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# HOW ELEPHANTS COMMUNICATE

THE MARYELS OF ANTMALVISION

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BACK schoo









Create Lasting Change

A

Dive into the

**Depth** 





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"Each species is a masterpiece, a creation assembled with extreme care and genius." E.O. Wilson

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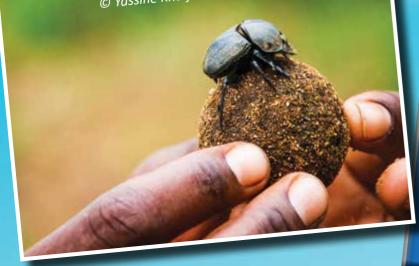
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# oung Beetles

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#### Why are dung beetles important?

Dung beetles are like nature's cleanup crew. They help keep our environment clean by removing animal poop. This helps prevent diseases from spreading and keeps our surroundings healthy.

What are dung beetles? Dung beetles are insects that love to eat poop! They are small creatures with hard shells and strong legs. You can find them in many parts of the world, from forests to grasslands.

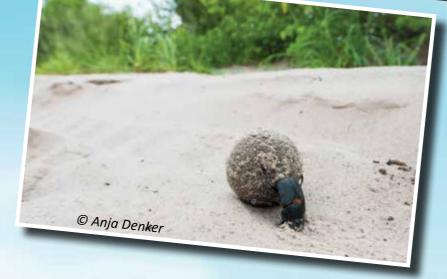
# What do dung beetles eat?

As the name suggests, dung beetles mostly As the name suggests, during beetles mostly eat animal dung, which is poop. They roll the dung into little balls and use it for food and to make a home for their babies. It might sound yucky, but it's an important job!

Dung beetles have a good sense of smell Dung beetles have an excellent sense of smell, which helps them find fresh dung to eat and roll into balls. It's like having a built-in radar for poopl in radar for poop!

# Dung beetles come in different sizes

There are many types of dung beetles, and they come in different sizes and colours. Some are small and shiny, while others are big and colourful.



Life cycle of dung beetles Dung beetles start as tiny eggs laid inside the dung balls. When the eggs hatch, the baby beetles eat the dung until they grow into adult beetles. Then they start the cycle again by collecting and rolling more dung balls.

Pako has sent you a postcard. He is telling you more about dung beetles. The words are all written together, making it difficult to read. Try to decipher the text and find out what Pako wants to tell you.

Somedungbeetlesevenusethe

Dungbeetlesmayhaveamessy job, but they are essential for keepingourworldcleanand healthy.Sothenexttimeyousee adungbeetledoingitsthing, rememberhowimportantthey aretoourplanet!

# Dung beetles help farmers

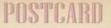
Farmers love dung beetles because they help improve the soil. By burying dung in the ground, they make the soil healthier and more fertile for plants.

Children in

Namíbía

Rddress: Africa

They are important to ecosystems Dung beetles are a vital part of many ecosystems. Without them, there would be a lot more poop lying around, which could lead to more diseases and unhealthy environments.



starstonavigate! Theycansee theMilkyWay,whichhelpsthem rolltheirdungballsinastraight line

# CREATURE Feature By Ruth H. Leeney Namibia's Rays and Sharks (NaRaS) project

#### This edition's featured creature is the **BLUNTNOSE GUITARFISH**.

English: Bluntnose guitarfish or Sand shark. Afrikaans: Stompneus-sandkruiper or Sandfis Scientific: Acroteriobatus blochii

There are 31 species of guitarfish around the world, but Namibia has just one species: the bluntnose guitarfish. The bluntnose guitarfish has a flattened body and a short, bluntly pointed snout. Their dorsal (top) surface is brown, and younger animals have a symmetrical pattern of white spots which gradually

the states and and An adult bluntnose guitarfish caught and released in Lüderitz.

disappears as they get older. They can reach a total length (from the tip of their snout to the tip of their tail) of 96 cm.

Bluntnose guitarfish live on the seafloor, in shallow sandy and muddy bays, and feed on small invertebrates and fishes that live on or near the seabed. In Namibia they are often seen by anglers and beachgoers, in Walvis Bay, Sandwich Harbour and in the lagoons in Lüderitz Bucht. They are found only in the coastal waters of Namibia and on South Africa's west coast they don't live anywhere else in the world! Because of this small range, it is important that their habitats

are protected from negative impacts like pollution, and that anglers who catch guitarfish release them guickly and carefully back into the ocean.

Guitarfish are completely harmless and quite shy, so they often swim away if you disturb them in shallow waters. The ≠Aonin or Topnaar people - Namibia's coastal tribe used to hunt guitarfish with spears, and eat them. The Topnaar name for guitarfish is 'orobeb'. Nowadays, their only predators are African fur seals and sharks.

There is a lot we still don't know about bluntnose guitarfish, such as how many young they give birth to, how far along Namibia's coast they travel, and how long they can live for. Perhaps you can become a scientist and study these little residents of Namibia's coastal zone. to better understand their lives and the important role they play in the foodweb.

A close-up of the golden eye of a bluntnose guitarfish caught and released near Swakopmund

By Mabuta Simataa

Namibia's Rays and Sharks (NaRaS) project

© A. Klingelhoeffer

Our second shark featured in this edition of the magazine is the DARK SHYŠHARK.

Afrikaans name: Donker skaamoog Scientific name: Haploblepharus pictus

The dark shyshark is a small shark with an elongated, torpedo-shaped body and a broad head with a rounded snout. Dark shysharks have a beautiful, complex patterning of dark brown saddles and yellow or light brown spots, on a brown background. They can only be found along the Namibian coast and South Africa's west coast, in the Atlantic Ocean. They live in shallow waters (no deeper than 35 m) along the coastline and can be found in kelp

forests, sandy and rocky reefs. Dark shysharks mainly feed on small bottom-dwelling fish, molluscs like squid & octopuses, and crustaceans like small crabs.

Dark shysharks are one of Namibia's smallest shark species, reaching only about 60 cm in length. They are completely harmless to humans and when threatened, they curl into a circle and cover their eyes with their tail, which is how they got the name 'shyshark'. In Namibia their main predators are broadnose sevengill sharks and other large fishes and marine mammals.

Female dark shysharks produce two eggcases at a time, each containing a single fertilised egg, and attach



O @namibia\_sharks



© NaRaS project

# **CREATURE** Feature

them to seaweeds or rocks. The eggs hatch after 6 to 10 months and the empty eggcases can be found on beaches in Namibia - they look like a little purse. Young dark shyshark are 10 to 11 cm long at birth. Dark shysharks can live for up to 25 years.

Because dark shysharks live close to the shore, they are not caught in any large-scale fisheries and the only threat they face is capture by recreational anglers. So as long as anglers handle them carefully and release them alive, we can ensure that these pretty little sharks remain an important feature of Namibia's coastal environment in the future.

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

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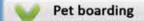
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#### HOW ELEPHANTS COMMUNICATE

Elephants are amazing animals, and they have some very special ways of communicating with each other.

**TRUMPETING** Elephants can make loud trumpet-like sounds using

their trunks. They do this to alert the herd to danger or to let each other know they're excited or happy. It's like their way of saying, "Hey, everyone, look over here!"

**RUMBLING** Elephants also communicate through lowfrequency sounds that humans can't hear very well. These rumbles can travel through the ground, and other elephants can feel them through their feet. It's like sending secret messages through vibrations.

**BODY LANGUAGE** Elephants use their bodies to communicate too. If they raise their trunks, it can mean they're curious or trying to smell something in the air. Flapping their big ears can help them cool down, but it can also be a sign of irritation or excitement.

**TOUCH** Elephants are known to be very affectionate and touchy-feely creatures. They use their trunks to touch each other gently, like a loving hug. It's their way of showing they care about their family and friends.

**CHEMICAL SIGNALS** Elephants can communicate through chemical signals too. They leave behind scent markings with their urine or by rubbing their bodies against trees. Other elephants can smell these markings and understand things like whether a female is ready to mate.

**INFRASOUND** Elephants can make super lowfrequency sounds called infrasound that are below the range of sounds that humans can hear. These sounds can travel really far and are used for long-distance communication. It's like sending messages to elephants far away.

**VOCALISATIONS** Besides trumpeting, elephants can make other sounds, like grunts and roars. These sounds can express different emotions and help them communicate with each other.

**FAMILY BONDS** In a herd of elephants, there is usually a matriarch, which is the oldest and most experienced female. She plays an important role in decision-making and helps keep the group safe. Her experience and knowledge are like the wisdom of the family.

So, as you can see, elephants have many ways to talk to each other, just like people use words, body language, and actions to communicate. It's one of the things that makes them such incredible animals.



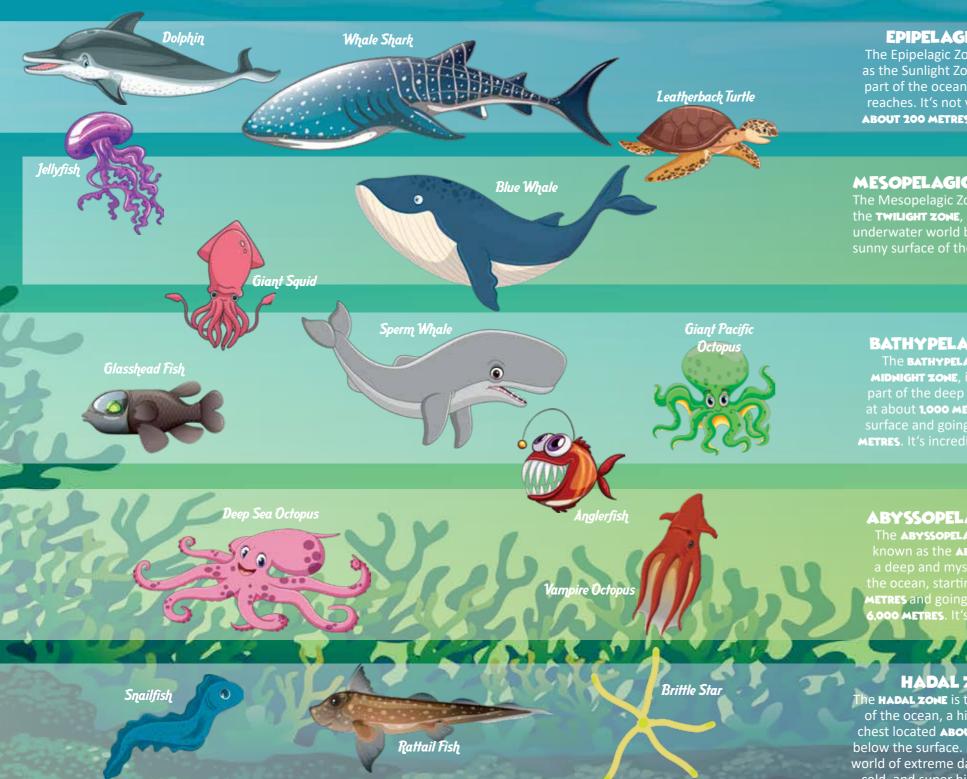


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VEND GIGHE TAH REVATED WORDS

# **DIVE INTO THE DEPTHS EXPLORING WHAT** MARINE ANIMALS CALL HOME

Beneath the shimmering surface of our planet's vast oceans lies a world brimming with wonder and enchantment. It's a world inhabited by creatures of all shapes and sizes, each with its own unique story and way of life. But did you know that these marine animals don't just live anywhere in the water? Just like how people have their favourite places to hang out, marine animals also have their preferred "neighbourhoods" in the sea.



#### EPIPELAGIC ZONE

The Epipelagic Zone, also known as the Sunlight Zone, is the upper part of the ocean where sunlight reaches. It's not very deep, only ABOUT 200 METRES, and it's where many colourful and exciting ocean animals live. In this zone, you can find colourful fish, playful dolphins, and tiny creatures like plankton. It's a busy place where plants called phytoplankton use sunlight

#### MESOPELAGIC ZONE

The Mesopelagic Zone, known as the **TWILIGHT ZONE**, is a mysterious underwater world beneath the sunny surface of the ocean. It's

not too deep, ABOUT 1,000 METRES, but the sunlight starts to fade away here. It's not pitch black, but it's dim, like an endless twilight. Special creatures live here, and they have

#### BATHYPELAGIC ZONE

The **bathypelagic zone**, or MIDNIGHT ZONE, is a mysterious part of the deep ocean, starting at about **1,000 METRES** below the surface and going down to 4.000 METRES. It's incredibly dark and the

adapted to survive in this extreme

#### ABYSSOPELAGIC ZONE

The ABYSSOPELAGIC ZONE, also known as the **ABYSSAL ZON**e, is the ocean, starting around **4,000** METRES and going down to ABOUT 5,000 METRES. It's incredibly dark

### HADAL ZONE

he HADAL ZONE is the deepest part of the ocean, a hidden treasure chest located ABOUT 6.000 METRES below the surface. It's a mysterious world of extreme darkness, freezing cold, and super high pressure. In

and super chilly because sunlight can't reach there. The animals living in this extreme place have special adaptations. Some of them are shaped strangely and light up to ind food and talk to each other. It's like a hidden world in the ocean, ful

this deep, dark world, strange creatures like ghostly fish and giant squids live. The Mariana Trench, the deepest part of the HADAL ZONE, goes down to about 11,000 METRES, making it the deepest place on Earth.

In this article, we're going to embark on an underwater adventure to discover the secret homes of marine animals.

So, grab your virtual snorkels and dive masks as we plunge into the blue depths and uncover the incredible world of marine animals and the unique environments they call home. Get ready to explore the ocean's hidden neighbourhoods, and who knows, you might just make a few new underwater friends along the way!

> to make food, which supports the ocean food chain. So, the epipelagic zone is a colourful and bustling place in the ocean where lots of life thrives under the bright and warm sun!

cool tricks to survive in this low light, like glowing in the dark to find food and hide from predators. Exploring this place is like finding a secret world beneath the sea!

and it's very cold. Exploring the BATHYPELAGIC ZONE is like visiting an alien world right here on Earth, and scientists keep discovering new things about the incredible animals that live there!

of amazing creatures. Scientists are still learning about it because it's one of the least explored spots on Earth. It's a mysterious place with weird and fantastic animals!

Scientists are on an exciting adventure to explore this unique world and learn more about its incredible life. Who knows what other secrets the **HADAL ZONE** might hold!

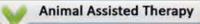




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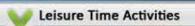
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> "Education is one thing no one can take away from you." - Elin Nordegren -





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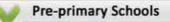
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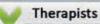
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(find answers on page 22)

It looks like it's going to be a great school year!

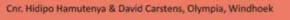
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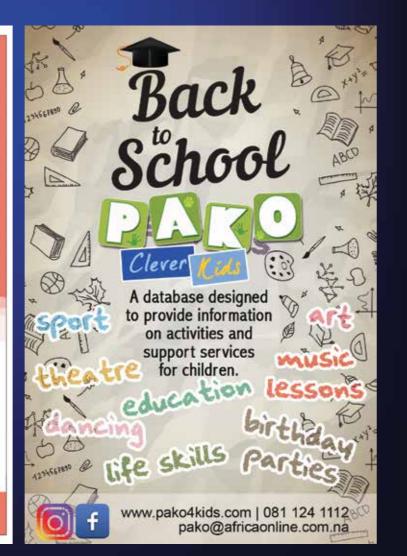
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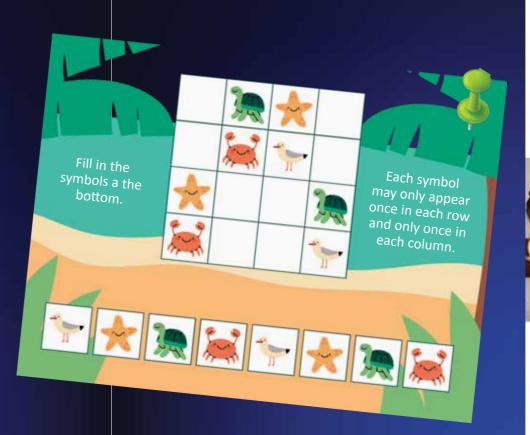
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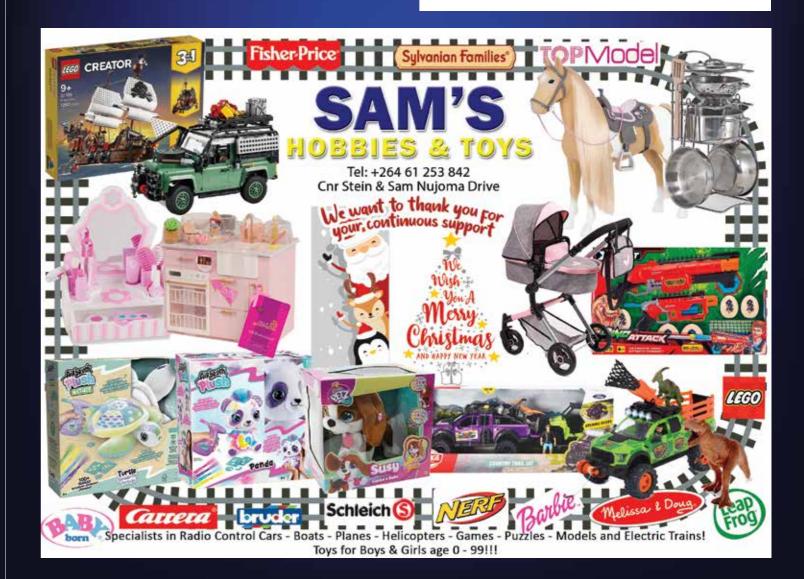
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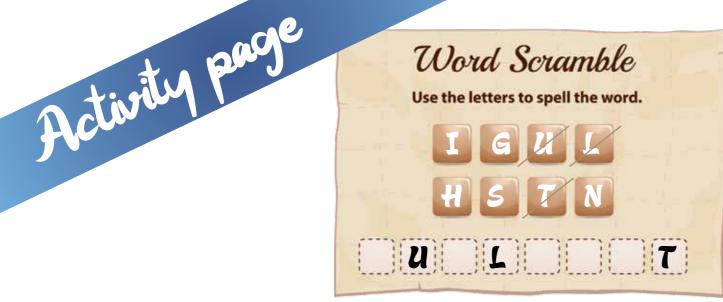


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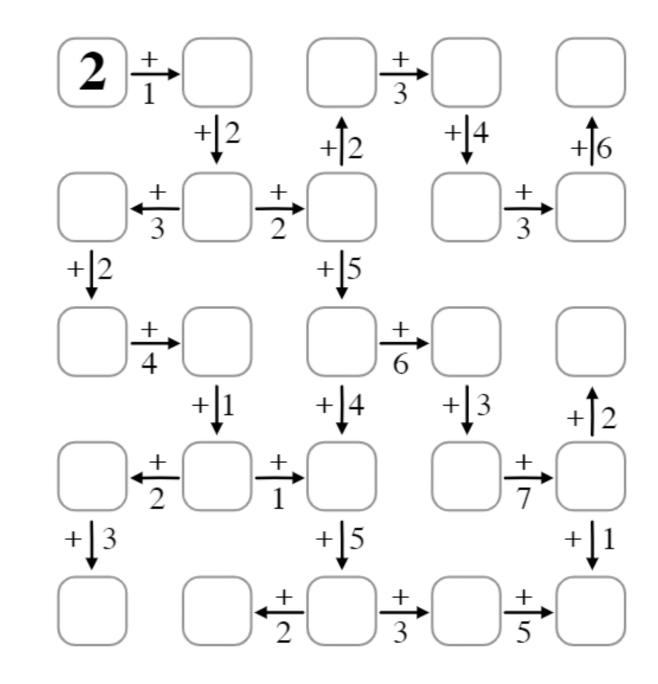
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#### Dolphins are amazing creatures

Resting one half of the brain: Dolphins are unique because they don't sleep like humans do. They are what we call "unihemispheric slow-wave sleepers". That's a big word, but it means that when dolphins sleep, they rest one half of their brain while the other half stays awake and alert. This is super important for them because they live in the water and they need to come up for air to breathe. Even when they're sleeping, dolphins don't stop swimming. They continue to swim slowly near the surface of the water. This way, they can keep breathing without having to fully wake up. Imagine if you could sleep while riding a bicycle!

TRUE OR

Wide Variety of Breeds: There are over 340 different breeds of dogs around the world. They come in all sorts of shapes, sizes, and colours!

□ True

FALSE?

□ False



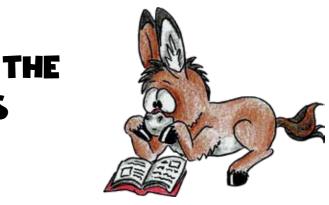
 Word Scramble

 Use the letters to spell the word.

 J.H.P.

 D.N.S.O.

(find answers on page 22)



# THE MARVELS OF ANIMAL VISION AN EXTRAORDINARY WORLD BEYOND HUMAN PERCEPTION

Stay focused! Part of the EM®NEKO Group



#### SHAPES AND SIZES

Animals come in all shapes and sizes, and so do their eyes! While slit-shaped pupils. These special pupils help them see better in bright sunlight and focus on their that help them see in the dark.



Do you know which animal that is?

Have you ever wondered why animals' eyes look so different from ours? Well, get ready to dive into the fascinating world of animal eyes and discover the amazing ways they differ from human eyes.



#### NIGHT VISION

Ever tried to see in the dark and struggled? Some animals have extraordinary night vision. Lions can see in much dimmer light because they have more cells in their eyes that work in low light, making them excellent nighttime predators.



#### **COLOURFUL WORLD**

Humans see the world in a rainbow of colours, but did you know some animals see even more colours than we do? Bees can see ultraviolet light, a colour invisible to our eyes. This special vision helps them find the brightest flower to collect nectar. On the other hand, dogs see fewer colours than we do. They see in shades of blue and yellow, no red colours. While we enjoy a colourful world, animals experience it in their unique ways.







#### FANCY FEATURES

Some animals have cool features that we don't have. Guess which animal were correct. They move their eyes independently, looking in two directions at once. This helps them keep

having built-in sunglasses. This helps them navigate and find food even on the brightest days.



#### **MORE INTERESTING FACTS**

- Humans can process three channels of colour, while the mantis shrimp perceives the world through 12 channels of colour.
- Have you heard the saying "as blind as a bat", this is a myth. Bats are not blind, they have small eyes with very sensitive vision, but they rely more on their hearing.
- Did you know that goats have rectangular pupils? Which provides them with a broad line of sight which allows them to see danger approaching.
- The giant squid has the largest eyes in the animal kingdom, their eyes are the size of a basketball.
- Most spiders have 8 eyes, which are arranged in two rows of four on the head region. Each pair of eves serves a different purpose.

Animals' eyes are like nature's incredible inventions, each designed for a specific purpose. While our human eyes are fantastic, exploring the unique eyes of animals opens a world of wonders. From night vision to colourful spectrums, animals see the world in ways we can only imagine.

Next time you meet an animal, think about the amazing things their eyes allow them to do and see, and appreciate the marvelous diversity of the animal kingdom.



# THE POWER OF FOCUS

things up close, but some animals beat us in this department. Eagles have eyes that are good at zooming in on faraway objects. Their eyes are like super cameras, allowing them to spot a tiny mouse from high up in the sky. This keen eyesight helps them hunt with precision.

Written by Sonja Boost Olympia Optics Tel: +264 (0)61 372 620 sonja@eyedoc.com.na

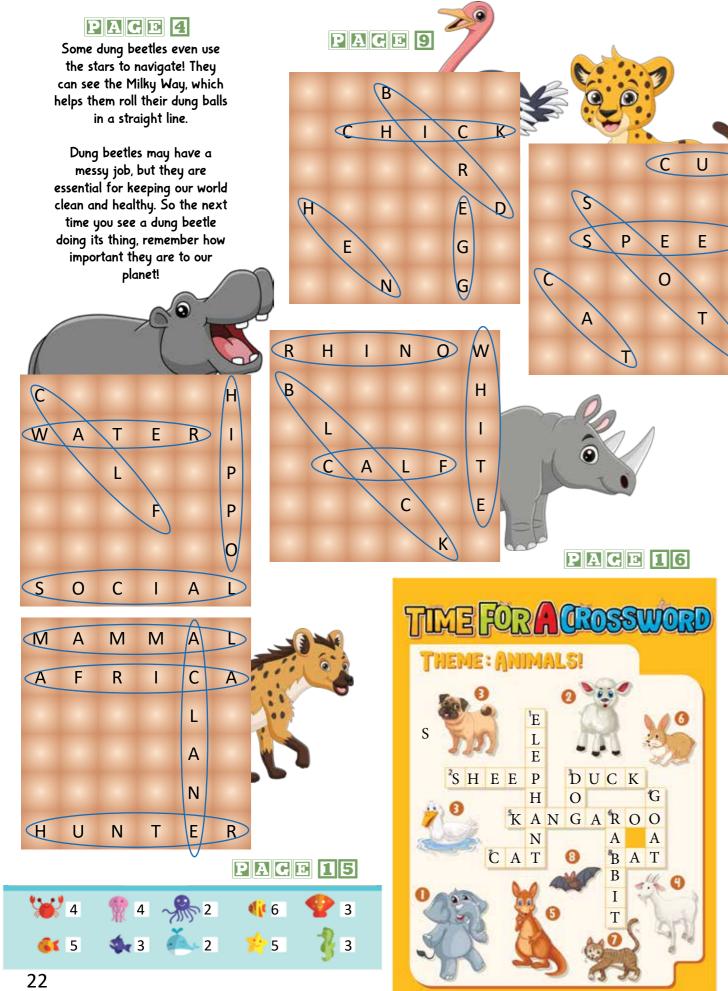
Humans are good at focusing on



#### UNDERWATER MARVELS

Fish have eyes that work amazingly well in the water. Their eyes have a special layer that acts like goggles, helping them see clearly even in the murky depths. Dolphins also have excellent vision.

# ACTIVITYANSWERS



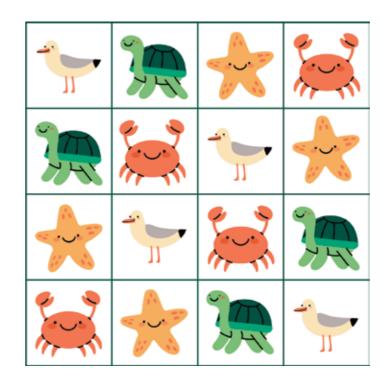
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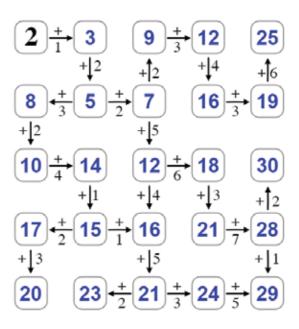


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Word scramble: SUNLIGHT DOLPHINS

#### **TRUE OR FALSE: TRUE**

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# Thank you for giving nature and animals a voice!

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