

SDG 15 Earth Literacy Lesson



Science,
Geography
Global Citizenship

Lesson 1

Focus: SDG 15
Life On Land

What is our waste?

Lesson Title & Summary: What is our waste? Recycling, composting, landfill

Learners will examine the amount of waste and wasteful products that exist around them, and the toll that this has on the environment. They will apply the information they have learnt in the lesson on focused action they can take within their own school to reduce the amount of waste.

In this lesson, the learner will:

- be introduced to the idea of sustainability and how it relates to our daily lives
- develop an understanding of life cycle analysis, circular economy and waste management
- learn about the impact of waste in the environment and how we as consumers can impact on this issue
- develop group work and analysis skills

Materials:

- Introduction to Waste Presentation
- YouTube video or printed material on impact of waste
- Non-transparent bag
- Common items made from different materials: e.g toothbrush (one bamboo, one plastic) takeaway dish (one polystyrene, one plastic, one cardboard cups (one single use coffee cup, one reusable coffee mug) water bottles (one single use, one reusable plastic, one reusable metal) etc.

4 QUALITY
EDUCATION



7 AFFORDABLE AND
CLEAN ENERGY



11 SUSTAINABLE CITIES
AND COMMUNITIES



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



What is our waste?



Activity 1 Introduction to issues with our waste (15 mins)

- 1) Use the Introduction to Waste Presentation to introduce issues with waste.
- 2) Watch the YouTube video or hand out the printed material about the impact of waste.
- 3) In groups, discuss the question in the Introduction to Waste Presentation.

Activity 2 - Sustainable pairs (25 mins)

- 1) Position the class in a circle, all facing inward. There needs to be enough room to walk around the circle, behind the learners.
- 2) Walking behind them so they cannot see the items, take items from the bag of 'waste' and give one item to each learner.
- 3) Learners should not look at their item until the whole class is each in possession of one item.
- 4) Learners now have to find their matches – i.e. the two different types of toothbrush are a match, the cups are all a match. This will create groups of 2, 3 or 4 depending on the materials you have used.
- 5) In their groups, they must discuss the items they possess in terms of sustainability and the circular economy. Which do you use? How would you dispose of these items? What are they made of? What is the most sustainable? Can they be reused? Can they be repurposed into other items?
- 6) Ask the groups to align the items from most to least sustainable and present their feedback to the whole class.

Activity 3 – Presentation (15 mins)

- 1) Display the Introduction to Waste Presentation again.
- 2) Continue with Part 2 of the Presentation
- 3) In small groups, discuss what they see as the biggest waste issues in their school.

For each issue:

- What is the issue?
- Why do they exist?
- What are some possible solutions to the issue?

Reflection exercise- see box below (5 mins).

REFLECTIVE EXERCISE: 3-2-1

Give learners time to reflect on the lesson in their notebooks, using the following prompts;

- Three things they feel they have learnt from the lesson and the tasks.
- Two things they found the most interesting and would like to learn more about.
- One piece of feedback on the lesson and the tasks.

You can use the information in their reflections to plan and modify the accompanying lessons, create projects or share with another teacher to implement cross-curricular tasks.

What is our waste?



Extension / Reduction Activities:

Reduction: for a shorter class, ask students to watch the You Tube video in Activity 1 before the lesson. Reduce the time for Activity 2.

Extension: for a longer class, select one of the key issues that comes up from the discussion in Activity 3. Write an action plan for solving this issue in the school. Decide on areas of responsibility and start implementing the action plan over the coming weeks.

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

Activity 1

- Introduction to Waste Presentation- Part one
- **Sources of Marine Litter** <https://www.youtube.com/watch?v=017bBeXhYz4&t=1s>

Activity 3

- Introduction to Waste Presentation- Part two
- **Recycling – how to** <https://www.youtube.com/watch?v=sZZsBedy0CU&t=81s>
- **Zero waste challenge:** <https://www.youtube.com/watch?v=KtTTnEePeAQ>

LOCAL EXPERTISE/ TRIP SUGGESTIONS

- Organise a visit to the local waste disposal facility
- Contact the County Councils Environment Officer
- Invite a local speaker or business owner who uses sustainable products to come and speak to the class.
- Find out from the local Tidy Towns group if they are working with waste issues
- Explore An Taisce's Green School Litter and Waste resources and link into the school's programme

Our waste:
Recycling and
composting

What Do We MEAN BY SUSTAINABLE?

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Bruntland Report for the World Commission on Environment and Development (1992)

Watch this YouTube video: Sources of marine litter

▶ <https://www.youtube.com/watch?v=017bBeXhYz4&t=1s>

Class Discussion time!

- ▶ Did you learn something new?
- ▶ Did you enjoy watching the video?
- ▶ How did the video make you feel?

- ▶ How much information in the video were you already aware of?
- ▶ Where did you learn about these topics?
- ▶ What would you change about the video to make it more suitable for your peers?

Stage 2: Stop the presentation here
and play the game

Post Game Discussion time!

- ▶ Discuss what materials the products made from?
- ▶ Can you work out if they are recyclable?
- ▶ Which product is most sustainable?

Part 2: What can we do?

- ▶ Working in groups try to catalogue what waste your group creates in a day, a week and a year?
- ▶ Discuss what happens to that waste? Is it recycled? Does it go to landfill? Do you have a home compost?

Part 2: What can we do? Watch these videos for more tips

Recycling – how to:

<https://www.youtube.com/watch?v=sZZsBedy0CU&t=81s>

Zero waste challenge:

<https://www.youtube.com/watch?v=KtTTnEePeAQ>

Final activity: Group discussion

What actions can you take to reduce the amount of rubbish you create?

What can you as a class do to reduce waste in the school environment?

SDG 15 Earth Literacy Lesson



Science,
Geography
Global Citizenship

Lesson 2

Focus: SDG 15
Life On Land

Lesson Title & Summary: Your local river – mapping your catchment

Water is one of our most important resources. Without it, life on this earth would not be possible, but how much do we take it for granted? As Sylvia Earle once said "No water. No life. No Blue. No Green". In this lesson, students will begin to explore local water sources, using mapping techniques and group work to gather information about how water is managed in the local area and begin to explore the issues affecting local waterways.

In this lesson, the learner will:

- develop an understanding of the interconnectedness of ecosystems
- develop an understanding of the water cycle and its role in the provision of drinking water
- develop communication and group work skills
- practice active listening skills

Materials:

- Video - Saving Ireland's water
- Video - Long profile of a river
- Video - The water cycle
- Video - The water treatment process
- Video - how much water do we use
- Local map
- A3 Paper for mapping task
- Internet access

4 QUALITY EDUCATION



7 AFFORDABLE AND CLEAN ENERGY



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Your Local River



Activity 1 Introduction to water (15 mins)

- 1) Watch video - Eco Eye: Saving Ireland's water. Learners note down the main ideas.
- 2) Watch video - Long profile of a river. Learners note down the main ideas.
- 3) Share ideas with a partner.

Activity 2 River Mapping (40 minutes)

- 1) River mapping task - divide the learners into groups and give each group a sheet of A3 sized paper.
- 2) Ask the groups to select a local river and begin to draw a map of the river. Ask them to mark on the map any features of the river they are aware of, where they think the river starts and where it enters the sea. Remind them to include any impacts that might be seen along the river from human use. Ask learners to add in any towns or villages that are close to the river and create a key to identify the items marked on their map.
- 3) Ask each group to identify resources that can be used from the river, whether there is an economic benefit from the river to their area and how the river may be used now and in the future.
- 4) Invite each group to present their river map and highlight the points they felt most important to them.

Reflective exercise- see box below (5 mins).

REFLECTIVE EXERCISE: 3-2-1

Give learners time to reflect on the lesson in their notebooks, using the following prompts;

- Three things they feel they have learnt from the lesson and the tasks.
- Two things they found the most interesting and would like to learn more about.
- One piece of feedback on the lesson and the tasks.

Your Local River



Extension / Reduction Activities:

Reduction: for a shorter class, ask students to watch the videos in Activity 1 at home and make notes on the main ideas. Start the class by putting students into pairs to share their notes, ask some basic comprehension questions and then move onto Activity 2.

Extension: for a longer class, watch the water cycle and water treatment process videos (see Media box). Ask the students to begin to map out where in their daily lives they use water. Begin from when they get up in the morning until they go back to sleep at night and identify when they use water throughout their day. Ask them record what the water source is and how much water they think each activity uses. Try to calculate an average use per person of water per day, then a total for the class and then the school.

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

Activity 1:

Video: Eco Eye - saving Ireland's water

<https://www.youtube.com/watch?v=1nUppNtj3KU>

Video: long profile of a river

<https://www.youtube.com/watch?v=JIO-OjS3CXc>

Extension task:

Video: the water cycle

<https://www.youtube.com/watch?v=FzYjPpxP-Cw>

Video: the water treatment process

<https://www.youtube.com/watch?v=iYFwFRWOEho>

Video: how much water do we use

<https://www.youtube.com/watch?v=SYwEAR6CbQw>

LOCAL EXPERTISE/ TRIP SUGGESTIONS

- Visit a local catchment area for a tour.
- Invite a representative from your local Lawpro office to speak to the class on local initiatives - <https://lawwaters.ie/>
- Invite a representative from Irish Water to speak to the class on water usage and waste.