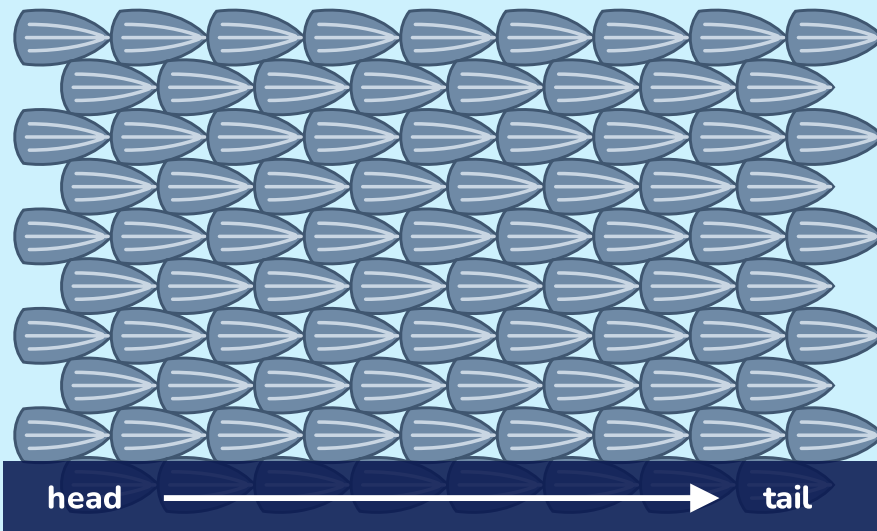


A



Super senses station A

Skin like sandpaper

On the table: A piece of sandpaper, velvet or corduroy

Try this

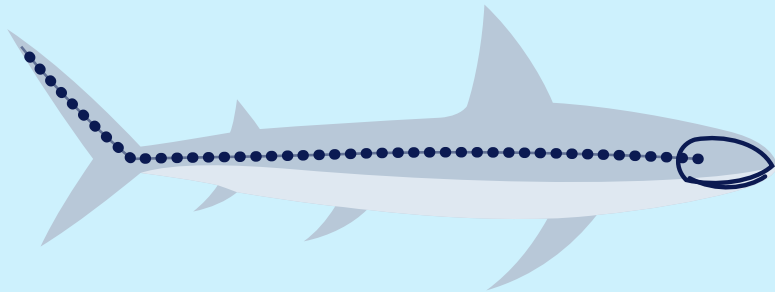
1. Stroke the material gently one way, then the other way.
2. Now look at the drawing of shark skin, seen up close.

What is going on?

Shark skin is covered in thousands of tiny, tooth-like scales called dermal denticles. They all point towards the tail, so the skin feels smooth if you stroke it from head to tail and rough the other way. Denticles protect the shark, and scientists think they help water flow smoothly past as it swims.

Write down: Which way does shark skin feel rough, and why?

B



Super senses station B

A skeleton that bends

On the table: Nothing needed. A piece of rubber hose, if you have one

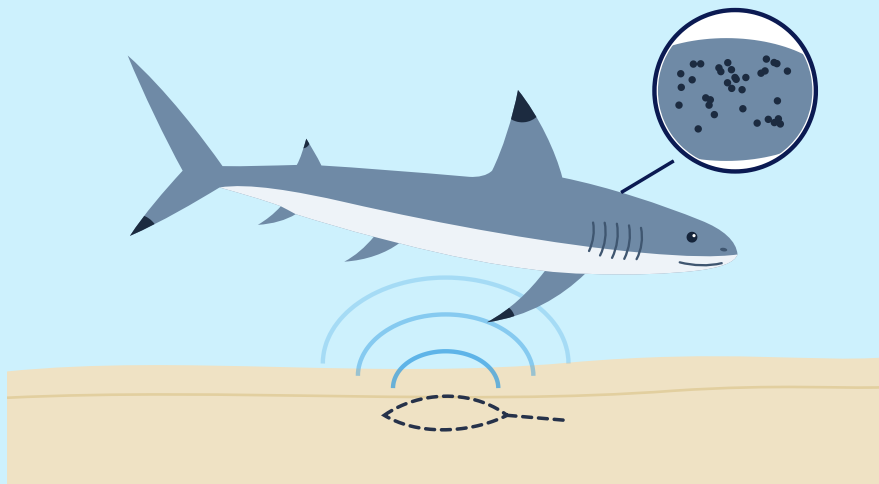
Try this

1. Gently bend the tip of your nose.
2. Now gently fold the top of your ear.
3. Try to bend your wrist bone. Can you?

What is going on?

The bendy parts of your nose and ear are made of cartilage. A shark's whole skeleton is cartilage, which is lighter and more flexible than bone, so sharks can twist and turn easily. Cartilage rots away quickly after an animal dies, so most shark fossils are just teeth.

Write down: Why do scientists mostly find shark teeth, not whole skeletons, as fossils?



Super senses station C

The electric sense

On the table: Six sheets of paper, a paperclip and a magnet on a string

Try this

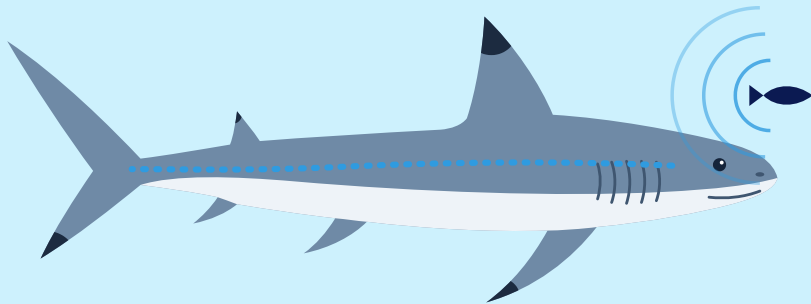
1. One person hides the paperclip under one sheet while the others look away.
2. The shark slowly moves the magnet just above the sheets, without lifting any.
3. When you feel the magnet pull, lift that sheet. Take turns being the shark.

What is going on?

Every animal gives off tiny electric signals when its muscles move, even when it is hiding. Sharks have hundreds of small, jelly-filled pores on their snout, called ampullae of Lorenzini, that can sense these signals. A hammerhead sweeps its wide head over the sand like a metal detector to find rays hiding underneath.

Write down: How does the electric sense help a shark find food it can't see?

D



Super senses station D

Feeling the water move

On the table: A shallow tray of water and a towel

Try this

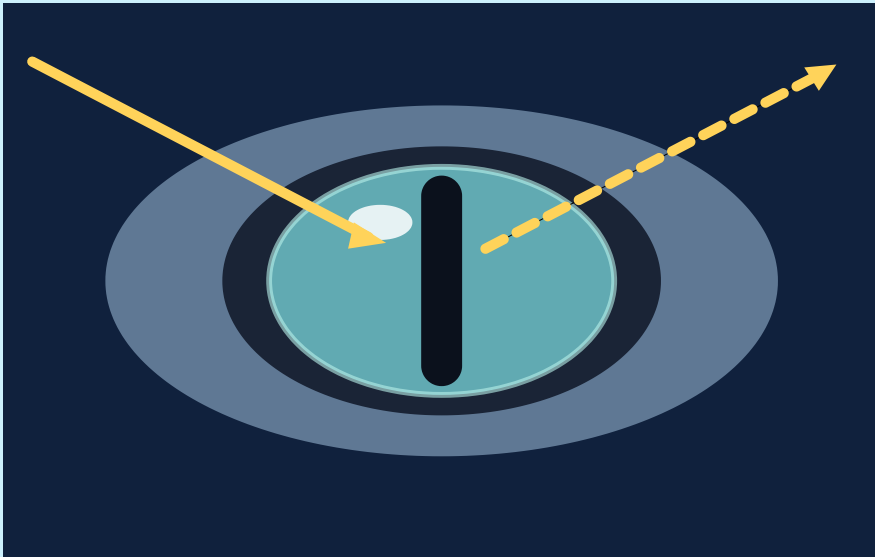
1. Close your eyes and rest one fingertip lightly on the water at one end of the tray.
2. Your partner makes a small tap in the water at the other end.
3. Can you feel the ripple arrive? Swap roles.

What is going on?

Along each side of a shark's body runs a line of tiny sensing pores called the lateral line. It feels movement in the water, like the flutter of a struggling fish, even in the dark or in murky water.

Write down: When would the lateral line be more useful than eyes?

E



Super senses station E

Eyes for the dark

On the table: A torch and a bicycle reflector

Try this

1. Go to the darkest corner of the room.
2. Shine the torch at the reflector from different angles.
3. What happens to the light?

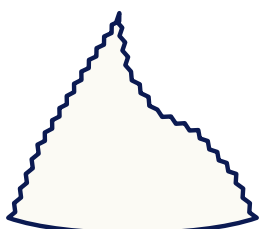
What is going on?

At the back of a shark's eye is a mirror-like layer called the tapetum lucidum. It bounces light back through the eye a second time, so sharks can see well when it is dim. Cats have one too, which is why their eyes shine at night.

Write down: Why is it useful for a shark to see well in dim light?

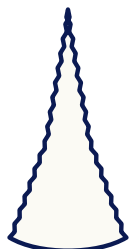
F

1



Tiger shark

2



Blacktip reef shark

3



Bamboo shark

4



Whale shark

Super senses station F

Teeth on a conveyor belt

On the table: Nothing needed. Everything is on this card

Try this

1. Look closely at the four teeth.
2. Match each tooth to the food that shark eats: sea turtles, small fish, crabs and shrimp, or plankton.
3. Check your answers at the bottom of the card.

What is going on?

Sharks grow new teeth all their lives. New teeth wait in rows behind the front ones and move forward when a tooth falls out. The shape of a tooth tells you what the shark eats: sharp saws for cutting, thin points for grabbing, blunt bumps for crushing.

Write down: What does a tiger shark's tooth tell you about what it eats?

Answers: 1 tiger shark, sea turtles, 2 blacktip reef shark, small fish, 3 bamboo shark, crabs and shrimp, 4 whale shark, plankton.