

Shark! *By Iain Campbell*

Introduction

Many people believe the shark is one of the world's deadliest predators. In *Shark!*, learn about the behaviour of these amazing animals and decide for yourself whether we need to be afraid of them ... or is it that they should be afraid of us?

Reason for reading

You could use this book with your students to:

- explore the topics of deadly predators, sharks and evolution
- learn about one of the world's most amazing predators, the shark.

Setting the scene

Draw on your students' prior knowledge. If necessary, introduce concepts or vocabulary to help them access the story. Also communicate the reason for reading.

- Brainstorm ideas about sharks. What are some of the different shark species? What are their methods of survival? Why is it important for scientists to study these animals? How might that knowledge affect our lives and their lives? What beliefs about sharks are based on supposition and what beliefs are based on fact?
- Print the KWLH chart (Template A) or create a KWLH chart on the board. Students, before reading, fill in the first two columns of this chart with what they know and want to know about sharks. After reading, they can fill in the last two columns with what they have learned about these animals and how.
- Students explore the cover and determine what they think the book is about.
- Introduce vocabulary that the students may need to access the text. Refer to the vocabulary worksheets (2, 3a and 3b) for words that may be unfamiliar.

Getting stuck in

Choose the prompts that you feel your students need. Remind them to note any unfamiliar words and check for clues to the meanings in the text or images. The meanings of words in bold text are in the glossary at the back of the book.

- End of page 3 – “Sharks have had little need to evolve for the last 150 million years. Why?”
- End of page 5 – “What are the significant differences between sharks and other fish?”
- End of page 7 – “What is the fastest fish in the oceans? How fast can it swim and why can it swim so fast?”
- End of page 9 – “Why do sharks have so many teeth? In what way are their teeth so unusual? Why do they have this feature?”
- End of page 11 – “Sharks have an incredible sense of smell. They also have two other senses most animals don't have – what are they?”
- End of page 13 – “What are the three different ways in which shark babies can be born?”
- End of page 15 – “What are the shark's gill slits called?”
- End of page 17 – “Do all sharks eat the same type of food? What foods do sharks eat?”
- End of page 19 – “What should you do if you are unlucky enough to be attacked by a shark?”

- End of page 21 – “What is the most common reason for killing sharks?”
- End of page 23 – “Where does the word *shark* come from?”

Taking a closer look

Choose suggestions that suit your students and reason for reading.

Exploring ideas and opinions

- Ask for your students’ opinions of this book. Did it hold their attention? Why or why not? Why do they think the author wrote it?
- After the students complete the three-level thinking guide (Worksheet 1), they discuss their responses in pairs, in small groups, or as a class.
- Students discuss in pairs or small groups: “How important is it to know about sharks? Why is it important? Many shark species are critically endangered. Why is it important that we work to conserve sharks?”

Exploring language

- Cut out the words and definitions from Worksheet 2 and mix them up. Hand them out to students, who then find their correct “partner”.
- As an alternative to the above activity, divide the class into two groups: one group fills in the second column of Worksheet 3a and the other group fills in the second column of Worksheet 3b. This activity involves the students in creating definitions, which they then use to test the other group.
- Students search for: adjectives such as *fearsome*, *streamlined*, *sensitive*; nouns such as *skeletons*, *cartilage*, *jaws*; and verbs such as *evolve*, *detect*, *migrate*. Do these words add to the “picture” of a shark that is generated?
- Students complete Worksheet 4 – the cloze activity.

Moving beyond the text

Choose activities that suit your students and reason for reading.

Reading

- Students read other articles and/or stories about sharks.

Writing

- Students prepare a chart that compares the different shark species in terms of where and how they live, what they eat, and how endangered they are and why.

Debating

- Hold a class debate on: “Sharks are the most dangerous animal in our oceans.”

Research

Students do research on:

- why many shark species are now facing extinction after living unchanged on Earth for the last 150 million years
- shark conservation and the organisations that are trying to help with this task.

Art and design

- Students prepare a static image, poster, or book cover that advertises *Shark!*
- Students create a poster that presents sharks in a positive way.
- Students draw a diagram of a shark showing its anatomy and the reasons why it has had to change so little in the last 150 million years.

WORKSHEET 1

Shark! – Three-level thinking guide

- Level 1 – Reading on the lines (interpreting what the text says on a literal level)
- Level 2 – Reading between the lines (inferring, or interpreting what the text might mean)
- Level 3 – Reading beyond the lines (evaluating ideas and information)

Students write “agree” or “disagree” beside each statement and then discuss their responses in pairs, in groups, or as a class. The value of this activity lies in the discussion it generates as students justify their views. The activity is not intended as a test for comprehension.

LEVEL 1	Agree/disagree
Sharks existed long before the dinosaurs.	
Sharks have been evolving and changing for the last 150 million years.	
Unlike other fish, sharks have no scales.	
Sharks range in size from 18 centimetres to 18 metres.	
The fastest fish in the oceans is the streamlined tiger shark.	
Sharks are always losing their teeth and growing new ones.	
Only alligators and crocodiles have jaws more powerful than sharks.	
Sharks detect their prey using their sense of electroreception.	
Sharks can survive in both sea water and fresh water.	
All sharks hatch from eggs.	
The shell of a shark's egg is called a “mermaid's purse”.	
Not all sharks will drown if they stop swimming.	
All sharks are able to eat anything and everything!	
Only a few shark species are known to attack humans.	

Sheet 1 of 2

LEVEL 2	Agree/disagree
If sharks are turned upside down, after 15 minutes they die.	
Shark flesh is good for eating, because it contains no bones.	
The hammerhead shark is able to see in all directions.	
Sharks can smell blood in the water over long distances.	
Each individual tooth of a shark is like a mini sword.	
Sharks are the most sensitive fish in the ocean.	
The bigger the shark, the bigger its prey.	
A person is more likely to die from a mosquito bite than a shark bite.	
Humans are the biggest threat to sharks.	
Sharks are still the top predators in the waters of the world.	
All sharks are dangerous to humans.	
LEVEL 3	Agree/disagree
Sharks will be around long after humans become extinct.	
Sharks are more frightened of us than we are of them.	
Sharks are the most important fish in the oceans of the world.	

Sheet 2 of 2

Worksheet designed by Barbara Freeman, Wellington, New Zealand, 2007

WORKSHEET 2

Shark! – Match the meaning

Cut out the words and their definitions, mix them up, and ask your students to match the pairs.

Word	Definition
camouflage	to make difficult to see by looking similar to the surroundings
campaigning	working on an organised course of action
cartilage	firm, strong tissue that acts like bone
caudal	at the tail end
conservation	protection and good management of living creatures and their environment
critically	seriously
crustaceans	animals with a hard shell, which usually live in water
delicacy	a special kind of food that is highly valued in a particular culture
detect	to discover the presence of
dorsal	on the back
electroreception	ability to sense electrical fields
endangered	at risk of extinction

Word	Definition
evolve	to develop or change slowly over time
exploit	to take advantage of
extinction	the wiping out of an animal or plant species
gills	the organs through which a fish breathes
habitat	living area
lateral line	the line along the side of a fish that contains sensory organs
microscopic	very tiny
migrate	to travel a considerable distance to settle elsewhere
minimise	reduce as much as possible
niche	a place to which something is well suited
organism	a living thing (animal or plant)
paralysis	inability to move or feel
pectoral	relating to the chest or breast
plankton	tiny floating organisms

Word	Definition
pollution	the act of making the natural environment foul or filthy
predator	animal that hunts another
prey	animal that is hunted by another
rarely	almost never
reputation	a widespread view or opinion of someone or something
ruthless	without care or pity
serrated	with a jagged or saw-like edge
species	a particular group or type of animal or plant
spiracle	gill slit behind the eyes
vulnerable	easily wounded or hurt

Sheet 3 of 3

Note that some words above may have different meanings in other contexts.

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WORKSHEET 3a – GROUP A

Shark! – Vocab swap

- Divide the class into two groups, and give one group Worksheet 3a and the other group Worksheet 3b.
- In the second column of its own worksheet, each group writes a definition for each of the words listed in the first column. Where a word has more than one meaning, the group may need to check the page of the book that is listed.
- Each group then folds the first column out of sight and swaps worksheets with the other group.
- Each group guesses the original words, based on the definitions given in the other group's worksheet, and writes them in the third column of that worksheet. A group can go to the page in the book that is listed if it needs help. For an extra challenge, the groups can guess without referring to the page.
- You could make this a fun competition and give points for every correct word.

Word	Definition (Group A)	Word (Group B)
campaigning (p 20)	(p 20)	
cartilage (p 4)	(p 4)	
conservation (p 22)	(p 22)	
crustaceans (p 16)	(p 16)	
detect (p 10)	(p 10)	
electroreception (p 10)	(p 10)	
evolve (pp 3, 5)	(pp 3,5)	
extinction (p 22)	(p 22)	
habitat (p 12)	(p 12)	
lateral line (p 10)	(p 10)	
migrate (p 12)	(p 12)	
niche (p 12)	(p 12)	

Word	Definition (Group A)	Word (Group B)
paralysis (p 7)	(p 7)	
pectoral (p 7)	(p 7)	
pollution (p 22)	(p 22)	
prey (p 5)	(p 5)	
reputation (p 2)	(p 2)	
species (p 5)	(p 5)	

Sheet 2 of 2

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WORKSHEET 3b – GROUP B

Shark! – Vocab swap

- Divide the class into two groups, and give one group Worksheet 3a and the other group Worksheet 3b.
- In the second column of its own worksheet, each group writes a definition for each of the words listed in the first column. Where a word has more than one meaning, the group may need to check the page of the book that is listed.
- Each group then folds the first column out of sight and swaps worksheets with the other group.
- Each group guesses the original words, based on the definitions given in the other group's worksheet, and writes them in the third column of that worksheet. A group can go to the page in the book that is listed if it needs help. For an extra challenge, the groups can guess without referring to the page.
- You could make this a fun competition and give points for every correct word.

Word	Definition (Group B)	Word (Group A)
camouflage (p 15)	(p 15)	
caudal (p 6)	(p 6)	
critically (p 22)	(p 22)	
delicacy (p 20)	(p 20)	
dorsal (p 6)	(p 6)	
endangered (p 22)	(p 22)	
exploit (p 12)	(p 12)	
gills (p 4)	(p 4)	
microscopic (p 16)	(p 16)	

Word	Definition (Group B)	Word (Group A)
minimise (p 18)	(p 18)	
organism (p 10)	(p 10)	
plankton (p 16)	(p 16)	
predator (p 22)	(p 22)	
rarely (p 2)	(p 2)	
ruthless (p 18)	(p 18)	
serrated (p 8)	(p 8)	
spiracle (pp 7, 14)	(pp 7, 14)	
vulnerable (p 22)	(p 22)	

Sheet 2 of 2

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WORKSHEET 4

Shark! – Fill in the gaps

Add your own words in the spaces to make this passage come alive!

Sharks don't usually people, but every year people kill over 100,000 for food sport.

The reason sharks killed is to make shark fin soup. Shark soup is an Asian delicacy. To make it, the fins are cut off with a hot knife and the live are thrown into the water to die. Conservationists are campaigning to ban practice, but face an uphill struggle.

Shark species such the wobbegong in Australia and the spiny dogfish Britain are commonly to make fish and chips. In the United States, blacktip and mako shark steaks have popular. Fishermen targeting other species many more sharks accidentally.

In addition commercial fishing, big game fishers consider some of shark to be fighting fish.

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TEMPLATE A

KWLH chart

<u><i>KNOW</i></u>	<u><i>WANT TO KNOW</i></u>	<u><i>LEARNED</i></u>	<u><i>HOW I LEARNED</i></u>