



What is the difference between a shark and a dolphin?

Blowhole to breathe air.

Horizontal tail fluke creates up and down propulsion to swim.

Dolphins are mammals and give birth to live young. They nurse their calves with milk that is very rich in fat. Sharks are fish. Most lay eggs and do not care for their young.

Flippers containing bones similar to human hand bones.

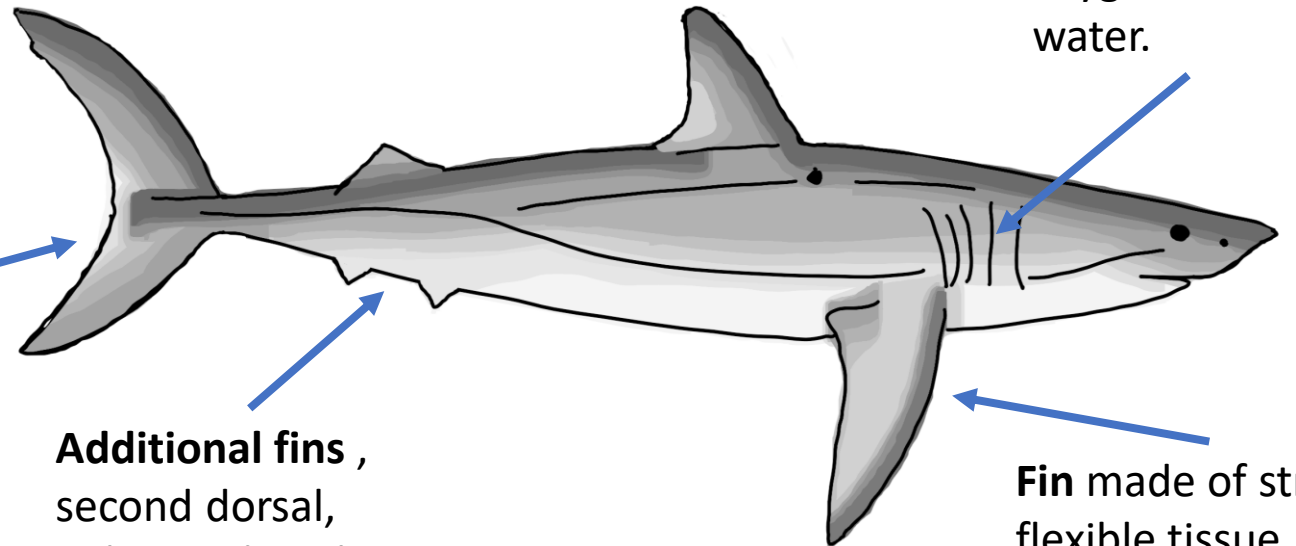
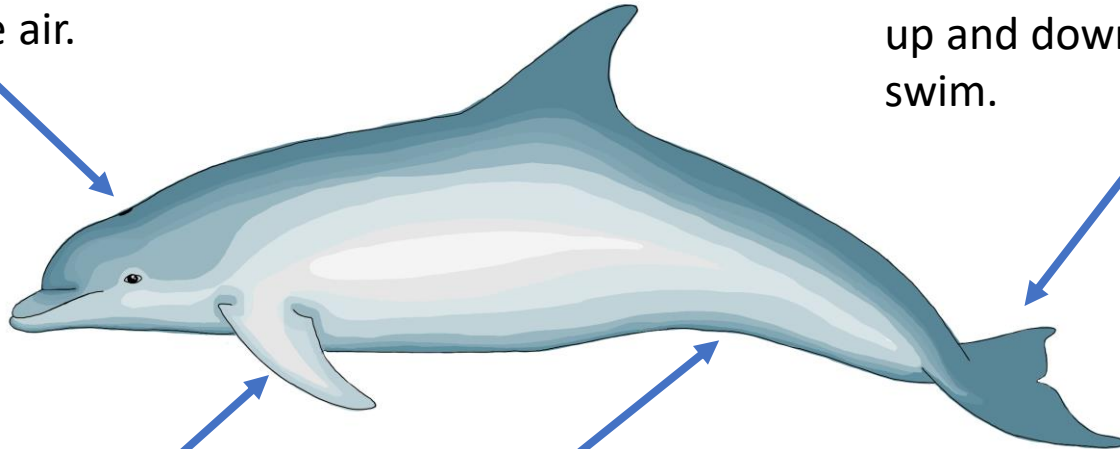
Mammary glands to produce milk for calves.

Vertical tail fin creates side to side propulsion to swim.

Additional fins, second dorsal, pelvic and anal.

Gills to extract oxygen from water.

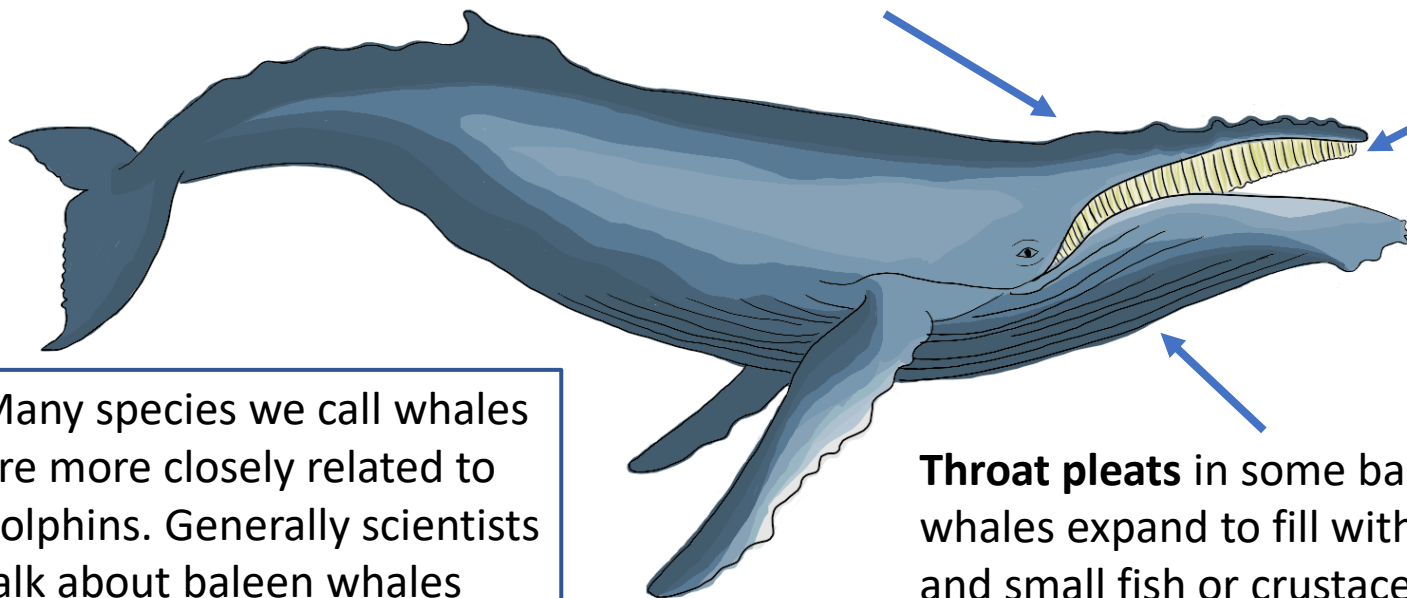
Fin made of strong, flexible tissue called cartilage.





What is the difference between a whale and a dolphin?

Baleen Whale



Two blowholes to breathe air.

Baleen is the bristle like structure in a whale's upper jaw which it uses to filter small fish or crustaceans from the water.

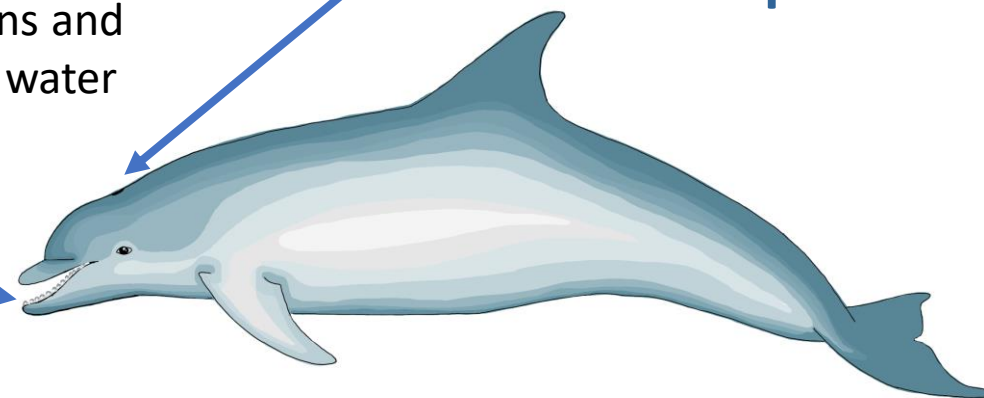
Many species we call whales are more closely related to dolphins. Generally scientists talk about baleen whales and toothed whales. Toothed whales include sperm whales, beaked whales, and all porpoises and dolphins. Killer whales and pilot whales are actually dolphins.

Throat pleats in some baleen whales expand to fill with water and small fish or crustaceans and then contract, pushing the water back through the baleen.

Teeth on the upper and lower jaws to grab fish, squid or other prey. They use **echolocation** to find their food.

Single blowhole to breathe air.

Dolphin





Echolocation

Brain processes signals to form an image.

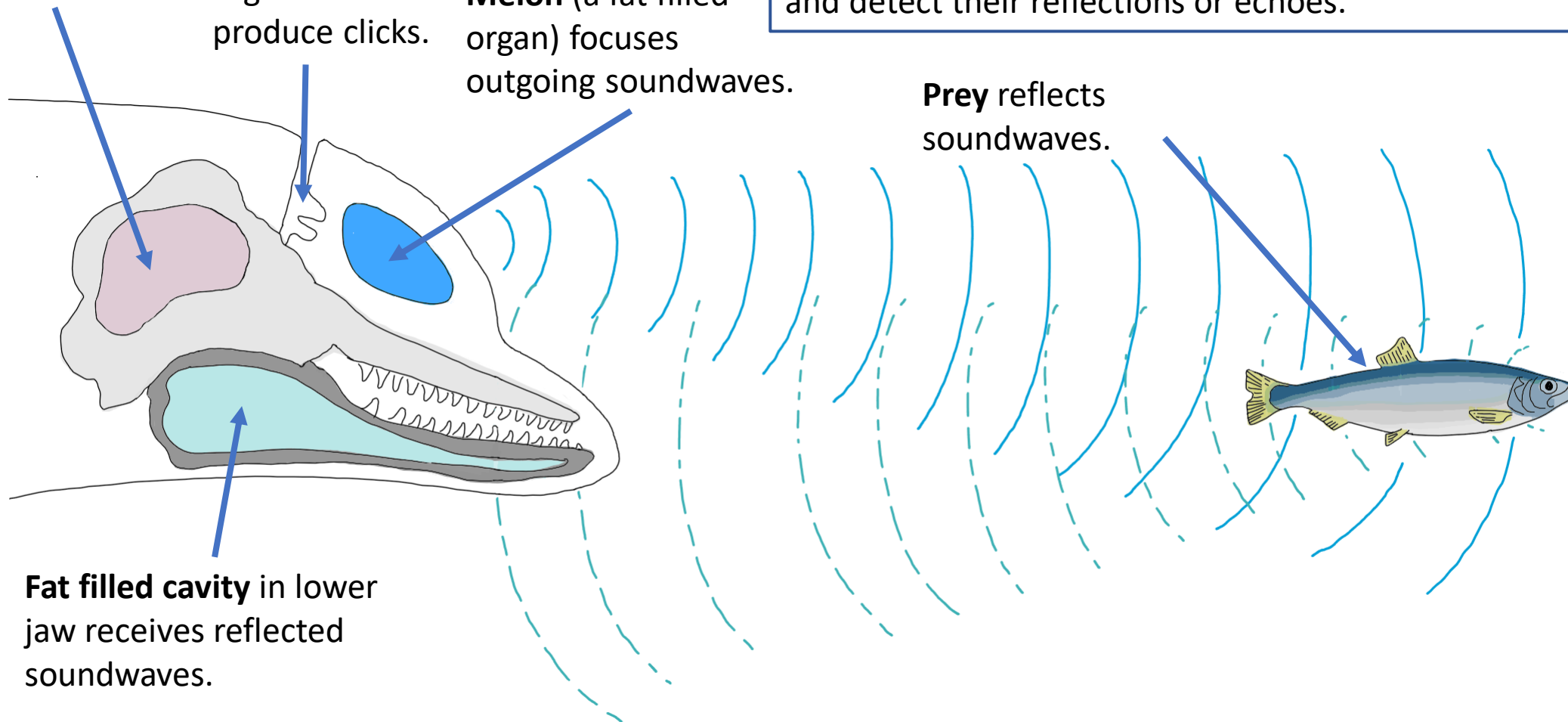
Nasal passage contains organs that produce clicks.

Melon (a fat filled organ) focuses outgoing soundwaves.

Toothed whales (dolphins, porpoises and species like pilot whales and killer whales) use echolocation to navigate and find their food. They emit a series of soundwaves in the form of clicks and detect their reflections or echoes.

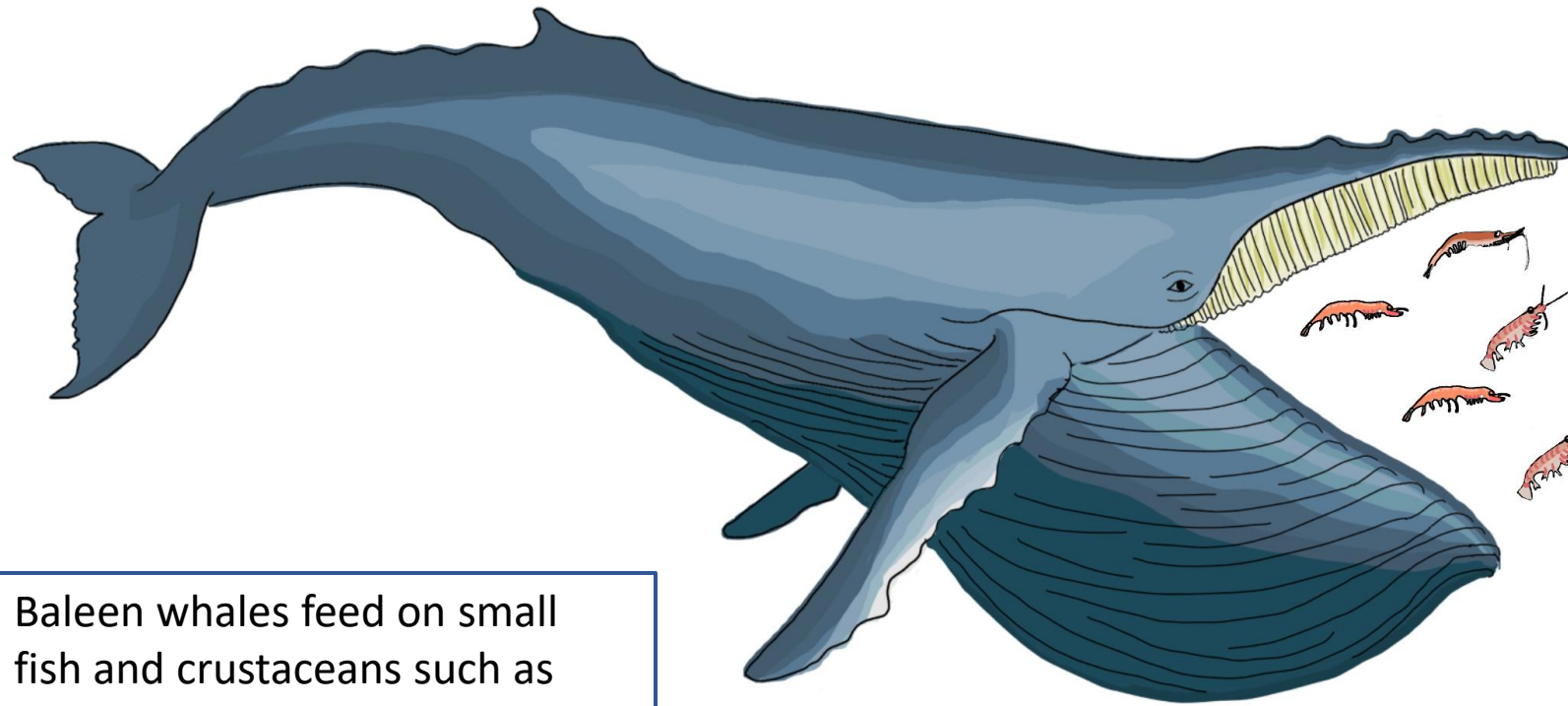
Prey reflects soundwaves.

Fat filled cavity in lower jaw receives reflected soundwaves.





Baleen Whale Filter Feeding

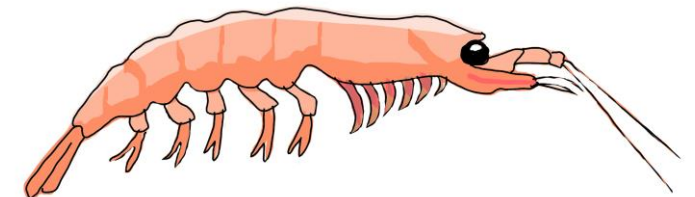


Baleen whales feed on small fish and crustaceans such as krill. They take in prey with water, trapping their food on the inside of baleen plates, which are like bristles of a broom. Some species of baleen whale don't have throat pleats but still filter feed.

Baleen is the bristle like structure in a whale's upper jaw which it uses to filter prey from the water.

Small fish or crustaceans such as **krill**.

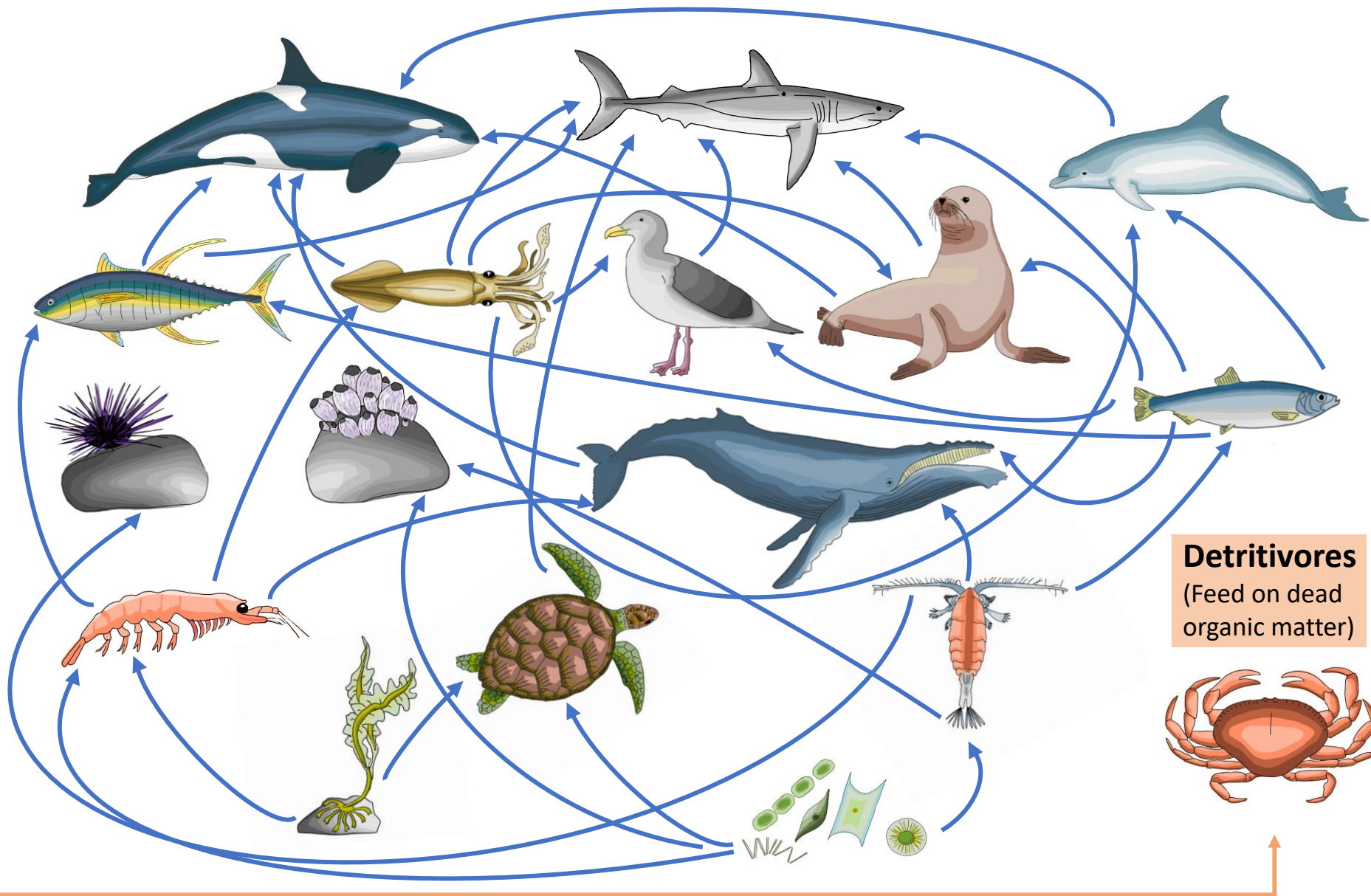
Throat pleats expand to fill with water and small fish or crustaceans and then contract, pushing the water back through the baleen.



1 cm

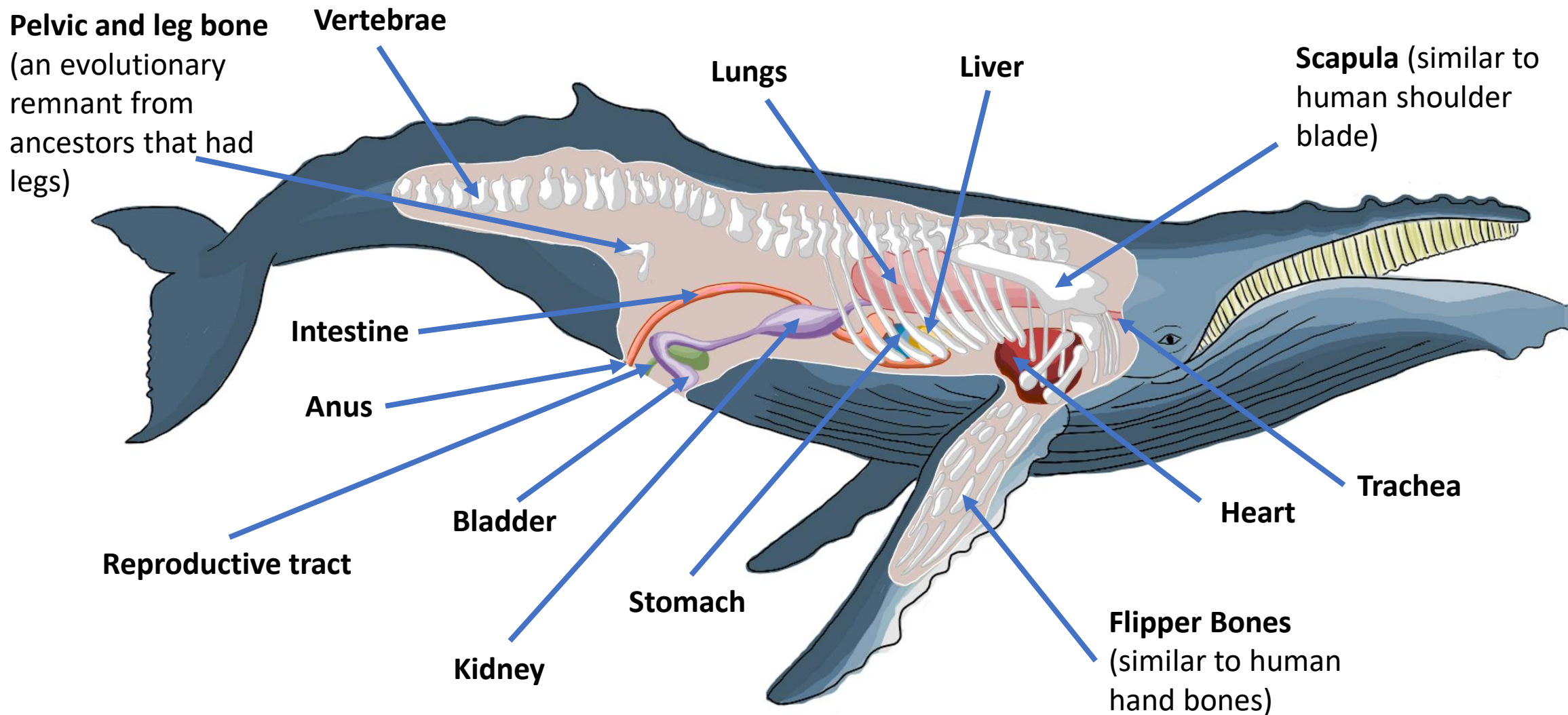


Marine Food Web



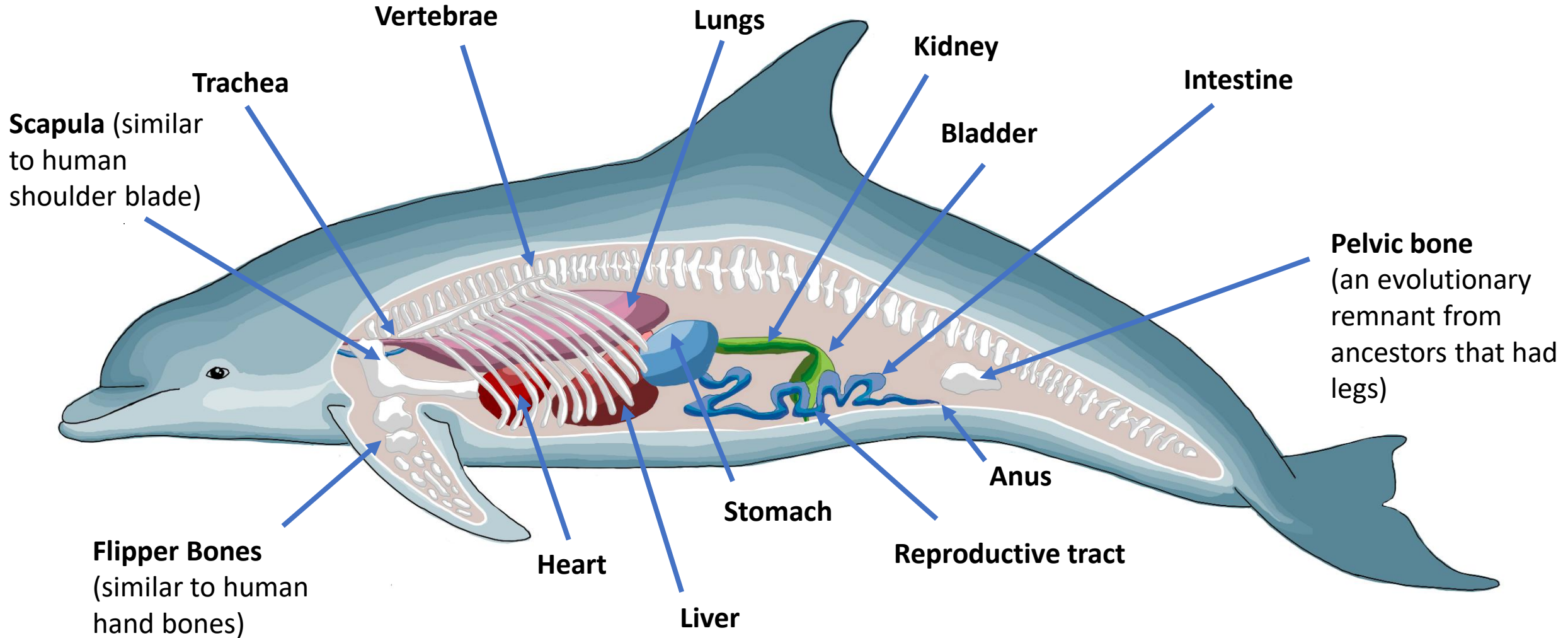


Baleen Whale Anatomy



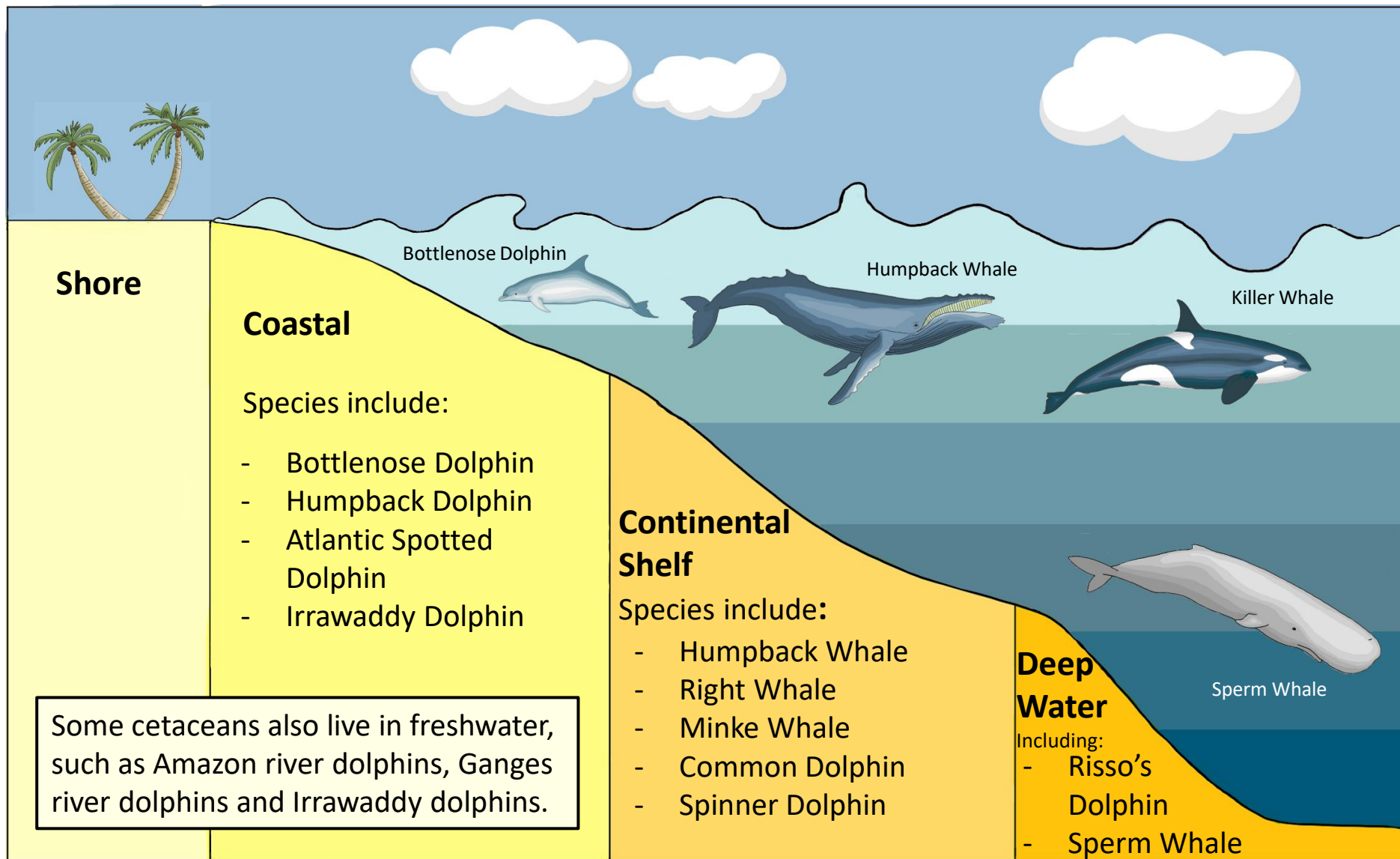


Dolphin Anatomy





Cetacean Habitats



Many species have clear habitat preferences, determined by their feeding strategies. For example, sperm whales dive to great depths to catch squid, while other species feed on fish and crustaceans in shallow, coastal waters. Other species target large schools of fish or crustaceans on the continental shelf. However, some cetaceans, like bottlenose dolphins and killer whales, can be found in almost any marine environment.



INTERNATIONAL
WHALING COMMISSION

Some threats to whales and dolphins

CLIMATE CHANGE causes the oceans to warm which can result in shifts and changes in food resources for whales and dolphins.

POLLUTION

and harmful contaminants build up in the food chain reaching high levels in top predators like dolphins and killer whales.

ENTANGLEMENT

in fishing gear leads to immediate death from asphyxiation or long-term injuries and inability to feed or reproduce.

MARINE DEBRIS

such as plastic is often found in stomachs of stranded cetaceans.

UNDER WATER NOISE

can damage hearing, mask communication and echolocation, and cause stress, driving cetaceans away from feeding or resting habitats.

SHIP STRIKES

kill or injure large whales and sometimes smaller whales or dolphins.

