

Food Chains: Apex Predators and Trophic Cascades

Teachers Notes

- In the shark tunnel we have 4 different species of shark and one stingray. Sand tiger sharks, broadnose seven gill sharks, school sharks and one wobbegong shark.
- Sand tiger sharks are the largest in the tank – very docile and safe to swim with. Here in NZ they can be found in the Bay of Plenty. Ours came from the USA. They rely on ram ventilation; water is forced into their mouths from moving forward through the water. It then gets passed out over the gills. If they stop swimming they will sink and can't breathe.
- Broadnose seven gill sharks are found all around NZ and are a little bit different to the other sharks as they have no main dorsal fin. They can live up to 50 years.
- School sharks are also found throughout NZ and can grow up to 2 metres. They can live up to 60 years and are normally found in small schools – hence the name.
- Lastly, the wobbegong shark. This shark sits on the bottom and is very well camouflaged. She doesn't have to swim to breathe like the sand tiger shark because she has spiracles. Two openings on the top of her head that pump water over the gills. Stingrays have these as well.
- The sting ray in here is a short-tail stingray called Barbs. She is the largest animal in this tank and still has her barb, which can be up to 30cm long. We could remove the barb, but they grow back again so it is pointless. She looks quite slow but can actually swim at up to 50km/h in short bursts.
- Sharks are apex predators – that means that they are at the top of the food chain. In order for sharks to live in any ecosystem, every link in the food chain below them must be in place. This means that when we see sharks it is an indicator of good ecosystem health.
- Sharks have incredible teeth – each species is a little different as well so you can tell which is which by looking at their teeth. Unlike many other animals, sharks have replaceable teeth. They have something like a conveyor belt of teeth, where if one is damaged or comes out it is replaced immediately. Sharks can have around 10,000 teeth in their life time.