THE STRING GAME

Teacher Resources - Activities

THE STRING GAME

A string game is a great way of introducing the idea of connections between organisms in a food web. You only need a ball of string and if you have them, some labels so learners can remember which organism they are pretending to be.

The game takes about 15 minutes to play as a class. In this string game sea creatures are from Australian waters, but you could create scenarios for other environments too, for instance a North Atlantic or Arctic food web.

How to play

A group of about 10 learners stand in a circle with others observing. Give each student a sea creature name written on paper, which they read to the rest of the group.

One learner will take the ball of string and hold it at the loose end. They then pass the ball to another student in the circle, creating a link in the food chain with that species, and explaining why they are connected to them. For instance, the sea lion might be linked to the tuna because sea lions eat fish.

Each learner then chooses another that they feel they're linked to, and passes the string across the circle, while keeping hold of the string themselves. After some time there will be a web of string across the circle.
Ask learners: *What does the web show?*

Observing students then read out a few of the scenarios given, involving changes to the marine environment. Ask those students whose species is affected by the change to wiggle the string.

Ask learners:

- *What happens when one organism is affected?*
- *How do they think they are affected by changes?*

Phytoplankton	**Lobster**
Prawn	**Human**
Sea lion	**Tuna**
Sardines	**Octopus**
Pipis	**Whale Shark**

Scenarios

Prawns are **overfished** and their numbers go down sharply.
The mass coral spawning event occurs in the Ningaloo reef in Autumn
Increased carbon dioxide emissions lead to more acidic oceans, meaning that shellfish find it harder to build their shells.
Quotas for tuna are introduced, meaning fishers take fewer of them and their numbers slowly increase.

MARINE CLASSIFICATIONS

Phytoplankton
Microscopic Algae
Phytoplankton are the foundation of the aquatic food web, feeding animals of all sizes from shellfish to great whales.

Prawns
Crustacean (Malacostraca)
Prawns eat micro-organisms including decaying organic matter, small shellfish, worms and phytoplankton.

Sea Lions
Mammal (Mammalia)
Australian sea lions eat octopus, rays, lobster, squid and fish such as tuna and sardines.

Sardines
Ray-finned fish (Actinopterygii)
Sardines are very low in the food chain, eating microscopic plants (phytoplankton) and animals (zooplankton).

Pipis
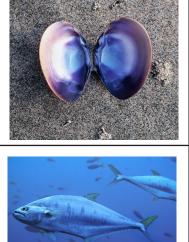*Bivalve Mollusc (Bivalvia)*
Pipis are filter feeders that extract plankton through their gills. Their predators include sea birds and humans.

Rock Lobster
Crustacean (Malacostraca)

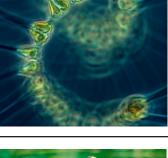Lobsters have a highly varied diet, eating fish, shellfish, worms, plant life and sometimes even each other.

Tuna
Ray-finned fish (Actinopterygii)
Tuna can grow to be very large fish. Their diet includes shellfish, octopus, squid, sardines, lobsters, krill, jellyfish and algae.

Octopus
Cephalopod (Cephalopoda)
Octopus are bottom dwellers and predatory. They eat species including crustaceans (lobster), shellfish (pipis and prawns) and snails.

Whale Shark.
Cartilaginous fish - Carpet Shark (Chrondrichthyes)
Whale sharks are filter feeders. Their diet includes phytoplankton, fish eggs, krill, prawns, sardines and tuna.

Human
Mammal - Primate (Mammalia)
Humans around the world consume all kinds of marine species from seaweed and krill to sharks and whales.