



# FOOD CHAIN CHALLENGE

Who will you eat?



**OCEAN  
SCHOOL**  
SURFERS AGAINST SEWAGE



All Ages



10 Mins



Outdoors

Look at the person on your left. Now at the person on your right. One of these people will try to eat you. **But who?** A food chain is where the different organisms in a habitat eat each other to survive. A krill eats some seaweed, a fish eats the krill, and a shark eats the fish. In these activities, we're going to play the parts of different marine animals, and see who can eat their way to the top of the food chain.

## BUILD A FOOD PYRAMID

### Do

- Make a pyramid on the beach with sticks, seaweed and stones, or just draw it in the sand.
- Separate it into four levels.
- Place the organisms at the right levels in the pyramid. Use an object or sign to represent them, or just write in the sand. It should go:

**Top:** Shark  
**Second level:** Fish  
**Third level:** Krill  
**Bottom:** Phytoplankton

### Discuss

- Who eats who?
- What other animals might there be instead of the ones here?
- What happens to the shark? (When it dies it decomposes and feeds bottom-level plants and creatures.)

## MEET THE CREATURES

### Do

Time to get into character. Get a minimum of eight friends and act out each creature in turn using these movements and sounds.

### Shark

**Noise:** Duuh nuh...duuuh nuh dun dun  
dun dun dun dun dun DUUUUH!

**Action:** Shark fin on your back.

### Fish

**Noise:** Popping noise with mouth.

**Action:** Weaving, snaking body.

### Krill

**Noise:** Tikatikatikatika  
(scuttling noise)

**Action:** Tiny swimming arms.

### Phytoplankton

**Noise:** "Swish swash..."

**Action:** Raised waving arms.



# FOOD CHAIN CHALLENGE

## FEEDING FRENZY (SIMPLE)

This is a fun game to learn how our food chain works.

### Do

- You start as phytoplankton, moving around the habitat doing the actions and noises.
- When you bump into someone who's the same species as you, play rock, paper, scissors with them.
- The winner becomes the next animal up in the food chain.
- The loser starts again as phytoplankton.
- Keep going until someone becomes a shark.

### Discuss

- How many of each thing did we have at the end?
- Are there any creatures above sharks in the food chain? (Humans)
- Humans are at the top of the food chain. How can we support all the creatures below us?

## FEEDING FRENZY (ADVANCED)

This is a more advanced game about food chains.

### Do

- Split into the different organisms in the food chain.
- Swim around your ecosystem together, doing the actions and noises.
- The aim is to try to eat an organism the level below you. So if you meet someone the level below or above, play rock, paper, scissors to see who eats who.
- Beat a lower-level organism? You ate them! Do a big burp and turn into the creature on the level above (if you can).
- Beat a higher-level organism? A lucky escape. Swim away triumphantly.
- Lost to a lower-level organism? Sorry, you starved. Your body sinks to the sea bed and you become phytoplankton again.
- Lost to a higher-level organism? Bad news, you're poop. You settle on the ocean floor and start again as Phytoplankton.
- After a few minutes, stop the game and count how many of each organism there are.
- You can then restart the game with different amounts of each organism, to see how this affects the numbers at the end.

### Know it all

Find out all about different food chains and how we can protect them on the next page.

### Prepare

- Sticks and seaweed to make a food pyramid.
- Lots of energy.

### Learn

- The hierarchies and relationships in a food chain.
- How humans impact food chains.
- How we can help protect them.

### Act

Help make sure we keep food chains balanced by understanding our role in them. This could mean not buying fish from overfished areas, and helping to clear plastic pollution from the coast.

## BONUS ACTIVITIES

### Go fishing

What would happen to your food chain if humans started catching too many fish? Play again, but with one person playing a fishing boat that removes creatures from the ocean whenever they want.

### Add plastic

How do microplastics affect the food chain? Play again, but this time one person is microplastics. When another creature eats them, the plastic poisons them. They'll then have ten seconds to live, or be eaten by a creature from the level above, who will then have ten seconds to live.

Plastic pollution is mistaken for food by almost all marine animals. Some even think it's a toy.



## Marine food chains

There are 1000s of animals that live in UK waters. Each animal fits into a different trophic level in the food chain.



### Trophic levels

Each stage in a food chain or foodweb is known as a trophic level. There are four trophic levels in this marine food chain.

#### Do

Can you add five more animals to the food chain?



### Secondary consumer

Squid, cuttlefish and snapper fish are secondary consumers. Can you think of any other animals that belong in this section.



### Primary consumer

Primary consumers eat the plants in the bottom level of the marine food chain and include animals like herbivorous fish, crabs and sea urchins.



### Primary producer

Food chains always start with a producer. These are organisms that make their own food through photosynthesis. Can you describe what photosynthesis is?



# GET THE MOST FROM OCEAN SCHOOL

Food Chain Challenge is an **Explore** activity, all about getting active and investigating critical issues.

For a full Ocean School journey, we'd recommend doing a **Connect** exercise first, to help you feel closer to the sea and get things off to a chilled start. And then once you've done the Explore task, finishing with a **Protect** activity to put everything you've learned into action.



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