

## Flintshire Recycles Recycling Lesson - Teacher's Guide

### Introduction

This teacher's guide contains background information to help you deliver the Recycling Lesson to your class. This lesson is intended for primary aged pupils ages 7 – 11. The lesson has been designed to take approximately 45 minutes.

The aim of this lesson is to educate pupils on recycling. It intends support Wales' 'Towards Zero Waste' strategy and inform pupils of why we should recycle, what can be recycle and the recycling journey.

### Recycling Lesson

Aspects in this lesson include:

- What is recycling?
- Why recycle?
- What can be recycled?
- How to recycle
- The recycling journey

Activities within the lesson are generally self-explanatory.

### What is Recycling?

To recycle an item means to use the item to make something new.

Pupils may use words such as cycle, reduce, reuse, or compost to help in their definition. They may start to: apply concepts such as preventing rubbish (or waste reduction); discuss the environmental benefits (e.g. saves energy) or identify recyclable items (glass, paper, cans, etc.)

### Why Recycle?

This section provides background information on why we should recycle. Older or more able pupils may wish to discuss these in more detail.

#### Recycling conserves resources

When we recycle, used materials are converted into new products, reducing the need to consume natural resources. If used materials are not recycled, new products are made by extracting fresh, raw materials from the Earth, through mining and forestry.

Recycling helps conserve important raw materials and protects natural habitats for the future.

#### Recycling saves energy

Using recycled materials in the manufacturing process uses considerably less energy than that required for producing new products from raw materials – even when comparing all associated costs, like transport.

Plus there are extra energy savings because more energy is required to extract, refine, transport and process raw materials ready for industry compared with providing industry-ready materials.

#### Recycling helps protect the environment

Recycling reduces the need for extracting (mining, quarrying, and logging), refining and processing raw materials all of which create substantial air and water pollution.

As recycling saves energy, it also reduces greenhouse gas emissions, which helps to tackle climate change.

## Recycling reduces landfill & incineration

When we recycle, recyclable materials are reprocessed into new products, and as a result the amount of rubbish sent to landfill sites or for incineration reduces.

### What can I recycle?

All the items pictured on slides 4 & 5 are all currently recyclable at home through Flintshire kerbside collections. Prior to the lesson it is suggested to ask pupils to find out for themselves what can be recycled at home by asking their parents/carers.

If possible, it will be useful to have a couple of recyclable items to be able to pass around the class e.g. plastic bottle, cardboard box etc.

### Game: What can I recycle?

For this game split the class into two groups. For each room each group will write down as many items as they can as well as the material it is made of e.g. Shampoo bottle, plastic. Use a timer to give the groups one minute per room. Award one point for each room to the group with the most correct answers. In the event of a tie award each group one point. The group with the most points at the end wins.

This activity focuses on items that can be recycled but the teacher may wish to discuss items that cannot be recycled with older or more able pupils.

(Further information on what can / cannot be recycled in Flintshire can be found on our website <https://www.flintshire.gov.uk/en/Resident/Bins-Recycling-and-Waste/What-can-and-cannot-be-recycled.aspx>)

## Recycling in the Bathroom

There are lots of items in the bathroom that can be recycled, and this can make a huge difference. For example, if everyone in the UK recycled one toothpaste box, it would save enough energy to run a fridge in over 2,000 homes for a year. Here's a handy list to remind you:

- ✓ Toothpaste boxes
- ✓ Toilet roll tubes
- ✓ Plastic shampoo and conditioner bottles
- ✓ Shower gel containers
- ✓ Liquid soap bottles
- ✓ Bathroom cleaner bottles

## Recycling in the Living Room

Did you know that it takes seven days for a recycled newspaper to come back as newspaper again? You could be reading your favourite newspaper comic on recycled paper in no time at all! In this room you can often find these items for recycling:

- ✓ Envelopes
- ✓ Newspapers
- ✓ Cardboard packaging from online shopping
- ✓ Cans
- ✓ Plastic bottles
- ✓ Glass bottles
- ✓ Greeting cards
- ✓ Paper
- ✓ Plastic cup

## Recycling in the Bedroom

If everyone in the UK recycled one aluminium deodorant aerosol, enough energy would be saved to run a TV in over 151,000 homes for a year. Amazing isn't it? Items to look out for include:

- ✓ Empty tissue boxes
- ✓ Old magazines
- ✓ Empty deodorant aerosols and hairspray
- ✓ Old clothing - depending on the school's council area

## Recycling in the Kitchen

Along with the usual drinks bottles in the kitchen, remember to check the cupboard under the sink! Items often forgotten include:

- ✓ Washing-up liquid bottles
- ✓ Surface cleaner bottles - just remember to remove the trigger top!
- ✓ Washing liquid and conditioner bottles
- ✓ Aerosols, tins of furniture polish and air fresheners - depending on the school's council area
- ✓ Empty dishwasher tablet boxes and kitchen wrap boxes/tubes
- ✓ Cereal boxes
- ✓ Plastic sauce bottles e.g. ketchup
- ✓ Cardboard egg cartons
- ✓ Plastic yoghurt pots - depending on the school's council area
- ✓ Plastic drink bottles
- ✓ Food tins e.g. baked beans
- ✓ Glass bottles and jars
- ✓ Drink cans

## Recycling Journey

This section covers the recycling journey for tins and cans. Pupils will watch a video and then answer the question as a class. The video can be accessed by clicking on the video image on the slide when PowerPoint is viewed in 'Slide Show' mode; alternatively, the web address is linked below the video.

### Aluminium cans

Aluminium cans are shredded, removing any coloured coating. They are then melted in a huge furnace and the molten metal is poured into ingot casts to set. Each ingot can be made into around 1.5 million cans.

Aluminium foil is a different alloy and is usually recycled separately with other aluminium scraps to make cast items such as engine components.

### Steel cans

Steel cans are put into the furnace where molten iron is added. Oxygen is then blasted into the furnace which heats up to around 1700°C. The liquid metal is poured into a mould to form big slabs which are then rolled into coils. These coils are used to make all sorts of steel products.

Steel cans are processed with other steel scrap but not with aluminium cans.

## How can I recycle?

This slide is easy tips for encouraging pupils to recycle at home. Encourage pupils to ask parents/carers to be involved and to learn their recycling processes at home.

## Recycling Action

This task is to encourage pupils to help recycle more at home. Each pupil will complete an action card by writing at least one action. Examples of suitable actions are:

- ✓ Encourage my parents to recycle
- ✓ Find the recycling symbol on packaging
- ✓ Use more things that are recyclable
- ✓ Recycle my drink cans (or any other appropriate item)

Pupils should be encouraged to take these cards home to their parent(s)/carer(s). To follow up, pupils should be encouraged to discuss in class the following week how they are getting on with their actions.

## Further resources

Further information regarding Flintshire kerbside recycling collections can be found here;

<https://www.flintshire.gov.uk/en/Resident/Bins-Recycling-and-Waste/Home.aspx>

More information on what happens to recyclable items can be found here;

<https://www.walesrecycles.org.uk/>