

Fishy business

45 mins

Brownies

About this activity

Too many fish are being taken out of the ocean. Play games to learn about the problem and make a fun fridge magnet to persuade the family chef to use different fish.

Outcomes:

- Learn about the link between food choices and the environment
- Learn more about where food comes from
- Make a fridge magnet with persuasive messaging

You will need:

Let's go fishing game:

- 2 large sheets of fabric

Catch it if you can game:

- A spoon, pot and [Fishing catch sheet](#) for every person (or piece of paper)
- 30 x dried peas, popcorn kernels and beads for each group. You can use any items as long as they're sufficiently different.
- Extra peas, kernels and beads for refills. You'll need enough for 2 refills for each group if none were taken out.

For Top 5 fish:

- Copies of [Fish Switch sheet](#)

For Make a magnet:

- [Fish magnet template](#) printed onto card for every person
- Magnet for every person
- Two paper clips for each person and old paper
- Glue, pens or paint.

Fishy business

Overfishing means catching fish faster than they can reproduce. Nearly all the world's fish stocks are fully or over-exploited from fishing. Too many fish are being taken out of the ocean.

Part 1 Let's go fishing

If you have time you could warm up with this fishing game. Otherwise, skip this and go straight to Part 2.

1. Mark out a playing area and line everyone up on one side. These are the 'fish' who must run to the other side without being caught. Choose a 'fisher'. Their job is to catch fish by tapping them on the arm as they run past. Once a fish is caught, they're out of the game. Ask the group to run across the playing area. How many fish are caught?
2. Now change the rules. Fish who are caught turn into fishers. How many fish are caught this time?
3. Finally give large sheets to two pairs. How many fish can they catch in the sheets?
4. Talk about how many fish were caught by the different fishing methods. Link this to overfishing and the problems with too many fish being taken from the ocean.

Part 2 Catch it if you can

This game shows the effect of catching too many of one type of fish.

1. Give each group of six a bowl containing 30 dried peas (cod), 30 popcorn kernels (porpoise) and 30 beads (turtles).
2. Give each person a spoon (net) and pot (boat).
3. The group should fish 3 times for 20 seconds each time. The aim is to use the spoon to catch as many 'cod' as possible. Try to avoid porpoise or turtles, but if you catch them, put them in the pot too. The group that catches the most cod will win.
4. Fish for 20 seconds, stop and record how many of each species each person caught.
5. Top up the bowls by adding one new pea, kernel or bead for each one remaining in the bowl.
6. Repeat this twice.
7. When fishing is finished, add up the totals and record on the [worksheet](#). Which group caught the most cod? What strategy did they use? What did everyone think about how quickly the number of cod could decrease? What does this tell us about fishing?

Part 3 Top 5 fish

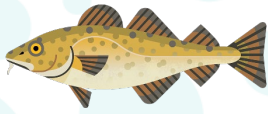
1. The most-eaten fish in the UK are salmon, haddock, prawns, cod and canned tuna.
2. What could we do to help the problem of overfishing? Take a look at the [Fish switch sheet](#) for ideas.

Part 4 Make a fridge magnet

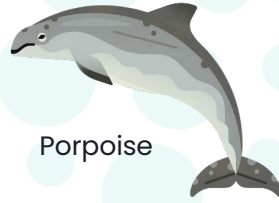
1. Follow the [instructions](#) to make a fishy fridge magnet notepad with a message.
2. Give your magnet to someone you know who likes cooking and explain what you've learnt about sustainable fish choices. They could put the magnet on their fridge to encourage them to switch their fish choice.

Fishing catch

Names in your group:



Cod



Porpoise



Turtle

Catch 1

	Cod	Porpoise	Turtles
Number caught			

Catch 2

	Cod	Porpoise	Turtles
Number caught			

Catch 3

	Cod	Porpoise	Turtles
Number caught			

Overall

	Cod	Porpoise	Turtles
Total caught			
Total left in bowl			

Can you switch fish?



The problem

93% of the world's fish stocks are fully or over-exploited from fishing. Some fish are as endangered as the Bengal tiger!

- > 80% of the seafood we eat in the UK is made up of five species: **cod, haddock, salmon, tuna and prawns.**
- > Some fishing methods like trawling and dredging can cause lasting damage to the seabed and marine habitats. Longlines and gill nets can accidentally catch vulnerable species like turtles and sharks.




















What you can do

Seafood has a much smaller carbon footprint than most land-based proteins. If fish farming is well managed, it will play an important role in supplying future populations with food.

- > **Avoid red rated fish**, as they could be endangered, caught using damaging methods of fishing or farming, or there could be illegal activity involved in catching or farming it.
- > **Use the Good Fish Guide** when choosing fish and seafood. It has all the advice you need to choose sustainable seafood. You can find it at mcsuk.org/goodfishguide.
- > **Buy fish with eco labels:**



Try new fish!

Instead of...	Why not try...		
 Cod	 European Hake	 Coley	 Plaice
 Haddock	 European Hake	 Coley	 Farmed turbot
 Salmon	 Rainbow trout	 Plaice	
 Prawns	 Langoustine	 Brown crab	
 Tuna	 Mackerel	 Wild-caught sardines	

Find the Best Choice seafood near you

MARINE CONSERVATION SOCIETY

Buy local, Support local



Langoustines

West of Scotland

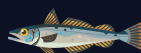
Pot/Creel



Dover sole

Bristol Channel

Demersal otter trawl



Hake

Cornwall

Gill or fixed net



King scallop

Lyme Bay Hand-dived



European lobster

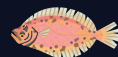
Jersey Pot/Creel



Brown crab

Shetland

Pot/creel



Megrim

North Sea (north)

Demersal otter trawl



Haddock

North Sea

Demersal otter trawl/
Demersal seine net/
Longline



Dab

North Sea

Demersal otter trawl/
Demersal seine net



Plaice

English Channel (east) & North Sea

Demersal otter trawl

Best Choice

UK farmed seafood



Mussels

Suspended Rope Culture / Bottom Culture



King & Queen scallops

Suspended Rope Culture / Bottom Culture



Rainbow trout

Freshwater ponds



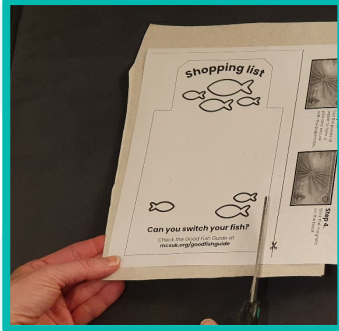
Atlantic halibut

Onshore open-circuit system

Make a fishy fridge magnet

You will need:

- A copy of this template
- Piece of card e.g. cereal box
- Small magnets
- Pens or pencils
- Two paperclips
- Sheets of paper
- Glue
- Scissors



Step 1

Place this template on a piece of card and cut out the shape.



Step 2

Stick the card to the paper and colour in the fish.



Step 3

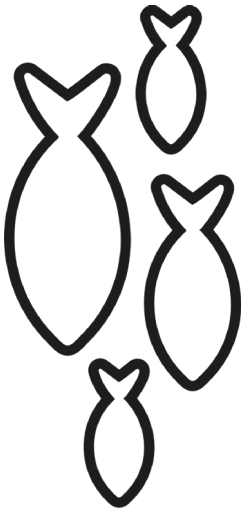
Stick the magnet to the card on the back.



Step 4

Decorate the magnet. Cut the pieces of paper to form a pad and secure with the paperclips.

shopping list



Can you switch your fish?

Check the Good Fish Guide at
mcsuk.org/goodfishguide

Fun fishy games

Brownies

About this activity

Burn off some energy and have fun with our marine-themed games. These are the perfect warm ups for any of our activities.

Outcomes:

- Work as a team
- Practise listening skills

You will need:

- Space to run around in
- Lots of energy!

Fun fishy games

Anemone attack

1. Make a small circle with one person (the anemone) in the middle.
2. Throw a beanbag or ball (the shrimp) from person to person, across the circle.
3. The anemone must try to catch the shrimp. The anemone can reach out but cannot move their feet.
4. When the anemone catches the shrimp, the person who threw the bag is 'eaten' by the anemone and becomes part of the anemone in the middle
5. Continue until all the shrimp are eaten.

Marine animal charades

1. Choose a player to start.
2. Ask them to think of a creature that lives in the ocean and to act out the name of the creature. They can do this until someone guesses the creature or until a set time limit has expired.
3. Continue until everyone has had a go or until time runs out.

Sharks and minnows

1. Nominate one person the 'shark' and mark out a 'safe area'.
2. The shark stands in the middle and says, 'fishy, fishy, come out to play.'
3. The minnows walk slowly towards the shark.
4. Whenever the shark decides, they should shout 'shark attack!' and runs towards the minnows to 'tag' them while the minnows run to the safe area. Any tagged minnows now become sharks.
5. The game restarts with the sharks in the middle of the remaining minnows. Keep playing until all minnows are tagged.

Dead fish

1. The leader stands in the middle of the room. Ask everyone to walk slowly around the room.
2. The leader shouts 'dead fish!' and everyone drops to the ground and keeps as still as possible. Anyone who moves sits 'out' and the game continues until one person is left.

Animal theatre

1. Split the group up into smaller groups.
2. Ask them to work together to create a 3D sea creature. They could stand up and move around or create a giant creature by lying, kneeling or standing.
3. Each group should then take it in turns to act out their animals to each other.

Fish tag

1. Split everyone into four groups.
2. Give each group the name of a fish or marine creature.
3. Play a game of tag. When someone is tagged, they become the same creature as the person who tagged them.
4. Continue playing until everyone is the same creature.

Animals in danger



Credit: Valkyrie Pierce

45 mins

Brownies

About this activity

Sadly, over 360 marine species are in danger of extinction. Learn about the UK's endangered marine animals and the people who work to protect them.

Outcomes:

- Learn about some of the UK's endangered marine animals
- Learn about jobs in the conservation sector

You will need:

For each pair.

- [Life in UK seas image](#)
- [Life in UK seas answer sheet](#) or sheets of paper and pens
- A set of [Endangered marine animals cards](#)
- A [Conservation career game board](#) and set of [job cards](#)

Note: If you have access to a laminator, you could laminate the boards and cards for future games.

Animals in danger

Humans are putting marine animals in danger. Sea creatures get caught up in fishing nets or litter in the ocean. They are also affected by climate change, which is destroying fragile marine habitats. Globally, over 25,000 marine species are at risk of dying out.

Part 1 Life in UK seas

What do you think of when you hear the word 'ocean'? Are there particular colours, sounds, smells? Does anyone have a favourite marine animal? Do you have a favourite place by the sea?

1. In small groups or individually, look at the [Life in UK seas image](#). How many of the 15 species can you name in 5 minutes? You can write your answers on the [Life in UK seas answer sheet](#) or a piece of paper.
2. Who named the most? Were there any surprises?
3. How do you feel when you look at this image?

Part 2 Most endangered

In pairs, play a game of [Endangered animal facts](#). This is a Top-Trumps-style game. The cards give facts about eight endangered marine animals in the UK.

1. Give each player in the pair 4 cards.
2. Take it in turns to choose a category. Whoever has the highest number for the category wins the card.
3. Keep playing until one player has all the cards.

Part 3 Match maker

1. Thousands of people in the UK and around the world are working to help endangered marine animals. In pairs, play the [Conservation careers matching game](#). Can you match the job title to the job description?
2. Once you've matched all the jobs to the descriptions, talk about the roles. Are you surprised by any of these jobs?

Part 4 Take it further

How do you feel about what you've learnt about endangered animals? What could you do to help?

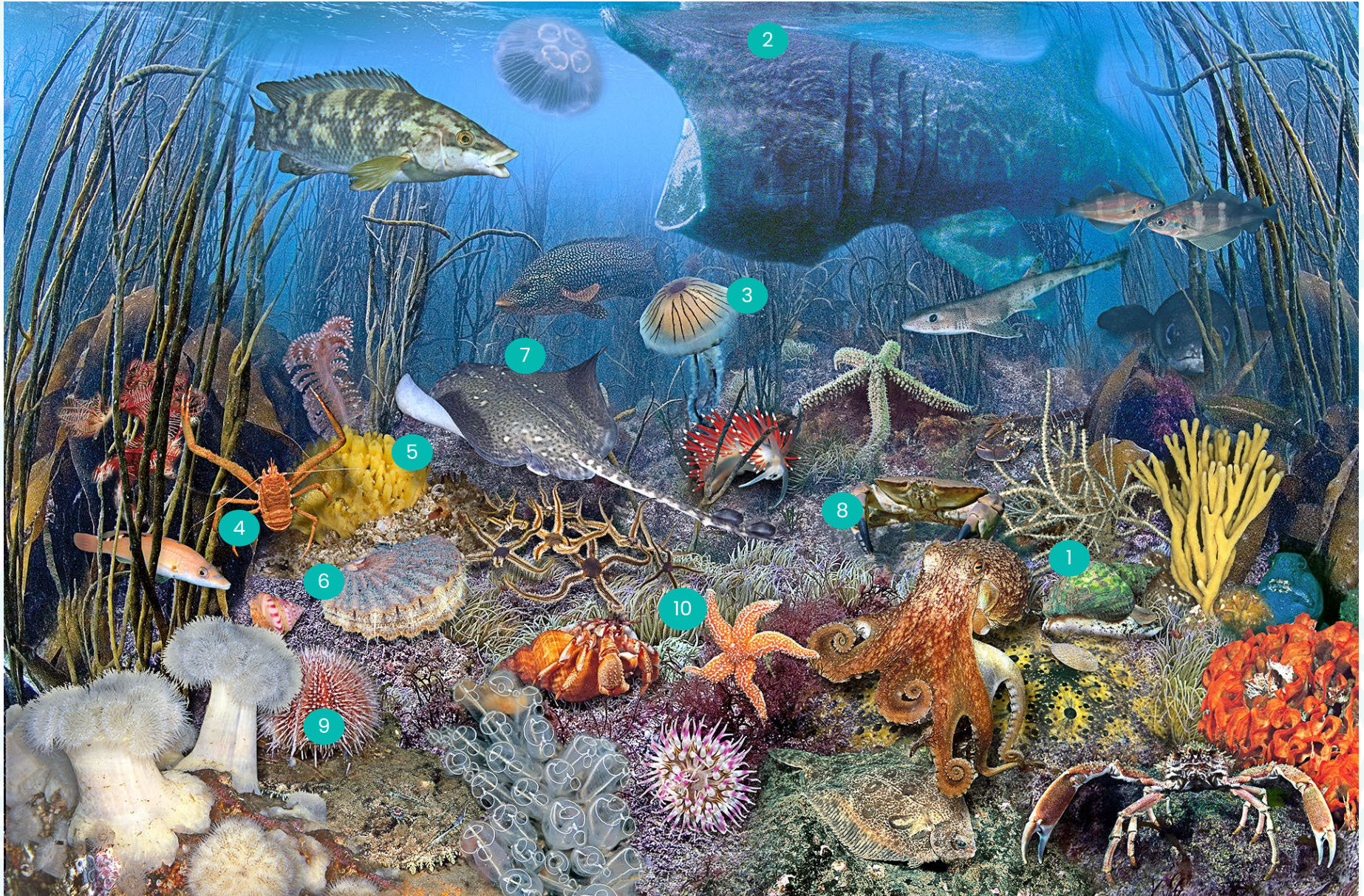
1. 70% of litter in the ocean is made of plastic. Could you reduce the amount of plastic you use? Our [Plastic-free party activity](#) shows you how to plan a celebration without any single-use plastic.
2. Alternatively, you could find out more about overfishing with our [Fishy business activity](#) and use your powers of persuasion to help tackle the overfishing crisis.
3. Are you interested in working in conservation? You could research the roles more at home as part of your Jobs interest badge.

Life in UK seas – answers

1. Common whelk
2. Basking shark
3. Compass jellyfish
4. Long-clawed squat lobster
5. Hedgehog sponge
6. Great (king) scallop
7. Thornback ray
8. Edible crab
9. Common (or edible) sea urchin
10. Common starfish

Life in UK seas

Can you name these living things found in the seas around the UK?



Name: _____

Life in UK seas

Write down the names of the creatures you know

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

Endangered UK marine animal fact cards



European eel

Critically endangered

Max length: **1.3m**
Max weight: **6.5kg**
Max lifespan: **85yrs**
Depth range: **700m**
Max speed: **2.4kmh**



Angel shark

Critically endangered

Max length: **2.4m**
Max weight: **32kg**
Max lifespan: **35yrs**
Depth range: **150m**
Max speed: **Unknown**



Sei whale

Endangered

Max length: **20m**
Max weight: **28,000kg**
Max lifespan: **60yrs**
Depth range: **300m**
Max speed: **50kmh**



Cod

Vulnerable

Max length: **1.2m**
Max weight: **40kg**
Max lifespan: **25yrs**
Depth range: **300m**
Max speed: **8kmh**



Common skate

Critically endangered

Max length: **2.5m**
Max weight: **88kg**
Max lifespan: **100yrs**
Depth range: **600m**
Max speed: **22.5kmh**



Short-snouted seahorse

Not enough data

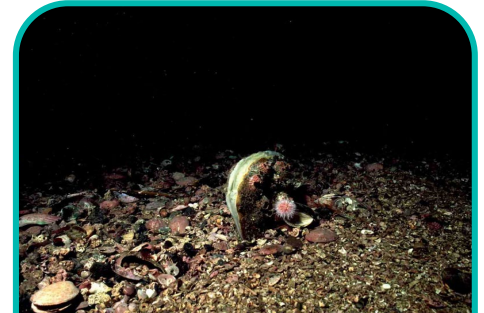
Max length: **0.2m**
Max weight: **0.0018kg**
Max lifespan: **5yrs**
Depth range: **77m**
Max speed: **0.001kmh**



Velvet scoter

Vulnerable

Max length: **0.5m**
Max weight: **1.2kg**
Max lifespan: **12yrs**
Depth range: **0m**
Max speed: **2.4kmh**



Fanshell

Critically endangered

Max length: **0.5m**
Max weight: **0.15kg**
Max lifespan: **32yrs**
Depth range: **400m**
Max speed: **0kmh**

Conservation careers job descriptions

I help marine animals in danger

I tell people about the problems animals face and how they can help

I help people take action to help the ocean emergency

I help people experience the marine environment

I teach people about animals and nature

I raise money to help save nature

I make films and tell stories about nature and the problems it faces

I persuade governments to change laws

I protect animals and the places they live

I study the behavior of marine animals

I farm in the sea and water

I carry out research

Conservation careers job cards

Cut out these cards and match up the job to the correct description

**Education
Officer**



**Marine Animal
Conservation
Officer**



Filmmaker



**Marketing
Officer**



**Scuba
Instructor**



**Marine
Research
Officer**



**Community
Volunteer
Manager**



**Conservation
Warden**



**Campaigns
Officer**



**Fundraising
Officer**



**Marine
Biologist**



Aquaculturist



Conservation careers game - answers

I help marine animals in danger

Marine Animal Conservation Officer

I tell people about the problems animals face and how they can help

Marketing Officer

I help people take action to help the ocean emergency

Community Volunteer Manager

I help people experience the marine environment

Scuba Instructor

I teach people about animals and nature

Education Officer

I raise money to help save nature

Fundraising Officer

I make films and tell stories about nature and the problems it faces

Filmmaker

I persuade governments to change laws

Campaigns Officer

I protect animals and the places they live

Conservation Warden

I study the behavior of marine animals

Marine Biologist

I farm in the sea and water

Aquaculturist

I carry out research

Marine Research Officer

Can you clean the sea?

45 mins

Brownies

About this activity

Take our water clean-up challenge. Work in teams to remove as much pollution as you can from a batch of water. Whose water will be the cleanest?

Outcomes:

- Learn about water pollution
- Use enquiry skills and creativity to make a water filtration system
- Work as a team to solve a problem

You will need:

For each group:

- [Polluted waters image](#)
- Sand
- Fine gravel
- Cotton wool
- Coffee filter
- Pair of tights
- A 2 litre bottle, with the top third cut off and inverted into the bottom (cap removed) or a tube with a funnel and container below to catch the water

To make 'dirty' water:

- Water
- Oil
- Vinegar
- Small pieces of litter
- Leaves or grass
- Soil
- Marbles or similar small item
- Salt or spices

Can you clean the sea?

Our seas are full of litter and harmful chemicals.

Pollutants, including plastic, chemicals and bacteria, travel from our towns and cities to our seas, where they join pollution from activities that take place in our ocean, like oil exploration and fishing.

Part 1 Polluted sea

Use the picture of the ocean in the [Polluted waters image](#) to prompt a conversation about ocean pollution. Some pollution is visible, like plastic and litter, waste from fishing boats or oil spills. Other ocean pollution can't be seen easily, like chemicals, microfibres from clothes, and bacteria.

Talk about how ocean pollution can affect animals and people.

Part 2 Cleaning water

1. Make a batch of 'dirty' water. Add a range of materials, such as oil, vinegar, soil, bits of litter, leaves or grass, marbles or a similar-sized item, and a handful of salt or spices to water.
2. In small groups, try to clean the water using the materials you've been given. Layer the filtration materials in the neck of the bottle or funnel. Pour the dirty water into the bottle so that it runs through the filtration materials.
3. Try different combinations of materials. Which works best? Which group's water was the cleanest?
4. Talk about how clean the water really is. What was removed easily by filtration?
5. Think about organisms that are too small to see and those that have been dissolved. Have those been filtered?

Part 3 Take it further

1. Engineers are working on technologies to try to clean up the ocean. You could research some of these solutions, like the Ocean Cleanup Project. The best solution to the pollution problem is to stop it at its source. 80% of litter in the ocean comes from the land. Litter finds its way into rivers and is transported to the ocean, or it's washed into the sea from the beach. Could you carry out a litter pick or beach clean? Visit our [website](#) for guidance on organising a litter pick with your group.
OR
2. 70% of litter in the ocean is made of plastic. Could you reduce the amount of plastic you use? Our [Plastic-free party](#) activity will help you plan a celebration without any single-use plastic.
OR
3. Every time clothes are washed they release thousands of microfibres. These are too small to be filtered from washing machines and end up in rivers and seas. Use our [Stop ocean threads](#) activity to take action to reduce microfibre release.

Polluted waters

A lot of the ocean is polluted. What pollution can you see? What isn't visible?



Credit: Lidya Nada

Let's go to the beach!



Credit: Ben Guerin

45 mins

About this activity

Use your imagination to experience the joy of being near the sea. Visit a virtual rockpool before using your creativity in a paper plate creature challenge.

Brownies

Outcomes:

- Use imagination to role play beach activities
- Learn about the variety of creatures that live in rockpools
- Use creativity to make a paper plate creature

You will need:

For the trip to the beach:

- Chairs set up in rows, like on a bus or train
- Typical items you would take to the beach e.g. picnic rugs, towels, rope, buckets, spades, inflatables, sunglasses, hats, beach chairs, frisbee, beach ball.

For paper plate creatures:

- Paper plate for each person
- Tissue paper in different colours
- Glue and paints.

For rockpool exploring:

- [Make your own rockpool instruction sheet](#)
- Sand
- A large plastic container or deep tray
- A selection of rocks and pebbles
- Water
- Access to a laminator or waterproof plastic bags
- [Rockpool Creature Sheet](#)
- [Rockpool Spotter Sheet](#) and pen for each group.

Let's go to the beach!

Part 1 Beach fun

1. Select the items you want to take to the 'beach'.
2. Get on the 'bus' or 'train'. As you're travelling, describe what you can see out of the window.
3. When you arrive at the seaside, close your eyes and take it in turns to describe what you can hear, smell and feel.
4. Role play activities you might do at the beach, like setting out picnic blankets, putting on sunhats and sunglasses, playing frisbee.
5. To simulate the seashore, lay out a rope curved like waves breaking. Run towards the water and jump the waves.
6. What does the water look like? Is it a sunny day? Can you see reflections? Are there any trees, plants or animals?
7. Your time at the beach is ending. Collect your things. What do you need to remember when you leave the beach? Are there any items it might be easy for forget?
8. Get back on the bus or train and head home.

Split into groups

Split into small groups. One group explores the rockpool while the others make paper plate creatures.

Part 2 Rockpool explorers

1. Set up the rockpool using the instructions on the [Rockpool instruction sheet](#). Take it in turns to turn over the rocks and find the creatures.
2. Mark off what you find on the [Rockpool Spotter Sheet](#).

Part 3 Paper plate challenge

Use your imagination to create a marine animal using a paper plate and craft materials. You could get ideas from the [inspiration sheet](#) or think of your own idea.

Once everyone has finished, vote for the winning creature. You could vote for the most imaginative or original design.

Leave nothing but footprints

80% of litter in the ocean comes from the land. Anything left on the beach at the end of a visit can be washed into the sea and harm marine life. This activity is a great opportunity to talk about the importance of always cleaning up properly before leaving the beach. If bins are full, don't leave rubbish next to them, take it home.



Make your own rockpool

What to do

1. Print the [Rockpool creature sheet](#) in colour.
2. Laminate the sheets and cut out the pictures.
3. Scatter sand across the bottom of the container or tray.
4. Place the rocks and pebbles randomly in the container and cover with water.
5. Place the 'creatures' in the correct places in the water, under rocks, at the bottom of the pool or on the side.
6. Challenge your group to be rockpool explorers using our [Rockpool Spotter Sheet](#).

Where to place the creatures

On the side above water: barnacles, beadlet anemone, common limpet, dog whelk, grey top shell, mussel, purple/flat top shell, shore crab

On the side under water: bladderwrack, common periwinkle, common starfish, snakelocks anemone

Under rocks: breadcrumb sponge, common blenny, common whelk, cushion star, hermit crab, painted top shell, prawn, rock goby, sandhopper, star ascidian, tompot blenny

In the water: brittle star, cat shark egg case, pipefish, sea scorpion, skae ray egg case, velvet swimming crab

Bottom of the pool: cockle, cuttlebone, razorshell

You will need:

- **large plastic container or deep tray**
- **rocks, pebbles, and sand**
- **water**
- **sticky tape or adhesive tack**
- **access to a colour printer and laminator**
- [Rockpool Creature Sheet](#)
- [Rockpool Spotter Sheet](#)



Use our [spotter sheet](#) when rockpooling

Rockpool Creature Sheet

Print out, laminate, cut out and stick **around the sides** of your 'rockpool'.



Dog whelk



Barnacles



Grey top shell



Common limpet



Mussels



Shore crab



Beadlet anemone



Purple/flat top shell

Print out, laminate, cut out and stick around the side of your 'rockpool' below the water.



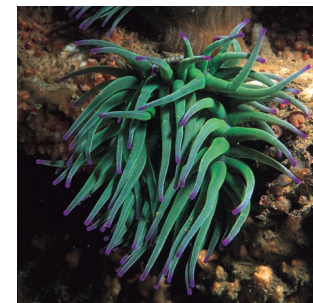
Bladderwrack



Common periwinkle



Common starfish



Snakelocks anemone

Rockpool Creature Sheet

Print out, laminate, cut out and stick **under rocks**.



Common whelk



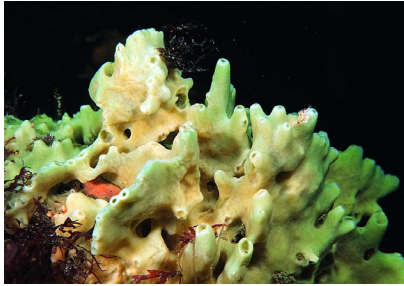
Tompot blenny



Star ascidian



Common blenny



Breadcrumb sponge



Cushion star



Hermit crab



Prawn



Painted topshell



Sandhopper



Rock goby

Rockpool Creature Sheet

Print out, laminate, cut out and place them **in the water**.



Catshark egg case



Brittle star



Velvet swimming crab



Sea scorpion



Pipefish



Skate/ray egg case

Print out, laminate, cut out and stick them to the **floor** of the 'rockpool'.



Cuttlebone



Cockle



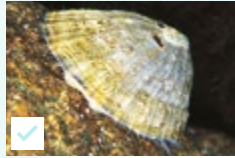
Razorshell

Rockpool Spotter Sheet

Name: _____



Barnacles



Common limpet



Painted top shell



Purple/flat top shell



Grey top shell



Cockle



Razorshell



Common whelk



Dog whelk



Common starfish



Cushion star



Beadlet anemone



Common periwinkle



Cuttlebone



Skate/Ray egg case



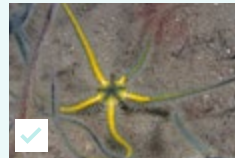
Catshark egg case



Snakelocks anemone



Breadcrumb sponge



Brittle star



Star ascidian



Bladderwrack



Velvet swimming crab



Hermit crab



Common shore crab



Common blenny



Rock goby



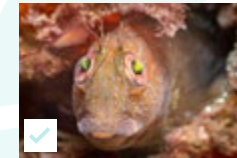
Prawn



Mussel



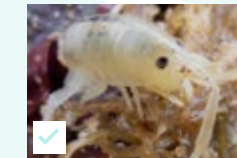
Pipefish



Tompot blenny



Sea scorpion

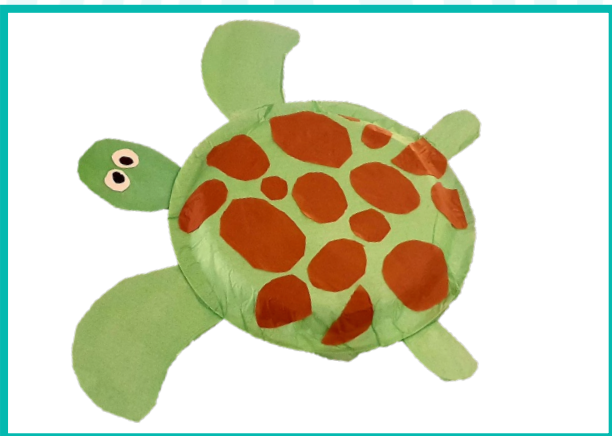
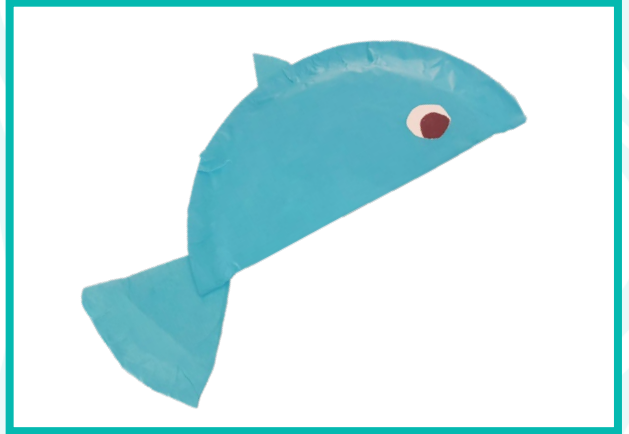
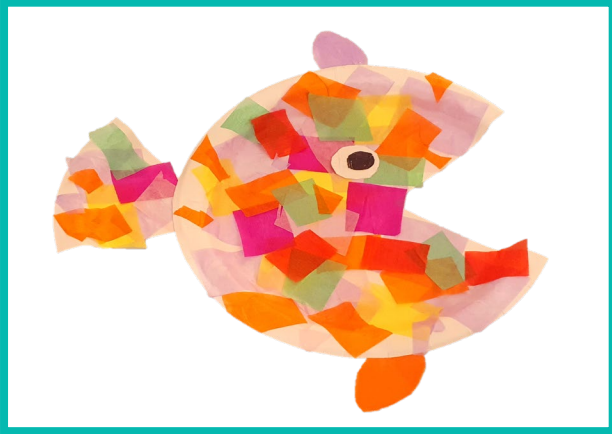


Sandhopper

Paper plate creatures

What will you make?

Here are some ideas of creatures to make with your paper plate. Use these as inspiration or think of your own creature.



Plastic-free party

45 mins

Brownies

About this activity

Plastic makes up most of the litter in the ocean. You can help by reducing the plastic you use. Plan a party that doesn't use any single-use plastic items and make cool plastic-free party decorations.

Outcomes:

- Spot hidden plastic in everyday items
- Learn about reusable, disposable and single-use plastic
- Find simple alternatives to common single-use plastic items
- Make a plastic-free party decoration

You will need:

- The following items (or images of them): paper, cardboard, cling film, image of a cigarette butt, plastic carrier bag, glitter, glossy wrapping paper, tin can, aluminium can, crisp packet, plastic drinks bottle, glass bottle, plastic milk carton, TetraPak carton, piece of food e.g. fruit, something wooden, something made of wool, single-use face mask
- [Plastic and Not plastic signs](#)
- [Litter Timeline labels](#)

For each person or group:

- [Our dirty ocean image](#)
- [Plastic party image](#)
- [Plastic-free Party Planner](#)
- Pens or pencils

To make party decorations:

- [Make your own party decoration instructions](#)
- Tissue paper in different colours
- Scissors
- String

Plastic-free party

Part 1

Plastic problems

1. As a group, look at the picture of [Our dirty ocean](#). Talk about what you can see.
2. Most of the litter in the ocean is plastic. What plastic items can you see in the picture? How do you feel when you look at this picture?

Part 2

Sort it out

We can help the plastic pollution problem by using less plastic. But can you spot plastic in everyday items?

1. Put all the items in a pile. Place the [Plastic sign](#) to one side of the pile, and the [Not plastic sign](#) to the other.
2. One at a time, ask each person to select an item and place it in the 'plastic' or 'not plastic' pile.
3. Once all the items have been sorted, reveal the answers. Were there any surprises? Look at the items in the 'plastic' pile. Which of the items can be reused? Which are single-use and designed to be only used once?

Part 3

Litter breakdown

How long does it take for litter to break down in the ocean?

1. Ask 6 people to make a timeline holding the [Litter Timeline cards](#).
2. Pick out the food, cardboard, crisp packet, plastic carrier bag, drinks can and plastic drinks bottle cards.
3. Give each item card to a different person and ask them to place it next to the time they think it will take for the item to break down.
4. Confirm the correct answers.
5. Ask the people with the plastic items to step forward. There's a twist – the time given is the time it takes for the item to break up. The plastic will never actually leave the planet as plastic lasts forever. It breaks up into smaller and smaller pieces but never goes away completely. Look at the plastic items. What does everyone think about this?

Part 4

Party planner

About 11 million tonnes of plastic ends up in the ocean each year. That's about a full rubbish truck every minute!

Parties and celebrations can be times when we use a lot of single-use plastic. Can you plan a plastic-free party?

1. Talk about all the plastic items you might see at a party. You could look at the [Plastic party image](#) for prompts.
2. Use the [Plastic-free party planner](#) to think about alternatives to single-use plastic.
3. How might making these choices for a party help the environment and the ocean?

Part 5

Make a decoration

Every party needs decorations. Follow the [instructions](#) to make cool plastic-free party decorations.

Plastic-free party answer sheet

Plastic or not

Not plastic:

- Paper
- Cardboard
- Glass bottle
- Tin can
- Aluminium can
- Piece of food e.g. fruit
- Item made of wood
- Item made of wool

Plastic:

- Cling film
- Cigarette butt
- Plastic carrier bag
- Glitter
- Glossy wrapping paper
- Crisp packet
- Plastic drink bottle
- Plastic milk carton
- TetraPak carton
- Single-use face mask
- Reusable plastic objects e.g. lunchbox, toy

Single-use plastic

- Cling film
- Cigarette butt
- Plastic carrier bag
- Glitter
- Glossy wrapping paper
- Crisp packet
- Plastic drink bottle
- Plastic milk carton
- TetraPak carton
- Disposable face mask

Break down times of litter

- Food waste – a few months
- Cardboard – 2 to 5 years
- Crisp packet – 75 years
- Plastic carrier bag – 250 years
- Aluminium can – 450 years
- Plastic drinks bottle – 800 years

Times for plastic items are estimates, as plastic hasn't been around long enough to be certain.

What's the problem with plastic?

Plastic lasts forever. It does not biodegrade, but breaks up into smaller and smaller pieces.

Single-use plastic items, like carrier bags and bottles, are a particular problem as they're used once and thrown away, but last for hundreds of years in our environment.

11 million tonnes of plastic ends up in the ocean worldwide each year. That's about a full rubbish truck every minute.

Plastic

Not Plastic

**A few
months**

**2 to 5
years**

75

years

250
years

450
years

800
years

Our dirty ocean

The ocean is full of rubbish and most of it is plastic. What can you see in this picture?



Litter left on the ground is washed down drains into rivers and eventually the sea. It can be blown into the sea by wind, or it escapes from factories using plastic to make products or packaging.

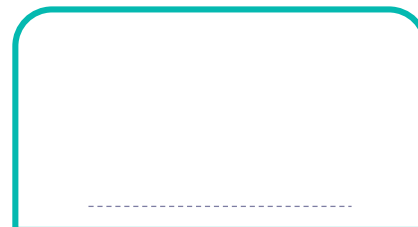
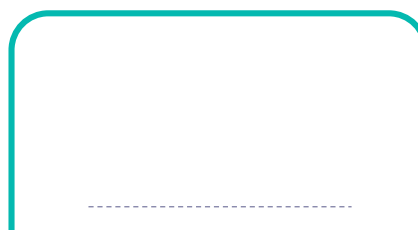
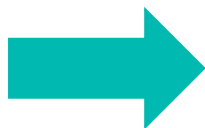
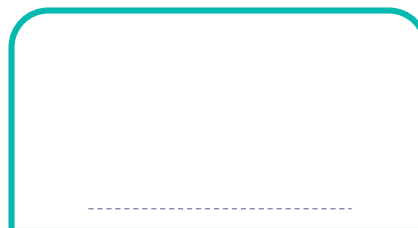
Plastic party



Image: Lidya Nada via Unsplash

Plastic-free party planner

Can you go plastic free?



Make your own party decoration

Use paper and string to make beautiful decorations for any party

You will need:

- Tissue paper
- String
- Scissors



Step 1

Take 20 sheets of tissue paper. Fold over 3cm of paper and press hard to make sharp creases.



Step 2

Turn the paper over. Make another fold of the same size. Keep doing this until all the paper is folded.



Step 3

Squeeze the paper together in the middle.



Step 4

Cut a piece of string about 15cm long and tie it around the middle of the paper.



Step 5

Round the ends of the paper with scissors.



Step 6

Gently pull each layer of tissue paper away.



Step 7

Continue to pull away the layers...



Step 8

Until you have a pom pom!

Stop ocean threads

Credit: Imogen Napper

45 mins

Brownies

About this activity

Our clothes pollute the ocean. Carry out experiments to investigate invisible water pollution before using your powers of persuasion to help tackle the problem.

Outcomes:

- Carry out experiments into microfibres
- Find simple ways to reduce microfibre pollution
- Use creativity to persuade people to take action

You will need:

For the microfibre experiment:

- A large bottle with a lid, three-quarters full of water
- Piece of brightly coloured synthetic material (fleece, nylon, polyester). The material should be new, or nearly new, as new fabric releases the most microfibres
- Sieve
- Filter paper or a piece of thick kitchen roll
- Magnifying glass

For food chain fibres:

- [Microfibre food chain images](#) cut out
- Sticky tape or Blu Tack
- 3 jars or small containers
- 1 bucket or large container

For micropollution solution:

- [Microfibres Fact File](#)
- [Social media template](#) or a blank sheet of paper for each person with pens, pencils or paints

Stop ocean threads

Every time clothes are washed, they release thousands of microfibres. The filters at wastewater treatment plants aren't fine enough to filter out microfibres and they are washed into rivers and seas. Every day, the equivalent of two rubbish trucks of microfibres are released into European waters where they can be eaten by marine animals.

Part 1 Microfibre experiment

1. In small groups, put a piece of fabric into a bottle three-quarters full of water. Screw the lid on tightly. Take it in turns to shake the bottle for 30 seconds for a total of 2 minutes.
2. Line the sieve with the filter paper or kitchen roll and carefully pour the water through the filter/paper.
3. Take it in turns to look at the paper through the magnifying glass. The tiny fibres are microfibres.

Most washing machines don't have filters to catch the fibres, which means they're released into wastewater. They can't be removed at sewage works, and they're then released into rivers and the ocean.

Part 2 Food chain fibres

Marine animals accidentally eat microfibres floating in the sea. Carry out the following activity to see how microfibres build up in the food chain:

1. Print and cut out the [Microfibre food chain images](#).
2. Stick the crab image on a bucket or large box. Stick the 3 worm images on jars or similar containers.
3. Distribute the plankton images, worm jars and crab containers among the group. Note the microfibre on the plankton.
4. Ask the people with the worm jars to move around and collect plankton, then ask the person with the crab container to collect the worms.
5. Gather around the crab container and look at what the crab has 'eaten'. How many microfibres are in the crab? Look at how quickly one microfibre in plankton turns into 30 inside the crab. In reality, there are thousands of microfibres building up inside marine animals.

Part 3 Micropollution solution

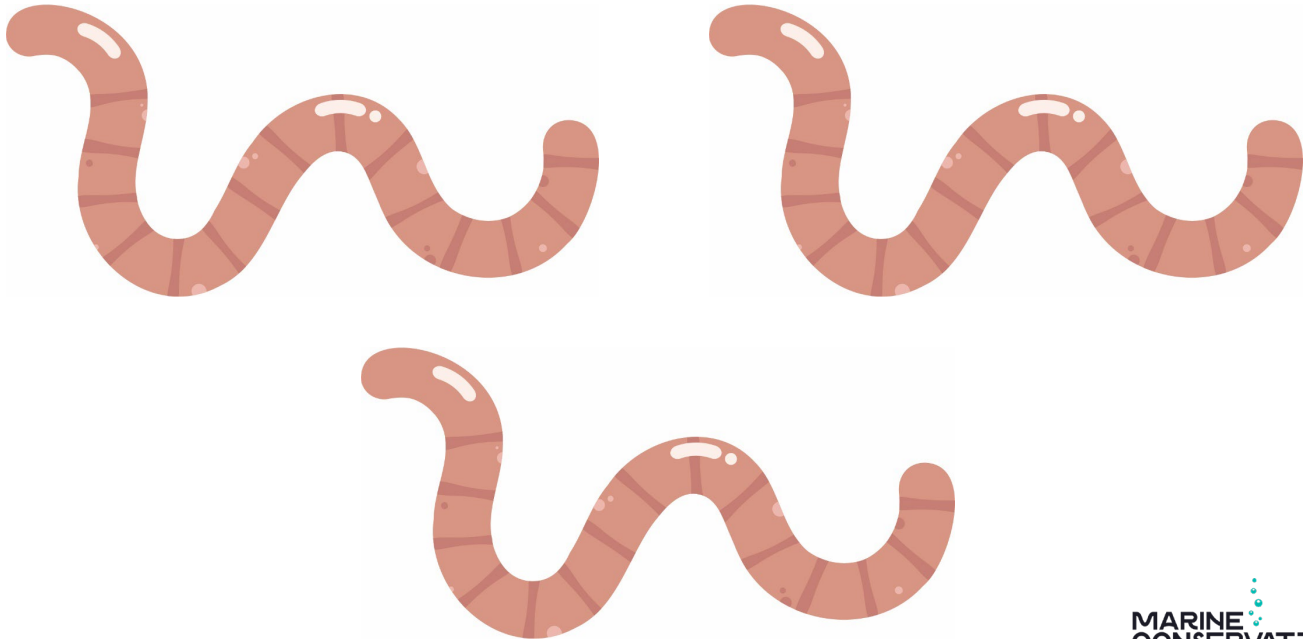
What can we do to reduce the amount of microfibres released into the environment? The [Microfibres Fact File](#) gives some simple ideas.

1. Share ideas about what you and your friends and family could do to make a difference.
2. Use the [template](#) to make an attention-grabbing message about things people can do to reduce microfibre release.
3. Take a photograph of your image and ask people you know with social media to post the picture, or turn the picture into a poster.

Fashion swap shop

When new clothes are washed for the first few times they release the highest levels of microfibres. Reducing the amount of new clothes we buy is one of the best ways to tackle the problem. Could you organise a clothes swap where everyone exchanges clothes they no longer wear?

Microfibre food chain images





Microfibre Fact File



The problem

Our clothes are made of millions of tiny fibres. Often these are synthetic materials like polyester, nylon or acrylic, which are made from plastic. With every wash, these microfibrils shed from our clothes.

- A single wash can release over 700,000 microfibrils. Every week in the UK about 9.4 trillion fibres are released from washing clothes.
- The fibres enter wastewater through drains, and many are then released into rivers and ultimately our ocean.
- Once in the ocean, animals can ingest microfibrils and they build up in the food chain over time. Microplastics have been found in any types of seafood we eat, including clams, mussels, fish and shrimp.



What you can do

- Sign our petition to [#StopOceanThreads](#) asking governments to bring in laws that require new washing machines to be fitted with filters.
- Check clothing labels. Avoid polyester, fleece and nylon. Choose clothes made from as near to 100% natural materials as possible.
- Reduce fast fashion consumption. It's estimated that we are buying 60% more clothes in 2021 than we were in 2000. To reduce how much you buy, repair clothes that break, shop second hand and swap clothes with friends and family.
- Wash clothes less. If you're wearing a top for a few hours, or a fleece for a few days, they probably don't need a wash – just hang them up to air out.
- Use liquid detergent instead of abrasive washing powder, it loosens fewer microfibrils, and use fabric softener. Fabric softener has been found to reduce the number of fibres shed by more than 35%.
- Wash at 30 degrees, on shorter cycles and in full loads.

Stop ocean threads!

Write and draw your message for people in the square below.

Think about:

- What do you want people to know about microfibres?
- What can people do to reduce the amount of microfibres?
- How can you grab people's attention?



Share the message

Take a photo of your picture and ask people you know with social media to post it on their accounts.