



The 3 R's...and more!



Unit 3: The 3 R's and more.....

What are the 3 R's?

The 3R philosophy is a great way to look at waste issues and to manage our resources in a more sustainable way. Lots of waste could be avoided if it was reduced at each stage of a material's life cycle.

There are usually 3 main R's listed in order of importance:

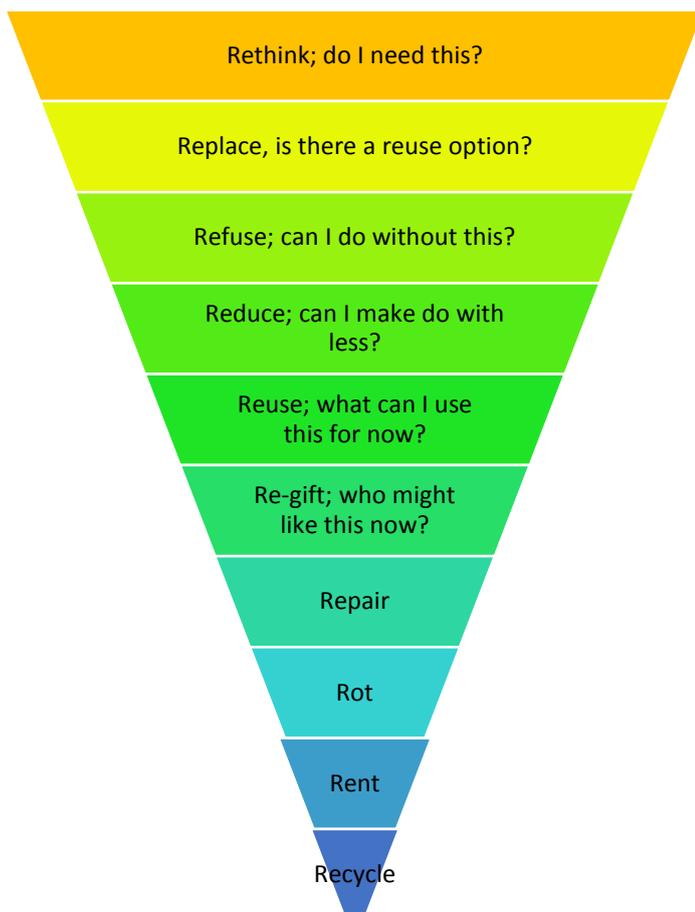
Reduce

Re-use

Recycle... is at the bottom because it is the last resort.



In fact, as you can see, there are so many more important R's to reduce waste!



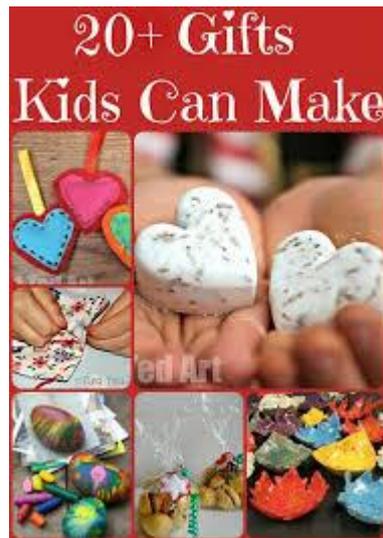
Reduce

Reducing how much wasteful stuff you buy is the best thing you can do for the environment.

Finding ways to reduce should always be our first step at work, home or school.

this could mean:

- Making meals at home instead of buying take away meals and junk food.
- Making gifts and cards for family and friends with things you have already, (**reuse**). You can find heaps of ideas online!
- **Refusing** to buying single use stuff, like straws and plastic bags, and swapping them out for reuse options.
- Putting a 'no junk mail' sign on your letterbox
- Being careful with the stuff you do buy, and **repairing** it when it breaks!
- buying refillable stuff like water bottles and pens.
- Pinning notices on notice boards instead of making copies to distribute.
- Not wasting food, by cooking enough, not too much!



Reuse

Means to use the same item more than once, preferably many times, instead of throwing it out after only one use.

Reusing saves money, energy and natural resources that would otherwise have been used to make a new product, it also means we are not sending that item to landfill.

There are lots of ways you can reuse things around the home. Here are a few ideas:

- Reuse empty glass jars for storage in your kitchen, shed or classroom, or making your own jams and preserves!
- Use a basket or cloth bag when you shop.
- Use a reuse bag for fruit vege's and Pick n Mix (but remember to write the number on your hand!!)
- BYO a container (like a click clack or ice cream container) at takeaways, deli's and the butchers.
- **Rent (hire)**, share or borrow items you don't use very often.
- Open envelopes carefully so they can be reused.
- Buy second-hand books and clothes.
- Run a garage sale so others can reuse your unwanted items.
- Save margarine and ice-cream containers for storage, or donate them to your local school.
- Buy reusable items instead of disposable ones, for example, hankies instead of tissues, and purchase rechargeable batteries to replace one-use batteries.

Schools are a great place to reuse lots of items that can be brought in from home. Many schools are now creating reuse sheds to collect, organise and store items for easy access by all teachers across the school for different projects.

Recycle

Recycle is the third main 'R'. Recycling means to break down a waste product and remake it into either the same product or something different. For example, aluminium cans are recycled back into cans or into engine blocks for new cars.



Recycling saves landfill space, stops new resources from being used and saves energy.

But, recycling uses power to transport and reprocess our stuff, so it is not the best way to reduce waste.

ROT You can even recycle fruit, vegetable and garden waste by worm farming and composting. In NZ about half of the stuff that goes to landfill is compostable, so we can reduce waste by half just by composting at home, work and schools!

Wait, there's more!

Rethink; changing the way we think can change our lifestyle **less waste = more happiness!**

Replace; is there something less harmful I could use? For example, most household cleaners can be replaced with homemade low cost cleaners.

Repair; repairing an item can extend its useful life. DIY skills are important to learn!

Replenish; we can increase the supply of a resource, such as capturing rainwater, or composting to replenish the soil.

Replant; plants store carbon, provide oxygen, and increase rainfall, replanting is important for our environment.

Recover; increasing the efficiency of how we extract natural resources and recover recyclable materials reduces harm to the environment.

Waste from packaging

Packaging is useful. Packaging protects products during transportation, it stops stuff going off, and has information and branding. However, packaging waste is one third of the waste in the developed world. Recycling has generally been seen as one of the main solutions to deal with this. Improvements can be made along every step of the packaging chain, reducing packaging and only having truly recyclable, re-useable, or compostable packaging would be a big step in the right direction.

Paper and cardboard equals around 80% of waste for businesses. Telecom's head office in Auckland with 360 staff reduced their rubbish from 210 bags per week to 70 bags when they started recycling

paper. They also saved \$14,000 per year in rubbish costs.

At School; Zero Waste lunches

'Zero Waste lunch' days challenge students and parents to have a school lunch with zero packaging. Leftover food scraps can be given to chickens, fruit and vegetable scraps can be placed in the worm farm or compost system. Snacks and sandwiches are packed in reusable containers and drinks are bought in bulk and then brought to school in reusable containers. Some schools have invested in class sets of reusable plates, mugs and cutlery; others have a litterless lunch draw where students with a litterless lunch get in the draw for a weekly prize, local cafes are often happy to sponsor this. For more on this look at the Litterless Lunches chapter.

A Study of a recycling stream; Paper and the 3 R's

Most schools reduce, reuse and recycle their paper by:

displaying a paper use policy in the photocopy room where teachers commit to reducing their

paper use using two sides of the page when printing

- using a smart board or chrome books
- collecting paper which is used only on one side; which students construct reuse note pads
- using a paper making kit

Schools can sign up with paper4trees in which the school gets trees for every ton of paper recycled.

School purchases: 'closing the loop'

'Closing the loop' means completing the recycling process by buying recycled products. Buying recycled products improves the economic viability of recycling by increasing the market for recyclables.

You can buy products from recycled paper, such as toilet paper, office paper, paper towels;

Recycled plastic products; such as polar fleece jackets, compost bins, detergent bottles, and outdoor furniture.

70% of the glass products in NZ are made from recycled glass, so we are already closing some loops, getting closer to a circular economy!



Cardboard and paper is gathered, sorted, and made into new paper or other products!

Half of NZ's paper is recycled in Auckland, the rest is sent overseas. The big pile in front of the factory is from the clay used to make magazines glossy!

