



Long lasting litter

This activity plan highlights the importance of sustainably managing our natural resources, focusing on the amount of waste we produce, the importance of recycling and the impact that inappropriate disposal can have on the environment, communities and the economy.



Natural Resources Wales' purpose is to pursue sustainable management of natural resources in all of its work. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

Objectives

By the end of this activity learners will be able to:

- Describe the length of time it takes specific example materials to break down on land and in the sea.
- Discuss the local and global effects of littering on the natural environment.

Duration of session

25 mins

Curriculum area

ESDGC
Geography

Location

Any outdoor environment or indoors (space permitting)

Curriculum links

KS2 ESDGC

Consumption and waste

Where the things people consume come from and go to
That waste can cause pollution

KS2 Geography

Study

Living in my world: caring for places and environments and the importance of being a global citizen

KS3 ESDGC

Natural environment

Show informed concern for the quality of the natural environment near and far

KS3 Geography

Study

Tomorrow's citizens: issues in Wales and the wider world of living sustainably and the responsibilities of being a global citizen

Please note this activity will also help you deliver multiple aspects of the national Literacy and Numeracy Framework and Digital Competency Framework.

Equipment and resources

- **Table: Waste timeline.**
- **Resource cards: Tidal trash - focusing on waste in the sea.**
- **Resource cards: Land litter - focusing on waste on land.**
- **Two bags containing specific pieces of 'rubbish' from the waste timeline table.**

What to do

Part 1 – How long 'rubbish' takes to break down

- Divide into groups and give each group an identical bag of 'rubbish'.
- Ask the group how long they think it would take in hours, weeks or years for each of the items to breakdown in the sea.
- As a group, try to agree/ compromise and line up the objects in order of how long it will take them to break down. Create a timeline.
- The groups should put their 'rubbish' in a line alongside the other groups timelines to make it easier to compare their choices.
- Use the *Waste timeline* table to go through each item and discuss how long it takes to break down.

Part 2 – Consequences of rubbish

- Having established the length of time the items remain in the environment, discuss what impacts that might have.
- If focusing on the effect of litter on land choose the *Land litter* resource cards or if concentrating on litter in a marine environment choose the *Tidal trash* resource cards.
- Hand out the resource cards to small groups.
- Give each group some time to look at their cards and read the information.
- Ask each group to show and explain their cards to the wider group.
- After discussing the impacts of rubbish in the environment, ask the learners what positive steps they could take to reduce their impact or help the situation.
- Suggestions could include, reduce, re-use, recycle, always put litter in a bin, remind family members to take bags with them when they go shopping, take part in an organised beach clean-up, raise awareness at school/home/in their local community or start a campaign e.g to stop the release of balloons at events or the use of Chinese lanterns.

Suggested key questions

- What is it - natural, manmade, organic, inorganic?
- How could it get into the sea?
- What factors might change the break down timeline?
- What does biodegradable mean?
- What is the appropriate disposal method?
- What behaviour changes can you make to reduce litter and waste getting into the natural environment?

Alternative format; large print or another language, please contact:
enquiries@naturalresourceswales.gov.uk
0300 065 3000

www.naturalresourceswales



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Adapting for different needs/abilities

Less able:

- Complete timeline activity as a group and/or with additional support from adults.
- Less technical detail on items.

More able:

- Group to create a timeline on the ground with a scale and add items of rubbish to the appropriate location on the timeline.
- Groups to feedback with more thoughts on the picture/info cards including how measures can be put in place to reduce the problems.

Follow up activity/extension

- Research further information about sources and consequences of waste in the sea.
- Follow up on any of the actions suggested at the end of part 2, e.g. write a letter to MP, raise awareness in local community.

Try out these activities:

- *Newspaper snippets*
- *Catch a fly-tipper*
- *The 3 C's of littering and fly-tipping*
- *Did you know...?*

Additional information

Figures can vary between sources but the importance of the activity is not to learn exactly how long items take to breakdown but rather to highlight that our waste will remain in the natural environment for a significant period of time and that it is important to consider what effect inappropriate disposal such as littering may have on the environment.

Sources used to produce the *Waste timeline* table are:

www.mass.gov/eea/docs/czm/coastsweep/pocket-guide-2003.pdf

www.tangaroablue.org/resources/fact-sheets.html

The amount of time it takes material to break down will vary depending on conditions such as temperature, moisture, oxygen, etc. Some material will biodegrade (get broken down by microorganisms), others like plastic might photodegrade (broken down by ultraviolet light), while others may just break down into smaller microscopic pieces. Due to the amount of time it takes some of the waste to break down many of the figures are estimates. Further information on how these estimates are made can be found at: sciencelearn.org.nz/Contexts/Enviro-imprints/Looking-Closer/Measuring-biodegradability



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