SECTION 4

Today we're going to look at one of my favourite fish – the shark. As you know, sharks have a reputation for being very dangerous creatures capable of injuring or killing humans, and I'd like to talk about sharks in Australia.

Sharks are rather large fish, often growing to over ten metres and the longest sharks caught in Australia have reached sixteen metres. Sharks vary in weight with size and breed, of course, but the heaviest shark caught in Australia was a White Pointer – that weighed seven hundred and ninety-five kilograms – quite a size! Sharks have a different structure to most fish: instead of a skeleton made of bone, they have a tough elastic skeleton of cartilage. Unlike bone, this firm, pliable material is rather like your nose, and allows the shark to bend easily as it swims. The shark's skin isn't covered with scales, like other fish: instead the skin's covered with barbs, giving it a rough texture like sandpaper. As you know, sharks are very quick swimmers. This is made possible by their fins, one set at the side and another set underneath the body, and the tail also helps the shark move forward quickly. *Q31* *Q32*

Unlike other fish, sharks have to keep swimming if they want to stay at a particular depth, and they rarely swim at the surface. Mostly, they swim at the bottom of the ocean, scavenging and picking up food that's lying on the ocean floor. While most other animals, including fish, hunt their prey by means of their eyesight, sharks hunt essentially by smell. They have a very acute sense of smell – and can sense the presence of food long before they can see it. *Q33* *Q34*

In Australia, where people spend a lot of time at the beach, the government has realised that it must prevent sharks from swimming near its beaches. As a result, they've introduced a beach-netting program. Beach-netting, or meshing, involves setting large nets parallel to the shore; this means that the nets on New South Wales beaches are set on one day, and then lifted and taken out to sea on the next day. When shark-netting first began in 1939, only the Sydney metropolitan beaches were meshed – these beaches were chosen because beaches near the city are usually the most crowded with swimmers. Ten years later, in 1949, systematic meshing was extended to include the beaches to the south of Sydney. As a result of the general success of the program in Sydney, shark-meshing was introduced to the state of Queensland around 1970. The New Zealand authorities also looked at it, but considered meshing uneconomical – as did Tahiti in the Pacific. At around the same time, South Africa introduced meshing to some of its most popular swimming beaches. *Q35* *Q36*

When meshing began, approximately fifteen hundred sharks were caught in the first year. However, this declined in the years that followed, and since that time, the average annual catch has been only about a hundred and fifty a year. The majority of sharks are caught during the warmest months, from November to February, when sharks are most active and when both the air and the ocean are at their maximum temperature. *Q37* *Q38*

Despite quite large catches, some people believe that shark meshing is not the best way to catch sharks. It's not that they think sharks are afraid of nets, or because they eat holes in them, because neither of these is true. But meshing does appear to be less effective than some other methods, especially when there are big seas with high rolling waves and strong currents and anything that lets the sand move – the sand that's holding the nets down. When this moves the nets will also become less effective. *Q39* *Q40*