

Sustainability in Packaging

Sustainability in Packaging will help you think about how we can reduce the environmental impact of our packaging, with solutions from the past and present. Have a go at thinking about each question before checking our hints and answers.

This activity is suitable for KS3 and GCSE level students, and is designed to support topics including PSHE, citizenship, business, marketing, entrepreneurship and design.

Throughout our history lots of different materials have been used to package the products we buy, and these materials have all had a different impact on the environment. Today it is very important to think about how the packaging we use affects the planet, and what we can learn from past and current packaging developments to try to better look after the Earth.

So what happens to packaging when you throw it in the bin? Well normally one of three things:

It biodegrades. This means it will break down, or decompose, into natural elements within a year, causing little long term harm to the Earth. Materials like card or paper are biodegradable.



It is recycled or reused. This packaging can be cleaned, and either reused by the consumer, or processed at a recycling centre and turned into something else. Materials like card, glass, metal and some plastics can be recycled or reused.



Packaging that can't biodegrade, be reused or be recycled goes to landfill, where it is buried and left to break down over hundreds or thousands of years. Materials like plastic, especially single use plastics, often go to landfill.



The Problems...

When packaging goes to landfill, that land can't be used for housing or farming for thousands of years. As the packaging slowly breaks down it releases dangerous toxins into the soil, and gasses into the air, contributing to global warming. This also happens when packaging that could go to landfill is burned instead. Packaging that isn't biodegradable or recycled also often ends up in our oceans, sometimes forming giant islands of rubbish. In fact, more than 8 millions tonnes of plastic enter our oceans each year, and it's estimated that one in three sea turtles today has eaten plastic!



These packets of crisps were buried in a garden in the 1970s, and dug up again in 2019. Look how great their condition is after nearly 50 years underground! This gives us a good idea of just how long this plastic could take to break down in landfill.

It's clear we need to cut down on wasteful packaging, especially packaging like a lot of the plastic that ends up in landfill. But why do we use so much plastic at all? Have a go at thinking of some of the benefits of using plastic in packaging below:

Why do we use plastic?

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Hint: plastic keeps food hygienic as it is air and water tight. It is very cheap to make and buy. It is durable and hard to break and can stand different temperatures. It is flexible, and can be made into almost any shape!

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However, although we see plastic everywhere today, this wasn't always the case. The first type of plastic was invented in 1862 and made from plants, but the first synthetic (or manmade) plastic, Bakelite, wasn't introduced until 1907. We had to find ways to package our goods for hundreds of years before this!

Take a look at some of these examples of sustainable historic packaging from the Museum's collection:



Day and Martin Real Japan Blacking Shoe Polish. This Victorian shoe polish came in a large ceramic pot, which was incredibly sturdy and could be reused over and over. The large jar also meant that customers could get a lot more shoe polish with less packaging than lots of little jars like we see today, making it cheaper and more efficient in the long term. The label is paper, and completely biodegradable.

Golden Shred Marmalade. This ceramic Edwardian jar of marmalade, like the shoe polish above, was sturdy and easy to reuse at home. The jar was sealed with a cloth cover, which could also be reused, and a biodegradable paper label.



Corona Orangeade. This glass bottle of orangeade, dating to the 1920s-30s, was delivered to customers' doors, and a small deposit paid for the bottle. When customers finished the drink, they could return the bottle and get their deposit back, or swap it out for a full bottle while the used one was taken away, cleaned and refilled. This refill system limited the amount of bottles that ever had to be produced, preventing waste.

Lifebuoy Toilet Soap. Toilet soap was not for toilets! It combined soap, deodorant and shampoo into one product. This 1960s toilet soap came in a simple card box, with no plastic around the soap like we might see today. The packaging could be completely recyclable or biodegradable.



These are some brilliant examples of sustainable packaging from the past, but lots of companies are also creating more environmentally friendly packaging today. Have a look at these examples:

Ecover - S. C. Johnson and Son <i>Recycled packaging</i>	
Ecover fabric softener bottle, made from recycled and plant based plastic.	
Pros	Cons
Can be recycled over and over	Not biodegradable, will take a long time to break down
Can return bottle to stores to be refilled	Not many shops currently have refill stations
Made of recycled and plant-based plastic, reducing waste	



Dove, Sure and Vaseline Aerosols - Unilever <i>Efficient Packaging</i>	
Unilever compressed packaging for aerosols, using less metal and gas to package the same amount of product.	
Pros	Cons
Less metal used in packaging, more efficient	Smaller bottles suggest less value for money, informing customers is key
Recyclable	Customer confusion, often mistaken as a travel spray



Reusable Coffee Cup - Starbucks <i>Reusable Packaging</i>	
Starbucks sell reusable plastic cups in store to cut back on single use paper cups.	
Pros	Cons
Reduces waste – one month's use saves one pound of paper	If the cup is damaged it cannot be recycled in all areas
Customers receive 10% discount for using the cup	Not heat proof - still requires a paper sleeve. Can be impractical as it cannot be sealed



Edible Coffee Cup - KFC <i>Waste Free Packaging</i>	
KFC edible coffee cup, a double layer coating of white chocolate around biscuit wrapped in sugar paper.	
Pros	Cons
Waste free – entire cup can be eaten or biodegrade	Unhealthy, customers may not want extra biscuit and chocolate with their drinks
The structure of the edible packaging can stand the heat of coffee	Hygiene – the cup would come into direct contact with customer's hands, tables etc. which may be unclear. It would also require air tight and water tight storage.



We have seen some different types of historic sustainable packaging, and how some brands are trying to be more sustainable today. Now it's your turn to have a go – find a product, or several items from your cupboard with packaging you think could be more environmentally friendly. Have a go at redesigning it to be more sustainable and draw your new design in the space below. If you aren't sure where to start, why not think about the size, function or purpose, material, and if there are different parts to the packaging that are all essential.

My sustainable packaging:

Once you're finished, Tweet us your design at @museumofbrands – we will be sharing our favourites!

While you're here...

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We look forward to welcoming you to the Museum again soon!