Issue 72 - 2023

arath



HIGH BLOOD PRESSURE

How does climate challge affect our ocealls?

© Victor Ene on Unsplash











lermaids" Purses



Here's to with the FNB Future Account

#TheChangeables have got their whole world in front of them. Whatever you want to be in the future, start making it happen now with the FNB Future Account.

- No monthly account fee
- Free debit card swipes
- Withdraw up to N\$1,000 for free at any FNB ATM
- Free monthly subscription to Online and **Cellphone Banking**



FNB Future Account

Bank of #TheChangeables. Terms and Conditions apply.

First National Bank of Namibia Limited. Reg. No. 2002/0180. A subsidiary of FirstRand Namibia Limited





Don tilet Mother Nature become a "Once Upon a Time"



PAKO Kids Magazine P O Box 3171, Windhoek, Namibia Tel: 081 124 1112 E-mail: pako@africaonline.com.na www.pako4kids.com

Editor: Petra Scheuermann Copy Editor: Helmut Nolting Marketing: Petra Scheuermann Design & Layout: Pako Designs Graphics: freepik.com & vecteezy.com Printer: John Meinert Printing (Pty) Ltd Photographs provided and Copyrighted to: Anja Denker, Günter Dainat. Unsplash.com Pako donkey creator: Michelle Bücking ISSN: 2026-7657

Index Features

How does climate change	ge
affect our oceans?	4
Did you know?	8
Mermaids' purses	10
High blood pressure in	
giraffes	20

Activities

Can you help to sort t	these facts
about cats?	6
What a mess	9
Paper dolls	
Activity page	
Answer page	22



NAMIBIAN PRODUCS

PAKO is available at:

WINDHOEK:

Windhoek SPCA Namibia Scientific Society Rhino Park Veterinary Clinic Windhoek Vetennary Clinic Windhoek Animal Hospital

SWAKOPMUND: The Fun Shop Swakop Charity Shop

Kids can subscribe at many schools In Namibia, If you are interested, please contact us for more information.



Did you know the oceans cover 70% of the Earth's surface? So anything that affects the oceans affects all the wildlife and plants that live in it and usually affects the rest of the world too!

Why is the ocean important for life on Earth?

The ocean is important because it is a very large part of our planet. It is a home and food source for countless fish, mammals, plants, birds, and more.

The ocean plays an important role in whatever happens in our environment on Earth. Even if you live on land – like humans do – you wouldn't survive without the ocean!

One example: without the ocean,

Earth would be much hotter than it is right now. That's because the ocean absorbs heat from the Sun and spreads it more evenly around our planet.

How does the ocean soak UD CO2?

Fish and other animals in the ocean breathe oxygen and give off carbon dioxide (CO2), just like land animals. Ocean plants take in the carbon dioxide and produce oxygen, just like land plants. The ocean is great at absorbing CO2 from the air. However, a lot of CO2 comes from human activities, too, For example,

exhaust from cars, planes, and factories put extra carbon dioxide into our air. Too much carbon dioxide in the air is a problem, as it causes the Earth to trap more heat. The ocean absorbs about oneguarter of the CO2 that humans create when we burn fossil fuels (oil, coal, and natural gas).

Does the salt in the ocean do anything?

The amount of salt in the ocean also affects currents. Saltier water is heavier than less salty water. When salty ocean water freezes,

the ice can no longer hold on to the salt. Instead, the salt mixes with the water below making it saltier and heavier. Glaciers, land ice and icebergs are made of fresh water, so what happens when this ice melts? Good guestion!

The water in the North Atlantic sinks because it's cold, but also because it's salty. Being both cold and salty makes it really dense and heavy, so it can sink very far. But if too much ice melts in the North Atlantic, the water could become less salty and affect ocean currents.

As Earth's climate warms, the water also warms melting sea ice. This warming could make the water less cold and less likely to sink. Without sinking cold water, the ocean currents could slow down or stop in some places.

What happens if ocean currents change?

Currents regulate global climate.

Currents play a crucial role in the climate system, helping to regulate global weather patterns. Its collapse would have enormous implications, including much more extreme winters, draughts and sea level rises affecting all countries, and a shifting of the monsoon in the tropics.







Dog clubs

Windhoek Dog Club (Windhoek) Avis Street www.windhoekdogclub.com Info@windhoekdogclub.com

German Shepherd Dog Club (Windhoek) C/o Sean McBride / Frankie Fredericks Drive Tel: o81 358 2182 svnamibia@gmail.com

Doggie School Swakopmund Doggie Lodge Tel: 081 242 1690



Dogs and more / Anja Junkers Tel: 081 801 0104 anja. junkers@gmx.net Force free dog training and behaviour adjustment training.

V Pet boarding

Doggie Lodge Swakopmund Tel: 081 292 4338 UteHolstein@web.de www.doggielodge.de



Windhoek Vet Shop (Vet To Pet Shops) (Windhoek) 1.Lifestyle VTP Maerua Shopping centre / Centaurus Road Tel: 061 223 544 info@whkvet-cc.com 2.Klein Windhoek VTP / Camelthorn Pod, Berg street 42 Tel: 061 250 120 info@whkvet-cc.com



Rhino Park Veterinary Clinic (Windhoek) 54 Rhino Street, Rhino Park Tel: 061 257 272/3

Windhoek Animal Hospital

(Windhoek) 5 Merensky Street, Ausspannplatz Tel: 083 330 4520 / 081 124 9052 windhoek@animalhospital.com.na

Windhoek Animal Hospital

(Okahandja) Axali Doeseb Street Tel: o62 500969 / 081 124 9052 okahandja@animalhospital.com.na

Windhoek Veterinary Clinic

Windhoek) 8 Lossen Street Tel. o61 228 405 / 081 124 1668 info@whkvet-cc.com DID YOU KNOW?

Good News

Some coral reefs could survive warmer temperatures.

New research indicates coral reefs in Palau can likely tolerate and adapt to some

rises in temperature, which could help to prevent future bleaching. This recent finding is a glimmer of hope for coral reefs, as global ocean temperatures rise due to human-caused climate change and natural weather patterns.

https://vitalsigns.edf.org/story/good-climate-news



More good news

Free food: Geneva's community pantries use the sharing economy to prevent food waste In an effort to cut waste, a Geneva nonprofit is rolling out street-side, free-access refrigerators where people can give and take food that might otherwise perish.

The project launched a year ago with a single fridge outside a community centre. The first fridge helped save around three tonnes of food from going to waste last year.

...and more good news

Meet the company using discarded oyster shells to cut energy costs and keep France's buildings cool. Cool Roof France (CRF) is on a mission to reduce the temperature inside buildings by painting roofs white.

The company utilises the more than 130,000 tonnes of oyster shells thrown away every year in France to make sustainable and cost efective paint.

https://www.euronews.com/green/2023/08/07/here-are-allthe-positive-environmental-stories-from-2023-so-far





8

free download of these social media posts from https://www.hero-in-my-hood.co.za/ free-downloads/ Download and send to your friends.





Have you ever found a mermaid's purse on the beach? These little capsules can be cast onto the beach where they blend in well with strands of seaweed, so you need to be looking carefully to find one. Perhaps, in the past, some people believed that they were indeed purses or bags belonging to mermaids, but we now know that they hold very different kinds of treasure. Mermaids' purses, also called eggcases, are in fact the protective cases inside which eggs develop into baby sharks and skates!

Unlike most fish – which release their eggs and sperm into the open ocean and leave the rest to chance - sharks and their relatives (rays, skates and chimaeras) practice 'internal fertilisation', which gives their pups a much better chance at survival. The young (called pups) of all rays and some sharks develop in eggs that are within the mother's body. Those eggs hatch inside the mother and are then born as miniature adults. But other shark species, and all skate species, use a different approach – the females produce eggcases and attach them to something underwater or leave them on the seafloor. One or more pups develop inside each eggcase, then hatch and swim away.

WHAT IS AN EGGCASE?

Eggcases can be simple or elaborate in design. They are made mostly of keratin (the same substance that your hair and fingernails are made of), making them strong but also flexible. Eggcases are usually pillow-shaped, with horns or long curly strands (called tendrils) at each corner. They come in a range of different shapes, sizes and designs - some sharks produce corkscrew shaped eggcases which the female sharks twist into crevices in rocky sea floors, so they don't get washed away.

The time it takes for a baby skate or shark to hatch from its eggcase depends on the species. Skates that live in the deepest parts of the ocean have some of the longest egg incubation times known for the animal kingdom – the eggcases of some species take several years to hatch! But other species, like catsharks and shysharks, hatch from their eggcases after just a few months.

Let's take a look at some of the different eggcases you might find in Namibia.



A spearnose skate eggcase found on a beach near Luderitz. Photo © Ruth H. Leeney



The spindle-shaped eggcase of a St. Joseph shark. Photo C Ruth H. Leeney

DARK SHYSHARKS

These little sharks only reach 60 cm in length as adults, making them the smallest of the shark species in Namibia's kelp forests. Dark shysharks have very small eggcases which are amber to dark brown in colour, and when you find them dried out on the beach, they are dark red, brown or black. Rehydrated eggcases are around 5.5 cm long and have long, curly tendrils at each corner, which are used to attach the eggcase to seaweed or another underwater structure, and keep it in one place.

WHITE SKATE (ALSO CALLED SPEARNOSE SKATE)

This is the largest skate in Namibia's coastal waters, and can grow up to 2.4 metres in length – that's really big! It is often caught by recreational anglers fishing from the beach. This skate produces the largest eggcases you can find on beaches in Namibia - the walls of the eggcase are very thick and ridged, and it has a pointed horn extending from each of its four corners. These eggcases are between 12 and 19 cm long without the horns, or up to 28 cm long including the horns, when rehydrated.

BISCUIT SKATE

This beautiful skate is found in shallow coastal waters around Lüderitz, and its eggcases are very common on beaches in southern Namibia. They are a similar shape to those of the white skate but are much smaller - when rehydrated, they are between 6 and 10 cm in length (excluding horns). There is a visible 'keel' along the long edges of the eggcase and the horns taper to very fine tips.

Chimaeras (also called ghost sharks) are relatives of sharks and rays that live in the deep ocean, but one type of chimaera, called the St. Joseph shark or elephantfish, lives closer to shore. It produces a large, spindle-shaped eggcase with a single point at each end and a frill along both edges.

HOW CAN EGGCASES HELP US LEARN MORE ABOUT SHARKS AND SKATES?

Sharks, skates and chimaeras move around a lot, which means it can be difficult to pinpoint specific areas where we can give them protection. If we record the places where we find eggcases, it gives us an indication of which areas are important for unborn sharks, skates and chimaeras. By protecting those areas, we can give many of these species a better chance of hatching and making it through the first few challenging days or weeks of their lives.

If you are lucky enough to live near the sea and want to go in search of mermaids' purses yourself, look at the high tide line, where bands of seaweed have been left by the tide. You need sharp eyes to notice the eggcases amongst the seaweed. The next time you find one, take a closer look and imagine the tiny shark or skate that spent the first few weeks of its life inside!

To learn more about our work, follow us on social media:



🧿 @namibia_sharks 🛛 🖬 Namibia's Rays and Sharks



A pyjama shark's olive green eggcase, suspended between two kelp stipes. Pyjama sharks are found in South Africa but not in Namibia. Photo © Helen Walne.



A developing dark shyshark inside its eggcase, photographed in False Bay, South Africa. Photo C Lisa Beasley.



Two biscuit skate eggcases, from a beach in southern Namibia. Photo © Ruth H. Leeney.



© Jonas Von Werne on unsplash





Clever www.pako4kids.com

pako@africaonline.com.na

Website for parents,

teachers and children.

Find more contacts on:

www.pako4kids.com/ cleverkids.htm

Happy Dog (Windhoek)

Tel: 081 801 0104

Tel: 081 270 1809

Animal Assisted Therapy



Element Riders (Kitesurfing / Surfing) (Walvis Bay, Swakopmund and Lüderitz) Tel: 081 666 6599 info@element-riders.com

Equitrails Namibia (Windhoek) (Horse Trails & Riding Tuition) Tel: 081-3380743 sam@equitralls.org www.equitrails.org

Rooisand Desert Ranch (Stargazing) (situated half-way between Windhoek and Walvis Bay) Tel: 081 127 7629 lifestyle@rooisand.com



Goethe Institut (Windhoek) y Robotics to solving problems Idel Castro Street Tel: 061 22 57 00 library.windhoek@goethe.de www.goethe.de/namibia



Hasselt Optics (Windhoek) Carl List Mall / Fidel Castro street Tel: 061 377 800 andreas@optometrist.com.na

Olympia Optics (Windhoek) Cnr Hidipo Hamutenya / David Carstens Tel: 061 372 620 admin@olympiaoptics.com www.olympiaoptics.com

African Eyes Optometrist (Windhoek) Shop 3, Maerua Mall, Jan Jonker Road Tel: 061 259 031 aeo@optometrist.com.na

Eye Store (Windhoek) Shop 35/36, Maerua Mali, Jan Jonker Road Tel: 061 307 620 reception@eyestore.co.na

Windhoek Optics (Windhoek) Continental Building / Independence Ave Tel: 061-22 55 41 whkoptic@iway.na www.windhoek-optics.com



Bianca Niemeyer Physiotherapy Tel: 061 253 446 biancaniem@gmail.com

Alna Swartz Physiotherapist (Kleine Kuppe / Windhoek) Tel: 081 406 9200 alna.swartz@mtcmobile.com.na

> Website for parents, teachers and children.

anen



Art supplies and stationery Jenny's Place (Windhoek) 78 Sam Nujoma Drive Bougainvillas Mall Tel: 061 269 152 marlene.jennysplace@gmail.com



mia.rousseau.art@gmail.com

The Fun Shop (Swakopmund) g Tobias Hainyeko street Tel: o64 46 3657 / o81 360 7230 online@thefunshop.com.na www.thefunshop.com.na

> "Education is one thing no one can take away from you." - Elin Nordegren -







Pre-primary Schools

Cosmo Kids (Windhoek) 32 General Murtala Muhammed Ave Tel: 081 128 8807 / 081 407 7677 info@cosmokids.com.na

Kindergarten West (Windhoek) c/o Bismarck street & Dr. W. Külz street Tel: o61 232 590 kigawest@gmail.com

Tiny Tots and Tall Tales (Windhoek)

Tel: 081 311 9312 Elisenheim Lifestyle Estate tinytotsandtalltales@gmail.com http://tinytotsandtalltales.simplesite.com

Private tutoring

Kumon - extra maths & english classes

(Windhoek) Tel: 061 255 367 carolkumon253@gmail.com www.kumon.org/namibia/

Schools

Waldorf School Windhoek (Windhoek) Tel: 061 415 250 reception@waldorf-namibia.org www.waldorf-namibia.org

Sport Activities

Crete Gymnastics Club (Windhoek) Tel: 085 129 9679 cretegym@iway.na www.cretegymnasticsclub.net

Bubbles Swim School (Swakopmund) Tel: 081 334 6871 tianeg18@gmail.com

T-Rex Tribe for Swim, Cycle & Obstacle Run Coaching; Camps & Multisport Events Tel: 081 246 2767 charm-shannon@afol.com.na www.t-rexnamibia.com

Salty Jackal Surf School

Tel: 081 465 1465 info@saltyjackal.com http://www.saltyjackal.com/

Theatre & more

Helen O'Grady Drama Academy (Windhoek) Tel: 081 390 6210 windhoek@dramaafrica.com www.dramaafrica.com

Therapists

LOGOTRIX Speech and Language Therapy (Windhoek) Tel: 061 225 424 / 081 247 2625 logotrix@iway.na

> Find more contacts on: www.pako4kids.com/ cleverkids.htm

free download of these social media posts from https://www.hero-in-my-hood.co.za/free-downloads/ Download and send to your friends.







Practice in Symmetry

Use the grid below to draw a mirror image of the owl's left

TRUE OR FALSE?

Activity page

Dolphins don't have ears.

□ True

□ False





Unlike other species, sea turtles cannot retract their paddle-shaped flippers and head into their shells.

True

False







(find answers on page 22)



side on the blank side of the chart.

	Right

WORDSEARCH

TURTLE ICE CURRENTS SEA GLACIERS CLIMATE OCEAN



HIGH BLOOD PRESSURE IN GIRAFFES

Agiraffe is a bit of an odd looking Aanimal with its long neck and legs. They come in handy while browsing trees, but giraffes have overcome another serious challenge... How to get blood from the heart to the brain over a distance of about 2 meters? Luckily, nature has a solution for everything!

To pump blood all over the giraffe's body, the giraffe has an incredibly high blood pressure. To maintain a blood pressure of about 110/70 mm Hg in the brain (average for large mammals), the giraffe's heart needs a blood pressure of

about 220/180 mm Hg (to compare, an adult man's blood pressure should be less than 120/80 mm Hg).

n humans, a high blood pressure causes all kinds of problems, from swollen ankles to heart failure. Chronic high blood pressure causes the heart muscle to thicken. Part of the heart becomes stiffer (fibrosis) and will be less able to fill up with blood. In giraffes, the heart muscles are also thick, but fibrosis of the heart does not occur. Giraffes manage the sudden change in blood pressure as they have special valves in their necks. When their heads are down.

such as when they are drinking water, blood collects in the big veins in their neck. More than 1 litre of blood can be stored in the neck. which temporarily reduces the amount of blood returning to the heart. As there is less blood in the heart, less pressure is generated per heartbeat. When the head is raised again, the stored blood flows back to the heart. The heart responds with a strong high-pressure heartbeat to help getting blood back to the brain before any damage is caused.

Then giraffes have another trick to avoid heart failure... They have a different electrical heart rhythm than other mammals. The filling-phase of the heart is extended, allowing the heart to pump more blood with each heartbeat. While the legs and ankles of humans can become swollen due

to a high blood pressure, giraffe legs have built-in support stockings! Their legs consist of dense connective tissue, and the arteries have thick walls to withstand the high blood pressure.

∧ last big question remains... You **A**know the feeling when you get up to quickly, you sometimes get dizzy? Knowing now that the giraffe has such high blood pressure, how come the giraffe does not faint when it has a drink and rises its head again?

We still don't have all the answers, but researchers found that giraffes can partly buffer the sudden change in blood pressure in the brain. During a study, several giraffes were immobilized and their heads were raised and lowered.

GIRAFFES ARE ANIMALS ON EARTH! ADULT GIRAFFES CAN GROW UP TO 5.5 METERS TALL (THAT'S AS TALL AS 3 ADULT HUMANS STACKED ON TOP OF EACH OTHER)

> Their tongues can reach up to 45 centimeters!

That's as long as a ruler! It helps them grab leaves from tall trees with ease.

When the head was down, blood pooled in the big veins of the neck. Giraffes have specialized blood valves in their necks to counter 'gravity'. Much more research still needs to be done to fully understand this mechanism.

The better we understand these amazing animals, the greater the chances that we can come up with ideas to improve on human medical conditions.



www.wildlifevetsnamibia.com mariska@wildlifevetsnamibia.com

They have such big hearts too, not just in size but also in how much they care for other giraffes. They are social animals and love hanging out in a group called a "tower." They look out for each other and stick together, just like we do with best friends and family!

Giraffes are not only good at reaching tall trees, but they can run fast too!

They can gallop at speeds up to 56 kilometers per hour! Imagine a giraffe racing alongside fast cars!





- ✓ Afternoon Schools
- ✓ After School Care / Holiday Care
- ✓ Animal Assisted Therapy
- ✓ Art & Craft Classes
- ✓ Art Supplies and Stationery
- Baking and Birthday Parties
- Children with Disabilities
- ✓ Clothes, Bedding and Accessories
- ✓ Dance Schools
- ✓ Dietitians

www.pako4kids.com

Pako Clever Kids offers parents and teachers easy ways to extend their child's learning and activity opportunities beyond the classroom.

We have created a database to help you to find everything for your children.



- Entertainment / Leisure Time
- ✓ Language Courses / Life Skills
- ✓ Music & Instruments
- Optometrists / Pharmacies
- ✓ Pre-Primary Schools
- Private Tutoring
- ✓ Schools
- Sport Activities & Equipment
- ✓ Theatre
- ✓ Therapists

In collaboration with





www.ati-holidays.com



Dr. Baines **Dr. Mike Greaves** ULTIMATE

LIFE ENRICHING JOURNEYS

www.ultimatesafaris.na

SAFARIS

https://safaricarrentalnamibia.com

Thank you for giving nature and animals a voice!