

! Megalodon was as long as two buses parked end to end.



I didn't know that sharks are older than dinosaurs. Sharks' ancestors lived about 200 million years before the dinosaurs. Some were giants and had spines on their head.



Few sharks turned into *fossils*, but their teeth did! This tooth (left) measures twelve centimetres and belonged to a monster shark called megalodon. A great white shark's tooth is half this size.



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Cladoselache lived about 350 million years ago, and measured about two metres from teeth to tail. The shark's mouth was at the tip of its snout, not tucked underneath as in most sharks today.

Cladoselache

This fossil of a shark called stethocanthus shows that it had thorny spines. Fossils of sharks are rare because their skeletons are made not of bone but *cartilage*, which rots away before it can fossilise.



! Port Jackson sharks still have spines, just like their ancestors did.



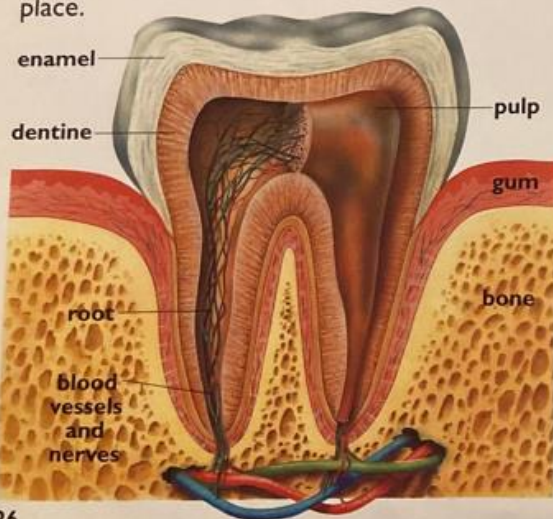
Teeth

Our teeth are there to break food down into small pieces, ready for swallowing. The teeth have three different shapes, designed to do different jobs.

The incisors at the front are for biting into food and cutting it up. The pointed canines tear tough food. And the big molars at the back grind and mash it.

Children lose their first set of teeth, known as milk teeth, which start to fall out when we are five or six. A set of new, bigger teeth grows in their place.

▽ **The outside of the tooth** is a hard layer of enamel. The centre of the tooth, with blood vessels and nerves, is surrounded by a substance known as dentine.

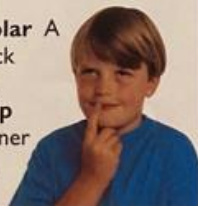


△ **You should visit** the dentist regularly to have your teeth checked and cleaned. Any tooth decay can be removed and replaced with a filling.

▽ **If sugar and bacteria** are left on the teeth for long, they can produce acid. This breaks down enamel and causes tooth decay. Regular brushing removes the sugar and bacteria.

NEW WORDS

- ▽ **bacteria** Tiny micro-organisms, or germs.
- ▽ **enamel** The shiny surface of a tooth.
- ▽ **incisor** A sharp-edged front tooth.
- ▽ **canine** A pointed tooth.
- ▽ **molar** A big back tooth.
- ▽ **pulp** Soft inner tooth.



CHECKING YOUR TEETH

Plaque is a filmy deposit on the surface of teeth that causes decay. You can check how much plaque there is on your teeth by chewing a disclosing tablet (from the chemist), made of vegetable dye. Plaque shows up as a deep pink colour. Brushing your teeth well and regularly will mean less plaque and so less tooth decay.

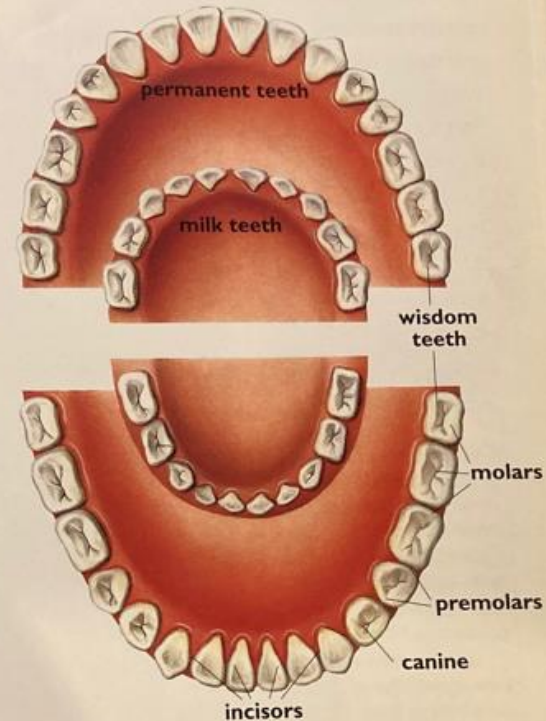


▽ **When old people** lose their teeth, they sometimes replace them with false teeth.

▽ **When you are small,** you have 20 milk teeth, shown in the inner circle. These are replaced by 32 permanent teeth, including four back wisdom teeth.

▽ **It has been known** for people to grow a third set of teeth, but this is very rare indeed.

▽ **It is important** to look after your teeth well when you are a child, so that they will be healthy and strong when you are older. Some children and young adults wear a brace for some time. This helps to make crooked teeth straight. Your dentist will tell you if this is a good idea.



△ **The four wisdom teeth** come through last, after the age of about 17. Some people never have wisdom teeth.

Our back teeth grind up our food which mixes with saliva and goes soft and mushy. This makes it much easier to swallow and digest.

Wild Wetland

The Pantanal is the largest-known freshwater wetland in the world, and it is a paradise for animals and plants. It extends from Brazil into Paraguay and Bolivia, covering at least 50,000 sq mi (129,500 sq km)—an area bigger than 29 of the U.S. states.

Seasonal soakings

An immense low-lying floodplain, the Pantanal contains some areas that are permanently swamped wildernesses. During the seasonal soakings, when rains in the nearby highlands pour into the river systems, the rivers burst their banks and the area underwater increases to around 80 percent.

Super habitat

Seasonal flooding sees a peak in fish breeding in the swampy plains, but during the dry season, from May to September, large areas of land are exposed and dry out. Grazing animals move in, closely followed by their predators—jaguars. Wading birds feast on the fish left exposed in isolated pools and a diverse range of animals feed among giant lily pads and water hyacinths.

▼ Spectacled caimans are the most adaptable of all crocodilians, so they can tolerate the Pantanal's changing conditions.

▼ There are at least 50 species of reptile in the Pantanal. Yellow anacondas give birth to their young in water.

▼ Floodwaters on the Pantanal can reach 13 ft (4 m) in height during and after the long summer rainy season, creating challenging conditions for cowboys and their herds.

Alien invaders

Cattle have been grazing on the Pantanal for around 260 years and many millions are now kept on enormous ranches. Large areas of woody vegetation have been removed using the cut-and-slash method, or by burning, to produce more grazing land.

▲ An incredible array of wildlife lives on the Pantanal, including the world's largest rodents, capybaras, which have a body length of about 3.3 ft (1 m). They are adept swimmers.

Adios Pantanal?

The Pantanal has been described as "one of the last intact ecological paradises." However, cattle ranching, commercial hunting, and pollution are just a few of the growing threats to this habitat. While some recent large-scale plans to turn the Paraguay River into a more navigable route for cargo have been put on hold, other projects planned for the rivers and tributaries that feed the wetlands are still being developed. This is likely to increase the environmental pressures that already face this precious ecosystem.

"PANTANAL" MEANS "SWAMP," BUT ACTUALLY THE REGION IS A PLAIN, AND THE REMAINS OF AN ANCIENT INLAND SEA THAT IS SLOWLY DRYING OUT.



