

Waste Management



We all create waste. We often buy new things we don't need, throw away things that still work and even leave food because we are full. A lot of our rubbish goes to landfills. High levels of methane gas and CO₂ are generated by the rotting rubbish in the ground. These are greenhouse gases, which contribute greatly to the process of global warming. We should try to avoid, or at least reduce rubbish that we send to landfills. Living a zero-waste lifestyle means you strive to use as little single-use plastic as possible, instead opting for sustainable and reusable alternatives. In short, it means you send as little as possible to landfills.



Do we think carefully about how we dispose of it all?

Context

Waste timeline. The diagram shows the length of time it takes to decompose.



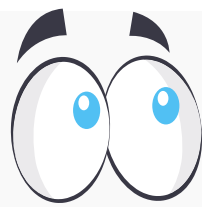


Have you ever thought...

Where does all the rubbish go?
Are we a throwaway culture?
What is the environmental impact?
What can we do about it?



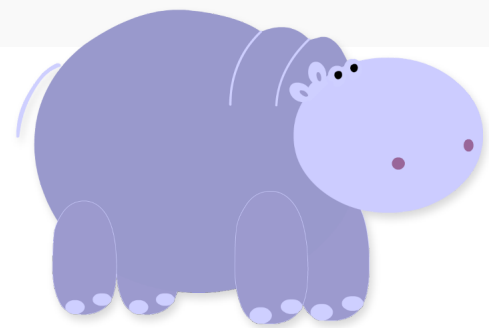
Take a look



Make a list of everything you throw away in a day, a week, a month.
How do you dispose of it? What happens to rubbish at school? At home?

How long would it take for everything to decompose? Estimate each one and then research the actual time.

Investigate...



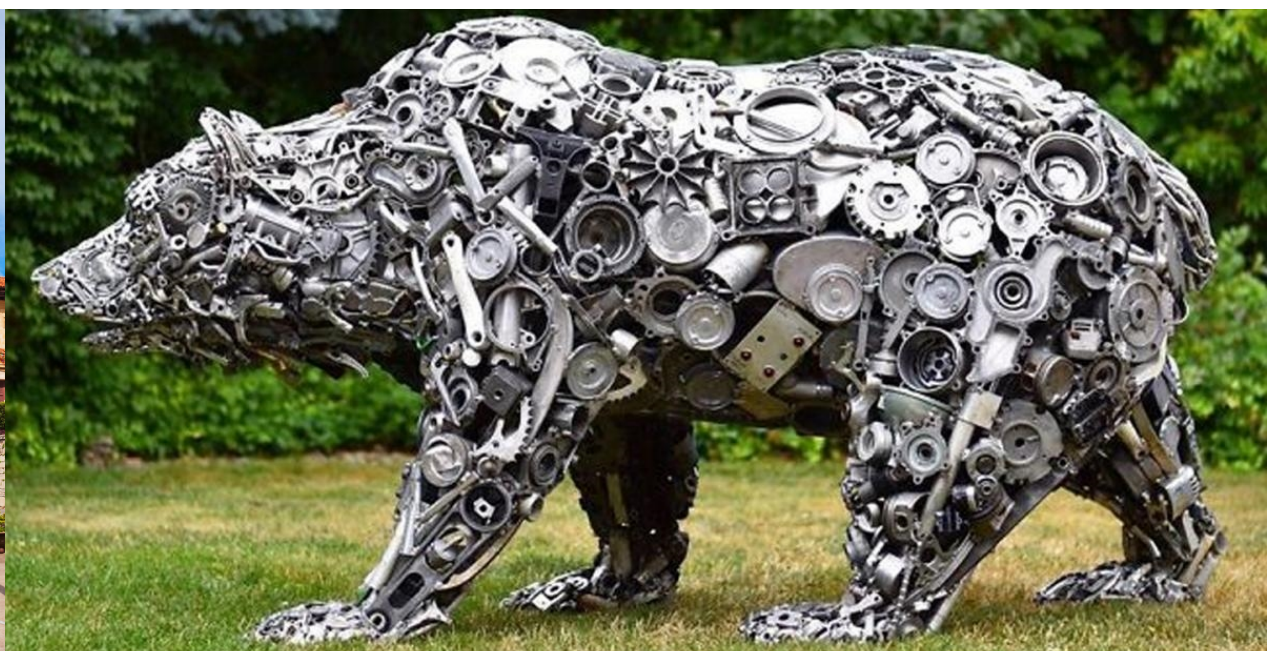
How does recycling work?

What can be recycled?

Can all glass be recycled? (car windscreen, drinking glass, glass bottle, mirror, windows)

You could conduct a survey to find out what people do with their waste.

Design a poster to heighten awareness. This could be a 3D sculpture using recycled materials.





Explore

Replacing as much as possible with reusable products, includes everything from food and drink packaging, hygiene products and clothing, with more sustainable or plastic free alternatives, will help protect the environment and benefit communities. It's about making a conscious effort to make better choices.

Having thought about the rubbish you throw away.

What changes could you make? What savings could you make?

Refilling a water bottle is cheaper and more environmentally friendly than buying a bottle of water!

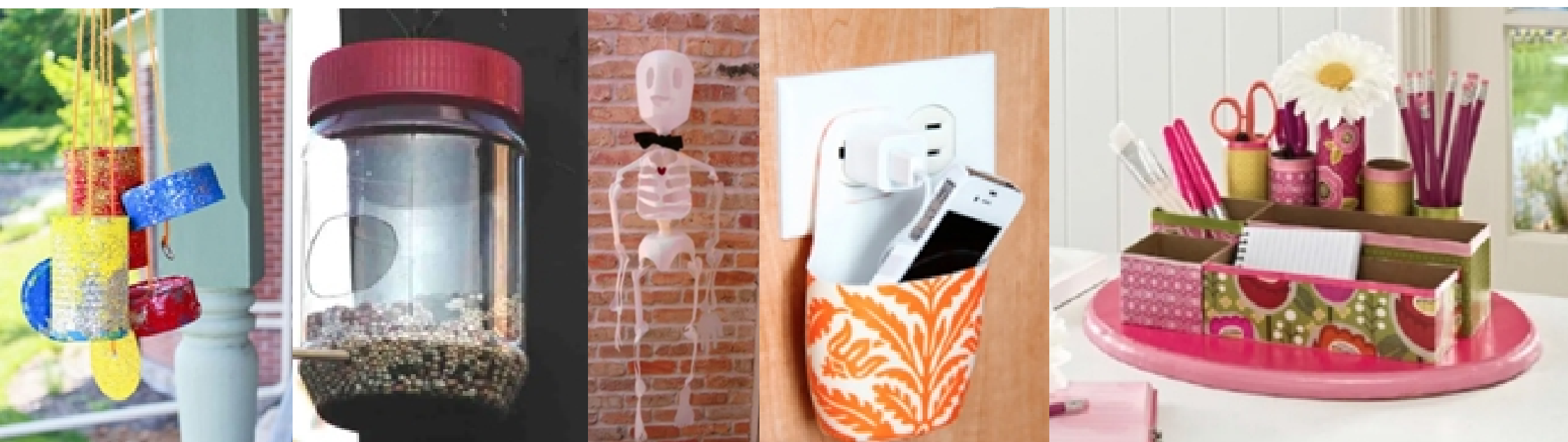
The **4 Rs** below could be a way of helping you think about reducing the impact of a new product on the environment.

Make a list of what you buy and/or throw away and place them in one of the 4 categories below.

Rethink	Do I need to buy that? Is there an alternative? E.g. plastic container that can be refilled rather than single use
Refuse	Do you need the product? Is it bad for the environment?
Reuse	Use the product to make something else?
Recycle	Reprocess a material or product. Turn it into another use

Challenge

There are lots of designers and makers who are choosing to use waste or recycled materials to make new products.





What do you think these products were made from? What is their purpose now?

Design a new product from waste/rubbish.

Who is your product aimed at?

How has your product been repurposed?

What does your product cost to make?

How much will you sell it for?



Did you know?

Glass bottles are the worst thing to throw away rather than recycle as it is estimated they will take 1 million years to decompose in a landfill.



The mathematics

Students through the different activities will be using many problem-solving skills, reasoning, decision-making, communicating, innovating and thinking creatively.

