

Waste and Waterways Lesson Plan

Investigating Marine Waste



years
11 and 12

AUSTRALIAN CURRICULUM LINKS:

Geography

- the nature and causes of the selected hazard and how the activities of people can intensify its impacts ([ACHGEO22](#))
- the magnitude, frequency, duration, temporal spacing and effects of the hazard ([ACHGEO23](#)) [1]

Objectives:

Students will be able to:

- Achieve an understanding of the definition of marine waste
- Investigate and examine the contemporary types, causes, impacts and affected animals from marine waste
- For students who completed the extension activity: Summarise and evaluate existing the effectiveness of recycled marine plastic projects

POST & PRIOR LEARNING:

- Marine pollution to be an ongoing national and global issue
- Marine pollution to affect both marine biodiversity and the ecosystem
- ICT skills in researching and utilising the internet
- Skills in summarising geographical information

TIME REQUIRED:

70 Minutes

RESOURCES:

- Student Laptops
- Interactive Whiteboard
- Appendix 1

TEACHING AND LEARNING STRATEGIES:

1 Introduction

Understanding Marine Waste:

- Activating Prior Knowledge- Image
- Display Marine Pollution Image [2] on the Interactive whiteboard (Appendix 1)
- Distribute an A5 piece of paper to each student

- Directs students to list as many marine wastes as possible visible in the image and from their knowledge
 - o Allocate a time limit of 2 minutes
- Instruct students to share their answers and encourage class discussion by asking questions such as:
 - o *Which waste do we see the most locally?*
 - o *Which waste do you think is the most common?*
 - o *Which waste do you think is the least common?*
 - o *From personal experience, have we encountered marine waste?*

2 Body

- Play the 'TRASH TALK: Where Does Marine Debris Come From?' YouTube video
 - o Link: <https://www.youtube.com/watch?v=FN9FF7VH4ig> [3]
 - o Ask students to identify where marine debris originates from

Potential answers:

- Dumping/ littering
- Waterways
- Wind transports
- Improper or careless waste disposal

Marine Plastic Pollution Infographic

- Direct students to research and create an infographic with the following information:
 - o Define marine waste
 - o Types of marine waste
 - o Causes of marine waste
 - o Impacts of marine waste
 - o Affected animal species from marine waste
- Instruct students to complete to use one of the following infographic creation platforms:
 - o Canva <https://www.canva.com/create/infographics/> [4]
 - o Pickochart <https://piktochart.com/formats/infographics/> [5]
 - o Venngage <https://venngage.com/> [6]
- The teacher can provide the following links to support lower achieving learners in their research:
 - o Marine Waste definition
<https://oceanservice.noaa.gov/facts/marinedebris.html#:~:text=Marine%20debris%20is%20defined%20as,Earth%20immune%20to%20this%20problem.> [7]
 - o Types of Marine Waste
<https://www.environment.gov.au/marine/marine-pollution/marine-debris> [8]

3 Conclusion Poster Viewing (15 Minutes)

- Instruct students to share their infographics with the class by one of the following methods:
 - o Upload to the digital learning platform and the teacher displays student's work on the interactive whiteboard
 - o Students connect their laptop to the interactive whiteboard with HDMI, wirelessly or via USB
 - Direct students to share their findings to the class and to share their learning experiences
 - Potential questions to ask:
 - o "What was the most difficult aspect of this project?"
 - o "What was the least difficult aspect of this project?"
 - o "What did you enjoy the most in this project?"
 - o "What did you least the most in this project?"
 - o "What was the most interesting piece of information you found during your investigation?"
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REFERENCES

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5. Piktochart [Internet]. Piktochart. 2020 [cited 7 November 2020]. Available from: <https://piktochart.com/formats/infographics/>
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10. Ocean Plastic Pollution – the facts and what you can do [Internet]. Australian Marine Conservation Society. 2020 [cited 7 November 2020]. Available from: <https://www.marineconservation.org.au/ocean-plastic-pollution/>
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12. Impacts of plastic debris on Australian marine wildlife [Internet]. Department of Agriculture, Water and the Environment. 2020 [cited 7 November 2020]. Available from: <https://www.environment.gov.au/marine/publications/>