

Seashore factfile

This factfile intends to provide the background information necessary for teachers to use the lesson plans and worksheets confidently. A number of other websites that may be useful include Wikipedia, ARKive, BBC Nature, Naturenet, RSPB and The Wildlife Trust.

Lobster

Clawed lobsters are a family (Nephropidae) of large marine crustaceans. Their order Decapoda (meaning '10-limbed') contains species such as the European lobster (Latin: *Homarus gammarus*). Lobsters are economically important as seafood, forming the basis of a global industry that nets US \$1.8 billion in trade annually.

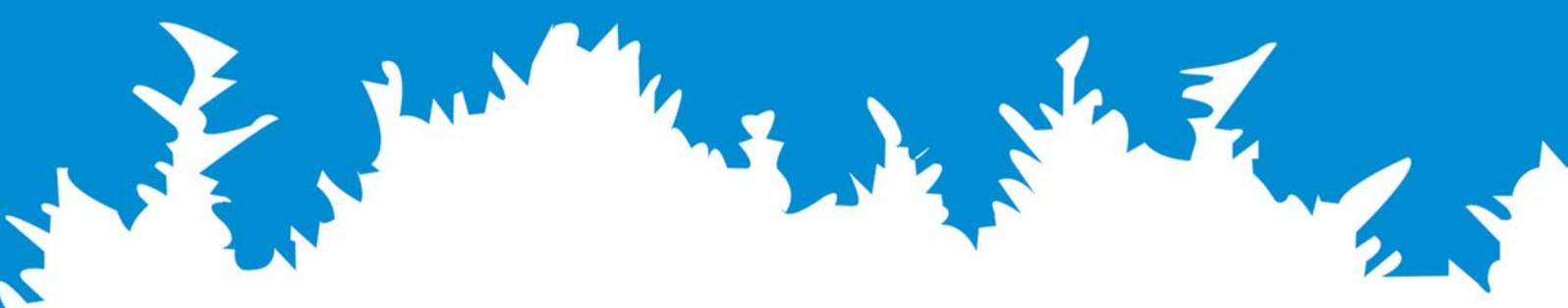
These invertebrates are found all over the world. Lobsters have 10 legs, the front pair are adapted to claws. One is large and blunt, designed for crushing, whilst the other is sharper and slightly smaller, for slicing. They are protected by a hard exoskeleton. Adults are dark blue in colour, but turn bright red after cooking. They must molt in order to grow, leaving them vulnerable to predation during this time. Lobsters continue to grow throughout their lives, and it is not unusual for them to live over 100 years. The largest lobster caught weighed 20.15 kg!

Lobsters are found on rocky, sandy or muddy bottoms from the shoreline outwards. They tend to live alone, in crevices or under rocks. The European Lobster inhabits the North Atlantic waters, from arctic Norway to Morocco. It is rarely found below 50m depth. They prey on molluscs, worms, crabs, starfish, and some fish and vegetation. Lobsters have poor vision and rely on their antennae to catch food in their murky environment.



www.npt.gov.uk/biodiversity





Females reach sexual maturity when they are between 5 and 7 years old. Mating usually occurs between a hard-shelled male and a soft, newly moulted female. Sperm is transferred from the male via ducts at the base of the last pair of walking legs to a sperm receptacle on the female. The female can retain the sperm whilst the eggs are maturing, fertilising them as they are laid. The fertilised eggs are carried beneath the female's abdomen for 9-12 months. The larvae then float in the open water for 5-10 weeks; many are eaten during this stage. They grow and moult, until they begin to resemble a small lobster (3rd moult). It is estimated that only around 0.005% of hatchling lobsters survive to this stage. They will then settle at the bottom of the ocean and burrow into the mud and sand, rarely moving for up to 2 years. They feed on marine worms and the larvae of other sea creatures such as small crabs and urchins during this phase. Once they grow to around 15mm in length they will begin life as an adult. Generally, lobsters walk slowly along the sea floor, though they are able to swim backwards, and do so to flee danger.

Starfish

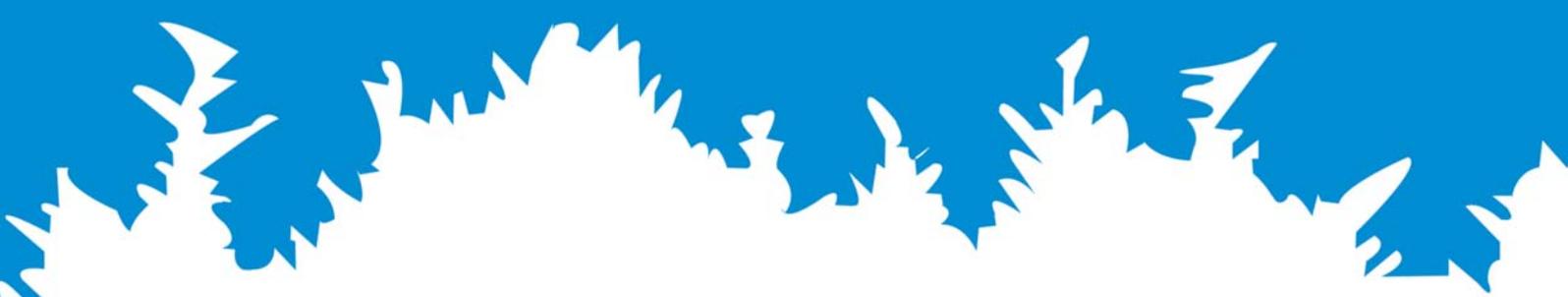
Starfish (also known as Sea Stars) are echinoderms which belong to the class Asteroidea. The name starfish is misleading as they are not fish.

Sea stars range in size, shape and colour. Sizes vary between the 1cm arms of the cushion star and the long skinny arms of Bathyal Brisingid sea-star which spans almost 91cm in diameter. They typically possess five "arms" which radiate from a central disk. Sea Stars are able to regenerate lost arms. They do not have a jointed, moveable skeleton for support and locomotion, but instead rely on a hydraulic water vascular system. The many projected tube feet on their underside aid with feeding as well as locomotion. They feed on shelled animals such as oysters and clams. They have two stomachs, one can be extended outward to engulf and digest prey whilst the other is used for digestion.

Sea stars are capable of both sexual and asexual reproduction. Fertilisation is external; males and females release a vast number of eggs and sperm into the environment. The resulting larvae live in the water column until they settle on the seabed and metamorphose into adult form.

Seal

Seals are members of the family Phocidae or True Seals. This distinguishes them from Eared seals including Fur Seals and Sea Lions. Seals are extremely adapted to aquatic life, although



they still return to land or packed ice to breed and give birth. Their sleek, streamlined bodies aid swimming, whilst a layer of blubber underneath the skin helps to control temperature. The fore flippers are used for steering and the back flippers allow them to swim rapidly and for long distances. Their respiratory and circulatory systems are adapted to allow diving to a considerable depth, and they can spend extended periods of time underwater.

Their large eyes enable them to see in low light conditions meaning they can hunt or swim at night, or down to depths where there is little light. Their whiskers are sensitive to touch and are likely to help the animal find food.

Grey Seals or Atlantic Grey Seals (Latin: *Halichoerus grypus*) and Common Seals or Harbour Seals (Latin: *Phoca vitulina*) are found on the Welsh coast; particularly Pembrokeshire and Cardigan. Grey seals appear black when wet, and are distinguishable from common seals which are smaller with a spottier coat and stubbier face.

Pupping begins in autumn, when fluffy white seals begin appearing in coves around the coast. Seals are mammals and the females feed the pups on an extremely thick, fat-rich milk, meaning that they grow very quickly during the first few weeks. Adults feed on a variety of fish, and will also take octopus, squid and lobster.

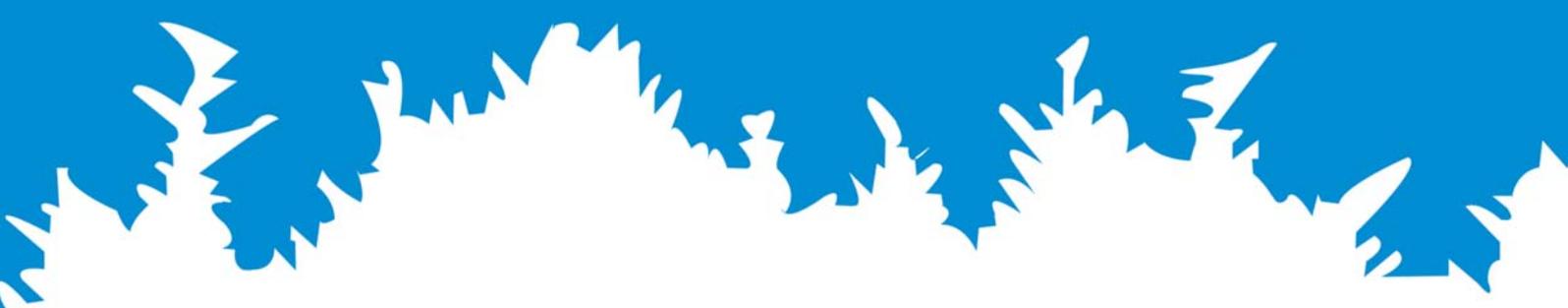
Seagull

Gulls are birds of the family Laridae. Most are ground nesting carnivores, which take live food such as crabs and small fish or scavenge. They are typically coastal or inland species, rarely venturing far out to sea. Gulls nest in large, densely packed and noisy colonies. They lay two or three speckled eggs in nests made from vegetation. The young are dark mottled brown and mobile from birth.

Fourteen species of gull are found in Europe, although the most commonly seen are Herring Gulls (Latin: *Larus argentatus*), Great black-backed (Latin: *Larus marinus*) and Lesser black-backed gulls (Latin: *Larus fuscus*). These species are often seen at rubbish tips and playing fields over the winter and breeding seasons. They often become used to human presence and will take or steal food.

Mussel

The common name mussel is used to describe members of several different families of clams or bivalve molluscs from both fresh and saltwater habitats. They usually possess a shell which is



somewhat elongated and asymmetrical when compared with that of other edible clams. The word mussel is also often used to describe Blue mussels (*Mytilus edulis*) which are commonly harvested for food throughout the world.

Blue mussels live in intertidal areas, attaching themselves to rocks and other hard substrates by strong thread-like structures. They are often found clumped together on wave-washed rocks. Clumping together holds the mussels firm against the force of the waves.

Fertilisation is external. Male and female individuals release their sperm and eggs; the resulting larvae drift for between three weeks and six months before settling on a hard surface. They are filter feeders; feeding on plankton and other microscopic sea creatures which are free-floating in seawater. Mussels are eaten by humans, sea stars, seabirds, and by numerous sea snails and sea slugs.

Mackerel

Mackerel is the name given to a number of different species of fish, most of which belong to the family Scombridae. Most live offshore in the oceanic environment, although some such as the Spanish Mackerel enter bays. Mackerels tend to be slim and cylindrical in shape, with numerous finlets behind the dorsal and anal fins. The largest species, the King Mackerel, can grow up to 1.68m in length.

Mackerel feed on a variety of prey including small fish such as sand-eels and small crustaceans. These fish are supremely adapted for hunting; their streamlined bodies can cut through the water at speeds of up to 20 mph. They are hunted by shearwater (birds), tuna, dolphins, whales, orca, seagulls, marlins, sharks and humans.

The Atlantic Mackerel (*Scomber scombrus*) is by far the most common of the ten species of the family that are caught in British waters. It is extremely common in massive schools which migrate towards the coast to feed on small fish and prawns during the summer.

The fish are an iridescent blue-green on the back with curved black lines. They have been recorded at lengths of up to 66cm, but around 40cm is more usual. A female Mackerel releases up to a million eggs at a time. Fertilization is external.