

Plastic: Key Stages 1 and 2

Ideas for teachers

including teachers' notes for
pupils' activity pages

Hyperlinks within the text are **underlined bold copy**.

Click on the link to find out more about the subject.

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Ideas for teachers

Background

Plastic is a man-made product that doesn't occur naturally. Almost all plastics are made from oil by a special procedure that changes the oil's carbon. Plastic is used to make many things because it is strong, lightweight, easily moulded into shapes or dyed into colours. There are many different kinds of plastics. Plastics can last a long time and are less likely than many other materials to corrode when they come into contact with certain substances. For this reason they are both very useful and very difficult to dispose of. As plastic takes so long to break down, plastic waste creates a big problem in the natural environment harming wildlife and environments. Plastic makes up a large proportion of the waste that ends up in landfill. Facilities for recycling are limited and reducing our consumption of plastic in everyday items such as single use plastic bags and bottles can have a positive impact on the environment.

Please see [Plastic information sheet](#) from [Waste Online](#) or visit [rethink waste: in education](#) for more information.

Rethink

- Encourage pupils to use reusable water bottles, bags and lunch boxes.
- Set the pupils a task to list all the plastic products they use in everyday life.
- For your own information watch this video looking at the use of [plastic for bottled water](#).
- Think about organising [Waste Free lunch](#) days when pupils should try and minimise the amount of packaging

Every square mile of ocean contains an average of 46,000 pieces of plastic, which choke and entangle sea birds and mammals



Plastic bags do not biodegrade; they break down into small pieces, eventually entering the food chain when eaten by animals

used for lunches. Compare the amount of waste generated from a regular lunch day with that from one of your Waste Free Days.

- For your own information read the positive stories of how countries around the world are tackling the issue of plastic bags. See **Plastic Bag Bans Around the World**.
- Also read **Plastic Bag Free Towns** to find out how people in the UK have taken on the problem of plastic bags themselves.
- Challenge the pupils to come up with suggestions as to how they could persuade more people in their area to reduce their use of plastic bags.
- Invite local businesses, **politicians** or councillors in to your school so children can question them about what they are doing to reduce packaging.
- Visit the local supermarkets and look at the most heavily packaged items. Encourage children to write to the supermarkets to ask about their use of plastic packaging.
- Contact your local council to arrange for a representative to come out to the school and discuss the topic of waste.

Reduce

- Class or school councils could lobby the pupils to use fewer plastic bags and bottles.
- Pupils can think of ways to encourage their friends and families to reduce their consumption of plastic bags and bottles such as converting to reusable bags and bottles.

On average we use a plastic bag for only 12 minutes before throwing it away

Reusing plastic is preferable to recycling as it uses less energy and fewer resources

Apart from that which has been incinerated, nearly every bit of plastic ever made still exists today

Reuse

- Plastics are amazing materials, often designed to be hardy and long lasting. Some plastics are unsuitable for reusing with food or drink but can often be used for other purposes. Task your pupils to come up with creative uses for plastic bags or bottles. Look [here](#) for some ideas.

Recycle

- Have recycle bins available in class and make sure pupils know when and how to use them and which plastic can be recycled.
- Visit or contact your local council recycling centre or packaging factory to learn more about the process involved and the energy used. For a list of local councils in Northern Ireland click [here](#).
- Learn about the different [recycling symbols for plastic](#).
- Learn about the [recycling journey of plastic bottles](#).
- Find out more about [recycling](#) and the facilities in your area.
- Use the internet to find out which types of plastic can be recycled in their local area.

Making reusable and sustainable items a way of life is a very positive step towards a planet-friendly existence



Each year, an estimated 500 billion to one trillion plastic bags are consumed worldwide

Teachers' notes for pupils' activity pages

Key Stage 1

Curriculum links

Cross-Curricular Skills
Thinking Skills and Personal Capabilities
Language and Literacy
The Arts
The World Around Us
Personal Development and Mutual Understanding

Background Knowledge

Plastic is very useful material which is used for many things. Plastic should be used wisely as it is difficult to get rid of and can be harmful to the environment. There are lots of ways we can use less plastic.

Objectives

- Pupils will use images to discuss how they feel about plastic pollution in the environment.
- Pupils will discuss ways to rethink, reduce, reuse and recycle plastic bags and bottles.
- Pupils will compare plastic and canvas bags.
- Pupils will make consider a range of plastic items and some alternatives and decide which is better for the environment.
- Pupils will think creatively about what the world would look like with less plastic.

Childrens' activities**Plastic pictures**

Use the pictures provided to discuss some of the problems with overuse of plastic and plastic pollution. Encourage the children to look carefully at the pictures and talk about what they think they are about. Ask them how the pictures make them feel. It is important to acknowledge both positive and negative emotions. Children will interpret pictures differently. They can use the word list or blank face to record their feelings. Provide any other words the children may need.

Ask the children what they could do or what changes they could make to lessen the problem.

Plastic bag checking

Help children to compare a plastic shopping bag and a cotton bag. Use bags that are about the same size. They can try to find out which bag is stronger and will last longer.

Make your choice

Use the pictures to talk about using less plastic. Talk about the amount of plastic used in packaging. Children can look at the pictures and explain which one they think is better for the environment.

A future with less plastic

This activity allows children to use their imagination to think creatively about what the world could look like with less plastic.

They can think about the natural environment, their home, shops and/or school. Give the children the opportunity to discuss their hopes and ideas with the rest of the class.

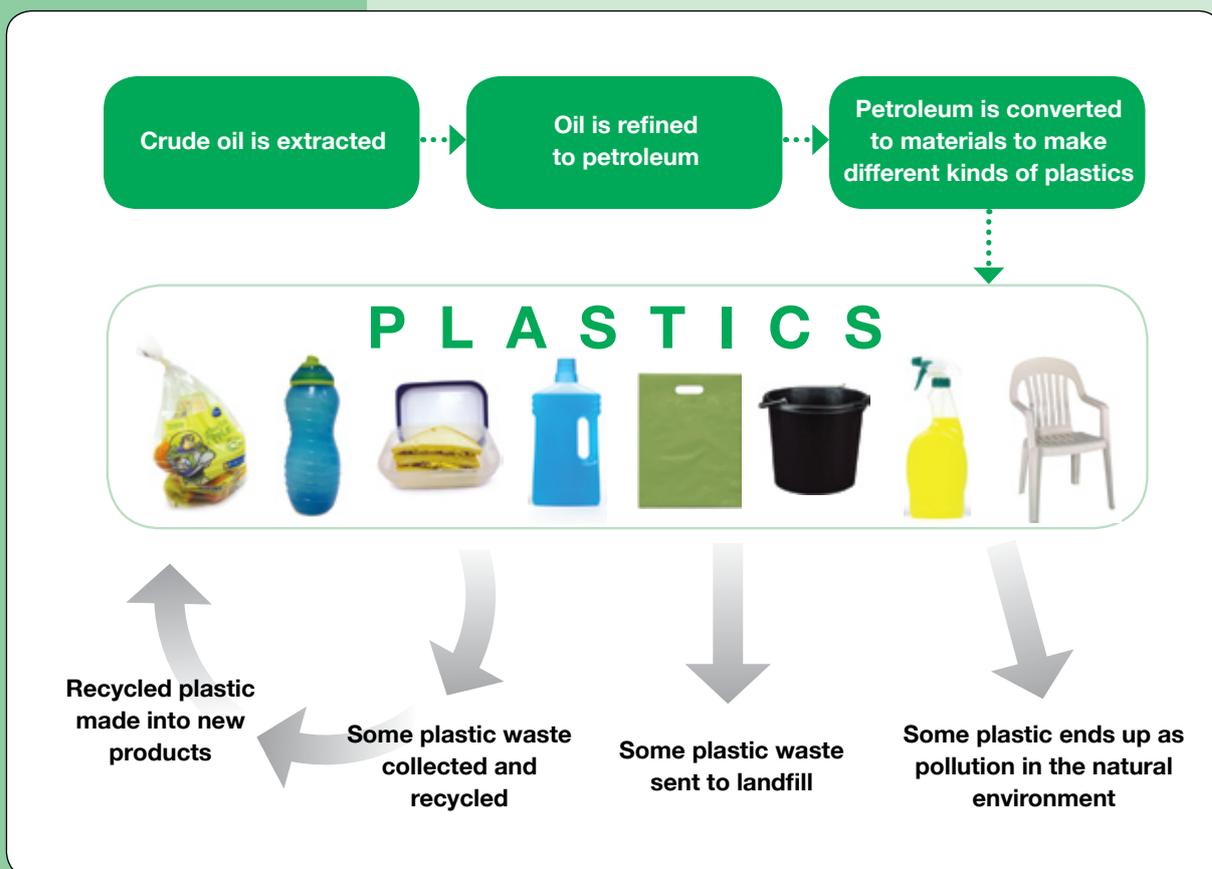
Key Stage 2

Curriculum links

Cross-Curricular Skills
 Thinking Skills and Personal Capabilities
 Language and Literacy
 The Arts
 The World Around Us
 Personal Development and Mutual Understanding

Background Knowledge

Plastic is made from oil. Oil is a limited resource. Production and recycling of plastics consumes energy and can be harmful to the environment. Most plastic still ends up in landfill. Plastic pollution is growing problem both at home and internationally. Plastic can take hundreds of years to degrade.



Aim

Pupils will understand the importance of reducing the amount of plastic used in such everyday objects such as plastic bags, bottles and food packaging.
 Pupils will feel empowered to take action to reduce their usage of plastics.

Objectives

- Pupils will estimate how many plastic bottles could be used in a school in a year and then think creatively about ways to reduce this.
- Pupils will learn that;
 - Plastic is made from oil which is a limited natural resource.
 - Currently only some plastic can be recycled. Recycling plastic saves energy
 - Plastic that is not recycled ends up in landfill and in the natural environment where it can take centuries to degrade.
- Pupils will attempt to reduce their consumption of plastic by carrying out a number of challenges.
- Pupils will think creatively to come up with a design for a reusable bottle that will be attractive to their peers.

Childrens' activities

How many bottles?

Pupils should work out the numbers of bottles used by James and his school mates and then come up with suggestions on how this can be reduced. Help the children to work out the number of bottles that could be saved.

Take a guess

Ask the children to guess the answers to the questions. Discuss how they feel about the answers.

Children could create their own plastic facts quiz.

Q: How long do you think it takes for plastic bottles take to begin composting?

A. Around 500 years.

Plastic bags have not been around long enough for us to know this for sure but estimates put the length of time for a plastic bag to degrade in landfill sites between 400-1000 years.

Q: Recycling one plastic bottle can save enough energy to power a 60-watt light bulb for how long.

A: 6 hours

Q: What proportion of plastic bottles end up in landfill?

A: 4 out of 5

Estimates vary but over 80% of plastic bottles end up in landfill.

Q: It takes how many 2 litre plastic bottles to make one fleece?

A: 25

Plastic challenges

Set the pupils some challenges to reduce their use of plastic bags. You could make it into a class competition. They could come up with a list of tips for families and friends to do avoid using new plastic bags.

See how long pupils can go without using any new plastic bags. They could;

- Think twice about taking a plastic bag if buying something that is easy to carry.
- Keep reusable bags with them so they always have them available when you go to the shops.
- Ask your favourite shops to stop providing bags for free, or to offer a discount for not using new bags.
- Invite local politicians in to your school and ask them about introducing laws to charge for plastic bags or ban them.

Design a bottle

Set the pupils a task to design a reusable bottle for the 8-12 year age group.

They should think about the most suitable material and add any additional ideas to make the bottle more useful e.g. carry straps, name labels etc.

They can draw their designs labelling any special features then share their ideas with the rest of the class.