

Sustainable Materials

Focus on Marine Litter and Plastics

Marine litter and plastics

Forty per cent of the Irish population live within 5km of the coast. Protecting our marine environment is important for our economy, tourism, biodiversity and general well-being.

Marine litter poses a threat to not only marine organisms but us humans as well. ‘Marine litter’ is any man made material that ends up in the marine environment. Approximately ten million tonnes of marine litter enter the world’s oceans and seas each year. What we find on beaches is only a small representation of the marine litter in the environment.

Ocean Jenga

Examples of Situations which harmed the marine environment	Examples of Situations which helped the marine environment
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Breakdown Game

(Resource from Leave No Trace Ireland
www.leavenotintraceireland.org)

Material	Prediction	Actual
Aluminium can		
Apple		
Banana		
Camping chair		
Cardboard		
Coffee cup with lid		
Crisp packet		
Glass bottle		
Nappy		
Plastic bottle		
Time Spans to choose from:		
Up to 2 years	500 years	450 years
Forever/ Never	3 months	250 years
	80 years	1,000,000 years
Which item and length of time to break down surprised you the most?		

Life Cycle Discussion

Name of Material:	
Life Cycle Steps: (eg. processing)	Actions we can take to reduce impact?
1	
2	
3	
4	
5	
6	
7	
8	
Can you think of any other actions we could take to reduce the impact of this material to the ocean?	

Beach Clean Data

What's on our shore?

Beach Name: Coral strand		Total No. of Bags collected: 4	
Group Name:		Total No. Foreign or traceable items:	
Date of Survey: 4/12/2018		0	
Weather Conditions: Sunny and cold		Total No. of Unusual Items: 3	
Example of how to count items	Drink Cans	 	TOTAL: 15
	Caps / lids	 	TOTAL: 20
Total for each item		Total for each item	
Plastic		Cloth	
Bags		Cloth pieces / string	
Bottles / Containers	 1	Clothing / shoes	
Cigarette lighters	1	Metal	
Crisp / sweet wrappers		Cans	
Cutlery / straws		Drink cans	
Fishing Net	 	Fishing weights	
Rope		Foil wrapper	
Toys		Food cans	
Plastic pieces		Metal pieces	
Polystyrene		Wire and wire mesh	
Fast food containers		Other (specify)	
Polystyrene pieces		Medical	
Packaging		Plasters	
Rubber		Wet wipes	
Balloons	1		
Gloves		Nappies	
Tyres		Paper	
Rubber pieces		Bags	
Other (specify)		Cardboard	
Glass (be careful picking up broken glass)		Cigarette stubs	
Bottle			
Glass pieces		Newspaper / magazines	
Faeces (DON'T TOUCH!)		Paper pieces	
Other Pollutants		Wood (note: driftwood should be left on the seashore)	
		Pallets / crates	
		Ice Lolly sticks	

Beach Clean Data Questions

Name the top five things identified during your beach clean?

- 1.
- 2.
- 3.
- 4.
- 5.

Can you identify who is responsible for each item?

(Individual and /or industry?)

- 1.
- 2.
- 3.
- 4.
- 5.

Discuss in your group an action that could be taken to reduce the impact of these items on the ocean:

- 1
- 2
- 3
- 4
- 5

Ocean Jenga

Design your own game

Design your own Jenga Cards below and play the game with your group.
Remember to write both positive and negative situation cards.

Some other useful sources of information on marine litter:

General information:

<http://www.marlisco.eu/>

<http://www.leavenotraceireland.org/>

<http://cleancoasts.org/marine-litter/>

<http://coastwatch.org/europe/>

https://greenschoolsireland.org/resources/theme_category/global-citizenship-marine-environment/

<http://www.deepmapscork.ie/environmental-priorities/pollution/marine-litter/>

<http://www.epa.ie/irelandsenvironment/water/>

<https://www.un.org/sustainabledevelopment/oceans/>

<https://www.beaches.ie/concern-about-the-potential-risk-of-microplastics-in-our-environment/>

Campaigns

<http://thinkbeforeyouflush.org/>

<https://www.beaches.ie/just-2-minutes-of-your-beach-time-can-make-a-difference/>

<http://cleancoasts.org/our-initiatives/beat-the-microbead/>

<https://skyoceanrescue.com/>

<https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/cleanswell/>

Community action: Success stories 😊

There are many local and international stories about the positive impact individuals, schools and communities can make to our marine environment. Below are just a few examples.

Can you and your students help to make a difference too?

Clean Coasts Big Beach Clean

In 2018 across the coast of Ireland 194 beach cleans took place with 3,652 volunteers. This community action led to the removal of 32 tonnes of marine litter from our coastline. Meanwhile, across the world, 789,138 volunteers in more than 100 countries collected nearly 9.3 million kilograms in International Coastal Cleanup events in 2018. Top 5 items removed were: cigarette butts, food wrappers, plastic bottles, plastic bottle caps, plastic grocery bags.

<http://cleancoasts.org/our-initiatives/big-beach-clean/>

Fishing for litter scheme

Campaign started in 2015 whereby fishermen in Ireland have voluntarily collected more than 190 tonnes of marine litter in their normal fishing activities using in their fishing nets. Now operating in 12 ports throughout Ireland with more than 90 fishing vessels supporting the scheme to remove litter from our ocean.

<http://www.bim.ie/our-work/projects/fishing.for.litter/>

Plastic bag levy Ireland

The 2002 introduction of the plastic bag levy (22 cents) has reduced the use of plastic carrier bags by over 90%. This has led to a reduction of one billion plastic bags entering the marine environment in Ireland. Any revenue generated from their sale goes into an Environmental Fund for green projects.

<http://www.irishenvironment.com/iepedia/plastic-bag-levy/>

A plastic free school

A group of transition year students from Newpark Comprehensive School in Blackrock launched the 'Plastic Outta The Park' campaign as part of an ECO-UNESCO Young Environmentalist Project in 2018

<https://www.newparkschool.ie/plastic-outta-the-park-rte-report-on-newparks-plastic-free-policy>

Self-Evaluation Sheet

Please score yourself in each section below:

Before Score	Knowledge	After Score
	I know about the Ocean around Ireland	
	I know how long it takes for materials to degrade	
	I know about the impact of marine litter on our ocean	
	I know about actions we can take to reduce this impact	
	← Calculate Totals →	

0 = something you don't know anything about/ never heard of

5= something you know a great deal about

Before Score	Attitudes and Values	After Score
	I think the Ocean is important to my daily life	
	It is important to protect the ocean for the animals and plants that live there	
	I believe I have a responsibility to protect the environment	
	I think I can take actions which will reduce the impact of marine litter on the ocean	
	← Calculate Totals →	

0 = something you strongly disagree with

5= something you strongly agree with

Before Score	Actions	After Score
	I can talk about Marine Litter	
	I feel confident in discussing the impact of marine litter	
	I can share information about marine litter in different ways	
	I can list simple actions I can take to help protect the ocean	
	← Calculate Totals →	

0 = something you never think of or intend to do

5= something you always think of or intend to do

On completion of the workshop:

List 3 simple actions you or your school could take to protect the ocean:

- 1.
- 2.
- 3.

Any other suggestions: