



Circular Economy

Generation Green Schools

Reducing waste and designing for sustainability



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How many types of waste can you think of?



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Waste is a problem!

Organic waste

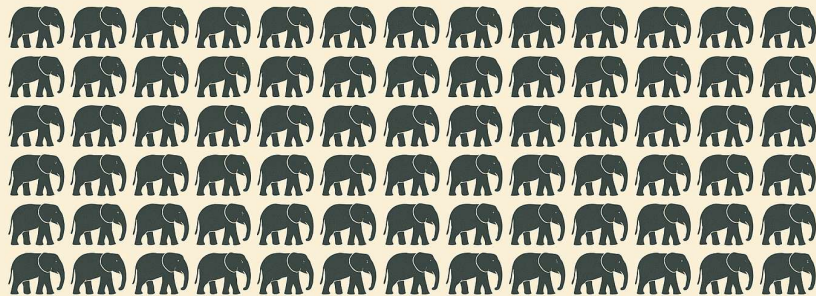
- Food waste – potato peelings, banana skins, orange peel, left over or out of date food
- Paper and cardboard

Inorganic waste

- Plastic: Bags, bottles, packaging, straws, food wrappers
- Metal: Aluminium cans, steel, and tin
- Glass: Bottles, jars, windows
- Electronics: Old phones, computers, televisions
- Synthetic materials: rubber, polyester etc. used for clothes and shoes



7.7 million tonnes of waste is generated each year in NI



7,7 MILLION TONNES

is roughly equivalent to the weight of



**~1,28 MILLION
ELEPHANTS**



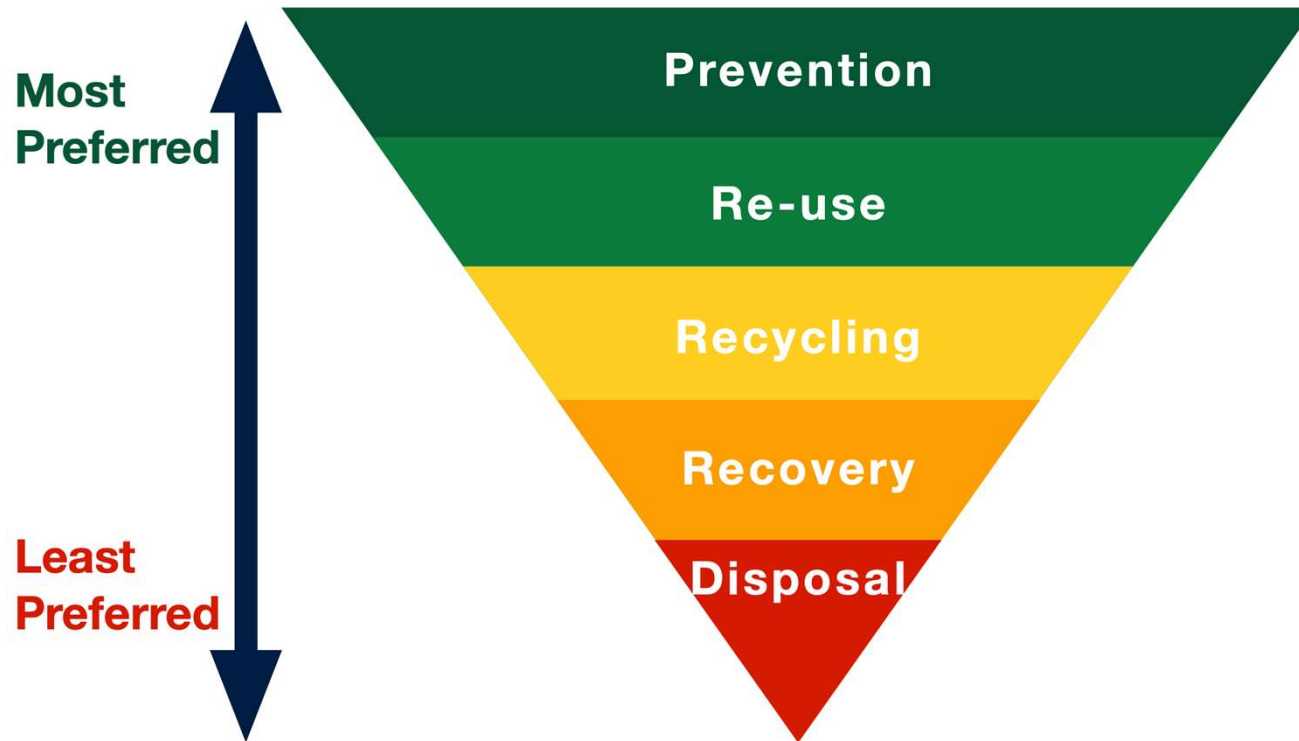
7.7 billion
bags of
sugar!!

Organic waste and greenhouse gasses

- Methane emissions stem from the breakdown of **organic** waste in anaerobic (i.e. oxygen free) environments eg in landfill sites, in plastic bags, mixed in with other inorganic waste
- The methane from organic decomposition can be collected and turned into green energy - if managed correctly



What happens to inorganic waste?



The waste hierarchy:
ranking waste management options from most to least environmentally friendly

More than **90%** of the products we extract from the planet goes to waste.



Linear economy – what we're used to



Linear economy – what we're used to



In a linear economy:

1. We take resources from the earth and deplete natural resources - we are taking more from the earth than we can naturally sustain
2. Drives climate change, biodiversity loss and pollution
3. Products and materials are not used to their full potential

Circular economy?

The circular economy is an economic model that aims to **eliminate waste and promote sustainability** through practices such as reuse, refurbishment, remanufacturing, and recycling.



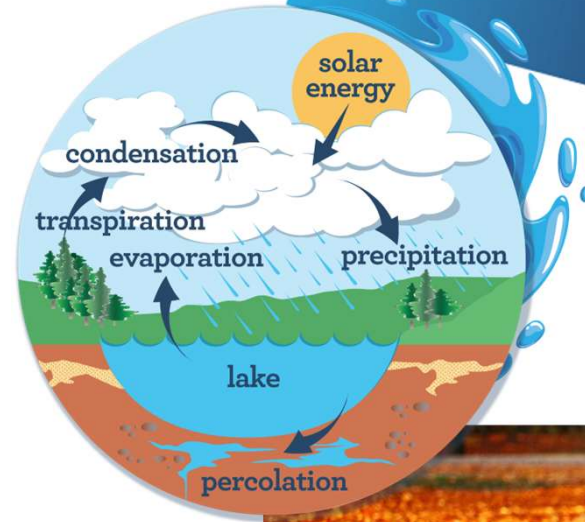
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The Circular Economy

If we move to a circular model, we begin to copy natural systems. **There is no waste in nature.**

- When a leaf falls from a tree it feeds the forest
- No water is lost in the water cycle

If there were no humans, then there would be no landfill. Nature is the original circular economy!



European *Environment*

Pause (k)



0:00 / 2:03



Plastic



How does the circular economy work?

A plastic bottle:

- In a linear economy: You buy it → drink it → throw it away → it ends up in a landfill.
- In a circular economy: The bottle is reused or recycled into a new bottle, or even made into clothes, furniture, or another product.



All of the plastic ever created still exists!

Example: Deposit Return Scheme

Why is this important?

- Reduce waste to landfill and protect the environment
- Reduce litter and increase recycling rates
- Value our resources - higher quality of recyclable material is returned



How many times can a plastic bottle be recycled?

A plastic bottle can be recycled up to seven times and aluminium cans may be recycled infinitely.



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Reducing plastics and increasing circularity

- A lot of plastic is unavoidable in everyday life
- We can try to avoid single use but sometimes it doesn't feel like its enough!
- Researchers are working on ways to change this so that the plastic we use is biodegradable and less harmful to the environment
- Innovation and bright new ideas are needed to solve the plastic problem

Careers in this field:

- Sustainable packaging designer
- Product re-design engineer
- Chemical recycling engineer
- Circular economy consultant
- Research scientist
- Environmental policy analyst
- Sustainable procurement officer



MarinaTex

Lucy Hughes

Fast Fashion





- Globally, **92 million tonnes** of textile waste is generated each year.
- By 2030 this is projected to rise to **134 million tonnes**



- 100 billion garments are produced every year.
- The average person buys **60% more clothing than 20 years ago**



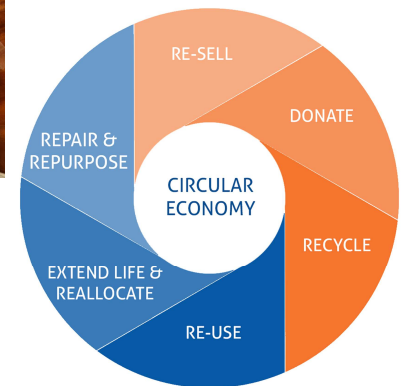
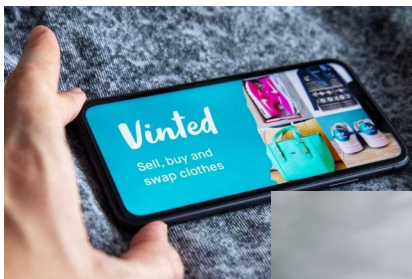
- On average we wear each item only **7-10 times** before discarding it
- **Less than 1%** of clothing is recycled into new garments

How does it work with clothing?



Linear Economy:

- Buy clothes → wear a few times → throw them away when they rip or go out of style.
- Circular Economy: over to you...





Food waste

Food waste in Northern Ireland

- Globally, we waste so much food that we could feed every food-insecure person on Earth three meals a day for a year... and still have some left over
- Food is lost at every stage of its journey - during harvest, in transport and storage, at grocery stores and restaurants, and finally on our plates

£

£570 per
house
per year



210kg per
house

How can we make food more circular?



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FIGHT FOOD WASTE WITH A DELIVERY OF DELICIOUSLY ODD FRUIT & VEG.

CHECK IF WE COVER YOUR POSTCODE.

FULL POSTCODE

GET STARTED



Excellent  Trustpilot

what's wonky?

We infuse our super tasty waters with real, wonky fruit. That's bent, crushed, curved, knobbly, misshapen fruit which others say no to. By accepting the misfits we are helping to fight food waste.

DOWNLOAD FOR MORE INFO



NO FARMER WANTS TO SEE
THEIR HARD WORK GO TO
WASTE



But at the moment that's exactly what's happening, with up to 40% of fruits and veg grown in the UK going to waste. It's a seriously frightening statistic for a serious problem that needs to be at the forefront of our minds when we choose what we eat and drink.



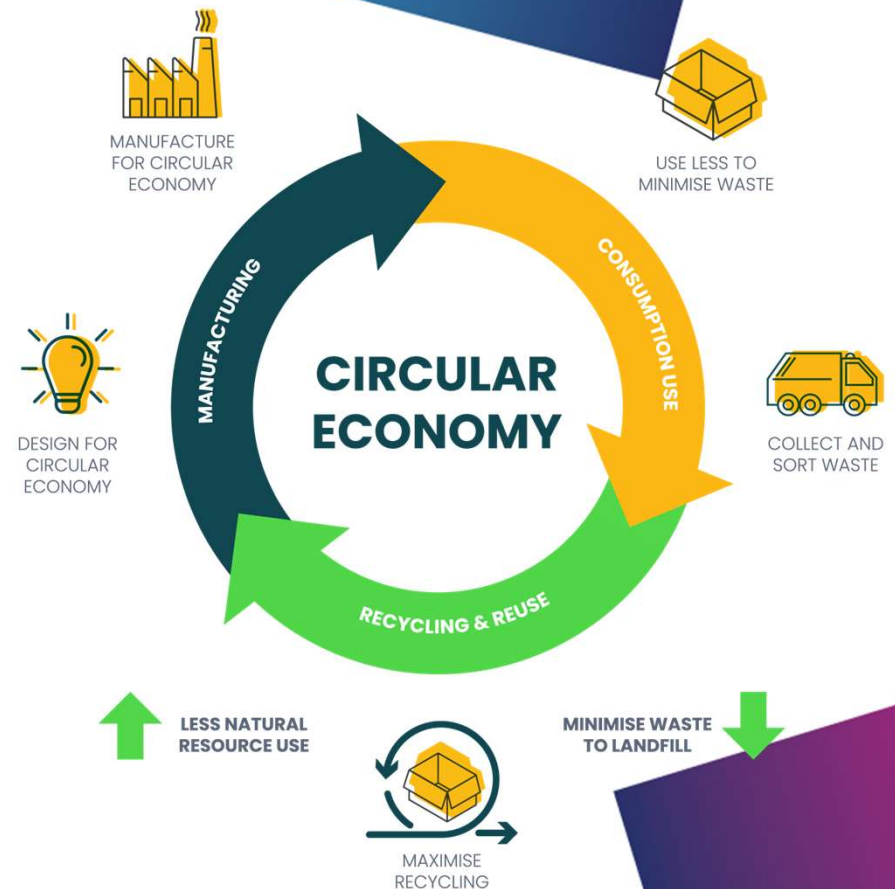
Other ideas...

- Meal planning
- Don't overbuy and let food go out of date
- Store food properly eg use your freezer
- Eating leftovers
- Using brown food waste bin
- Buy loose fruit and veg with no plastic packaging
- Composting at home
- Too Good To Go app



Circular economy summary

- The circular economy is a system where materials **never become wasted**, they are reused and re-purposed forever
- This reduces the amount of waste that goes to **landfill**
- It also reduces the number of **new materials and natural resources** that are taken from the earth, which is good for the environment
- By reducing waste and taking a more 'circular' approach, we have the potential to **reduce greenhouse gas emissions** and **reduce the impacts of climate change**





How can you adopt the circular economy in your life?

At home, at school, at clubs, through your hobbies, with friends



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