



— GRADE 8 · SCIENCE

Sharks: Masters of the Ocean

Why are sharks the ultimate marine hunters?

| *What would happen if sharks vanished from the seas?*

WARM-UP · 5 MINS

Do Now

👉 4 questions

🤫 Complete in silence

Answer in silence – no notes. 5 minutes.

1

Name one predator that lives in the ocean.

2

What gas do fish extract from water using gills?

3

Define the term 'food chain'.

4

Which ocean zone receives the most sunlight?



Photo by [wewe.yang](#) on [Pexels](#)

— LEARNING OBJECTIVES

By the end of this lesson...

1

I can explain the structure and function of shark adaptations

2

I can analyse how shark feeding strategies relate to their anatomy

3

I can evaluate the impact of human activities on shark populations



Key terms for this lesson



PREDATOR

An animal that hunts and eats other animals



CARTILAGE

Flexible tissue that replaces bone in sharks



GILL SLITS

Openings that allow water to pass over gills



BUOYANCY

Ability to stay afloat without sinking



OVOVIVIPAROUS

Giving birth to live young from eggs that hatch inside the mother

PART 01

Basics

Foundational ideas about sharks

1 Basics

2 Anatomy

3 Feeding

4 Adaptations

5 Practice



Photo by [Daniel Torobekov](#) on [Pexels](#)

— DEFINITION

What is a Shark?

Now that we know marine predators, here's the core definition of a shark.

Sharks are **cartilaginous** fish belonging to the class Chondrichthyes. Their skeleton is made of cartilage, not bone, which makes them lighter and more flexible for fast swimming.

THINK *Why does cartilage benefit a fast swimmer?*

Shark Anatomy





Shark Hunt Video



⏮ WATCH FOR

Watch a great white shark ambush a seal – notice the speed and bite angle.

youtube.com/watch?v=Qzxy3GtSzt0

— ADAPTATIONS

Key Adaptations

Building on anatomy, here are three adaptations that make sharks successful hunters.

- **Streamlined body** reduces drag for fast swimming
- **Multiple rows of teeth** replace quickly after loss
- **Ampullae of Lorenzini** detect electric fields of hidden prey

THINK Which adaptation would be most useful in murky water?



Great White vs Whale Shark

Great White



Photo by [Daniel Torobekov](#) on [Pexels](#)

- **Length up to 6 m** makes it a top predator
- Eats fish, seals and other sharks
- **Powerful bite** can crush prey

Whale Shark



Photo by [Mary Alethma A. Manayon](#) on [Pexels](#)

- **Length up to 12 m** makes it the largest fish
- Filter-feeds on plankton and small fish
- **Gentle swimmer** moves slowly through water



How do size and diet shape each species' role?