



SHARKS

SESSION PACK

SESSION PACK CONTENTS PAGE - SHARKS

- **INFORMATION PAGES: SHARKS**
- **SESSION PLAN: SHARKS**
- **PRESENTATION: WHY THAT NAME**
- **ACTIVITY: GIVE THAT SHARK A NAME**
- **EXERCISE: DESIGN YOUR OWN SHARK SPECIES**
- **GAME: SOUTH AFRICAN SHARK BINGO**
- **DOCUMENTARY LINK: OUR OCEANS - SHARK SANCTUARY**
- **ADDITIONAL RESOURCES: SHARKS POSTER**
- **ANNEXURE 1 - ASSOCIATED SESSION PLAN BREAKDOWN FOR RELEVANT READING AND COLOURING IN PAGES FOR “HARRY THE HAMMERHEAD” VOLUME ONE**
- **ANNEXURE 2 - SESSION PLAN CURRICULUM AND ASSESSMENT POLICY STATEMENT (CAPS) ALIGNMENT**

MATERIALS REQUIRED FOR SESSION

- Colouring pencils
- Copies of give that shark a name activity sheet - one per person
- Copies of design your own shark species exercise sheet - one per person
- Bingo players cards - one card per person
- Two sets of bingo calling cards (shark names)
- Screening device

INFORMATION PAGES: SHARKS

DESCRIPTION:

Like other fishes, sharks are cold-blooded, have fins, live in the water, and breathe with gills. A shark's skeleton is made of cartilage not bones. There is 400+ species of sharks globally and South Africa is a hotspot for shark's 100+ species in our waters we act as a lifeboat for the conservation of this diverse species.

CHARACTERISTICS:

- Sharks normally have tough, grey skin with tooth-like scales. They may also be cream, yellow, brown, bronze, blue, or nearly black. They are often covered in patterns, spots, bands, or marbling.
- Most sharks have a muscular, asymmetrical, upturned tail, pointed fins, a pointed snout, and sharp triangular teeth.
- A shark's fusiform body shape (rounded and tapering at both ends) reduces drag and requires minimum energy to swim.
- Sharks have special electroreceptor organs most often used to capture prey by detecting electrical fields generated by the prey. For example, this allows sharks to find prey hidden in the sand.
- Most shark species bear living young.

DIFFERENCES BETWEEN BONY FISH AND SHARKS:

	SHARKS	BONY FISH
Skeleton	Cartilage	Small delicate bones
Fins	They are very stiff, which helps them to remain stable in the water, and some species swim very quickly using their tail fin.	Bony fish fins are very flexible, and all fins are used to propel fish forward.
Mouths	Most sharks have mouths on the underside of their head with powerful jaws and many rows of teeth.	The mouths of bony fishes are typically in front of the head, usually with the lower jaw protruding forward.
Skin	Shark skin is covered in small toothlike scales called dermal denticles.	Bony fish have a thin skin covered by large overlapping scales.
Floating	Sharks must always swim slightly upward to keep them from sinking; they also have a large oily liver that assists them with buoyancy.	Most fishes have a swim bladder filled with air to help keep them afloat.
Gills	Both bony fish and sharks draw water into the body and extract oxygen as water passes over the gills. Sharks have 5 to 7 uncovered gill slits on the side of their head.	Both bony fish and sharks draw water into the body and extract oxygen as water passes over the gills. Bony fish have one-gill opening protected by a bony flap.

SESSION PLAN: SHARKS

SESSION OBJECTIVES:

Learners gain insights into the basic characteristics of sharks and their diversity in South Africa's oceans.

INTRODUCTION ACTIVITY:

- Ask the learners if they know what a shark is, and what differences there are between bony fish and sharks– (*see information pages to guide you*)
- Ask the learners to name any sharks they know.
- Ask the learners to guess how many kinds of sharks we have in South Africa. (*Nearly 200 species visit our South African oceans and there are over 400 different kinds globally*).

MAIN ACTIVITY:

- Give each learner a copy of the “Give that shark a name” ACTIVITY sheet provided below.
- Ask the learners the following question; If you were a scientist who first discovered the existence of this species of shark, what would you name it? (*Discuss what others may have used to name sharks i.e., colour, where they are found, size, etc.*).
- Allow the learners to think of names for each of the sharks on the page and to write their chosen name on the line next to the shark image on their worksheet.
- Let the learners share some of the names they have chosen and why with the class.
- Lead a discussion around the origin of names, many sharks are named after traits and characteristics they possess. Use the “*Why that Name?*” PRESENTATION provided below to guide you,
- Allow the learners to write the actual names of each of the sharks on their worksheets.
- Have the learners complete the EXERCISE design your own shark species provided below.

CLOSING EXERCISE:

- Play *South African Shark Diversity Bingo* (*see GAME provided below*)

FOLLOW UP SUGGESTIONS:

- Play *USHAKA SA* – a shark card game available from Justice for Jaws – <https://justice4jaws.co.za/super-ushaka/>
- Learners could keep a notebook and devote a page to each South African shark and start to gather information, pictures, etc about all our sharks' page by page.
- Watch *OUR OCEANS: Shark Sanctuary* documentary (48 minutes) – <https://tinyurl.com/yszatr4s>

PRESENTATION:

WHY THAT NAME?

Why do Hammerhead Sharks have hammer heads?



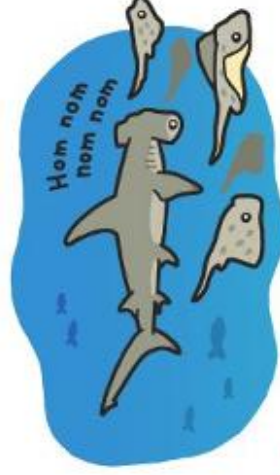
✗ Extra space for fancy jewelery



✗ Lift for brief but exhilarating flights



✗ A tool for building undersea forts



✓ To spot, pin, and dispatch flappy prey



Whale Shark

- The name whale shark comes from the fact these animals are so large (as big as whales) and that they **filter feed** (like baleen whales such as the humpback). However, they have **cartilage** instead of bone – making them a **true shark**. The whale shark is the largest living shark.



Great White Shark

- Great White sharks most likely get their name from their **great size and their white underbelly**. These super swimmers are the largest predatory fish (fish that eat other fish or animals) on our planet. On average, they grow to around 4.6m long, but some great whites have been measured at 6m (that's about the length of 2 cars in a row!!)



Thresher Shark

- They are named for their long, **scythe-like tail**, which is used to stun fish before preying on them. Adult common thresher sharks have few predators, but younger, smaller ones may fall prey to larger sharks.



Hammerhead Shark

- This shark's unusual name comes from the **unusual shape of its head**, an amazing piece of anatomy built to maximize the fish's ability to find its food.



Lemon Shark

- Lemon sharks are named for their **yellow-brown skin** that helps them camouflage in the sandy, tropical waters they inhabit



Bull Shark also known as the Zambezi Shark

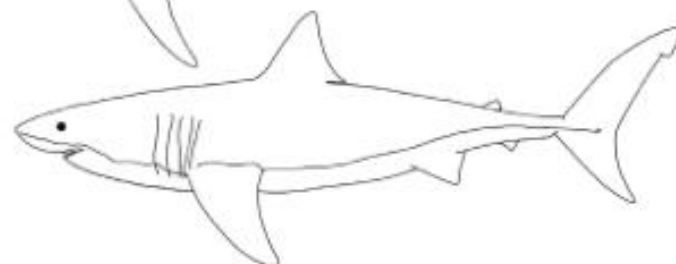
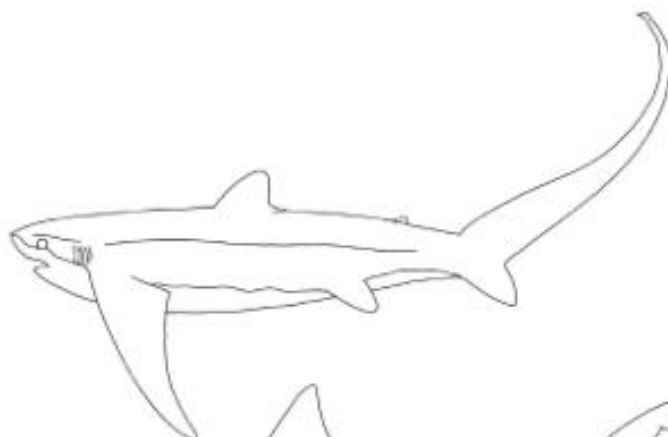
- Bull sharks get their name from their short, blunt snout, as well as their natural disposition to be aggressive and a tendency to head-butt their prey before attacking. They are medium-size sharks, with thick, heavy build bodies and long pectoral fins. The bull shark is known to most South Africans as the Zambezi shark, as it has freshwater capabilities and has been found many kilometres up the Zambezi River.



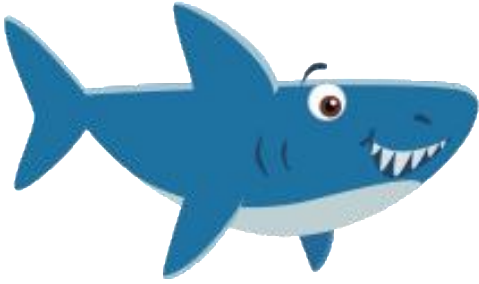
Leopard Catshark

- These gorgeous Leopard catsharks get their name from their beautiful, widely variable skin patterns they have which are typical “pantherinum” which is made up of rosettes and broken lines.

ACTIVITY: GIVE THAT SHARK A NAME



EXERCISE: DESIGN YOUR OWN SHARK SPECIES



Design Your Own Shark

What is your shark species called?

Draw a picture of your shark species:

Describe your shark species in words
(colour, size, any special behaviours, markings, or features etc)

Where does your shark species occur? _____

Is your shark endemic? _____

Is your shark species endangered? _____



GAME: SOUTH AFRICAN SHARK BINGO

(game designed using myfreebinogcards.com)

BINGO CALLER'S CARD

- Use your Bingo Caller's Card to call the bingo and keep track of which words you have already called. NOTE - Your caller's card continues onto the next page of this document.
- Print two copies of the caller's card. Cut one copy up, fold the squares in half, and put them in a hat.
- To call the bingo, pull a square out of the hat, unfold it and read it out.
- When you have called a bingo (shark name), tick it off on the second copy of the caller's card.
You can use the second copy of the caller's card to check if a player has a winning card during a game.

SA Frigid Shark	Sharptooth Seven Gill Shark	Bluntnose Six Gill Shark	Bigeye Six Gill Shark	Broadnose Seven Gill Shark	Bramble Shark	Roughskin Dogfish
Spotted Spiny Dogfish	African Longnose Spurdog	Longnose Dogfish	Leafscale Gulper Shark	Little Gulper Shark	Birdbeak Dogfish	Arrowhead Dogfish
Black Dogfish	Whitecheek Lantern Shark	Brown Lantern Shark	Giant Lantern Shark	Sculpted Lantern Shark	Thorny Lantern Shark	Traveller Lantern Shark
Portuguese Dogfish	Whitetail Dogfish	Southern Sleeper Shark	Velvet Dogfish	Angular Roughshark	Kitefin Shark	Taillight Shark
Pygmy Shark	Longnose Pygmy Shark	Cookie cutter Shark	Large-toothed Cookie cutter Shark	Sixgill Sawshark	African Angelshark	Tawny Nurse Shark
Zebra Shark	Whale Shark	Goblin Shark	Spotted Ragged tooth Shark	Smalltooth Sandtiger Shark	Crocodile Shark	Megamouth Shark
Pelagic Thresher Shark	Bigeye Thresher Shark	Common Thresher Shark	Basking Shark	Great White Shark	Shortfin Mako Shark	Longfin Mako Shark

BINGO CALLER'S CARD CONTINUED

Porbeagle Shark	Ghost Catshark	Smalleye Catshark	Saldanha Catshark	Black Wonder Catshark	African Sawtail Catshark	Lined Catshark
Tiger Catshark	Puffadder Shyshark	Brown Shyshark	Natal Shyshark	Dark Shyshark	Honeycomb Izak Catshark	African Spotted Catshark
Izak Catshark	Balloon Shark	Pyjama Shark	Leopard Catshark	Yellowspotted Catshark	African Ribbontail Catshark	Soupfin Shark
Pencil Shark	Hardnose Smoothhound Shark	Whitespot Houndshark	Flapnose Houndshark	Spotted Gully Shark	Snaggleteooth Shark	Whitetip Weasel Shark
Silvertip Shark	Bignose Shark	Grey Reef Shark	Java Shark	Bronze Whaler	Silky Shark	Human's Whaler Shark
Bull Shark	Blacktip Shark	Oceanic Whitetip Shark	Blacktip Reef Shark	Dusky Shark	Sandbar Shark	Spottail Shark
Sliteye Shark	Sharptooth Lemon Shark	Blue Shark	Milk Shark	Whitetip Reef Shark	Tiger Shark	Scalloped Hammerhead Shark
Great Hammerhead Shark	Smooth Hammerhead Shark					

BINGO PLAYERS CARDS

- Print one card per player
- When you call out a Bingo (shark name) – if the player has this name on their card, they mark it with a cross on their card
- Once a player has all the names on their card crossed, they shout BINGO and have won the game.
- You can double check their card with your calling card

Bramble Shark	Tawny Nurse Shark	Longnose Dogfish	Whitetip Reef Shark	Megamouth Shark
Lined Catshark	Whale Shark	Pygmy Shark	Pyjama Shark 	Roughskin Dogfish
Common Thresher Shark	Spotted Spiny Dogfish	FREE SPACE	Java Shark	Puffadder Shyshark 
Blacktip Shark	Smalltooth Sandtiger Shark	Black Dogfish	Ghost Catshark	Bluntnose Six Gill Shark
Sharptooth Seven Gill Shark	Velvet Dogfish	Large-tooth Cookiecutter Shark	Smooth Hammerhead Shark	Snaggletooth Shark

Bramble Shark	Tawny Nurse Shark	Longnose Dogfish	Whitetip Reef Shark	Megamouth Shark
Lined Catshark	Whale Shark	Pygmy Shark	Pyjama Shark 	Roughskin Dogfish
Common Thresher Shark	Spotted Spiny Dogfish	FREE SPACE	Java Shark	Puffadder Shyshark 
Blacktip Shark	Smalltooth Sandtiger Shark	Black Dogfish	Ghost Catshark	Bluntnose Six Gill Shark
Sharptooth Seven Gill Shark	Velvet Dogfish	Large-tooth Cookiecutter Shark	Smooth Hammerhead Shark	Snaggletooth Shark

Zebra Shark	Brown Lantern Shark	Oceanic Whitetip Shark	Leafscale Gulper Shark	Grey Reef Shark
★ Puffadder Shyshark	Smalltooth Sandtiger Shark	Honeycomb Izak Catshark	Scalloped Hammerhead Shark	Dark Shyshark
Giant Lantern Shark	★ Pyjama Shark	FREE SPACE	Birdbeak Dogfish	Whale Shark
Broadnose Seven Gill Shark	Whitetail Dogfish	African Spotted Catshark	Crocodile Shark	Black Dogfish
Spotted Gully Shark	Black Wonder Catshark	★ Tiger Catshark	African Longnose Spurdog	Sculpted Lantern Shark

Smalltooth Sandtiger Shark	Sharpenose Seven Gill Shark	Tawny Nurse Shark	Oceanic Whitetip Shark	Black Wonder Catshark
Saldanha Catshark	Pygmy Shark	Bramble Shark	Blue Shark	Shortfin Mako Shark
Dark Shyshark	Yellowspotted Catshark	FREE SPACE	Velvet Dogfish	Crocodile Shark
Bigeye Six Gill Shark	Milk Shark	Whitecheek Lantern Shark	★ Flapnose Houndshark	Dusky Shark
Leafscale Gulper Shark	Bignose Shark	Grey Reef Shark	★ Puffadder Shyshark	★ Leopard Catshark

Brown Lantern Shark	African Spotted Catshark	Birdbeak Dogfish	Sculpted Lantern Shark	Thorny Lantern Shark
African Angelshark	Great Hammerhead Shark	Leafscale Gulper Shark	Soupfin Shark	Spotted Spiny Dogfish
Arrowhead Dogfish	Crocodile Shark	FREE SPACE	Tiger Catshark ★	Pygmy Shark
Whale Shark	Dusky Shark	SA Frilled Shark	Whitecheek Lantern Shark	Longnose Pygmy Shark
Zebra Shark	Great White Shark	Whitetip Reef Shark	Roughskin Dogfish	Pencil Shark

Soupfin Shark	Tawny Nurse Shark	Yellowspotted Catshark	Izak Catshark	SA Frilled Shark
Spotted Spiny Dogfish	Porbeagle Shark	Brown Shyshark ★	Scalloped Hammerhead Shark	Bluntnose Six Gill Shark
Bigeye Thresher Shark	Basking Shark	FREE SPACE	Whitetip Weasel Shark	Whale Shark
Roughskin Dogfish	Java Shark	Flapnose Houndshark ★	Tiger Shark	Sculpted Lantern Shark
Leopard Catshark ★	Southern Sleeper Shark	Goblin Shark	Silky Shark	Puffadder Shyshark ★

Pelagic Thresher Shark	Great White Shark	Birdbeak Dogfish	African Ribbontail Catshark	Little Gulper Shark
Milk Shark	Spotted Gully Shark	Thorny Lantern Shark	Pencil Shark	Pygmy Shark
Dark Shyshark	Silvertip Shark	FREE SPACE	Sliteye Shark	Whitespot Houndshark
Whitetip Weasel Shark	Bluntnose Six Gill Shark	Pyjama Shark ★	Ghost Catshark	Saldanha Catshark
African Sawtail Catshark	Angular Roughshark	Bull Shark	Sculpted Lantern Shark	Flapnose Houndshark ★

Brown Shyshark ★	Whitetail Dogfish	Silvertip Shark	African Sawtail Catshark	Yellowspotted Catshark
Tiger Shark	Broadnose Seven Gill Shark	Pelagic Thresher Shark	Blacktip Reef Shark	Longnose Pygmy Shark
Whitespot Houndshark	Smooth Hammerhead Shark	FREE SPACE	Sixgill Sawshark	Roughskin Dogfish
Kitefin Shark	Izak Catshark	Dark Shyshark	Bull Shark	Zebra Shark
Sandbar Shark	Velvet Dogfish	Spotted Spiny Dogfish	Dusky Shark	Giant Lantern Shark

Ghost Catshark	Basking Shark	Whitetail Dogfish	Milk Shark	Oceanic Whitetip Shark
Taillight Shark	Little Gulper Shark	Scalloped Hammerhead Shark	Whitespot Houndshark	Common Thresher Shark
Great Hammerhead Shark	Yellowspotted Catshark	FREE SPACE	Bigeye Six Gill Shark	Sandbar Shark
Longfin Mako Shark	Black Dogfish	Great White Shark	Pygmy Shark	Porbeagle Shark
Flapnose Houndshark ★	Spotted Gully Shark	Crocodile Shark	Human's Whaler Shark	African Longnose Spurdog

Brown Lantern Shark	Broadnose Seven Gill Shark	Southern Sleeper Shark	Snaggletooth Shark	Great Hammerhead Shark
Silky Shark	Natal Shyshark ★	SA Frilled Shark	Blacktip Reef Shark	Shortfin Mako Shark
Roughskin Dogfish	African Ribbontail Catshark	FREE SPACE	Smooth Hammerhead Shark	Sixgill Sawshark
Scalloped Hammerhead Shark	Goblin Shark	Longnose Pygmy Shark	Blacktip Shark	Common Thresher Shark
Sliteye Shark	Velvet Dogfish	African Sawtail Catshark	Dark Shyshark	Whitespot Houndshark

Lined Catshark	African Ribbontail Catshark	Ghost Catshark	Spotted Raggedtooth Shark	Human's Whaler Shark
Longfin Mako Shark	Bronze Whaler	Java Shark	★ Flapnose Houndshark	Honeycomb Izak Catshark
Great Hammerhead Shark	★ Leopard Catshark	FREE SPACE	Kitefin Shark	African Longnose Spurdog
Smooth Hammerhead Shark	Sixgill Sawshark	Silvertip Shark	★ Puffadder Shyshark	★ Tiger Catshark
Sharpnose Seven Gill Shark	Bluntnose Six Gill Shark	Zebra Shark	Sharptooth Lemon Shark	Sculpted Lantern Shark

Megamouth Shark	Balloon Shark	Blacktip Shark	Sixgill Sawshark	Black Wonder Catshark
African Ribbontail Catshark	Arrowhead Dogfish	Sharpnose Seven Gill Shark	Bigeye Six Gill Shark	★ Tiger Catshark
Black Dogfish	★ Leopard Catshark	FREE SPACE	Pencil Shark	Smalleye Catshark
Whale Shark	Grey Reef Shark	Bigeye Thresher Shark	Izak Catshark	Java Shark
Crocodile Shark	Hardnose Smoothhound Shark	★ Flapnose Houndshark	Great White Shark	Smooth Hammerhead Shark

Sandbar Shark	Smalleye Catshark	Human's Whaler Shark	Snaggletooth Shark	Bigeye Six Gill Shark
Bull Shark	African Spotted Catshark	Izak Catshark	Shortfin Mako Shark	Leafscale Gulper Shark
Dark Shyshark	Thorny Lantern Shark	FREE SPACE	Bignose Shark	Black Dogfish
Ghost Catshark	Tiger Shark	Bramble Shark	African Sawtail Catshark	Longfin Mako Shark
Great Hammerhead Shark	Tawny Nurse Shark	Taillight Shark	Yellowspotted Catshark	Longnose Dogfish

Silky Shark	Bramble Shark	Whitetip Weasel Shark	Java Shark	Pencil Shark
Silvertip Shark	Grey Reef Shark	Basking Shark	Bigeye Six Gill Shark	Bull Shark
Pygmy Shark	Largeetooth Cookiecutter Shark	FREE SPACE	African Spotted Catshark	Smalltooth Sandtiger Shark
Black Dogfish	Megamouth Shark	Great White Shark	★ Leopard Catshark	Angular Roughshark
African Sawtail Catshark	SA Frilled Shark	Spottail Shark	Southern Sleeper Shark	Scalloped Hammerhead Shark

Goblin Shark	Yellowspotted Catshark	Lined Catshark	Balloon Shark	Large-tooth Cookiecutter Shark
Snaggletooth Shark	Smalltooth Sandtiger Shark	Basking Shark	Whitetip Reef Shark	Whitespot Houndshark
Thorny Lantern Shark	Honeycomb Izak Catshark	FREE SPACE	Sharpnose Seven Gill Shark	Sharptooth Lemon Shark
Pelagic Thresher Shark	 Tiger Catshark	Birdbeak Dogfish	Whitetail Dogfish	Porbeagle Shark
Blacktip Shark	Blue Shark	Oceanic Whitetip Shark	Spotted Spiny Dogfish	Scalloped Hammerhead Shark

Sliteye Shark	Great Hammerhead Shark	Tiger Shark	Shortfin Mako Shark	Large-tooth Cookiecutter Shark
 Tiger Catshark	Black Wonder Catshark	Sixgill Sawshark	Birdbeak Dogfish	Sculpted Lantern Shark
Smalleye Catshark	Giant Lantern Shark	FREE SPACE	 Flapnose Houndshark	Silvertip Shark
 Brown Shyshark	Angular Roughshark	African Spotted Catshark	Bull Shark	 Leopard Catshark
Ghost Catshark	Whale Shark	Grey Reef Shark	Whitetip Reef Shark	Megamouth Shark

Scalloped Hammerhead Shark	African Longnose Spurdog	Black Wonder Catshark	Smalleye Catshark	Bignose Shark
Zebra Shark	Leafscale Gulper Shark	Saldanha Catshark	Lined Catshark	Pencil Shark
Pelagic Thresher Shark	Roughskin Dogfish	FREE SPACE	Brown Shyshark 	Arrowhead Dogfish
Grey Reef Shark	Hardnose Smoothhound Shark	Common Thresher Shark	Smooth Hammerhead Shark	SA Frilled Shark
Spotted Raggedtooth Shark	Sharpnose Seven Gill Shark	Great Hammerhead Shark	Milk Shark	Human's Whaler Shark

Smooth Hammerhead Shark	African Ribbontail Catshark	Honeycomb Izak Catshark	Kitefin Shark	Whitecheek Lantern Shark
Spotted Spiny Dogfish	Porbeagle Shark	Bignose Shark	Shortfin Mako Shark	African Angelshark
Great White Shark	Largeetooth Cookiecutter Shark	FREE SPACE	Pencil Shark	Java Shark
Izak Catshark	Snaggletooth Shark	Southern Sleeper Shark	Black Dogfish	African Spotted Catshark
Grey Reef Shark	Bramble Shark	Saldanha Catshark	Pygmy Shark	Black Wonder Catshark

Pyjama★ Shark	Spotted Spiny Dogfish	Common Thresher Shark	Honeycomb Izak Catshark	Whale Shark
Bigeye Thresher Shark	Arrowhead Dogfish	Milk Shark	Leopard★ Catshark	Bigeye Six Gill Shark
Bignose Shark	African Sawtail Catshark	FREE SPACE	Soupfin Shark	Bull Shark
Basking Shark	Silky Shark	Snaggletooth Shark	Lined Catshark	Giant Lantern Shark
Dark Shyshark	Longfin Mako Shark	Whitetip Reef Shark	African Spotted Catshark	Puffadder★ Shyshark

Broadnose Seven Gill Shark	Smalleye Catshark	Arrowhead Dogfish	Pygmy Shark	Milk Shark
Dusky Shark	Black Dogfish	Zebra Shark	Whitetip Reef Shark	Little Gulper Shark
Lined Catshark	Human's Whaler Shark	FREE SPACE	Black Wonder Catshark	Sharpnose Seven Gill Shark
Saldanha Catshark	African Angelshark	Blacktip Shark	Crocodile Shark	Soupfin Shark
Smalltooth Sandtiger Shark	Sixgill Sawshark	Balloon Shark	Longnose Dogfish	Longnose Pygmy Shark

Largetooth Cookiecutter Shark	Broadnose Seven Gill Shark	Sixgill Sawshark	Sliteye Shark	Dark Shyshark
Sculpted Lantern Shark	Blacktip Reef Shark	Traveller Lantern Shark	Southern Sleeper Shark	Saldanha Catshark
Balloon Shark	Black Wonder Catshark	FREE SPACE	Spotted Spiny Dogfish	Yellowspotted Catshark
Spottail Shark	Grey Reef Shark	Giant Lantern Shark	Thorny Lantern Shark	Leafscale Gulper Shark
Java Shark	Little Gulper Shark	Silvertip Shark	Spotted Raggedtooth Shark	Tawny Nurse Shark

Bignose Shark	Java Shark	Kitefin Shark	Taillight Shark	Spottail Shark
Shortfin Mako Shark	Great White Shark	Longfin Mako Shark	Portuguese Dogfish	Giant Lantern Shark
Milk Shark	Scalloped Hammerhead Shark	FREE SPACE	Sliteye Shark	Pelagic Thresher Shark
Snaggletooth Shark	Longnose Dogfish	Soupfin Shark	Traveller Lantern Shark	Whitecheek Lantern Shark
African Angelshark	Zebra Shark	African Spotted Catshark	Oceanic Whitetip Shark	Izak Catshark

Longnose Dogfish	Honeycomb Izak Catshark	Whitetip Reef Shark	Smooth Hammerhead Shark	Natal Shyshark 
Spottail Shark	Bigeye Six Gill Shark	Bigeye Thresher Shark	African Angelshark	Traveller Lantern Shark
Tawny Nurse Shark	Blacktip Shark	FREE SPACE	Cookiecutter Shark	African Sawtail Catshark
Sharpnose Seven Gill Shark	Great Hammerhead Shark	Whitetip Weasel Shark	Broadnose Seven Gill Shark	Silvertip Shark
Whale Shark	Smalleye Catshark	Sculpted Lantern Shark	Kitefin Shark	Lined Catshark

SA Frilled Shark	Black Dogfish	Silky Shark	Smalltooth Sandtiger Shark	Java Shark
Human's Whaler Shark	Thorny Lantern Shark	Blue Shark	Giant Lantern Shark	Megamouth Shark
Brown Lantern Shark	Honeycomb Izak Catshark	FREE SPACE	Whitecheek Lantern Shark	Cookiecutter Shark
Smooth Hammerhead Shark	Tawny Nurse Shark	Traveller Lantern Shark	African Spotted Catshark	Largeetooth Cookiecutter Shark
Goblin Shark	Whale Shark	Pelagic Thresher Shark	Tiger Catshark 	Spotted Spiny Dogfish

Bronze Whaler	Whitetail Dogfish	Blue Shark	Saldanha Catshark	Leopard Catshark 
Silky Shark	Arrowhead Dogfish	Sixgill Sawshark	Longnose Dogfish	Portuguese Dogfish
Oceanic Whitetip Shark	Spotted Raggedtooth Shark	FREE SPACE	Shortfin Mako Shark	Grey Reef Shark
Smalleye Catshark	African Ribbontail Catshark	Sandbar Shark	Thorny Lantern Shark	Sliteye Shark
Great White Shark	Spotted Spiny Dogfish	Izak Catshark	Dusky Shark	Cookiecutter Shark

Longnose Pygmy Shark	Kitefin Shark	Whitecheek Lantern Shark	Brown Shyshark 	Balloon Shark
Pelagic Thresher Shark	Sliteye Shark	Birdbeak Dogfish	Honeycomb Izak Catshark	Cookiecutter Shark
Longfin Mako Shark	Brown Lantern Shark	FREE SPACE	Portuguese Dogfish	Roughskin Dogfish
Scalloped Hammerhead Shark	Black Dogfish	Tiger Shark	Whitetip Weasel Shark	Dusky Shark
Pyjama Shark 	Taillight Shark	Traveller Lantern Shark	Dark Shyshark	Sharpnose Seven Gill Shark

African Angelshark	Bigeye Six Gill Shark	Leafscale Gulper Shark	Pelagic Thresher Shark	Human's Whaler Shark
Ghost Catshark	Sliteye Shark	Thorny Lantern Shark	Spotted Gully Shark	Balloon Shark
Whitespot Houndshark	Southern Sleeper Shark	FREE SPACE	★ Leopard Catshark	Yellowspotted Catshark
Oceanic Whitetip Shark	Traveller Lantern Shark	Portuguese Dogfish	★ Pyjama Shark	Bramble Shark
Shortfin Mako Shark	Arrowhead Dogfish	Pygmy Shark	African Longnose Spurdog	★ Brown Shyshark

★ Brown Shyshark	Soupfin Shark	★ Pyjama Shark	Kitefin Shark	Silky Shark
Bluntnose Six Gill Shark	Bigeye Thresher Shark	Sandbar Shark	Great Hammerhead Shark	★ Flapnose Houndshark
Cookiecutter Shark	Blacktip Shark	FREE SPACE	Porbeagle Shark	Arrowhead Dogfish
Dusky Shark	Portuguese Dogfish	★ Natal Shyshark	Shortfin Mako Shark	Pygmy Shark
Whitetip Weasel Shark	Roughskin Dogfish	Human's Whaler Shark	Grey Reef Shark	Sharptooth Lemon Shark

Human's Whaler Shark	Little Gulper Shark	Dusky Shark	Whitespot Houndshark	Whale Shark
Bigeye Thresher Shark	Silky Shark	African Ribbontail Catshark	Common Thresher Shark	Whitetip Reef Shark
Whitetail Dogfish	Goblin Shark	FREE SPACE	Cookiecutter Shark	Bronze Whaler
Yellowspotted Catshark	Honeycomb Izak Catshark	★ Flapnose Houndshark	Oceanic Whitetip Shark	Hardnose Smoothhound Shark
Dark Shyshark	Milk Shark	Lined Catshark	African Angelshark	Portuguese Dogfish

★ Leopard Catshark	Hardnose Smoothhound Shark	★ Flapnose Houndshark	Dark Shyshark	Balloon Shark
Spotted Spiny Dogfish	★ Tiger Catshark	Giant Lantern Shark	Ghost Catshark	Spottail Shark
Longnose Pygmy Shark	Whitetip Reef Shark	FREE SPACE	Little Gulper Shark	Great Hammerhead Shark
Shortfin Mako Shark	Tiger Shark	African Longnose Spurdog	Yellowspotted Catshark	Angular Roughshark
Pygmy Shark	Whitecheek Lantern Shark	Sandbar Shark	Brown Lantern Shark	Snaggleteeth Shark

Black Dogfish	Milk Shark	Angular Roughshark	Silvertip Shark	Spotted Gully Shark
African Angelshark	Longnose Dogfish	Saldanha Catshark	Bluntnose Six Gill Shark	Pencil Shark
Whitespot Houndshark	Whitetip Reef Shark	FREE SPACE	African Ribbontail Catshark	Blacktip Reef Shark
Spotted Raggedtooth Shark	Smalltooth Sandtiger Shark	Dark Shyshark	Porbeagle Shark	Pyjama Shark★
Scalloped Hammerhead Shark	Sharpnose Seven Gill Shark	Silky Shark	Honeycomb Izak Catshark	Taillight Shark

Smooth Hammerhead Shark	Pygmy Shark	Blacktip Reef Shark	Sharptooth Lemon Shark	Human's Whaler Shark
Roughskin Dogfish	Balloon Shark	SA Frilled Shark	Saldanha Catshark	African Longnose Spurdog
Spotted Gully Shark	Scalloped Hammerhead Shark	FREE SPACE	Arrowhead Dogfish	Soupfin Shark
Brown Lantern Shark	Hardnose Smoothhound Shark	Broadnose Seven Gill Shark	Oceanic Whitetip Shark	Whitetip Weasel Shark
Black Wonder Catshark	Cookiecutter Shark	Whale Shark	Angular Roughshark	Goblin Shark

Longnose Pygmy Shark	Broadnose Seven Gill Shark	Spotted Gully Shark	Izak Catshark	Sharpnose Seven Gill Shark
Giant Lantern Shark	Saldanha Catshark	Roughskin Dogfish	Bull Shark	Blue Shark
Taillight Shark	Whitetail Dogfish	FREE SPACE	Southern Sleeper Shark	Whitespot Houndshark
Megamouth Shark	Leafscale Gulper Shark	Smalltooth Sandtiger Shark	Dusky Shark	Grey Reef Shark
Great Hammerhead Shark	Human's Whaler Shark	Natal Shyshark ★	Common Thresher Shark	African Longnose Spurdog

Longnose Pygmy Shark	Basking Shark	Silky Shark	Bluntnose Six Gill Shark	Natal Shyshark ★
Grey Reef Shark	Giant Lantern Shark	Flapnose Houndshark ★	African Angelshark	Bramble Shark
Leafscale Gulper Shark	Birdbeak Dogfish	FREE SPACE	Longfin Mako Shark	Roughskin Dogfish
SA Frilled Shark	Oceanic Whitetip Shark	African Spotted Catshark	African Ribbontail Catshark	Bronze Whaler
Largetooth Cookiecutter Shark	Balloon Shark	Pygmy Shark	Hardnose Smoothhound Shark	Smalleye Catshark

Smalltooth Sandtiger Shark	Human's Whaler Shark	Smooth Hammerhead Shark	Tiger Shark	Bluntnose Six Gill Shark
African Angelshark	Sharnose Seven Gill Shark	African Spotted Catshark	Bronze Whaler	Blacktip Shark
Smalleye Catshark	Ghost Catshark	FREE SPACE	★ Flapnose Houndshark	Birdbeak Dogfish
Brown Lantern Shark	Sixgill Sawshark	Soupfin Shark	Bignose Shark	Dark Shyshark
Angular Roughshark	Largetooth Cookiecutter Shark	Porbeagle Shark	Blacktip Reef Shark	Pelagic Thresher Shark

Leafscale Gulper Shark	★ Leopard Catshark	Porbeagle Shark	Balloon Shark	Smalltooth Sandtiger Shark
Smalleye Catshark	Grey Reef Shark	Whale Shark	Thorny Lantern Shark	Soupfin Shark
Southern Sleeper Shark	Largetooth Cookiecutter Shark	FREE SPACE	Spotted Raggedtooth Shark	Whitespot Houndshark
Little Gulper Shark	Whitecheek Lantern Shark	Java Shark	Taillight Shark	Bignose Shark
Silky Shark	Yellowspotted Catshark	Common Thresher Shark	Sixgill Sawshark	★ Brown Shyshark

Zebra Shark	Snaggletooth Shark	SA Frilled Shark	Spottail Shark	Honeycomb Izak Catshark
Birdbeak Dogfish	Oceanic Whitetip Shark	Bignose Shark	Scalloped Hammerhead Shark	Smooth Hammerhead Shark
Whitetip Weasel Shark	Dark Shyshark	FREE SPACE	Velvet Dogfish	Brown Shyshark★
Tiger Shark	Blacktip Reef Shark	Blacktip Shark	Hardnose Smoothhound Shark	Pyjama Shark★
Izak Catshark	Portuguese Dogfish	Flapnose Houndshark★	Dusky Shark	Saldanha Catshark

Lined Catshark	Taillight Shark	Longnose Dogfish	Ghost Catshark	Sculpted★ Lantern Shark
Sliteye Shark	Brown Lantern Shark	Arrowhead Dogfish	Whitetip Reef Shark	Leopard Catshark
Sandbar Shark	Great Hammerhead Shark	FREE SPACE	Spotted Spiny Dogfish	Porbeagle Shark
Puffadder★ Shyshark	Dusky Shark	Angular Roughshark	Snaggletooth Shark	Smalleye Catshark
Giant Lantern Shark	Silvertip Shark	Basking Shark	Cookiecutter Shark	Thorny Lantern Shark

Black Dogfish	Common Thresher Shark	Shortfin Mako Shark	Leafscale Gulper Shark	Tawny Nurse Shark
Whitetail Dogfish	Birdbeak Dogfish	African Spotted Catshark	Yellowspotted Catshark	Pygmy Shark
Largetooth Cookiecutter Shark	Sharptooth Lemon Shark	FREE SPACE	Little Gulper Shark	Longfin Mako Shark
Whitecheek Lantern Shark	Pelagic Thresher Shark	Bignose Shark	Blacktip Reef Shark	Pyjama Shark★
Traveller Lantern Shark	Bigeye Six Gill Shark	Megamouth Shark	Whitetip Reef Shark	Roughskin Dogfish

Great White Shark	Kitefin Shark	Whitecheek Lantern Shark	Natal Shyshark★	Blue Shark
Tawny Nurse Shark	Black Wonder Catshark	Black Dogfish	Milk Shark	Goblin Shark
Saldanha Catshark	Sharptooth Lemon Shark	FREE SPACE	Tiger Catshark★	African Ribbontail Catshark
Yellowspotted Catshark	Spotted Raggedtooth Shark	Velvet Dogfish	Sharpnose Seven Gill Shark	Lined Catshark
Largetooth Cookiecutter Shark	Common Thresher Shark	Crocodile Shark	Pelagic Thresher Shark	Leopard Catshark★

Smalleye Catshark	Brown Lantern Shark	Dusky Shark	African Angelshark	Hardnose Smoothhound Shark
Bull Shark	Bramble Shark	Pygmy Shark	Great Hammerhead Shark	Angular Roughshark
Spotted Raggedtooth Shark	Tiger Shark	FREE SPACE	African Spotted Catshark	Sixgill Sawshark
Crocodile Shark	Portuguese Dogfish	Pelagic Thresher Shark	Soupfin Shark	Whale Shark
Human's Whaler Shark	Kitefin Shark	Spottail Shark	Large-tooth Cookiecutter Shark	Longnose Dogfish

Pyjama Shark ★	African Sawtail Catshark	Oceanic Whitetip Shark	Bigeye Thresher Shark	Bronze Whaler
Scalloped Hammerhead Shark	Broadnose Seven Gill Shark	Pencil Shark	Sharptooth Lemon Shark	Megamouth Shark
African Longnose Spurdog	Hardnose Smoothhound Shark	FREE SPACE	Giant Lantern Shark	Whale Shark
Thorny Lantern Shark	Puffadder Shyshark ★	Traveller Lantern Shark	Bignose Shark	Black Wonder Catshark
Grey Reef Shark	Black Dogfish	Silky Shark	Basking Shark	Sliteye Shark

★ Flapnose Houndshark	Blacktip Reef Shark	Bramble Shark	Traveller Lantern Shark	Hardnose Smoothhound Shark
Spotted Raggedtooth Shark	Smooth Hammerhead Shark	Common Thresher Shark	★ Tiger Catshark	Whale Shark
Smalltooth Sandtiger Shark	Black Dogfish	FREE SPACE	Sharptooth Lemon Shark	Scalloped Hammerhead Shark
Tawny Nurse Shark	Pygmy Shark	★ Leopard Catshark	Soupfin Shark	Bronze Whaler
Smalleye Catshark	Sandbar Shark	Megamouth Shark	Southern Sleeper Shark	Angular Roughshark

Bignose Shark	Roughskin Dogfish	Little Gulper Shark	Common Thresher Shark	Porbeagle Shark
Bramble Shark	Sharptooth Lemon Shark	Megamouth Shark	★ Leopard Catshark	Blacktip Reef Shark
Yellowspotted Catshark	Bigeye Six Gill Shark	FREE SPACE	Dark Shyshark	Smooth Hammerhead Shark
Whale Shark	Blue Shark	Broadnose Seven Gill Shark	African Sawtail Catshark	Bull Shark
Spotted Raggedtooth Shark	Whitetip Weasel Shark	African Spotted Catshark	★ Natal Shyshark	Great White Shark

Soupfin Shark	Largetooth Cookiecutter Shark	Whitespot Houndshark	Spotted Raggedtooth Shark	Megamouth Shark
Tiger Shark	Porbeagle Shark	Angular Roughshark	Dark Shyshark	African Ribbontail Catshark
Cookiecutter Shark	Smooth Hammerhead Shark	FREE SPACE	Brown Shyshark ★	Java Shark
Little Gulper Shark	Milk Shark	Longnose Dogfish	Blue Shark	Pencil Shark
Bignose Shark	Bigeye Thresher Shark	Balloon Shark	Pygmy Shark	Great White Shark

Sixgill Sawshark	SA Frilled Shark	Thorny Lantern Shark	Sandbar Shark	Whitespot Houndshark
Bull Shark	Dark Shyshark	Bramble Shark	Cookiecutter Shark	Black Dogfish
Pencil Shark	Longfin Mako Shark	FREE SPACE	Pyjama Shark ★	Birdbeak Dogfish
Whitetip Reef Shark	Tiger Catshark ★	Angular Roughshark	African Ribbontail Catshark	Blacktip Reef Shark
Silvertip Shark	Brown Lantern Shark	Yellowspotted Catshark	Smalltooth Sandtiger Shark	Porbeagle Shark

Ghost Catshark	Sharpnose Seven Gill Shark	Roughskin Dogfish	Goblin Shark	Pelagic Thresher Shark
Tawny Nurse Shark	Java Shark	Zebra Shark	Blacktip Shark	Yellowspotted Catshark
Velvet Dogfish	Bull Shark	FREE SPACE	Spotted Raggedtooth Shark	Traveller Lantern Shark
Dusky Shark	Spotted Spiny Dogfish	Spotted Gully Shark	Pencil Shark	Saldanha Catshark
Sharptooth Lemon Shark	Izak Catshark	Scalloped Hammerhead Shark	Leafscale Gulper Shark	Shortfin Mako Shark

Whitetip Weasel Shark	Whitetail Dogfish	Portuguese Dogfish	Leopard Catshark ★	Angular Roughshark
Southern Sleeper Shark	Pencil Shark	Pygmy Shark	Tiger Catshark ★	Megamouth Shark
Hardnose Smoothhound Shark	Whitecheek Lantern Shark	FREE SPACE	Leafscale Gulper Shark	Great Hammerhead Shark
Oceanic Whitetip Shark	Black Dogfish	Dark Shyshark	Little Gulper Shark	Sandbar Shark
Largeetooth Cookiecutter Shark	Shortfin Mako Shark	Bramble Shark	Goblin Shark	Longfin Mako Shark


Bigeye Six Gill Shark	Brown Shyshark★	Spotted Spiny Dogfish	Flapnose Houndshark★	Grey Reef Shark
African Longnose Spurdog	Oceanic Whitetip Shark	Shortfin Mako Shark	Megamouth Shark	Puffadder Shyshark★
Scalloped Hammerhead Shark	Sculpted Lantern Shark	FREE SPACE	Milk Shark	Portuguese Dogfish
Smooth Hammerhead Shark	Hardnose Smoothhound Shark	Giant Lantern Shark	Bull Shark	Longnose Pygmy Shark
Yellowspotted Catshark	Honeycomb Izak Catshark	Basking Shark	Birdbeak Dogfish	Great Hammerhead Shark

SA Frimled Shark	Broadnose Seven Gill Shark	African Ribbontail Catshark	African Sawtail Catshark	Izak Catshark
Arrowhead Dogfish	Honeycomb Izak Catshark	Leopard Catshark★	Spotted Raggedtooth Shark	Snaggleteooth Shark
Portuguese Dogfish	Soupfin Shark	FREE SPACE	Black Dogfish	Great Hammerhead Shark
Spotted Gully Shark	Whitespot Houndshark	Oceanic Whitetip Shark	Yellowspotted Catshark	Whitecheek Lantern Shark
Birdbeak Dogfish	Milk Shark	Sculpted Lantern Shark	Basking Shark	Brown Shyshark★

SHARKS


Masters of the Ocean

At least 180 species of sharks inhabit the waters of South Africa. The largest are harmless, filter-feeding whale and basking sharks. There are many bottom-feeding sharks such as slysharks and sand sharks. Pelagic sharks are torpedo-shaped, fast swimmers and are the top predators of the ocean.



WHALE SHARK
Whale sharks are the largest living fish, up to 13 m and weighing 13 tons. They live in warm oceans of 21-25°C and follow plankton blooms, coral blooms and small pelagic fish. They cruise near the surface and are most abundant in KwaZulu-Natal in summer and autumn.

Although they have 3000 tiny teeth, whale sharks filter-feed on plankton and small fish. Their food is sieved from the water as it flows between their gills.



ROWS AND ROWS OF TEETH
Sharks have several rows of teeth. As the teeth in the front are worn out or lost, they are replaced by the row behind. The shape of the teeth depends on the size of the food eaten by the different species.

Rows of pointed, tri-cuspid teeth

Unlike bony fish, most sharks do not have rays or spines

A skeleton of gristle-like cartilage

Water flows out through gill slits

Unlike Ragged-tooth sharks, most sharks must keep moving to ensure oxygenated water flows over their gills

Tooth-like dermal denticles are embedded in the skin for protection

RAGGED-TOOTH SHARK
Babies of the ragged-tooth shark practise cannibalism inside the mother's uterus. The first formed juveniles feed off the other eggs and embryos until only two pups remain, one in each arm of the uterus. They are born live after 9-12 months gestation.


THIS POSTER MAY NOT BE SOLD

THE HAMMERHEAD SHARK
Hammerhead shark eyes and nostrils are wide apart for good bifocal vision and scent detection. They can sense electrical signals better than all other sharks and use their strangely shaped head like a metal detector scanning for food. The embryos are nourished through a placenta and the pups are born live.


eye
nostril

EXTRAORDINARY SENSES

- Sharks can hear low frequency noises over a kilometre away.
- The lateral line is a hypersensitive line of pores that provides information on water pressure, movement, sound and touch.
- Sharks have a highly developed sense of smell and taste. They follow scent trails for many kilometres.
- Sharks have large eyes. Shallow water, day-feeders have moderate colour vision, but sharks that feed at night and in murky water have better light-intensity perception.
- Organs near the mouth allow sharks to detect electrical signals from living organisms. These organs may also be used to assist with navigation.



PYJAMA SHARK
Pyjama sharks are small, slow moving, bottom feeders with large lateral fins for manoeuvrability. They have small, pointed teeth and feed at night on small fish and invertebrates around rocky reefs.



Shark egg case of pyjama shark

Only a handful of sharks are potentially dangerous to man and humans do not form part of the shark's normal diet. Unlike bony fish, sharks mate and their eggs are fertilized internally. Some lay eggs but others give birth to live pups.

ANNEXURE 1

Associated session plan breakdown for relevant reading and colouring in pages for “Harry the hammerhead” volume one – uThukela & iSimangaliso communities

Session Title	Harry the Hammerhead Shark Spreads the good news (volume 1) reading page numbers	Colouring in page numbers
Intro to oceans session (pre survey)		None
Harry the Hammerhead session	Read pages 1-32	None
What makes iSimangaliso special session	Read pages 1-5	1, 2 & 3
Coelacanth session	Read pages 6-7	4
Turtle hatchling session	Read pages 8-11	5 & 6
Coral Reefs session	Read pages 12-15	7 & 8
Marine food webs session	Read pages 16-23	9, 10, 1 & 12
Shark session	Read pages 24-27	13 & 14
Whale session	Read pages 28-29	15
Benefits of MPA's session (post survey)	Read pages 30-31	16

ANNEXURE 2

Session plan Session plan - Curriculum and Assessment Policy Statement alignment

WILDTRUST Session plan	Section	Grade	Subject	Strand	Topic	Content & Concepts
Shark session	Senior Phase	Grade 7	Natural Science & Technology	Live & living	Biodiversity	Diversity of animals: Vertebrates