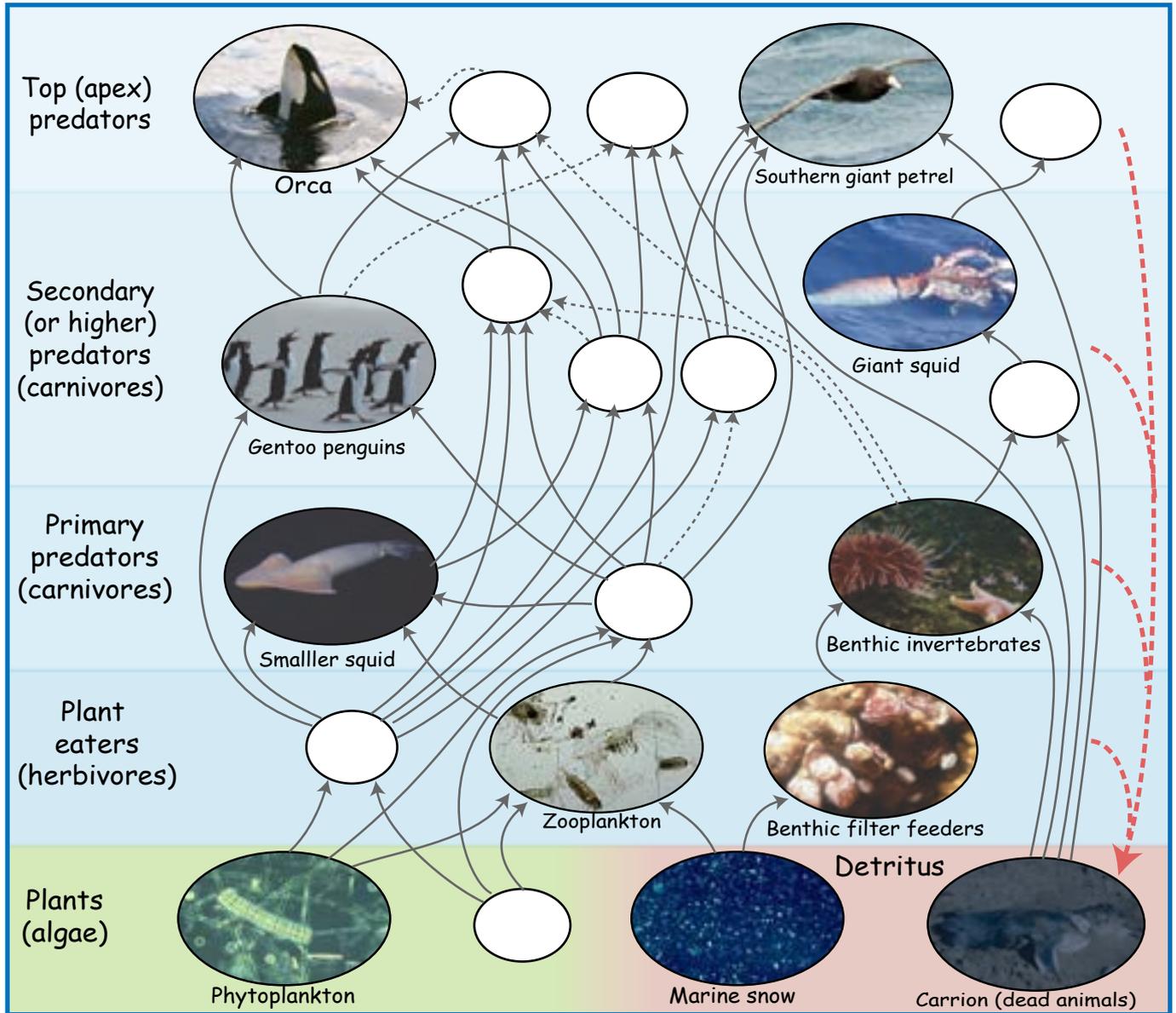


Antarctic foodweb quiz

All animals have to eat to stay alive. They also have to avoid predators that want to kill and eat them. A food web 'maps' prey and predators - for a single species, or for whole ecosystems.



Can you place the creatures below in the right place in this Antarctic food web?

Write the number of each picture in the correct circle on the food web above. If you are unsure about what the animals eat, please see the notes at the back of the sheet.



1. Leopard Seal 2. Krill 3. Antarctic silverfish 4. Ice algae 5. Cape pigeon



6. Adelle penguin 7. Weddel seal 8. Antarctic cod 9. South Polar skua 10. Sperm whale

Antarctic food web notes

All animals have to eat to stay alive. They also have to avoid predators that want to kill and eat them. A food web 'maps' food (prey) and predators - either for a single species, or for several animals in an ecosystem. Arrows in the foodweb show how energy (or carbon) travels through the system. For example: when a seagull eats a fish, energy moves to the seagull, so the arrow points from the fish to the seagull.

The **Leopard Seal** is the second largest seal in the Antarctic. Adult males may be over 3m long and weigh up to 450 kg. They are fierce predators, with few natural enemies, but orcas and large sharks may kill young seals. Their diet changes with age and opportunities. Young seals eat krill, squid and fish. As they grow, they switch to larger prey - penguins and sometimes other seals.

Antarctic krill are shrimp-like crustaceans found in the waters around Antarctica. They can grow to a length of 6 cm and weigh up to 2 g. They live in large swarms, sometimes as many as 30,000 per cubic meter. Krill feed directly on phytoplankton. They are an important food source for whales, seals, squid, icefish, penguins, petrels and many other species of birds.

Antarctic silverfish are small, pelagic fish - about the size of a sardine. They are common all around Antarctica, where they live open waters down to about 900 m depth. They also live in pack ice, and produce their own anti-freeze. Silverfish larvae eat mainly copepods; the larger adults can take larger prey, and eat a lot of krill.

Ice algae are microscopic plants that live in sea-ice. They can colour the ice green, yellow, brown or red. Like phytoplankton, they are at the bottom of the food chain. They do not contribute as much to Antarctic primary production as oceanic phytoplankton, but are very important for the survival of krill and other tiny animals.

The **Cape pigeon** is actually a petrel, and like all petrels it is a good flier. Cape petrels feed mainly on krill. They can scoop them from the surface, while hovering over the waves, or dive in to filter them out under water. Squid and small fish are also welcome. Their main predators are skuas and giant petrels, which may try to steal eggs and unprotected chicks.

Adelie penguins are smaller than other penguins - around half a metre tall. You can recognise them by the white ring around each eye. They feed mainly on krill, silverfish, and squid, and can swim up to 45 miles per hour to hunt for food or escape predators. Their main predator is the Skua, which takes eggs and chicks. Adult Adelies may also be killed by orcas and larger seals.

Weddell seal This seal is common all around Antarctica, not just in the Weddell Sea, where it was first discovered in the 1820s. It eats fish, krill, squid, bottom-feeding prawns, and sometimes even penguins. An adult can eat 10 - 50kg per day.

Antarctic cod, or Antarctic toothfish, have antifreeze that allows them to survive in the icy waters of Antarctica, and have been caught at depths over 2000 km. They have a varied diet of other fish, carrion, and benthic animals. When fully grown they can be over 2m long and weigh over 135 kg. Their main predator is the giant squid. Smaller cod are also prey for seals and orcas.

The **South Polar skua** is a large seabird with a wingspan of 140cm or more. It eats mainly fish, and often robs smaller birds of their prey. It may also attack and kill other seabirds and their chicks, and often eats scraps and carrion. Skuas will not usually attack adult penguins or chicks protected by their parents, but they keep an eye for abandoned chicks and eggs.

The **Sperm whale** can be over 20m long. It is the largest living toothed animal. It feeds on squid and fish, diving as deep as 3 km; this makes it the deepest diving mammal. Its diet includes giant squid and colossal squid. Few predators are strong enough to successfully attack a healthy adult sperm whale, but orcas attack pods and kill calves.