as these unique lizards are often captured and sold illegally.

Climate change also affects their habitat, altering weather patterns and food availability. Fortunately, they are now a protected species in South Africa, and conservation efforts are underway to help preserve their natural habitats.



Get this!

Due to strict protection laws in South Africa, it is illegal to capture or sell giant girdled lizards. This has helped reduce their exploitation in the exotic pet trade.



Get this!

These lizards have a very slow reproductive rate. Females give birth to live young, usually only one or two babies every couple of years. This makes their population recovery slow if they are threatened.

Importance in the ecosystem

The giant girdled lizard plays an important role in South Africa's grassland ecosystem. By controlling insect populations, they help maintain balance in their environment. Their burrows also provide shelter for other small animals, like insects and rodents, making them important to the survival of various species in the grasslands.



The giant
girdled lizard
is truly impressive
with its tough armour,
burrowing skills, and
ability to adapt to its
environment.

While
they may look
intimidating, they
are a vital part of
South Africa's natural
heritage and deserve
our protection.



Make a Company of the Company of the

This beaded lizard is easy to make and a great craft for any time you need to keep hands busy! Plus, it makes an awesome keychain you can hang on your keys or school bag!



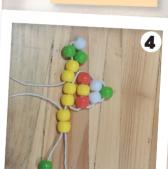
Place a bead in the middle of your string, and two beads on one end. Pull the end of the opposite string through the two beads.



Make the eyes by putting three beads on your string. The two outer beads should be different colours. Then, repeat the second half of step 1.



Repeat the second half of step I in order to make the gecko's neck.



What you need:

• Pony Beads

(Large Beads)

String (at least

2m)
• A keyring
• Scissors

Add two and then three separate beads. Push the string through the first two beads, then repeat on the other side.



Create four more rows by adding 3 beads, then 4 beads, then 4 beads again, and finishing off with 3 beads in the row.



Repeat step 4 to create the back legs of the gecko.



Repeat step 3 to make the base of the tail. Then, make 6 single bead rows for the gecko's tail.



After creating your gecko, add a keyring to the end of the tail so you can hang it on your keys!



Have you ever thought about why some animals, like the dinosaurs, are no longer around? Earth has gone through five huge extinction events where many animals and plants disappeared forever. These extinctions changed the world, and they paved the way for new life to take over. And guess what? Some scientists think we could be living in the middle of a sixth extinction right now!

Let's explore the six Big Extinctions and what caused them, so we can understand how our planet changed so much over time.



Extinction is the dying out of a species. Extinction plays an important role in the evolution of life, because it opens up opportunities for new species to emerge.

The 1st Extinction

Ordovician-Silurian Extinction Around 444 Million Years Ago

What Earth Was Like

During this time, the Earth was mostly covered by oceans.

There were no trees, land animals or flowers – the Earth's surface was bare! Life existed almost entirely in the oceans, with strange species like trilobites, jawless fish, and early coral reefs.

What Caused the Extinction?

Scientists believe that this extinction was caused by moving continents, changing the planet's climate. A sudden ice age occurred, causing huge glaciers to form, and causing sea levels to drop. Because of this, the ocean water became freezing cold and shallow seas disappeared. This wiped out 85% of all ocean species!

36% Life Lost

Cambrian

Ordovician

Silurian

De

The 2nd Extinction

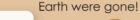
Late Devonian Extinction
Around 375 Million Years Ago

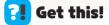
What Earth Was Like

Plants began to spread across the land, creating the first forests. The oceans were filled with fish, early sharks, and coral reefs. Life in the seas was thriving, with new species appearing. But this explosion of life came to a halt due to several possible causes.

What Caused the Extinction?

Volcanic eruptions on land released ash and gases into the air, which blocked out the sun and cooled the planet. This drop in temperature affected ocean life. Plants on land also released their nutrients into the water, causing giant algae blooms which sucked up oxygen in the water. Without oxygen, many sea creatures perished, including the majority of coral reefs, which took millions of years to recover. This event was spread out over millions of years and didn't happen all at once. But by the time it was over, about 75% of all species on





The Late Devonian extinction may have lasted for as short as two million years, or as long as 20 million!





The next extinction is often called the "Great Dying" because it was the most severe extinction Earth has ever seen! It wiped out nearly 96% of all species. That means almost every animal and plant on Earth disappeared during this time. It was a devastating event.

The 3rd Extinction

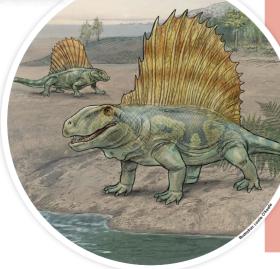
The Permian-Triassic Extinction Around 252 Million Years Ago

What Earth Was Like

The land was full of strange reptiles, early amphibians, and massive insects. The oceans were home to marine reptiles and many fish species. Earth was warm, and life was spread out across land and sea.

What Caused the Extinction?

Massive volcanic eruptions in Siberia spewed out huge amounts of lava, ash, and toxic gases into the air. These eruptions were some of the biggest eruptions ever known, and lasted for hundreds of thousands of years. Global warming was triggered by carbon dioxide in the volcanic gases, raising temperatures worldwide. Many animals couldn't survive the extreme heat, and oceans became hotter and more acidic, making them too toxic for most sea creatures to live in. In fact, entire food chains collapsed because the water was so poisonous. Forests died out, and many of the animals that depended on them, including large reptiles, went extinct. The world was nearly a barren wasteland. The few species that did survive, like certain reptiles and amphibians, evolved into new kinds of creatures, including the ancestors of dinosaurs!



Devonian

Carboniferous

Permian

The 4th Extinction

The Triassic-Jurassic Extinction **Around 201 Million Years Ago**

What Earth Was Like

During this time, Earth was still recovering from the Permian extinction. Early dinosaurs roamed the land, but they weren't the dominant species yet. Other reptiles, like crocodile-type creatures and giant amphibians, were more common.

What Caused the Extinction?

Once again, volcanoes were to blame for this extinction. Massive volcanic activity took place as the supercontinent Pangaea began to break apart. This volcanic activity spewed out huge amounts of lava

and gases, including carbon dioxide. The increase in CO₂ caused global warming, just like during the Permian extinction, but this time it wasn't as extreme. Even so, the warming

> temperatures were enough to trigger another mass extinction, wiping out about 80% of species on Earth. This included many of the reptiles that were competing with dinosaurs for dominance. As those reptiles disappeared, it left a big gap for dinosaurs to thrive.





Get this!

This was the most famous extinction event of all time. This event didn't just wipe out dinosaurs; it also killed about 75% of all species on Earth, including many plants and animals.



The 5th Extinction

80% Life Lost

Cretaceous-Paleogene Extinction Around 66 Million Years Ago

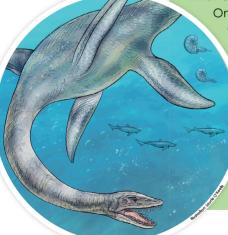
What Earth Was Like

Dinosaurs ruled the land, and marine reptiles like mosasaurs ruled the seas. Birds and small mammals were starting to evolve but weren't very common. Flowering plants had just started to spread across the land.

What Caused the Extinction?

One day, a giant asteroid, about 6 miles wide, crashed into Earth near what is now Mexico. The impact was so powerful that it caused a massive explosion, sending rocks and debris flying into the atmosphere.

This explosion created firestorms and earthquakes and released gases that blocked out the sun for months, maybe even years. Without sunlight, plants couldn't grow, meaning that the animals that eat them had no food. This started a deadly chain reaction. About 75% of all species, including the dinosaurs, went extinct. The Earth went through a dark and cold period. However, the end of the dinosaurs allowed mammals - like the early ancestors of us humans – to evolve and become the dominant species on Earth.



Triassic

Jurassic

Cretaceous

Supernova

200 million vears ago

years ago



This might surprise you, but many scientists believe that we are in the middle of a sixth extinction **right now!** This one is different from all the others, though, because it's mostly caused by humans.

What Earth is Like Now

Right now, humans are the dominant species, and animals like tigers, elephants, and whales still roam the Earth.

Forests are being cut down, and pollution is a big problem for the environment. Many species are endangered, and climate change is warming up the planet.

What's Causing the Extinction?

Humans are changing the planet in many ways. We are cutting down forests, polluting the air and oceans, and using up a lot of natural resources. All of this is causing animals and plants to go extinct at a much faster rate than usual. Species that once roamed the Earth in large numbers are disappearing because their habitats are being destroyed, or they are being hunted to extinction. Scientists think that within the next hundred years, we could lose one-third of all species on Earth if we don't make some changes.

But there is hope! People all over the world are working hard to save endangered species and protect the environment. You can help too by doing simple things like recycling, planting trees, and learning

Present Day





WHAT THE ANCIENTS KNEW

Words by Candice Robertson

Layout and illustrations by Alexandra Botha-Green

Ever wondered how ancient people seemed to know how to do just about everything? From building pyramids and navigating oceans without GPS, to discovering how plants could heal and making beautiful art, ancient civilisations were filled with smart thinkers who figured out how the world worked long before modern technology existed.

So how did they do it? Let's take a journey back in time to uncover the secrets of how ancient people became so smart!

What Are Indigenous Knowledge Systems?

One of the reasons ancient people were so smart is thanks to indigenous knowledge systems. Imagine knowing exactly when the rain will come, how to spin silk into cloth, or the best time of year to plant your crops. That's what indigenous knowledge systems are all about! They are practical ways of understanding the world, based on generations of observation, experience, and deep connection to nature. While modern science relies on experiments and technology, indigenous knowledge is passed down through stories, traditions, and a deep respect for nature.



Indigenous people learned how to live in balance with their environment by watching animals, plants, and the changing seasons. This knowledge isn't written in textbooks but passed down through songs, stories, and practices that have been honed over centuries.





Ancient Egyptians observed the flooding of the Nile River and figured out when the river would rise and fall each year. This allowed them to plant their crops at just the right time!

Wisdom of the Land

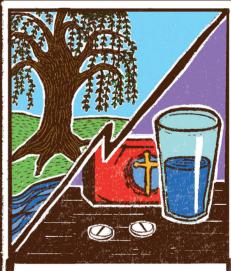
Long before weather forecasts or apps existed, indigenous people knew exactly when storms were coming, when to plant crops, and where animals would migrate. This wasn't magic – it was the result of careful observation and respect for the natural world.

Many indigenous groups noticed that certain animals behaved differently when a storm was approaching. Birds might fly lower, or ants would build higher nests. These clues helped them prepare for changes in the weather, long before anyone invented the weather radar!

Knowledge of Plants and Medicine

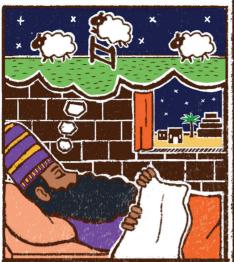
Did you know that many of the medicines we use today were first discovered by indigenous people? For thousands of years, indigenous communities studied plants and their healing properties. They didn't have modern science labs, but they had something just as powerful – trial and error, careful observation, and knowledge passed down through generations. From treating stomach aches with mint leaves to using aloe vera for burns, indigenous knowledge of plants is both impressive and incredibly useful.

These ancient healers understood the power of nature, and they passed down their knowledge through stories and teachings. Today, many scientists are looking back to indigenous knowledge to discover new medicines and treatments that can help people around the world.



One of the most famous discoveries was made by ancient people who found that chewing on willow tree bark helped reduce pain and fever. Scientists later developed aspirin using the same ingredients found in willow tree bark!





The Babylonians, who lived in Mesopotamia, were among the first to develop a system of numbers. They used a base 60 system, which is why today we still have 60 seconds in a minute, and 60 minutes in an hour!

Astronomy and Navigation

Indigenous people were master navigators and astronomers long before modern technology existed. They used the stars, the sun, and the moon to travel across vast lands and seas.

But it wasn't just navigation – indigenous people also used the stars to figure out the best times to plant and harvest their crops. By paying close attention to the movements of the moon and stars, they could predict the changing seasons and make sure they had enough food to last through the year.

Storytelling as Science

Stories are one of the most powerful ways indigenous people shared their knowledge. These weren't just fun tales to pass the time – they were full of important lessons about the environment, survival, and the natural world. By listening to stories, children and adults alike could learn how to live in harmony with nature!

In many indigenous cultures, creation stories explain how the world came to be. For example, some stories might explain why rivers flood or why certain animals behave the way they do. These stories weren't meant to be taken literally, but they helped people understand and respect the natural forces around them.



Stories were a clever way to make sure important knowledge wasn't forgotten. By telling the same tales over and over again, ancient people kept their wisdom alive for generations.





Ancient people were very inventive – in harsh environments where food was scarce, they figured out ways to store food for long periods of time using what they had around them. The ancient Egyptians used salt to preserve fish and meat, while people in the Andes Mountains developed freeze-drying techniques for potatoes – centuries before the invention of modern freezers!

Protectors of Biodiversity

Indigenous people have always understood the importance of protecting biodiversity — the variety of life on Earth. They practiced sustainable living long before it became a modern concept, making sure they took only what they needed from the environment. By doing so, they helped protect plants, animals, and ecosystems for future generations.

Even when hunting, indigenous people had strict rules to ensure they didn't overhunt animals. They knew that if they took too much, it could upset the balance of the ecosystem and make it harder to find food in the future. This respect for nature is something we can all learn from today as we face new challenges in protecting our planet.

Legacy and Modern Science

Today, scientists are turning to indigenous knowledge systems to help solve some of the biggest challenges facing our planet. Whether it's protecting endangered species, conserving forests, or fighting climate change, indigenous people have valuable lessons to share that we can learn from! By combining their ancient wisdom with modern science, we can create better solutions for the future. Indigenous knowledge is also helping us fight climate change by showing us how to live more sustainably, use fewer resources, and respect the natural world.



The ancient people knew how to do so many things because they were curious, patient, and willing to experiment. They paid close attention to the world around them, learned from their mistakes, and passed their knowledge down through stories, traditions, and teamwork. By observing the natural world, trying new things, and working together, they solved problems and built amazing civilisations—without any of the modern technology we have today! Their discoveries and inventions laid the groundwork for many of the things we take for granted now, from farming and medicine, to architecture.



Main Activity

Can you spot these constellations?

Scorpius

Hydrus

Centaurus

Southern Cross



Get this!

The Southern Hemisphere contains 32 of the 88 constellations.

Download a Sky Map or stargazing app

Get to know the stars and planets in more detail, and track their movement across the sky! You'll also get updates about meteor showers and other cool events to watch the night sky for.



Get this!

A sky map is graphical representations of celestial stars and constellations visible in the night sky, specifically at an exact moment in time.



Get this!

Sky maps are also known as star charts or celestial maps.

WOBERSCH

器

How to play

Search the magazine to help you answer the questions below, and find the answers in the wordsearch!

- 1. Which country celebrates the Midsummer festival?
- 2. Which hemisphere contains 32 of the 88 constellations?
- 3. Which plant contains the same ingredient found in asprin?
- 4. Giant Girdled lizards love to snack on ___
- 5. What type of eruptions caused the Permian-Triassic Extinction?

- 6. What south American traditional dish is made from cow's small intestine?
- 7. A _____ weighs as much as 30 elephants.
- 8. What was Tina Turner's real name?
- 9. What did the ancient Egyptians use to preserve fish and meat?
- 10. Which extinction wiped out the dinosaurs?
- 11. What is Argentina's most famous dance?
- 12. How do you say 'Thank you' in isiXhosa?

I E S T 0 T I S E T S Ι R E E T 0 E 0 R S S E G I E I G 0 T R S U F Q T H S K D Q S U C H M E E N K 0 I S R

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What'cha Reading?

Test yourself

How much did you understand about indigenous knowledge systems?



Read
the article,
What the
Ancients Knew,
on page
34-37.

Then,
answer
the following
questions from
the text.



1. Read the sentences below, and write if they are true or false.

a. Indigenous people have been using their own knowledge systems for thousands of years.

b . Thousands of years ago, people used weather radars to predict weather. _____

c. Willow bark helps when you have a cough. _____

d. Indigenous knowledge is passed down through stories. _____

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

virsualv

aniaobynbal

vatornigas

ginthun

a. Indigenous peoples were master _____

b. _____ rules helped protect the ecosystem balance.

c. The _____ were some of the first to create a number system.



d. Some indigenous tales are important stories of _____



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

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







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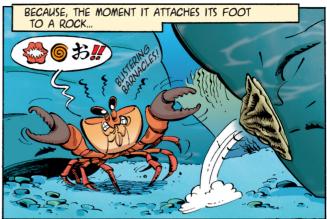




MARINE ANIMALS

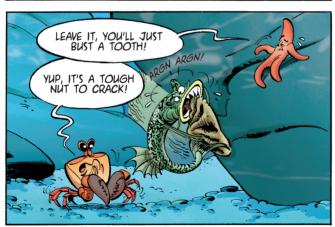
The suction power of a rustic limpet



















RUSTIC LIMPET Patella rustiqua

- Size: 5-7 centimetres
- Diet: Herbivorous grazer
- Interesting fact: Some barnacles start off as male and become female. Some even turn back to male later on.

