

# MUSEUM

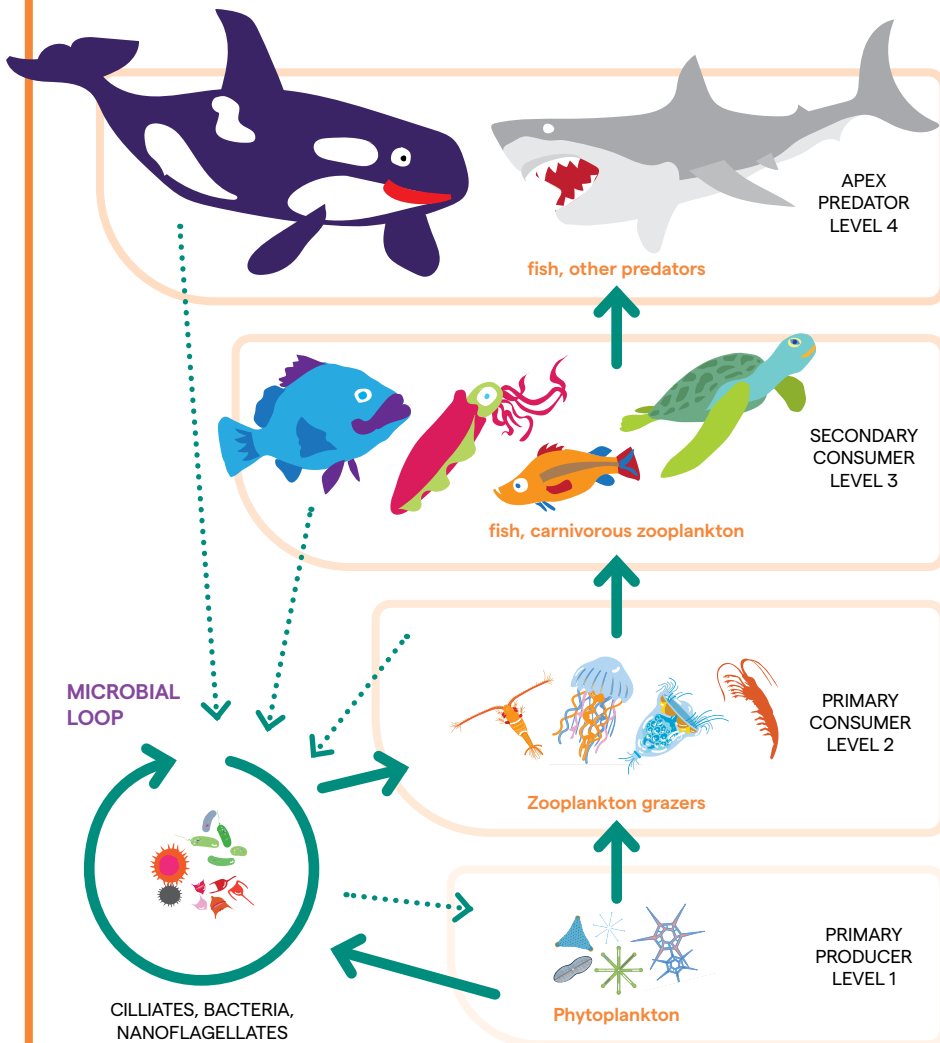
## WHO EATS WHO?

These are some vocabulary words you might come across when you are talking about food chains and food webs

Plankton form the base of the marine food web, it's one of their **SUPERPOWERS** – supporting all other life in the ocean.

Below you can see a basic **food chain** for an ocean ecosystem.

A **food chain** shows how the energy flows through an ecosystem – from the plants and animals at the bottom...up to the apex predators at the top.



The ocean is a big place with many different marine ecosystems. This chain would have different creatures in it depending on which marine ecosystem you are looking at – a kelp forest, a coral reef, the open ocean, Antarctic ocean, deep sea and so on.

Everything that lives in the ocean can become food for another creature.

In the ocean, a food chain typically starts with energy from the photosynthesising phytoplankton, and follows a course such as: phytoplankton → herbivorous zooplankton → carnivorous zooplankton → filter feeder → predatory vertebrate

Those are some **big scientific words**. If you want to look up some of these words, we've included a short list of vocabulary to help you.

### PRIMARY PRODUCER – LEVEL 1

a living thing (usually a plant) that produces their own food (rather than eating someone else).  
Examples: phytoplankton, algae

### PRIMARY CONSUMER – LEVEL 2

a living thing (plant or animal) that eats primary producers to get energy. Examples: mussels, oysters, krill, copepods, dinoflagellates, shrimp

### SECONDARY CONSUMER – LEVEL 3

a living thing (usually an animal) that eats primary consumers to get energy. Examples: blue claw crab, lobster, seastar, humpback whale

### APEX PREDATOR – LEVEL 4

an animal at the top of the food chain with no predators. Examples: shark, dolphin

### DECOMPOSER

a living thing that breaks down dead plant and animal material and wastes and releases it again as energy and nutrients in the ecosystem.  
Examples: bacteria, fungi, worms, crabs

### FOOD CHAIN

group of organisms linked in order of the food they eat, from producers to consumers, and from prey to predators, scavengers, and decomposers

### FOOD WEB

all related food chains in an ecosystem

### MARINE ECOSYSTEM

community of living and nonliving things in the ocean that interact with each other. Eg. A coral reef is a marine ecosystem

### PHOTOSYNTHESIS

a process by which plants turn water, sunlight, and carbon dioxide into oxygen, and simple sugars

### PHYTOPLANKTON

microscopic organism that lives in the ocean and can convert light energy to chemical energy through photosynthesis

### TROPHIC LEVEL

levels in the food chain or food web

### PHYTOPLANKTON

are Primary Producers

### ZOOPLANKTON

are Primary Consumers

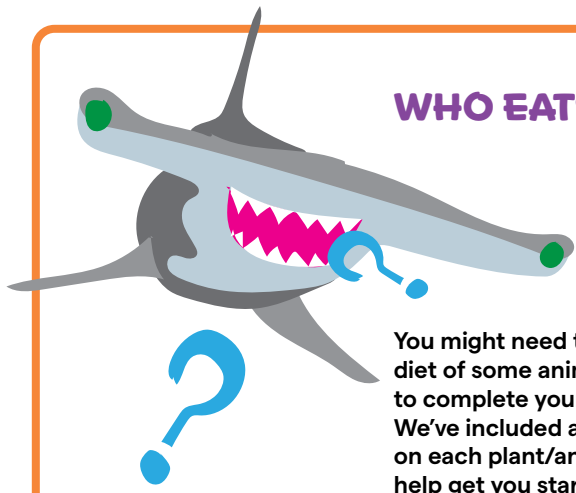
### FISH AND OTHER MARINE ANIMALS

are Higher order consumers

### MICROBIAL ORGANISMS

also play a role as decomposers making nutrients available. Even though they don't fit in the "food chain" they are still very important for life in the ocean.

## WHO EATS WHO?



You might need to research the diet of some animals to be able to complete your food chain. We've included a few predators on each plant/animal card to help get you started.

## MAKE YOUR OWN OCEAN FOOD CHAIN

### 1. PRINT AND CUT OUT

these printable cards for your ocean food chain game. You might like to glue them onto some cardboard so they last longer. We've left a few circles blank so you can add extra creatures into your food chain if you wish.

### 2. ADD SOME BLU TAC

to the back of each card.

### 3. CREATE AN OCEAN FOOD CHAIN

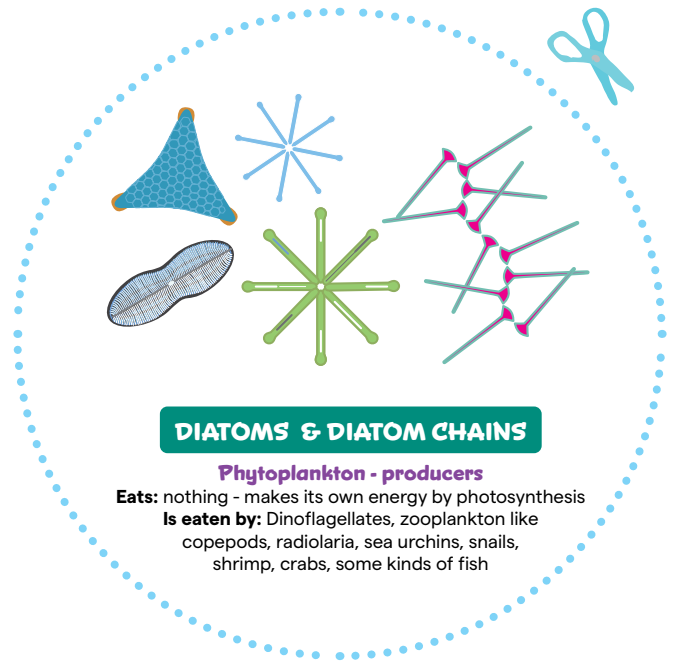
on an empty wall / floor space. Start with some phytoplankton at the bottom and then an arrow to who eats them (maybe a zooplankton species) and then an arrow to who eats them (maybe a fish) and so on. Each arrow means "is eaten by".

### 4. IF YOU HAVE TIME

create a second food chain starting with the turtle or the Jellyfish. Join that to the first chain with arrows and start to build a food web!

### THINGS TO THINK ABOUT:

What happens when there is imbalance – too many of a particular species in any level of the chain? This could happen because of climate change, changes in nutrients in the water, overfishing by humans, pollution and other reasons.



### DIATOMS & DIATOM CHAINS

#### Phytoplankton - producers

**Eats:** nothing - makes its own energy by photosynthesis

**Is eaten by:** Dinoflagellates, zooplankton like copepods, radiolaria, sea urchins, snails, shrimp, crabs, some kinds of fish

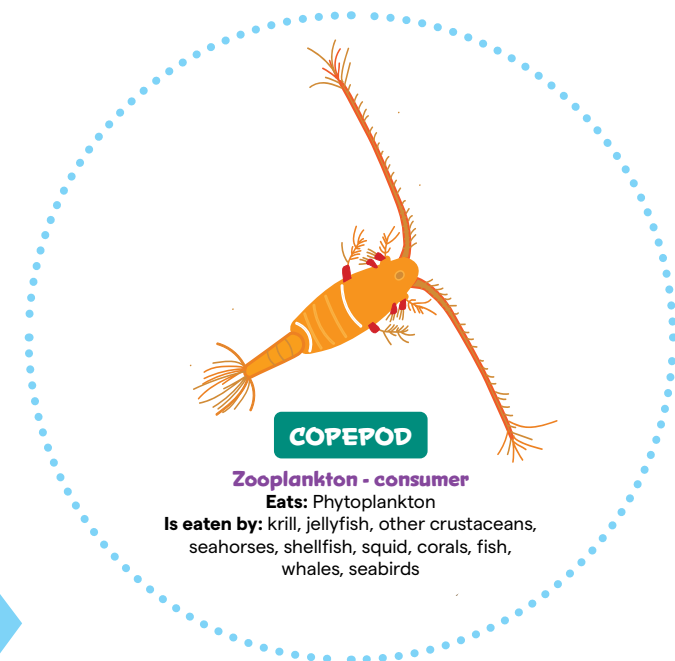


### DINOFLAGELLATES

#### Plankton - some are producers, some are consumers

**Eats:** bacteria, bluegreen algae, diatoms, ciliates, and other dinoflagellates

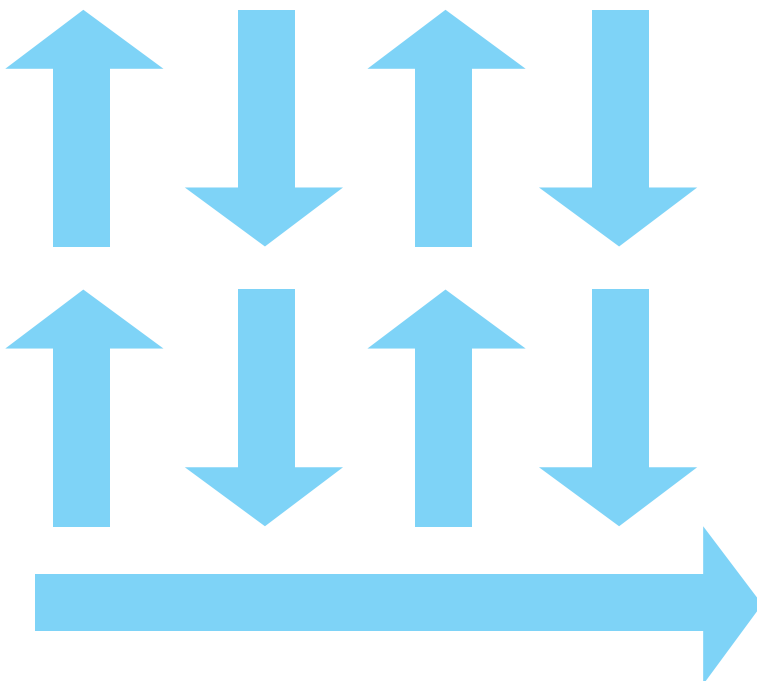
**Is eaten by:** other Dinoflagellates, Zooplankton like copepods

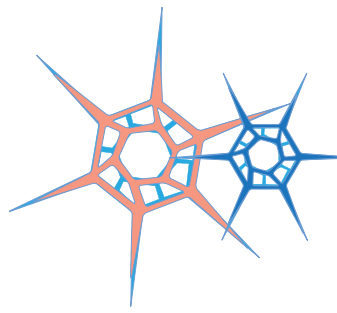


### COPEPOD

#### Zooplankton - consumer

**Eats:** Phytoplankton  
**Is eaten by:** krill, jellyfish, other crustaceans, seahorses, shellfish, squid, corals, fish, whales, seabirds

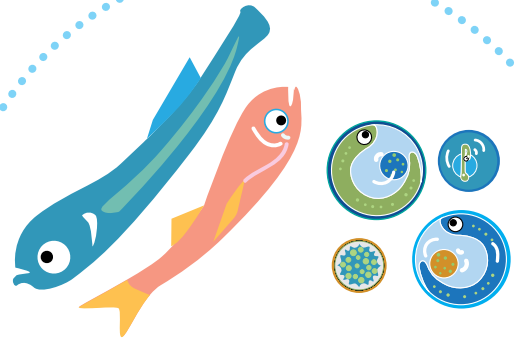




### SILICOFLAGELLATES

**Phytoplankton - producer**

**Eats:** makes its own energy by photosynthesis  
**Is eaten by:** zooplankton, small fish and crustaceans



### FISH EGGS & FISH LARVAE

**Zooplankton - consumer**

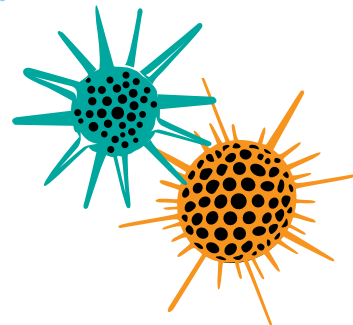
**Eats:** phytoplankton  
**Is eaten by:** copepods, arrow worms, jellyfish, marine snails, krill, bigger fish



### JELLYFISH & EPHYRA (Larval Jellyfish)

**Zooplankton - consumer**

**Eats:** zooplankton like copepods, fish larvae, crustaceans, small fish, phytoplankton  
**Is eaten by:** other jellyfish, turtles, penguins, predatory fish like tuna, sunfish, salmon, shark, swordfish, sea anemone



### RADIOLARIA

**Zooplankton - consumer**

**Eats:** Diatoms  
**Is eaten by:** larger zooplankton - jellyfish, crustaceans, arrow worms



### ROTIFERA

**Zooplankton - consumer**

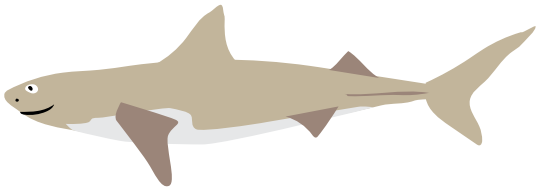
**Eats:** phytoplankton, decomposing material, algae  
**Is eaten by:** seabirds, clams, shrimp, tadpoles, aquatic insects



### KRILL

**Zooplankton - consumer**

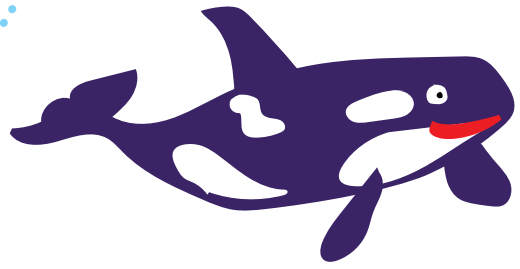
**Eats:** phytoplankton, decomposing material, algae  
**Is eaten by:** jellyfish, squid, penguins, seals, fish, whales, seabirds



**SHARK**

**Elasmobranch fish - apex predator**

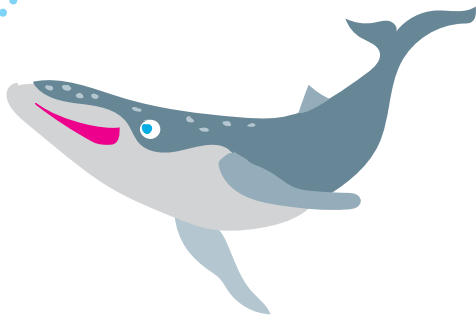
**Eats:** fish  
**May be eaten by:** killer whale, tiger shark



**KILLER WHALE**

**Mammal - apex predator**

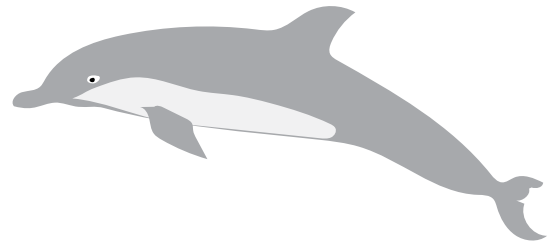
**Eats:** Other whales, sharks, seals, squid, fish



**WHALE**

**Mammal - apex predator**

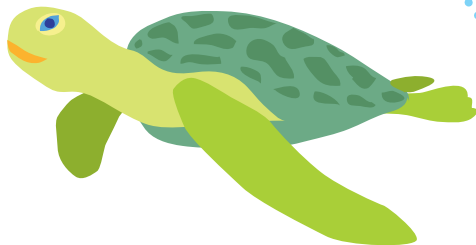
**Eats:** squid, fish, krill, other zooplankton  
**May be eaten by:** killer whale



**DOLPHIN**

**Mammal - apex predator**

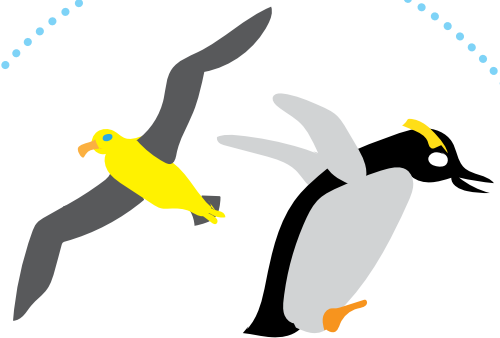
**Eats:** squid, fish, octopus



**TURTLE**

**Reptile - consumer**

**Eats:** jellyfish, phytoplankton algae, seagrass, zooplankton, crustaceans  
**Is eaten by:** tiger sharks, killer whales  
\*young turtles are also eaten by smaller animals like ghost crabs, seabirds and fish



**SEABIRD**

**Bird - consumer**

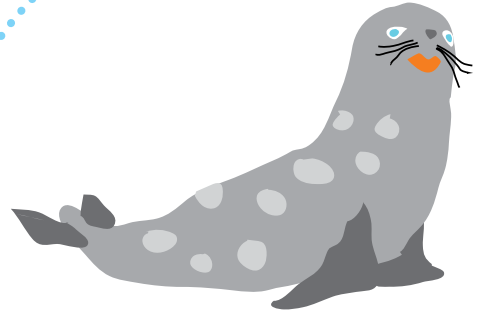
**Eats:** phytoplankton, fish, zooplankton - krill, copepods, hatchling turtles  
**Is eaten by:** some seals, predatory fish



**SQUID**

**Cephalopod - consumer**

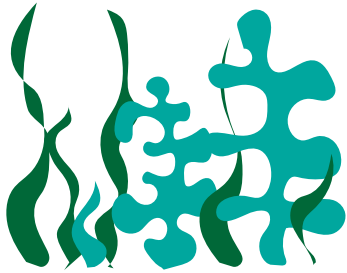
**Eats:** crustaceans - crabs, mussels, clams  
**Is eaten by:** whales, predatory fish, penguins, seals



**SEAL**

**Mammal - consumer**

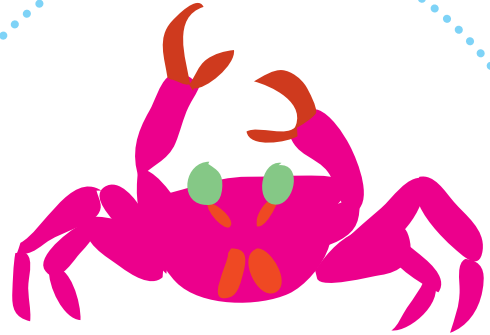
**Eats:** squid, fish, seabirds  
**Is eaten by:** killer whales



**SEAWEED (ALGAE)**

**Marine plant - primary producer**

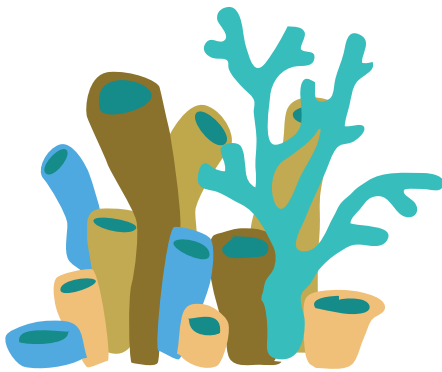
**Eats:** produces its own energy by photosynthesis  
**Is eaten by:** sea birds, dugong, fish, turtles, zooplankton, crustaceans



**CRAB**

**Crustacean - consumer**

**Eats:** phytoplankton, zooplankton, fish  
**Is eaten by:** turtles, fish, squid, octopus



**CORAL**



**SHELLFISH**



## WHICH IS YOUR FAVOURITE ANIMAL IN YOUR FOOD CHAIN?

Use the OCEAN SUPERHEROES FACT FILE card to create a story about your favourite animal.  
You might even want to send it in the mail to someone you haven't seen in a while.



**Name:**

**Other names:**

**Where I live:**

**What I eat:**

**Superpowers:**

**Nemesis:**  
(other creatures  
who eat me)



**A story about me:**

