

# BE THE WAVE AR FRIG Y DON

# Plastic Pollution

Lesson Plan



cadwch keep  
gymru'n wales  
daclus tidy

**MARINE  
CONSERVATION  
SOCIETY**



UNDEB EWROPEAIDD  
EUROPEAN UNION



Llywodraeth Cymru  
Welsh Government

**Cronfeydd Strwythurol a  
Buddosodi Ewropeaidd**  
European Structural  
and Investment Funds



Ariennir gan  
**Lywodraeth Cymru**  
Funded by  
**Welsh Government**



**Aims**

- To develop understanding of plastic pollution and the impact it can have on the marine environment and the wildlife it supports.
- To understand that individuals can make everyday choices in their consumption and disposal habits to make a positive difference to plastic pollution and ocean health.

**Objectives**

- To develop an understanding of plastic, its durability and extensive global use.
- To explain the impacts of plastic pollution on the marine environment
- To apply knowledge of plastic pollution to everyday life through action #BeTheWave and Eco-Schools programme

| Eco-Schools Topic  | Global Goals  |
|--|---|
| <ul style="list-style-type: none"> <li>• Waste Minimisation</li> <li>• Biodiversity</li> </ul> | <ul style="list-style-type: none"> <li>• 12 Responsible Consumption</li> <li>• 14 Life Below Water</li> </ul> |

| Links to the Curriculum for Wales  |                                     |
|--|-------------------------------------|
| <b>Purpose</b>   |                                     |
| Ambitious, capable learners who: <ul style="list-style-type: none"> <li>• Build a body of knowledge</li> <li>• Can explain the ideas and concepts they are learning about</li> <li>• Can use number effectively in different context</li> </ul> Enterprising and creative contributors who: <ul style="list-style-type: none"> <li>• Express ideas and emotions through different media</li> </ul> Ethical and informed citizens who: <ul style="list-style-type: none"> <li>• Use evidence in forming views</li> <li>• Engage in contemporary issues based upon their knowledge and values</li> <li>• Show their commitment to the sustainability of the planet</li> </ul>  |                                     |
| <b>What Matters</b>  | <b>Progression Step: Three/Four</b> |
| Humanities: <ul style="list-style-type: none"> <li>• Have an understanding of my own and others environmental, economic and social responsibilities in creating a sustainable future</li> </ul> Mathematics and Numeracy: <ul style="list-style-type: none"> <li>• Make informed choices about how to organize and represent data, using a wide range of graphs and charts including pie charts, frequency diagrams and frequency polygons</li> <li>• Use different scales to extract and interpret information from a range of diagrams, tables, and graphs including pie charts with simple fractions and proportions and recognize any trends that are seen.</li> </ul> Science and Technology: <ul style="list-style-type: none"> <li>• Explain how the impact of our actions contribute to the changes in the environment and biodiversity</li> </ul> |                                     |
| <b>LNF</b>   | <b>Progression Step: Four</b>       |
| <b>Writing</b> <ul style="list-style-type: none"> <li>• Use the full range of punctuation accurately (including colons, semicolons and parenthesis) to clarify, organise and expand meaning.</li> </ul>  |                                     |



- Adapt my writing style, choosing and using the best structures for different contexts and purposes, e.g. to successfully describe, explain, persuade, discuss. I can select and use appropriate strategies to plan and develop my writing for different purposes and audiences.
- Organise and construct my writing effectively, connecting and developing my ideas for a range of different contexts.
- Learning that statistics represent data and that probability models chance helps us make informed inferences and decision.
- Select and construct appropriate charts, diagrams and graphs with suitable scales.
- Construct and interpret graphs and diagrams (including pie charts) to represent discrete or continuous data, choosing an appropriate scale.
- Interpret graphs that describe real-life situations, including those used in the media, recognising that some graphs may be misleading.
- Interpret mathematical information; drawing inferences from graphs, diagrams and data, including discussion on limitations of data.

**Cynefin**

Encourage students to research marine species found in Wales e.g. Angel sharks, sea grass meadows  
Investigate the Welsh Government plans to ban single use plastic items.

| Activity One   | Resources and Equipment                |
|--|--|
| <p><b>What is plastic?</b></p> <p>Students watch the 2 videos</p> <p><a href="#">Plastic Pollution: How Humans are Turning the World into Plastic - YouTube</a><br/>(9:01 may wish to stop at 4:22 when switches to microplastics)</p> <p><a href="#">(21) The Present Problem - YouTube</a> (0.36)</p> <p>Plastic diary</p> <ol style="list-style-type: none"> <li>1. Give pupils three minutes to list everything they've used today that is made of plastic or comes in plastic packaging (give prompts, if needed, such as cereal bags, juice bottles, pen cases, toothpaste tube, computer cases, school chairs, etc.) You could bring in examples of packaging and items and hold a discussion with pupils about which ones they use.</li> <li>2. Pupils then highlight which items on their list are single-use plastics, i.e. that are thrown away after being used only once (give examples if needed, e.g. milk bottle: yes; plastic cereal bowl; no)</li> <li>3. Discuss the lists as a whole group, focusing on: how many items are made of plastic in their daily lives; which items</li> </ol> | <p>PowerPoint</p> <p>Pen and paper</p> |




|   |                                    |
|---|------------------------------------|
| <p>surprised them; what proportion are single-use plastics; whether they think single-use or multi-use items are better or worse for the environment etc</p> <p>Students then discuss the most appropriate data presentation for the data with justification, typically pupils then generate a pie chart or bar chart showing the proportions of single use or multi use plastic.</p> | <p>Graph paper<br/>Protractors</p> |
|---|------------------------------------|

| Activity Two   | Resources and Equipment                  |
|--|--|
| <p><b>Plastic – What is the problem?</b></p> <p><a href="#">Takeaway food and drink litter dominates ocean plastic, study shows   Plastics   The Guardian</a></p> <p>Read the report from The Guardian<br/>Task students to identify the facts in the article and produce a list of them<br/>Get students to summarise how they feel about the facts from the article.<br/>Can any of the items mentioned in the article be reduced or eliminated within your school?<br/>Can students investigate more sustainable alternatives?</p> <p>To expand activity, see extra presentation facts.</p> | <p>Access to ICT</p> <p>Presentation</p> |

| Activity Three  | Resources and Equipment   |
|---|---|
| <p><b>Plastic impacts - Marine plastic and wildlife</b></p> <p>Watch the video <a href="#">The Waiting Room</a></p> <p>Ask students to search the internet (through Google/Ecosia or <a href="#">Ocean Hero</a>) to discover images of the impact of plastic pollution on marine wildlife.</p> <p>Using these and information from activities one and two, students then pick one species and develop a comic strip or using ICT, showing how marine plastic has impacted on that species and suggest solutions. E.g. turtles mistake plastic bags as their food source (jellyfish), this blocks the digestive system and the turtle slowly starves. Solutions include banning single-use plastic bags.</p> <p>Possible suggestions for solutions -</p> | <p>Presentation</p> <p>ICT</p> <p>Paper pens<br/>(You may wish to develop a template for a comic strip)</p> |



|   |  |
|---|--|
| <a href="#">20 Actions to Reduce and Reuse plastic - Go!   Ocean Generation</a>   |  |
| <p>Students should be encouraged to develop success criteria for what makes a good comic strip.</p> <p>You may wish students to research their species further.</p> |  |

|   |
|---|
|  <b>#BeTheWave</b>   |
| <p>Apply the knowledge gathered in the lesson into action as ethical and informed citizens. It is an important aspect to ensure students know they have the power to enact and make changes within their own lives and within the school. It is also a positive step which helps to balance some of the negative impacts explored within the lesson.</p> <p>Decide on an action/actions to take forward either as individuals or as a class, these are some suggestions, or the class could generate their own.</p> |
| <p>School:</p> <ul style="list-style-type: none"> <li>• Use your pupil voice and become a <a href="#">Plastic Free School run by Surfers Against Sewage</a></li> <li>• Take part in the <a href="#">Young Reporters for the Environment</a> and highlight the dangers of marine plastic for our wildlife.</li> <li>• Highlight the Litter and Wildlife facts from the <a href="#">RSPCA</a>. In an assembly, school newsletter or social media</li> </ul>   |
| <p>Individual:</p> <ul style="list-style-type: none"> <li>• Live with less plastic - Take a look at <a href="#">Refill Wales</a> and become a Refill Champion</li> <li>• Support local <a href="#">Wildlife Trust for Wales</a> or <a href="#">WWF Cymru</a> and find out about the nature on your doorstep</li> <li>• Investigate <a href="#">Living Seas Wales</a> - help with citizen science work or join an event.</li> </ul>  |

| <b>Alternative Activities</b>  | <b>Resources and Equipment</b> |
|--|--------------------------------|
| Raise awareness of the intervention activities highlighted in the video <a href="https://youtu.be/QG8vNigOML4">https://youtu.be/QG8vNigOML4</a>  |                                |
| Use the consultation document <a href="https://gov.wales/reducing-single-use-plastic-wales">https://gov.wales/reducing-single-use-plastic-wales</a> to encourage discussion on the proposed ban of single use plastic items by the Welsh Government. |                                |



cadwch keep  
gymru'n wales  
daclus tidy

33-35 Heol yr Eglwys Gadeiriol, Caerdydd, CF11 9HB | 33-35 Cathedral Rd, Cardiff, CF11 9HB  
029 2025 6767 keepwalestidy.cymru info@keepwalestidy.cymru



Cadwch Gymru'n Daclus yn gwmni wedi ei gyfyngu trwy warant. Rhif Cwmni: 4011164 Rhif Elusen: 1082058 Rhif TAW: 850 3958 13  
Keep Wales Tidy is a Company Limited by Guarantee. Company Registration Number: 4011164 Charity Registration Number: 1082058 VAT Registration Number: 850 3958 13