

LITTER ACTIVITY GUIDE AGES 11-14



OVERVIEW

This activity guide introduces the topic of litter. Within this guide is an activity and a follow up work sheet which allows you to explore the importance of reducing pollution with your students.

- **Lesson Objective:** to identify pollution sources and how marine pollution is directly linked to own lives
- **Curriculum links:** Geography/Science/Literacy/Numeracy

LEARNING TIPS

Emphasising the relevance to the children's personal lives is key for this activity to be a success! Encourage students to continue to engage with initiatives promoting clean ups and waste free lives.

The activities in this litter activity guide can be combined with other Project Seagrass guides: 'microplastics', 'habit breaker' and 'making changes' activities. Check out these pages:

- **Two-minute beach clean** <https://www.beachclean.net/>
- **Surfers against sewage** <https://www.sas.org.uk/our-work/education/>
- **Global plastic pollution in numbers** <https://www.condorferries.co.uk/plastic-in-the-ocean-statistics>
- **More plastic pollution lesson plans** <https://education.plasticoceans.uk/schools/>
- **City to sea** <https://www.citytosea.org.uk/take-action/>

KEY INFORMATION

- Outdoor activity
- Group activities
- Time – 30-40 minutes
- Practical/workbook

KEY WORDS

Finite resource –

A resource that will run out (earth only has a limited amount)

Bioaccumulate –

The build-up of something (e.g., plastics) in an organism

Pollution –

Makes the environment unclean or dirty

Linear economy –

Resources are used once then thrown away

Circular economy –

Resources are continuously reused

Raw material –

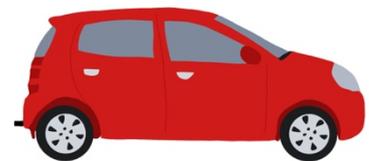
An unprocessed material, such as a tree

INTRODUCTION

Everything we use or pop in the bin ends up somewhere. Hopefully, that's a recycling station, but sadly a lot of our waste escapes and ends up in the sea. It can get there via **littering**, down our **drains** or **swept to sea by storms**.

Water samples from the most remote and untouched parts of the world show how we have inundated our seas with rubbish. A large proportion of that rubbish is **plastic**.

Plastic is an incredibly **strong** and **useful** material. We use it in all realms of life, from laptops and lunch boxes to cookers and cars.



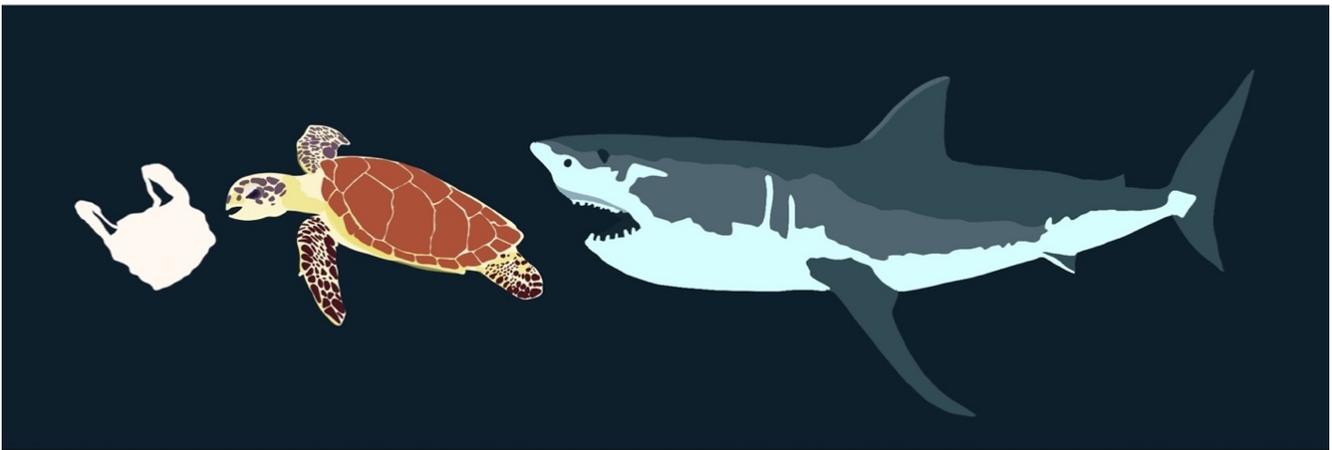
It is so strong that it can take **thousands of years** to completely breakdown. This strength is also nature's weakness! As plastics take so long to degrade, we just keep topping up the sea with more and more generations of plastic pollution, consequently never giving the sea a chance to recover from our mess.

Plastics are made from **finite** sources of **petroleum** (oil) and **gas**. Finite resources such as these are **unsustainable** as we only have a limited supply of them. Once we've used them up then there will be none left for our children or grandchildren.

What's the problem?

The flash of silver foil can look just like the flash of a fish to a bird, or the blob like shape of a plastic bag can be mistaken for a tasty jellyfish by a turtle, filling their stomachs with yucky plastic. These harmful things make our

treasured sea animals very unwell due to the harmful chemicals that are attached to the plastic that they've mistakenly eaten. The **number of plastics and pollutants** in the animal increases as we look further up the food chain in a process called **bioaccumulation**. For example, if 5 small fish have each eaten 3 pieces of plastic, and then 1 dolphin eats all 5 fish, the dolphin now has 15 pieces of plastic in its stomach.



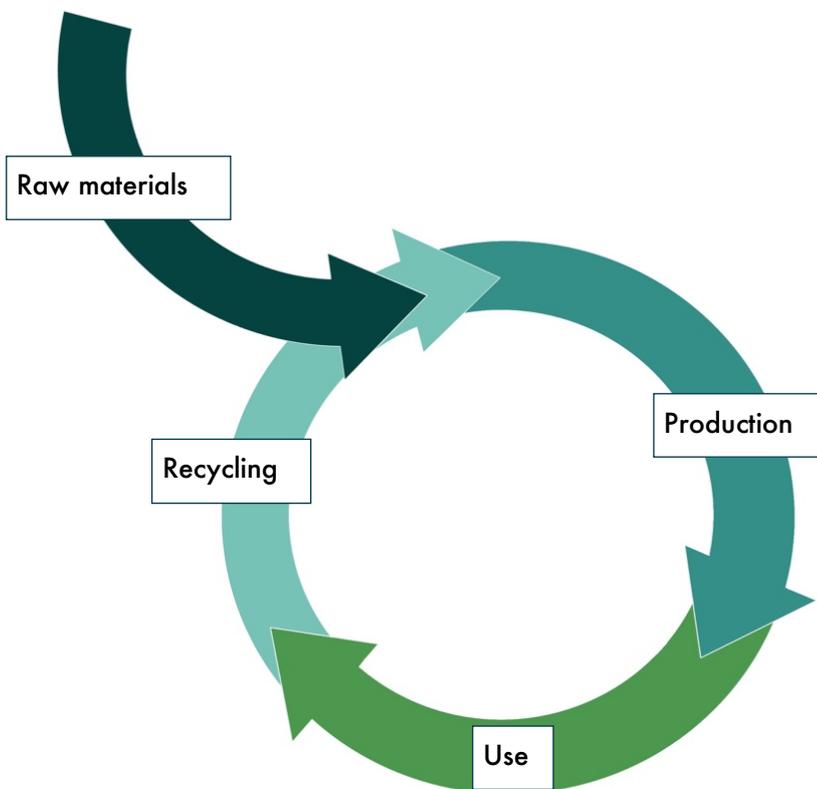
Problem solving...

We hear on repeat 'reduce, reuse, recycle' and there's good reason behind that!

Once we are finished with an item then that is not the end of the item's life, it still exists once we put it the bin. If we're not careful, some of what we throw away might also end up on our beaches. At the moment we heavily rely on what's called a 'linear economy'. We take raw materials from the earth, use them once, then put them in landfill. This only works if we could take never ending amounts of everything from the earth!



By sticking to the magic phrase 'reduce, reuse, recycle' we can try to keep what has to go in the bin to as little as possible! This is called a 'circular economy'. We take the smallest number of raw materials from the earth as possible, leaving more for **wildlife** and **future generations**. We then keep using these same resources over and over again! We can **repair** and **upcycle** once things get broken, giving them new life, and once the item is finally beyond repair then we can recycle it so that it's broken back down into raw materials and built again as a new item.



If we reduce the number of trees that have to be chopped down or the mines built for precious minerals and metals, then we can give more of this land back to nature. Nature will then help protect us from climate change and increase the number of wild animals.

We're going to head outdoors to find out who and what is littering our beaches, rivers and parks! Our guidelines are based on the movement by #2MinuteBeachClean; check out their website and campaigns to discover what a big difference just two minutes of litter picking can make to your local area.

ACTIVITY:

- 1) On arrival to each beach activity through the residential, take two minutes to do a litter pick.
- 2) Pair the children up and collect the litter in boxes or old bags, being mindful not to disturb the wildlife or pick in any difficult to reach locations. Do not throw the litter away!
- 3) At the end of the week analyse the litter collected. First, see how much it weighs and calculate how many minutes it took the class to collect.
- 4) Sort the litter into source type (for example food wrappers, fishing gear, plastic bags, face masks and gloves, bottles and cups, cigarette butts, cosmetics etc.,) and make a tally of how much is in each category.
- 5) If you can, take pictures of the total collection and each category of rubbish.
- 6) Encourage discussion around the sources of pollution - which ones could be replaced by a non-polluting material, or stopped being used completely? Which are the most damaging to marine life and why?

YOU WILL NEED:

Litter pickers



Bin bags



Hand washing facilities

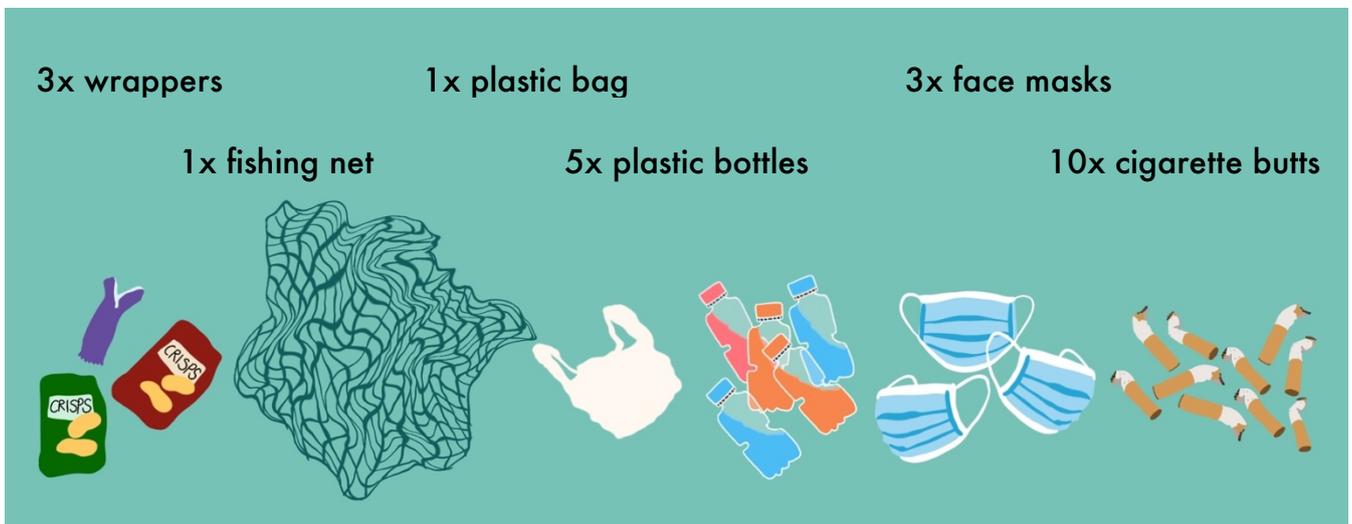


Camera



HEALTH AND SAFETY

- Have adult supervision if picking up any sharp or non-sanitary items
- Ensure thorough hand washing after touching anything
- Be polite and mindful of other shore users
- Do not touch or disturb wildlife
- Do not put yourself into danger to collect hard to reach litter
- Define picking location to stay within area of staff supervision



7) Follow this by encouraging the children to take an action. Assign the children to contact the biggest polluters, e.g., coca cola drinks or walker's crisp or local businesses which are contributing to the litter. This can be done really easily by finding the contact section of a company's website, explaining that they were one of the biggest polluters on the beach and that the company needs to change in order for us to have a sustainable future. If possible, add a picture of their rubbish.

8) If possible, post a class picture of your beach clean using the **#2MinuteBeachClean** to get involved with the movement. Tag companies that are the main offenders!

9) Once finished make sure to recycle as much as possible!

10) Complete the workbook activities either as a group discussion or independent work; these strongly link with the microplastics activities.



WORK SHEET FOLLOW UP:

1) What was the total weight (kg) of the rubbish and how many minutes did it take for your class to collect? *If 15 people collected for 2 minutes over 3 days, then the total time would equal $15 \times 2 \times 3 = 90$ minutes.*

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2) Which category was the largest source of pollution?

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3) Which category was the most harmful? *Consider chemicals released, animal consumption (shiny is more likely to be mistaken for a fish), entanglement, sharp edges. This maybe multiple categories!*

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4) What was the strangest item found on the beach cleans?

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5) What was the most valuable item?

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6) Take action! Challenge yourself to complete at least one of the following actions. Add your own ideas on fighting plastic pollution:

- a. Contact companies producing unnecessary waste such as excess food packaging and ask them to remove it or find environmentally friendly alternatives. If we take two minutes to let them know it's an issue, then they are more likely to change. Use the template below.
- b. Write to your MP asking them to put pressure on the government to implement legislation banning single use plastics and forcing companies to use sustainably sourced packaging.
- c. Get active on social media! When used in the right way social media can be a powerful tool to raise awareness. Use the hashtag #2MinuteBeachClean with a picture of the litter you've collected and tag companies that were repeat offenders- ask them to change.
- d. Push your school to go plastic free. This can start off small such as banning single use bottles within your class.
- e. Read a blog with tips on how to go plastic free!
- f. Check out pre-loved apps, you'll save money as well as the planet! Apps such as Vinted and Depop are great for clothes, and Facebook marketplace, Gumtree or eBay for everything else.

Dear Coca cola,

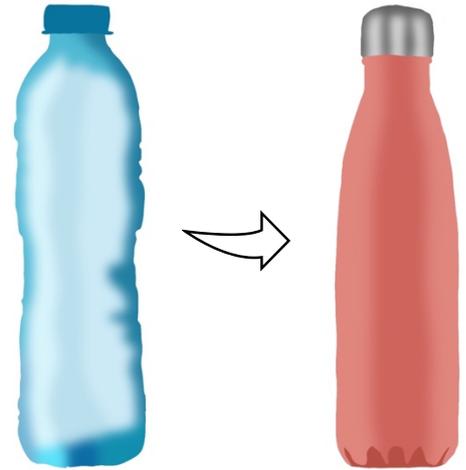
*My class and I have been litter picking at **Porthdinllaen** beach and have been dismayed to see numerous of your products littered across the beach. I have attached a picture of your pollution. This is harmful for nature and our future. Please take action to reduce your pollution footprint and change your products to be sustainable.*

Yours sincerely,

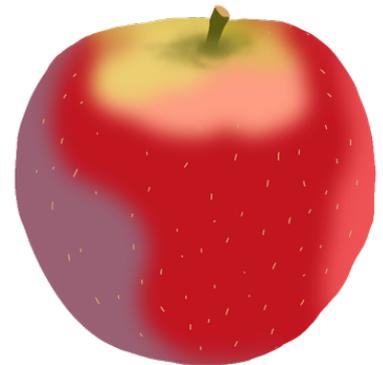
Your full name

7) Write down three personal pledges to reduce your plastic consumption of your choice.

- a. Do a two-minute litter pick once a week (beach, street, park, river - it all helps!).
- b. Swap from shampoo bottles to waste free bars.
- c. Reuse the items I already have for as long as possible.



- d. Take on an upcycling project.
- e. Try and buy second hand wherever possible.
- f. Recycle all the rubbish that I can.
- g. Avoid buying plastic bottles.
- h. Make homemade sandwiches for lunch in a reusable box.
- i. Contact a company when they produce unnecessary and wasteful packaging.



8) Discuss and chose a whole class plastic free pledge:

- a. Arrange for more recycling bins at your school.
- b. Arrange a teracycle collection point at your school.
- c. Push your school to have plastic free catering.
- d. No plastic bottles allowed in class (unless they're being reused!).



9) Fill in the gaps:

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