On Shark Awareness Day we celebrate sharks and share some fascinating facts about these amazing animals and their vital role in the ocean.

SO MANY DIFFERENT SHARKS!

There are over 470 species of shark.

**SMALLEST**
Dwarf lantern shark (up to 20 cm)

**LARGEST**
Whale shark (growing up to 18 m)

They are found throughout the world’s oceans, from the poles to the tropics.

The Zambezi (Bull) shark can even be found in fresh water.

And from the depths of the ocean to the surface.

WHAT IS A SHARK?

A shark is a fish, **BUT**...

A shark’s skeleton is made of cartilage and not bone.

Cartilage is what humans have in their ears and on the tips of their nose.
Sharks have 5 to 7 gill slits. Fish have 1.

Sharks have a large oily liver for buoyancy. Most bony fish have swim bladders.

Sharks have dermal denticles covering their bodies. Fish have scales.

Dermal denticles face backwards, streamlining the shark from head to tail. Shark skin feels like sandpaper when stroked in the opposite direction.

The idea for the fabric design of some swimsuits worn during the Sydney Olympic Games was inspired by shark skin. The swimsuits were found to improve performance and provided an unfair advantage to the wearer. This led to a ban on all swimsuits of a similar nature.

TOOTHY FACTS

Shark teeth are not embedded in the jawbone.

They have 5 to 7 rows of teeth.

As the teeth in the front row fall out they are replaced with strong new teeth.
TOOTHY FACTS

Many sharks are top predators in the ocean, keeping numbers of their prey in balance. Sharks also feed on sick and weak prey, helping to keep the oceans healthy.

Their teeth have different shapes. Some have serrated, triangular shaped teeth (e.g. Great White shark, Tiger shark, Zambezi shark). With these efficient cutting teeth and a side-to-side sawing action they can feed on prey much larger than themselves.

Some sharks (e.g. Ragged-tooth shark, Mako shark) have smooth, fork-like teeth. These teeth cannot cut and are used for grabbing prey and swallowing whole.

Some sharks (Smooth houndsharks) have 8-10 rows of flattened teeth used to crush and grind, rather than bite and tear their prey.

The whale shark is a filter feeder – one of only 3 known filter-feeding shark species.
SHARK SENSES

Sharks have the same **five senses** humans have. They also have an **additional sense**, the ability to detect electric fields in the water.

1 **SIGHT**
Sharks are able to see in low light conditions. Most sharks are colour blind. They have 2 eyelids but they cannot close them. A third eyelid, called a **nictitating membrane**, protects the eye from damage.

2 **HEARING**
Sound travels faster through water than air. Sharks can hear sounds that humans cannot hear.

3 **SMELL**
Sharks use their **nostrils** to pick up scents, they are not used for breathing.

4 **TASTE**
The taste organs are not as highly adapted as the other senses.

5 **TOUCH - LATERAL LINE**
The **lateral line** runs down the side of the body of a shark ending at the tail. It detects vibrations and pressure changes in the water.

A wounded fish will send out rapid vibrations while a fish swimming normally will send out calm vibrations.

6 **ELECTRIC DETECTION**
The **Ampullae of Lorenzini** are jelly filled pores mostly on the snout. They detect tiny electric currents – even the beating heart of prey buried in sand.
Baby Sharks

Sharks reproduce by internal fertilization.

Male sharks have two external organs known as claspers. A clasper is inserted into the female during mating to deposit sperm.

There are 3 types of reproduction in sharks

Oviparous reproduction

The female lays eggs which are attached to sea weeds until hatching takes place.

These eggs are sometimes known as a “mermaid’s purse”.

Ooviviparous reproduction

They give birth to live young.

The pup develops inside the body of the mother, but is not attached in any way.

The pup is fed by a yolk sac or by feeding on other eggs.

Raggedtooth sharks are ooviviparous.

Viviparous reproduction

They give birth to live young.

The pup develops inside the body and is nourished by the mother by means of an umbilical chord.

Tiger sharks are viviparous.

Sharks do not care for their young. After hatching or birth they fend for themselves.
WHY ARE SHARKS IMPORTANT?

Sharks are the top predators in the ocean's food pyramid.

If sharks are removed, the entire ocean's food pyramid will be unbalanced.

If there were no sharks, animals that sharks eat would increase in numbers.

And those animals would not have enough food.

SHARKS ARE THREATENED

Most sharks grow slowly, take many years to mature and produce few young. This makes them vulnerable to over-fishing.

Over 74 shark species are listed as THREATENED by the IUCN.

Sharks killed every day.

264,000

90% of global shark populations lost in last 20 years.

Sharks killed every year.

100 million

Sharks and people

12 people per year

People kill 100 million sharks per year.
THREATS TO SHARKS

- Over-fishing through direct targeting of sharks for commercial use.
- Habitat loss from coastal development.
- Bycatch of the commercial fishing industry.
- Over-fishing through direct targeting of sharks for commercial use.

WHAT CAN WE DO TO HELP SHARKS?

- Choose your seafood wisely
  - Use the SASSI list.
- Choose your seafood wisely
  - Opt for MSC certified products.
- Support better laws to protect sharks.
- Support credible research organisations.
- Obey fishing regulations when fishing.
- Support organisations that practice ethical shark tourism.
- Learn more about sharks and share your knowledge.