

# SDG14 Future of the Ocean

## MM1: Introduction to Ocean Literacy



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### Research and Development

### Lesson 6: Local Coastal Pollution 1

**Subject Areas: CSPE, Climate Action and Sustainability, Geography, Science, SPHE**

#### **Lesson Title and Summary: Local Coastal Pollution 1**

In this lesson, learners will further develop their awareness of the impact of pollution on the ocean and take action to help restore ocean health locally. The learners' first hand experience will be used to develop observational skills including data gathering and analysis.

*This lesson includes a task to be undertaken at a local shoreline. If you do not live near the coast, please see Option B in the Extension Box. Lesson 7 is a linked lesson.*

**Vocabulary: Coastal pollution, Community engagement, Eco-friendly, Ocean Literacy**

#### **In this lesson, the learner will:**

- increase their ocean literacy skills
- increase understanding of humans influence on nature and the ocean
- work collaboratively in field work
- participate in citizen science
- practice independent & group work
- develop mindful reflection skills

#### **Materials**

- Supporting Resource: Observation cards
- Bags or buckets for litter collection items
- Gloves for litter picking
- Hand sanitiser

**3** GOOD HEALTH AND WELL-BEING



**11** SUSTAINABLE CITIES AND COMMUNITIES



**13** CLIMATE ACTION



**17** PARTNERSHIPS FOR THE GOALS



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## L6: Local Coastal Pollution 1



### Activity Instructions

*This lesson may need to be adapted in duration, depending on how close you are to a local shoreline or beach. You can collate the items in the Materials list yourself or contact [cleancoasts.org](http://cleancoasts.org) to be sent a pack.*

#### Activity 1: Local coastal pollution (10 mins)

1. In pairs, ask learners to discuss the following questions:
  - Do you feel our local coast is polluted? Why/why not?
  - What do you think the main issues are locally around coastal pollution?
  - How can community engagement and education raise awareness about local coastal pollution, fostering a sense of responsibility and encouraging individuals to adopt eco-friendly habits in their daily lives?
2. Discuss ideas and opinions as a whole group.

#### Activity 2: Beach clean (40 mins)

1. Walk to nearest beach or shoreline (adapt to location) and give learners a brief safety overview. Learners will need to bring a pen/pencil.
2. Divide learners into pairs and give each a bag/gloves and observation cards
3. Review the observation cards and how to complete them and give learners 15 minutes to complete a rapid beach clean.
4. After the set time, meet back as a group and ask learners to share the most common item of litter they found and the most interesting one. Was there many recyclable items found?
5. Collect the observation cards and return to class.

\*\* If you are going to complete Lesson 7 Local Coastal Pollution 2: bring bags of collected rubbish back to school and store in a pre-arranged area. \*\*

\*\* If you are not going to complete Lesson 7 Local Coastal Pollution 2: pre-arrange a collection point for the local council to remove your collated rubbish bags\*\*

### REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks
- Two things they found most interesting and would like to explore more
- One opinion they have about the activities, what did they like or how they would improve them

Use Post-its or a Mentimeter survey - [mentimeter.com](http://mentimeter.com) to gather reflections

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### EXTENSION / REDUCTION ACTIVITIES

Reduction: For a shorter class, go straight to the beach and use the walk to refresh learners' knowledge about ocean plastic pollution by asking them review questions about previous lesson.

Extension: For a longer class, spend longer on the beach clean or get learners to upload their litter finds onto the Litterati app.

Option B (for Activity 2): Examining Open Source Data

1. Use Worksheet: Examining Open Source Data to look at pollution collected at coastal sites around Ireland and worldwide.

### MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Video: The Majestic Plastic Bag - A Mockumentary [3:59 mins] <https://www.youtube.com/watch?v=GLgh9h2ePYw>

Video: Ducks Overboard! [2:54 mins] <https://www.youtube.com/watch?v=fjxLIMF2Fq0>

Video: The epic journey of the plastic ducks [2:58 mins] <https://www.youtube.com/watch?v=AvchIWftt80&feature=youtu.be>

Website: Clean Coasts <https://cleancoasts.org/>

Website: Open Litter Map <https://openlittermap.com/>

App: Litterati (building the most powerful crowd-sourced set of data on litter ever assembled) [https://www.litterati.org\\_](https://www.litterati.org_)

### Local Trip / Expertise / Additional Work and Assessments

Develop a longer-term citizen science project where learners do regular beach cleans over a determined period and collate data on what litter items are found. Research local beachcombers, Tidy Towns or Sick of Plastic campaigns and see what interesting items they have found on their local beaches or a beach near you.

Linked Learning

- SDG 4 Supporting Skills
- MM2 Problem to Pitch - Marine Plastic Waste
- MM 7 Media Communications

# MM1: L6WS OBSERVATION CARDS



Name of beach/shoreline: \_\_\_\_\_

Date of clean: \_\_\_\_\_

## ITEMS COLLECTED

**Tick categories and write number of items collected.**

### Shoreline Litter & Recreational Activities

- |   |   |
|---|---|
| <input type="checkbox"/> Plastic bags _____     | <input type="checkbox"/> Wrappers _____         |
| <input type="checkbox"/> Paper bags _____       | <input type="checkbox"/> Bottle caps/lids _____ |
| <input type="checkbox"/> Plastic bottles _____  | <input type="checkbox"/> Cigarette butts _____  |
| <input type="checkbox"/> Glass bottles _____    | <input type="checkbox"/> Cardboard _____        |
| <input type="checkbox"/> Nappies _____          | <input type="checkbox"/> Newspaper _____        |
| <input type="checkbox"/> Sanitary items _____   | <input type="checkbox"/> Condoms _____          |
| <input type="checkbox"/> Plastic utensils _____ | <input type="checkbox"/> Straws _____           |
| <input type="checkbox"/> Wipes _____            | <input type="checkbox"/> Clothing _____         |

Other:

- |                                |                                |
|--------------------------------|--------------------------------|
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |

### Marine Litter

- |   |   |
|---|---|
| <input type="checkbox"/> Buoys/Floats _____ | <input type="checkbox"/> Pallets/wood _____ |
| <input type="checkbox"/> Fishing line _____ | <input type="checkbox"/> String _____       |
| <input type="checkbox"/> Net _____          | <input type="checkbox"/> Containers _____   |

# MM1: L6WS OBSERVATION CARDS



Other:

<input type="checkbox"/> _____	_____	<input type="checkbox"/> _____	_____
<input type="checkbox"/> _____	_____	<input type="checkbox"/> _____	_____
<input type="checkbox"/> _____	_____	<input type="checkbox"/> _____	_____

Dumping

<input type="checkbox"/> Building Materials _____	<input type="checkbox"/> Household appliances _____
<input type="checkbox"/> Batteries _____	<input type="checkbox"/> Other _____
<input type="checkbox"/> Car parts _____	<input type="checkbox"/> Other _____

## MM1: L6WS EXAMINING OPEN SOURCE DATA



Coastal pollution poses a significant threat to marine ecosystems worldwide. It includes pollutants such as plastic debris, chemical runoff, and oil spills, which harm marine life and degrade coastal habitats.

**Let's see what type of pollution has been found around our local coastlines.**

### Selecting a location

1. Go to <https://openlittermap.com/global>
2. Use the zoom in tool to locate Ireland.
3. Select a coastline closest to where you live.
4. Click on one of the coloured, numbered circles. Continue clicking until you have zoomed in to the location and it shows smaller circles.

Where have you selected? \_\_\_\_\_

### Pollution records

What type of rubbish has been recorded at this location?

\_\_\_\_\_

1. Repeat the exercise around the coastline you selected, to get a better idea of the type and volume of pollution found there.

Describe the pollution found along your selected coastline, based on what has been recorded on the Open Litter Map.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Compare your description with a partner.

What was similar? \_\_\_\_\_

What was different? \_\_\_\_\_

### What is happening in other places?

Select a coastline in another country.

Where have you selected? \_\_\_\_\_

What type of rubbish has been recorded at this location?

\_\_\_\_\_

### Discuss:

What can you say about coastal pollution in Ireland and other places in the world?