

Coastal Food Chains

For this game you need:

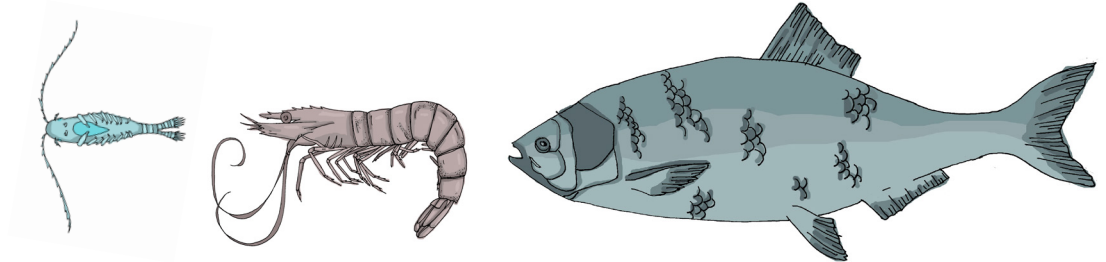
- ✧ A safe space for children to play
- ✧ 16 stacking 'species' buckets

Order of play:

- 01** Randomly scatter the buckets across the play area
- 02** Provide a simple introduction to the ecological concepts of food chains and biodiversity
- 03** Explain that the children are going to create four separate food chains by stacking buckets, with the buckets at the bottom of the stack representing plants or animals at the bottom of the food chain
- 04** There are 16 buckets equalling four food chains each containing four species

Gameplay overview:

- ✧ Children work together as a group to construct four coastal food chains. Through this fun challenge, children learn about biodiversity and the importance of maintaining a healthy ecosystem



Coastal wildlife items (16):



Cormorant



Crab



Herring



Kelp (seaweed)



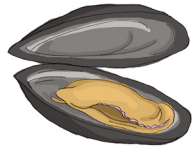
Kittiwake



Limpet



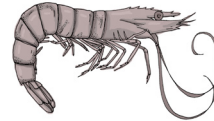
Lobster



Mussel x2



Phytoplankton x 2



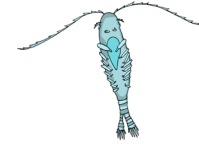
Prawn



Seal



Whelk x 2



Zooplankton

Food chain example 1

Lobster
↓
Whelk
↓
Limpet
↓
Seaweed

Food chain example 2

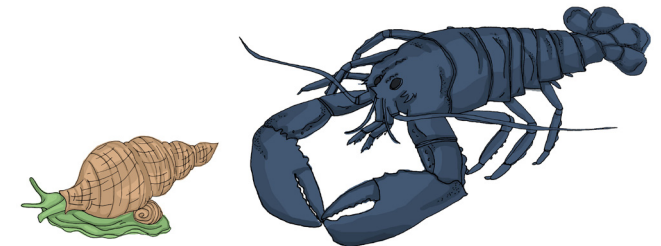
Cormorant
↓
Crab
↓
Mussel
↓
Phytoplankton

Food chain example 3

Seal
↓
Herring
↓
Prawn
↓
Zooplankton

Food chain example 4

Kittiwake
↓
Whelk
↓
Mussel
↓
Phytoplankton



Notes

Cormorant

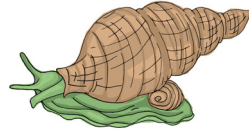
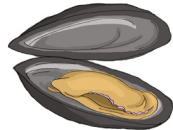
This bird is a great diver and it feeds almost exclusively on fish which it catches in its sharp beak and swallows whole!

Crab

You'll find the edible crab (or brown crab) along the lower shore and even out to sea in water as deep as 100 metres. It is nocturnal and likes to hide beneath big rocks or inside cracks in rocks. When small, it makes a popular snack for seashore birds. The crab will happily chomp its way through shellfish and even smaller crabs.

Herring

Feeds on microscopic phytoplankton and zooplankton and smaller fish. Shoaling in large numbers, herring attract hungry seabirds who will dive under the water to snatch them.



Kelp (Seaweed)

Kelp is a type of seaweed which can grow into large underwater 'forests', providing shelter and food for spawning crabs, lobsters and fish.

Kittiwake

This sea bird hunts in flocks during the daytime, floating on the water and dipping its head in to catch fish, or making the occasional shallow dive.

Limpet

The limpet is a type of snail that lives in the intertidal zone (the bit between high and low tides). It eats mostly algae (e.g. seaweed). Although it has a strong muscular foot that can anchor it to rocks, it will be eaten by crabs and lobsters. When the tide is out, it's a target for hungry seabirds.

Lobster

With its powerful pincers, a large lobster will hunt out small fish, shellfish (such as mussels) and crabs. It will also snack on seaweed. Seals will grab lobsters with their mouths and crunch right through their tough outer shell with their jaws to reach the tasty soft fleshy parts inside.

Mussel

This shellfish feeds by filtering microscopically small phytoplankton and other small particles out of the water. It is in turn preyed upon by large crabs, lobsters, marine mammals, fish and birds. A mussel can live to 60 or 70 years of age!

Prawn

The prawn is omnivorous, which means that it has a varied diet of phytoplankton, zooplankton, small shellfish and decaying organic (plant) matter. You'll often find prawns swimming in the rock pools along the coast.

Seal

This marine mammal is a top predator along our coast, feeding mainly on fish and shellfish like crabs and lobsters.

Whelk

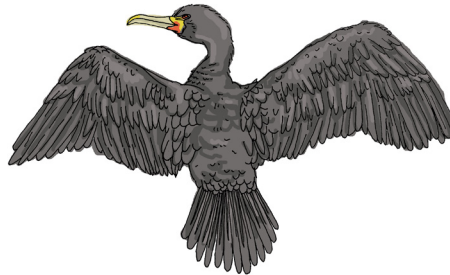
Whelks are carnivorous (meat eating) sea snails. They drill holes in the shells of other creatures, such as limpets and barnacles, and turn the insides into a kind of soup before using their tongue to suck it all up.

Phytoplankton

Phytoplankton, also known as microalgae, are similar to plants that live on land in that they have chlorophyll in them which enables them to make their own food from sunlight through photosynthesis. These tiny organisms float around in vast quantities and are a vital foundation for many food chains.

Zooplankton

Tiny and microscopically small animals that drift in the sea water and in rock pools. Zooplankton contains the young larvae of fish, crustaceans (like lobsters and crabs) and other marine animals and forms the basis of many food chains.



Some important questions and concepts:

- ✧ Can you name some other sea creatures and think about where they might fit into the foodchain?
- ✧ Where do you think humans come in these coastal food chains?
- ✧ What do you think are some of the ways that humans impact in a negative way on foodchains?
- ✧ What can we do to help protect coastal wildlife and keep the ecosystem healthy?
- ✧ Could the children create a food web based on what they know about food chains? This could be achieved by asking the children to stand next to a bucket and then pass a length of string or rope between them, that shows the links between different species in the web.