Name _____ Date _____

Life in the ocean

How sea animals and plants breathe, move and hide in water.

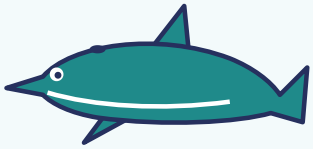
1 Learn

Ocean life has three big problems: getting oxygen, moving through water, and hiding in open sea.



Fish

- **gills** take oxygen from water
- can stay underwater all the time
- tail swishes side to side



Dolphin (a mammal)

- breathes air with **lungs**
- comes up to breathe through a blowhole
- tail beats up and down

Worked example: how does a whale breathe?

1. What is it? A whale is a **mammal**, like dolphins and us. Mammals breathe air.

2. Breathes with? Lungs, not gills, through a blowhole on top of its head.

3. How does it help? It can breathe at the surface without lifting its head, then hold its breath to dive.

Flip's tip: streamlined means a smooth shape, pointed at the front, so water flows past easily. Dolphins, sharks, penguins and tuna all have one.

Warm up: write **G** if it breathes with gills or **L** if it breathes with lungs.

☐ a shark	☐ a dolphin	☐ a goldfish
☐ a seal	☐ a blue whale	☐ a sea turtle

Grown-ups: the key mix-up is thinking dolphins and whales have gills. Living in the sea doesn't make an animal a fish. Ask: "Does it come up to the surface to breathe?"

Name _____ Date _____

2 Try it together a child and a grown-up, about 10 minutes



Shape race

You need: play dough or modelling clay, a tall glass or clear jug full of water, a spoon to fish the shapes out, and a towel for drips.

1. Split the dough into **three equal lumps**, so it's a fair test.
2. Make a **ball**, a flat **pancake**, and a smooth **torpedo** with a pointed front (like a dolphin).
3. Predict which will sink to the bottom fastest, and which slowest.
4. Hold two shapes just above the water and let go at the same time. Drop the torpedo point-first. Watch which reaches the bottom first.
5. Race every pair, then try again to check.

Shape	My prediction (1st, 2nd or 3rd)	What happened (1st, 2nd or 3rd)
Ball		
Pancake		
Torpedo		

Grown-ups: the pancake has to push the most water out of its way, so water resistance slows it down. The pointed torpedo slips through most easily. That's why fast swimmers are streamlined.

3 Practise

A. Draw a line to match each adaptation to how it helps.

a dolphin's streamlined body ●	● keep warm in cold water
a whale's thick blubber ●	● float up towards the sunlight
a shark's dark back, pale belly ●	● swim fast using less energy
a sea turtle's flippers ●	● be hard to spot from above or below
air pockets on seaweed ●	● paddle through the water

Name _____ Date _____

B. Complete the table.

Animal	Breathes with gills or lungs?	Gets its oxygen from water or air?
cod (a fish)		
dolphin	lungs	
shark		water
killer whale		

C. A fish dies if it is out of water for too long. A dolphin would drown if it stayed underwater for too long. Explain why.

D. Ring the most streamlined shape. Explain why it would be best for a fast swimmer.



1 2 3

Challenge

Leo says, "Dolphins live in the sea like fish, so they must breathe with gills." Is Leo right? Explain how you know.

I can… Tick when you can.

- ☐ explain how fish breathe with gills
- ☐ explain why dolphins and whales come up to breathe air
- ☐ explain how a streamlined shape helps an animal swim