The Story of Waste

Community Engagement Advisor Training Manual

NSW EPA

www.epa.nsw.gov.au

Artist:

Jordan Ardler

La Perouse Aboriginal Community, Bidgigal People

Artwork:

This artwork represents various landscapes from across New South Wales.
Symbols include (from bottom to top) rocks on riverbank/land, river/ocean, land environments, and tree engravings. Movement is also represented through lines and the positioning of animals and symbology representing people. The addition of the people and animal symbology also acknowledges that all land is occupied. The specific colours used reflect the range of scenery being depicted.
Circular and line symbology throughout the artwork highlights community growth through collaboration and working as one to proceed through a journey.

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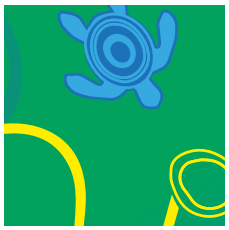
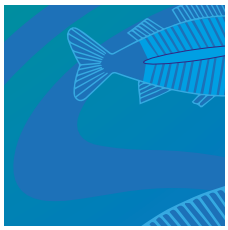
The NSW EPA acknowledges and pays respect to the First Nations peoples of the land on which we live and work, and to Elders past, present and future.

Contents





Meet and greet

CEAs of Northern NSW

Name	Community	Role	Phone	Email

Project ideas

1. The story of waste

Aboriginal resource use

'… from time immemorial, we believe as Aboriginal people, Australia has been here from the first sunrise, our people have been here along with the continent, with the first sunrise. We know our land was given to us by Baiami, we have a sacred duty to protect that land, we have a sacred duty to protect all the animals that we have an affiliation with through our totem system.'

Jenny Munro, Wiradjuri Nation

For over 60,000 years, Aboriginal people from all parts of Australia have lived with an intimate connection to their land and the resources they use. Aboriginal people harvested from the environment the raw materials needed for food, housing, clothes and tools such as coolamons, dilli bags, digging sticks, canoes, shelters, axes and so on. During that time, the technologies they used to produce these essential items for living have been environmentally and socially sustainable. Aboriginal Lore assigned roles and responsibilities to ensure the protection of Country and the sustainable harvest of resources. Resources have been maintained, shared and traded sustainably through cultural stories and songlines across different language groups, with some materials like ochre traded across thousands of kilometres. Waste management was not an issue because all products were made from raw materials. Today Aboriginal people continue to care for Country and by doing so know that the country will care for them.

On page 7 are examples of Aboriginal technologies that make use of raw materials from the environment. When the items made are no longer needed, they will break down through weathering within months causing no pollution or environmental damage.

Caring for Country is our responsibility

Technology		Natural resource	
Dilli bag		Pandanus tree: the resource (leaves) are harvested without damaging the tree.	
Canoe		Aboriginal canoe scar tree showing how the resource is harvested without killing the tree	
Fish trap		Jungle vine (Malaisia scandens) is harvested without killing the plant.	
Aboriginal shelters		Bark is used from the paperbark tree without damaging the tree.	
Stone axes		Stones	
		Tree resin (live sustainable harvest)	

Current mainstream use of resources

Historically, Europeans produced the goods they needed from resources just like Aboriginal people. The items they needed were handmade, reused and repaired. However, since the Industrial Revolution in the early 1700s, most goods have been made with machinery. The advent of machine technology also led to the mass extraction (mining) of the Earth's underground resources and the ability to mass produce goods in factories quickly and cheaply.

Our current mainstream lifestyle, which includes high consumption and material ownership of 'stuff', puts great pressure on resource extraction. The average Australian household of four people owns 34 electronic items and produces enough waste to fill a three-bedroom house every year! Technology is also changing so quickly that the items we buy today are often out of date and rubbish within a year of purchase.

Businesses and corporations that make all this stuff are driven by making a profit. Many produce cheap products that break and end up as waste, sometimes within weeks. This wasteful life, pursued by many in the western world including mainstream Australians, is putting huge pressure on Country and Indigenous people to open their land to mining companies, threatening pollution, deforestation, climate change and the extinction of animals and plants.

Another pressure on resources is the growing world population with 7.6 billion people living on the Earth today. In 1970, less than 50 years ago, there were half this many people. The planet simply cannot sustain this trend towards a lifestyle which includes overconsumption and overuse of resources, leading to huge amounts of waste.

We simply must change our wasteful lifestyle.

Plastics are another serious threat to Country. Plastic has only been around for 100 years, yet it has drastically changed the way we package and consume items. Today, many items are 'single-use' disposable items like plastic bags, take-away containers, and plastic bottles and packaging. This means we buy more and throw far more away than ever before, creating huge amounts of waste. Unlike traditional use of resources, these modern products do not break down and are harmful to the environment and human health.

Most technologies being used in Australia and worldwide rely on resources extracted through mining and agriculture. The following table shows some mainstream technologies and their connection to resources.

Activity 1: Know your stuff – the resource game

A copy of the game is available in *A Deadly Sort: Rubbish and recycling education games*.

Renewable resources: energy from the sun and timber from trees

Technology		Natural resource	
Paper		Pine tree plantation	
Cotton shirt		Cotton farm	
Can		Bauxite mine	
Glass bottle		Sand mine (silica)	
Plastic bag		Crude oil mine	

Doesn't all waste break down?

Some types of waste (like paper, food and garden waste) break down quickly and return to the earth as nutrients in soil. These materials readily break down when exposed to sunlight, heat, rain and decomposing plants and animals like micro-organisms, worms, fungi, bacteria, insects and other invertebrates. We call these wastes **biodegradable**.

When biodegradable waste breaks down into smaller parts, it is absorbed into the environment without harming it. These kinds of wastes nourish the Earth by returning nutrients to Country, improving the soil and feeding the planet.

Check out this video of a decomposing donut!
https://www.youtube.com/watch?v=6Z2ZQDl2iJ4

Other types of wastes that are **non-biodegradable** can take a very long time to break down – and some never do. Many plastic products will never break down, instead becoming smaller and smaller pieces that remain in the environment forever.

This is because during the manufacture of plastic, petroleum oil is heated to a point which changes the oil's chemical compound, making the new product unrecognisable to nature's decomposers. The new compound is so tough it requires a large amount of energy to break it down.

Examples of biodegradable waste


Fruit and veg waste


Animal waste


Garden waste


Grass clippings, NSW. Photo: Tash Morton, EPA

Activity 2: Living on borrowed time game

A copy of the game is available in *A Deadly Sort: Rubbish and recycling education games.*

Game 2: Living on Borrowed Time

Examples of non-biodegradable waste


Plastic, glass, aluminium and tin waste


Synthetic clothing


Polystyrene


Electronic waste

2. Impacts of waste on Country

Why is waste a problem?

Australians produce a staggering volume of waste. In 2016 this amounted to 50 million tonnes of waste which would fill 90 football stadiums to the top of the goal posts. Most of this waste ends up in landfills, where it will never break down.

While Australia has strict laws around the management of waste, some parts of NSW do not have rubbish collection services. Without waste management facilities, rubbish piles up or is dumped on Country. This is not only harmful to the people who live around these dumps, but also to the surrounding environment.

Heavy machinery is used to compact waste to make more space.

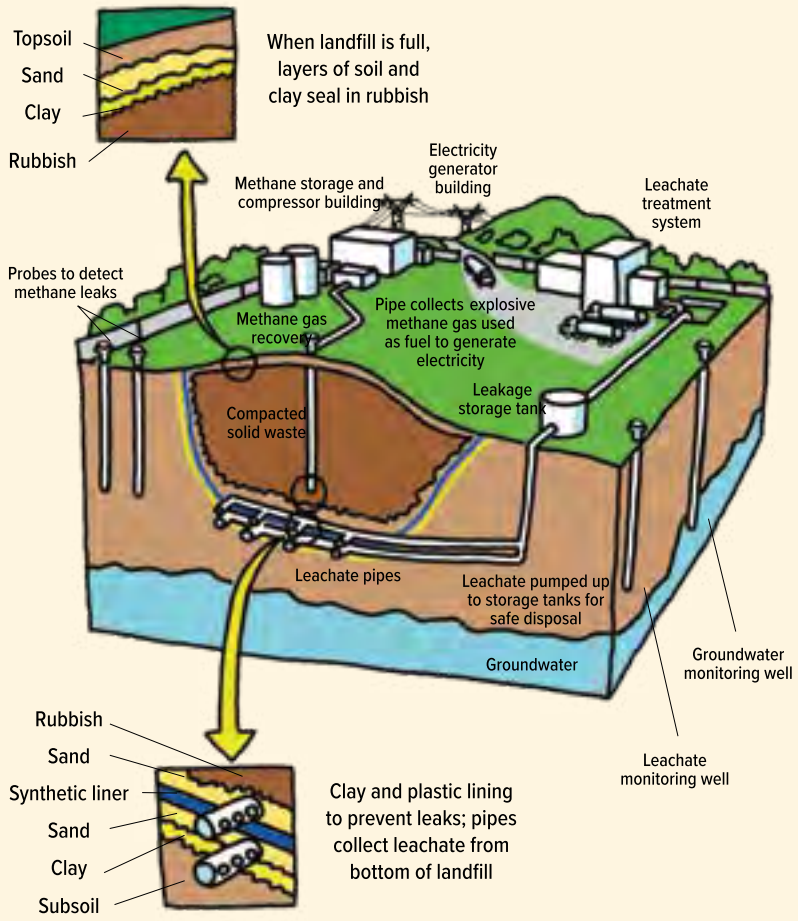
This waste dump in The Philippines outside Manila is called 'Smokey Mountain'. Poor families, including young children, sort through the rubbish to separate materials such as paper, cardboard, metals and plastics to sell to recyclers. Many suffer chronic skin and asthmatic diseases as a result of close contact with burning rubbish and chemicals.

Landfills

Landfills in NSW are regulated by either the Environment Protection Authority or local councils. Strict guidelines apply to the management and maintenance of landfills to ensure they do not adversely affect the environment. Landfills must be covered daily to prevent materials like plastic blowing everywhere and reduce the impact on wildlife that feed on the food scraps. At most landfills you will see many scavenging birds who come to feed daily. Unfortunately, they often digest plastics with the food they eat.

As waste breaks down in landfill, it releases gases (methane) and liquid (leachate) that can be harmful to the environment if not managed properly.

ILLUSTRATION: A properly managed landfill



What's leachate

Leachate is a toxic liquid produced when rainwater filters through decomposing waste in landfills. Landfill sites contain everything we throw away from food waste, metals, plastics, oils, batteries, paints, household chemicals and more. A lot of these materials contain harmful chemicals that are released when they start to break down.

As rubbish starts decomposing, all the oxygen gets used up, the temperature in the landfill heats up and the pH drops. This makes the liquid very acidic and metals dissolve in the developing leachate. This can start breaking down other materials that would not normally do so and harmful gases like methane may be produced. This leachate has a very strong smell and can be toxic.

Properly managed landfills are lined, and the leachate is pumped into ponds or tanks where it can be managed. Leachate collection systems are essential, to stop the leachate from entering the groundwater.

If a landfill is not managed properly, the leachate could seep into the groundwater. Once groundwater is contaminated, it can contaminate rivers and drinking water.

Activity 3: Bad water, sick country

A copy of the game is available in *A Deadly Sort: Rubbish and recycling education games.*

ILLUSTRATION: Leachate from dumped rubbish can contaminate groundwater

Contamination of groundwater from dumped rubbish

Landfill gas

Landfill gas is approximately 40–60% methane gas with the remainder mostly carbon dioxide. Methane and carbon dioxide are both greenhouse gases which contribute to global warming and climate change. When methane gas is released into the atmosphere, it heats up the Earth. Methane is far more damaging to the atmosphere than carbon dioxide because it is 25 times hotter.

The rubbish in landfills is generally compacted by machinery to create more space to fit more rubbish. This process of compacting the waste reduces the oxygen in the landfill. As organic materials break down in these low-oxygen conditions, methane gas is created.

Landfills can go on creating methane gas and liquid leachate waste for 20 to 30 years after they have closed.

ILLUSTRATION: Landfills produce methane gas and leachate

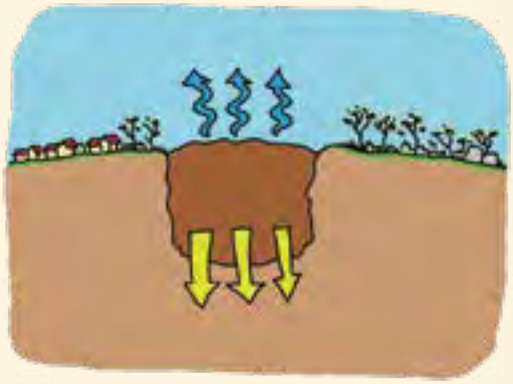
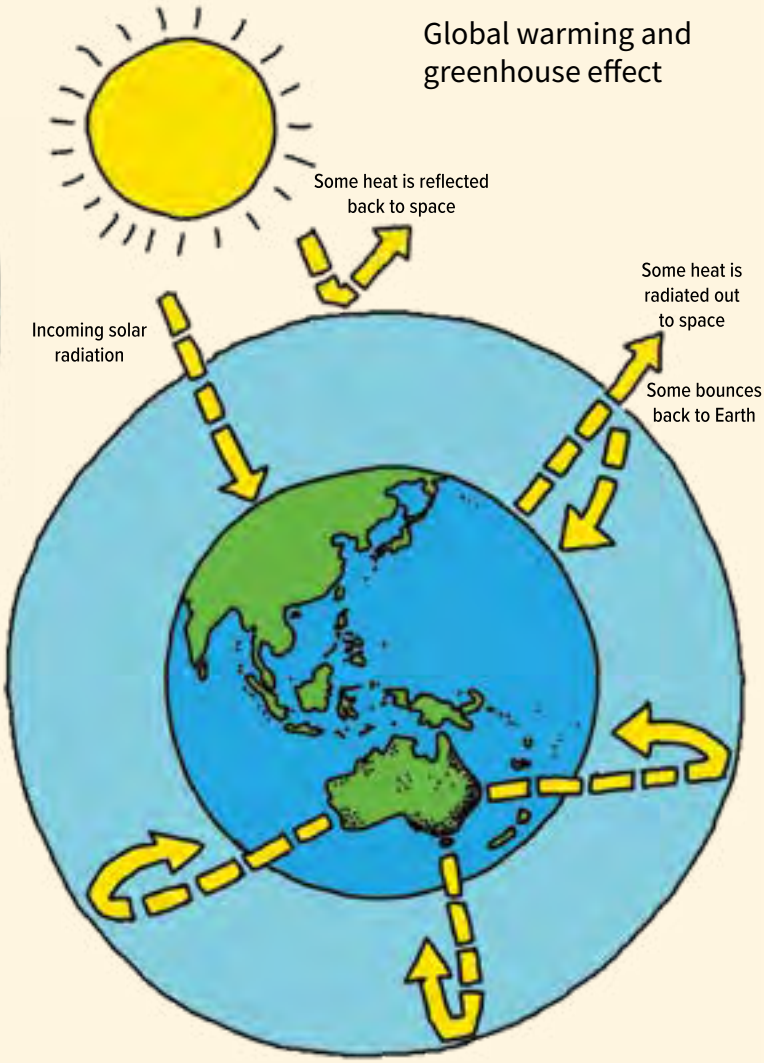


ILLUSTRATION: Landfills contribute to the warming of the earth and climate change



Hazardous waste

Most households contain a wide variety of substances in the kitchen, laundry, garage and garden shed that are potentially hazardous to human health and the environment.

Hazardous household materials are products that are likely to be poisonous (toxic), corrosive, flammable, explosive or reactive and include the items shown below.

It is important for everyone to manage these hazardous wastes responsibly to minimise the risks to humans and Country. If dumped on Country or put into landfill they will leach chemicals into the environment, potentially harming plants, animals, humans that work on the landfills, contaminate water and soil.

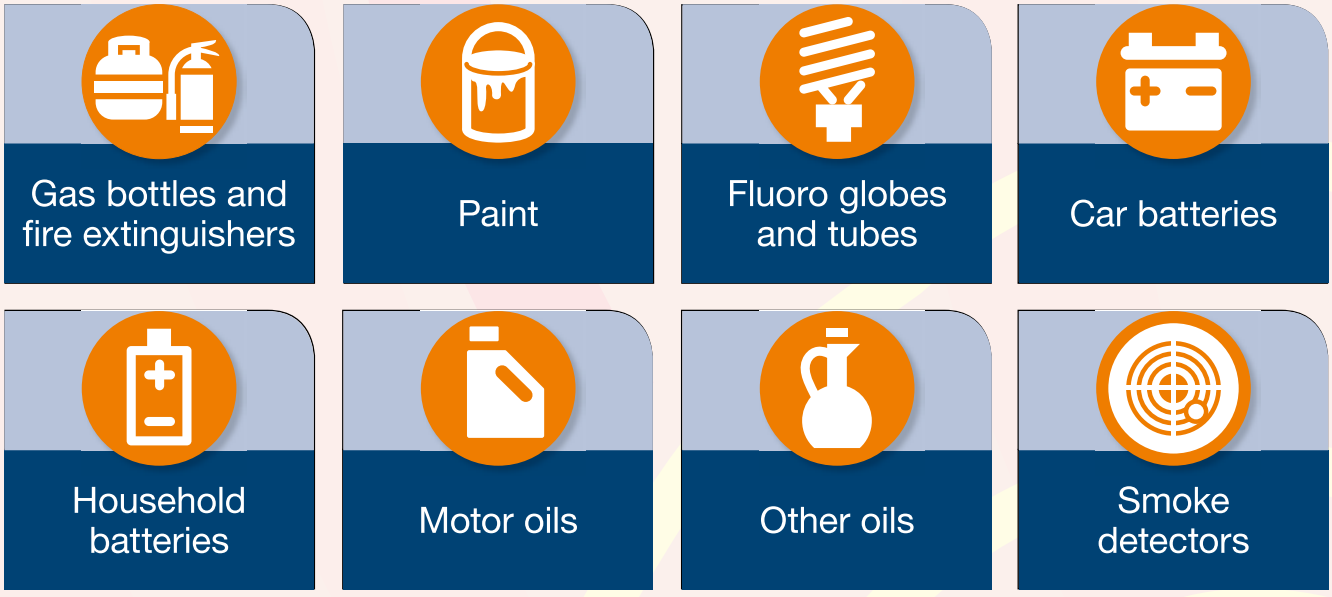
Gas cylinders should not be disposed of in household bins, garbage trucks or landfills as they can explode when compacted by the machinery.

They are also dangerous if dumped on Country because they will explode when the Country is burnt. It is important to take gas cylinders to the collection points at your local transfer station where they are collected separately for recycling.

Across NSW, many Councils have established Community Recycling Centres to collect these household problem wastes. Most Community Recycling Centres are located at local transfer stations. Some Councils have established collection points at supermarkets or libraries and mobile collections have been set up in some parts of NSW.

Disposal of the waste items shown below at Community Recycling Centres is FREE. Household problem wastes that can be dropped at Community Recycling Centres include paint, gas bottles, fluoro globes and tubes, household and car batteries, smoke detectors and motor oil.

Disposal of these waste items at Community Recycling Centres is FREE



Look out for the standard Community Recycling Centre signage at your local transfer station.

Tyres

Tyres are made from rubber, plastic (from petroleum oil), chemical compounds and steel. The chemical compounds used in manufacturing tyres include zinc, chromium, lead, copper, cadmium and sulphur. Many of these compounds are harmful to the environment and human health.

Burning tyres is extremely toxic

When tyres are dumped on Country they release toxins that can pollute water, air and soil. They also pose an environmental health risk when dumped, as water collects in their rim and can become a breeding ground for mosquitos, rats and snakes.

Tyres will never biodegrade and if they are burnt they give off toxic gases. Tyre fires are very difficult to put out. A tyre dump that was lit in 1989 in Powys, Britain, burnt for over 13 years.

Tyres are recycled in a range of ways:

- shredded and used in road construction
- manufactured into new rubber products such as soft fall surfaces, artificial turf and conveyer belts
- burnt and used as an alternative fuel source in cement production
- turned into brake pads, basketball court surfaces and even shoes
- as construction materials and in erosion control.

In NSW some landfills and tyre retailers will accept tyres for recycling. There is usually a small charge per tyre.

Plastics in the environment

Although plastics have been in common use for only 50 years, it has taken just two generations for us to become overdependent on them. Almost everything we buy comes wrapped and packaged in plastic, yet half of these items are only used once and then thrown away. **Worldwide we only recycle about 5% of the plastics that are produced.**

The main problem with plastic is that it doesn't break down but instead transforms into smaller and smaller pieces. This results in microplastics that wash into the environment and enter creeks, the ocean, soil and air. Animals, including humans then ingest the microplastics, while seabirds, turtles and other marine animals also eat plastic because they confuse it with prey.

Waste in rivers affects the environment in various ways. Animals can die from ingesting waste or becoming tangled in it. Chemicals from the breakdown of waste may enter creeks and rivers and poison bush tucker like fish, turtles, crayfish and mussels. Where oil is dumped and flows into a creek or river, it forms a thin layer over the water surface that prevents oxygen from entering the water. Without oxygen, the water cannot support plant or animal life.

Creeks flow into rivers and rivers flow into the ocean. So whatever waste pollution is in the creek will end up in the ocean. In fact, **eight million tonnes** of plastic end up in the ocean worldwide every year, enough to fill the Melbourne Cricket Ground 13 times!

Aboriginal people lived sustainably on Country for over 60,000 years and created no harmful waste but, in only fifty years of plastic use, mainstream culture has created a massive environmental problem for our children and their children.

The ocean simply cannot stomach another 50 years of plastic waste and it's up to all of us to rethink our use of plastic now.

A million seabirds and 100,000 marine mammals are killed annually by plastic in our oceans.

Is this a jelly fish or plastic bag?

90% of seabirds eat plastic

Impacts of e-waste

'E-waste' is the short term for electronic waste which includes televisions, computers, mobile phones, printers, game players, music devices and other electronic equipment. Australians produce an estimated 140,000 tonnes of e-waste each year with only about 4% of it recycled.

When e-waste is sent to landfill, poisonous substances can leach from decomposing waste into the environment. These substances may seep into groundwater, contaminate the soil and enter the food chain. Electronic waste is responsible for 70% of the toxic chemicals found in landfill, such as lead, cadmium, mercury, arsenic and flame retardants.

Many countries are illegally exporting e-waste to developing countries in West Africa, Asia and South America. This waste is often burnt in open fireplaces, exposing workers and surrounding communities to harmful toxins by polluting the air, water and soil.

The rapid change in electronic technology and the short life cycle of these products is putting a huge demand on the minerals required to make electronics. In the Kimberley region of Western Australia, the traditional owners of Country are being pressured by mining companies for access to their land to mine for rare-earth minerals that are used to make electronics. **The film *Undermined Tales from the Kimberley* explores this story** http://underminedfilm.com/

A failure to recycle our e-waste is adding to a shortage of rare-earth minerals and further increasing the pressure on Indigenous communities all over the world to allow their land to be dug up and mined.

Many councils provide e-waste collections and some e-waste like mobile phones can be mailed in free postal satchels to a recycler.

The short film *The Story of Electronics* describes the problems with e-waste: https://www.youtube.com/watch?v=sW_7i6T_H78

Poor work conditions in West Africa where e-waste is sent illegally for recycling

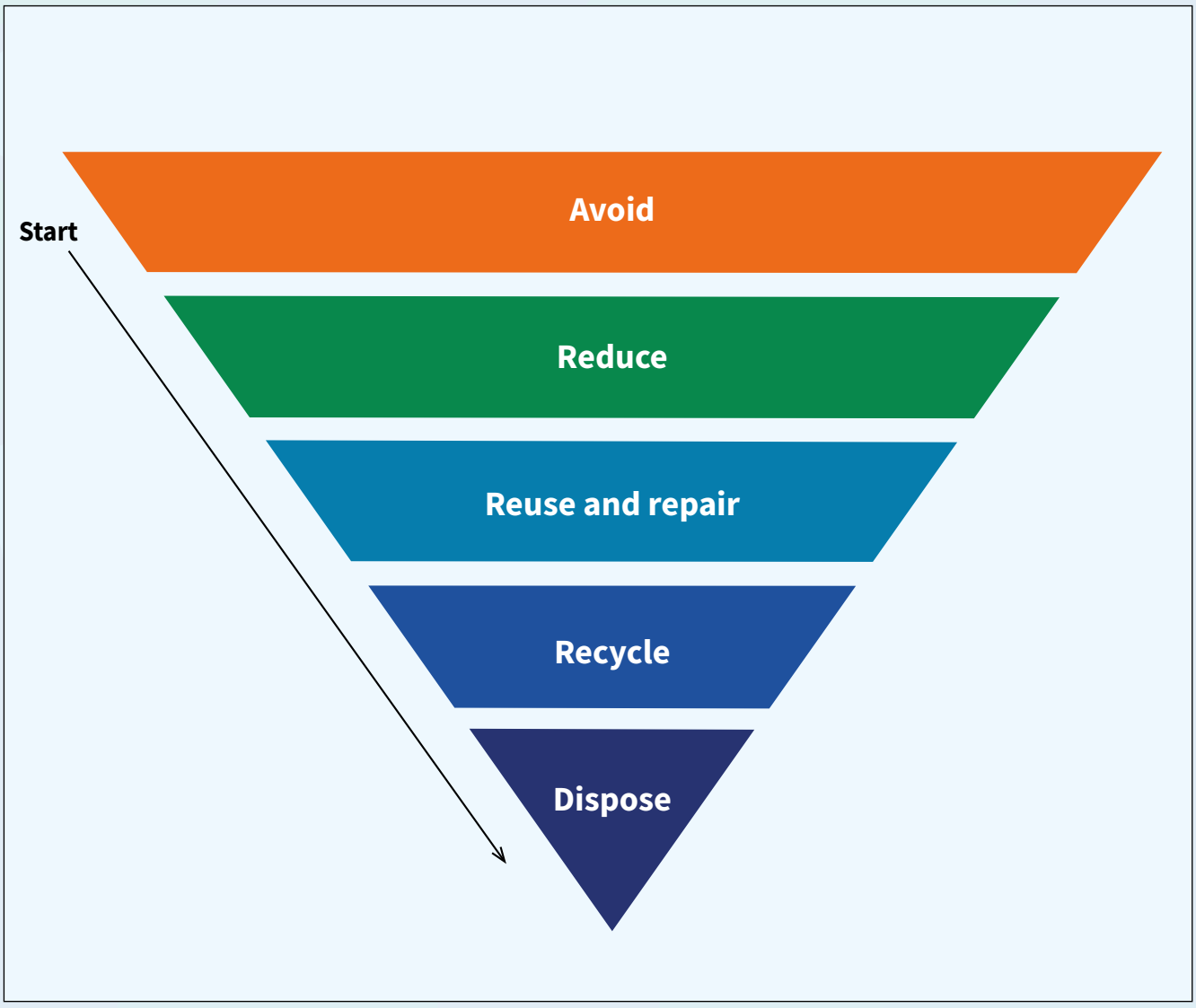
Common e-waste items

3. Less waste to landfill

So how do we go about living with less waste? Well the good news is that it isn't that difficult, so long as we practise the 'ARRRD way of life'.

The ARRRD way of life

ARRRD stands for AVOID, REDUCE, REUSE, RECYCLE and DISPOSE. If we avoid buying what we don't need, reduce the packaging we buy, reuse items or repair them when we can and recycle what we can, we will reduce what we dispose of to landfill. Reducing the waste to landfill means more resources for future generations, less mining, and contaminated land and healthier Country and people. The diagram below shows how the ARRRD way of life works.



Avoid

The best way to reduce the amount of rubbish going to landfill is to avoid creating the rubbish in the first place. Do I need it? Is there a way to buy it without packaging? Is it going to be harmful to Country, when it breaks down?

Is there an environmentally friendly alternative?

Will my Country, my family and community be better off if I buy this?

Can I buy it second-hand or borrow it from someone who already has one?

Nappies will never ever break down.

'Look after Country for me and my children. If you use disposable nappies, I'll create this much waste'.

A few ideas on how to **AVOID** waste:

Avoid	Instead
Plastic straws	Do you need them?
Polystyrene cups	Buy cups from the op shop you can reuse repeatedly.
Plastic water bottles	Switch to reuseable water bottles.
Disposable nappies	Use washable cloth nappies.
Plastic plates and cutlery	Buy plates and cutlery from the op shop that you can reuse repeatedly.
Plastic bags	Take your own bags or use a box.
Take-away packaging	Take your own reusable container: glass jars, plastic or glass containers and refill.

Reduce

We can all make an effort to reduce the amount of rubbish we produce, especially plastic waste. To look after Country, we have to reduce our rubbish and conserve our resources and this will protect other animals and the environment from the pollution our rubbish creates. A few ways we can start are listed below.

Plastic bag use

Across the world
1 million
plastic bags are used every minute.

Single-use plastics

50%
of the plastics we buy are only used once and then thrown away.

Disposable nappies

5.6 million
nappies go to landfill every day in Australia.

Buy second-hand clothes

Australians send
6000 kg
of clothes to landfill every 10 minutes.

Reuse and repair

There are many stories that describe the ingenuity of Aboriginal people in reusing waste by turning it into useable items, including blunted steel rods from old windmills used as digging sticks, old petrol tins and hubcaps hammered into bowls, kerosene tins flattened out to make roofing panels and old chisel blades attached with kangaroo or emu sinew onto wooden handles. Aboriginal people have reused and repaired items, like fishing nets and shelters, for tens of thousands of years.

Today, Aboriginal people continue to find creative solutions to waste problems. Below are examples of two deadly projects that reuse waste.

Plastic fantastic project

A remote Indigenous community is using 3D printing to turn its plastic waste into sunglasses, phone cases and toys. Milingimbi, an island off Arnhem Land about 440 kilometres east of Darwin, turns trash into treasure using sophisticated computer programs. After community members collect the plastic rubbish, it is shredded and put through a plastic melting machine. The thin plastic string that emerges is then wound into a printing machine connected to a computer program that designs and prints three-dimensional objects.

Be inspired: https://www.youtube.com/watch?v=t74nFzG5Mto&feature=youtu.be

Pormpuraaw's ghost net art

Pormpuraaw on the remote western tip of Cape York Peninsula suffers from the greatest concentrations of floating plastic fishing nets, also known as 'ghost nets', of anywhere in Australia. Lost or abandoned nets from fishing vessels can be up to 6 kilometres long and are known to kill more than 200 species of marine animals and birds. The waste nets also damage culturally and biologically significant reefs and are hazardous to the small boats typically used by Aboriginal people.

Fortunately, Aboriginal communities in the Gulf of Carpentaria and Torres Strait are taking the lead in dealing with ghost nets, removing them from beaches through their Caring for Country and Ranger programs. Pormpuraaw's local Indigenous rangers regularly patrol about 70 km of local beaches, removing nets that are sometimes so large they need heavy earthmoving machinery to haul them out of the ocean. However, instead of being burnt or dumped, the waste net is increasingly being recycled and used in sculptural works by the community's artists, along with other waste found on the beaches, including copper wire, aluminum offcuts, steel bars, old rope and flotation devices. The sculptures are sold to support the artists.

Be inspired: https://www.youtube.com/watch?v=VraZHXxVJuk

Reusing items can be a fun and creative way that not only reduces rubbish but also saves money and makes money!

Christine Yantumba cleaning nets collected from the beach.
Photo: Pormpuraaw art

Syd Bruce Shortjoe working on Batfish from collected materials.
Photo: Pormpuraaw art

How does recycling work?

Recycling turns waste materials back into raw materials, so they can be used again for making new products or creating energy. Recycling saves resources which means Country is protected from mining. Recycling saves energy and water as it takes less energy and clean water to recycle materials compared with mining more resources. When we recycle, it means less waste ends up in landfill, reducing the production of methane gas and leachates.

Across NSW, what is collected for recycling differs. It is best to check with your local council to see what recycling they collect. There is also a good website called https://recyclingnearyou.com.au/ : enter your postcode and it will give you details of what can be recycled near you and where to take it for recycling.

A short video explaining what happens to our recycling is available at https://www.youtube.com/watch?time_continue=47&v=y2qCQgAD9Bc

The following products are collected for recycling in NSW.

Appendix 1: provides a recycling checklist of what to put in your recycling bin.

Glass recycling

Glass, which is made from sand, limestone and soda ash, can be recycled over and over again. Recycling glass uses 74% less energy than mining sand to make new glass product. This is because recycled glass melts at a lower temperature. Recycled glass is used to make new glass bottles and for sandblasting, brickmaking, road base and concrete mixes.

Glass can be recycled over and over again.

Recycled glass can be used to make road base.

Plastic recycling

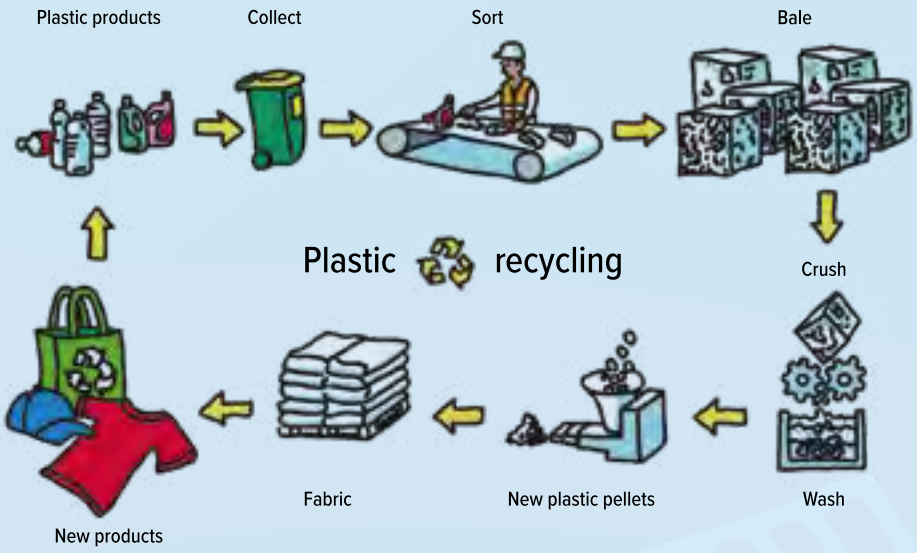
Plastics are made from petroleum oil, coal and gas which are valuable fossil fuels. Plastics do not biodegrade and they leach toxic chemicals into the environment. Recycling plastic saves 84% of the energy needed to make new plastic from raw materials. Plastic can be recycled into clothing, plastic furniture, carpet, compost bins, wheelie bins, pipes for plumbing, detergent bottles and toys.

A great TED ED video about what happens to plastic bottles we throw away is available at https://www.youtube.com/watch?v=_6xlNyWPpB8

HARD PLASTICS Can be recycled.

SOFT PLASTICS In most areas of NSW, can't be recycled.

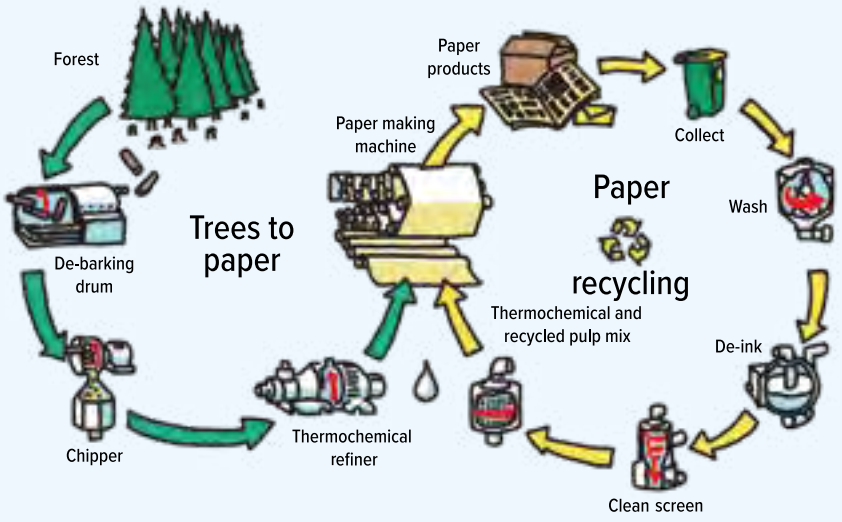
ILLUSTRATION: Plastic recycling process



Paper and cardboard recycling

Paper and cardboard are made from trees. Recycling paper uses about half the amount of water to manufacture than paper made from newly cut trees. Paper can be recycled about eight times. Over half of the paper products used in Australia are made from recycled paper, including toilet paper, egg cartons, cardboard boxes, cardboard packaging, kitty litter and newspapers. Quality paper such as office supplies and stationary is often turned into greeting cards and books.

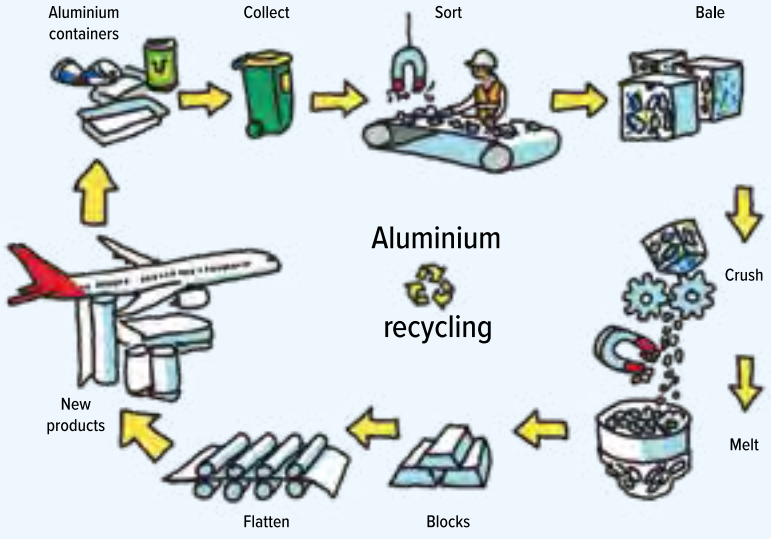
ILLUSTRATION:
Paper recycling process



Aluminium recycling

Aluminium is made from the resource bauxite (aluminium ore) and is recycled by melting it down and casting it into new cans. The energy needed to make one new aluminium can from raw materials is the same as the energy needed to recycle 20 cans. Aluminium can be recycled indefinitely into such products as cans, new car parts, aeroplane parts, window frames and aluminium foil.

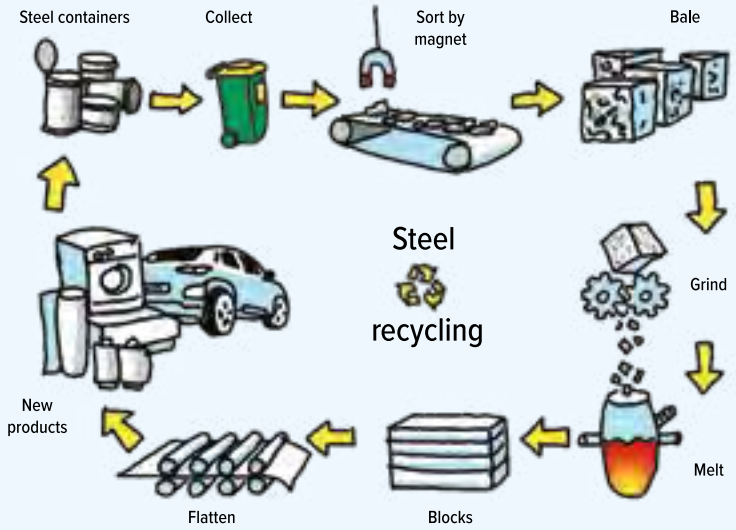
ILLUSTRATION:
Aluminium recycling process



Steel recycling

Recycling steel can save around 75% of the energy needed to mine raw materials like iron ore, coal and limestone to produce it new. Recycled products include steel cans, car parts and railway tracks.

ILLUSTRATION:
Steel recycling process



E-waste recycling

In 2011, the Australian Government introduced a national industry-funded recycling scheme for televisions and computers. The National Television and Computer Recycling Scheme prevents millions of old TVs and computers from being sent to landfill by providing opportunities for the community to recycle their unwanted televisions and computers free of charge. Click on the link https://recyclingnearyou.com.au/ewastescheme/ to find where you can take your used television or computer for recycling. Across NSW many local waste transfer and recycling facilities offer e-waste collection for FREE.

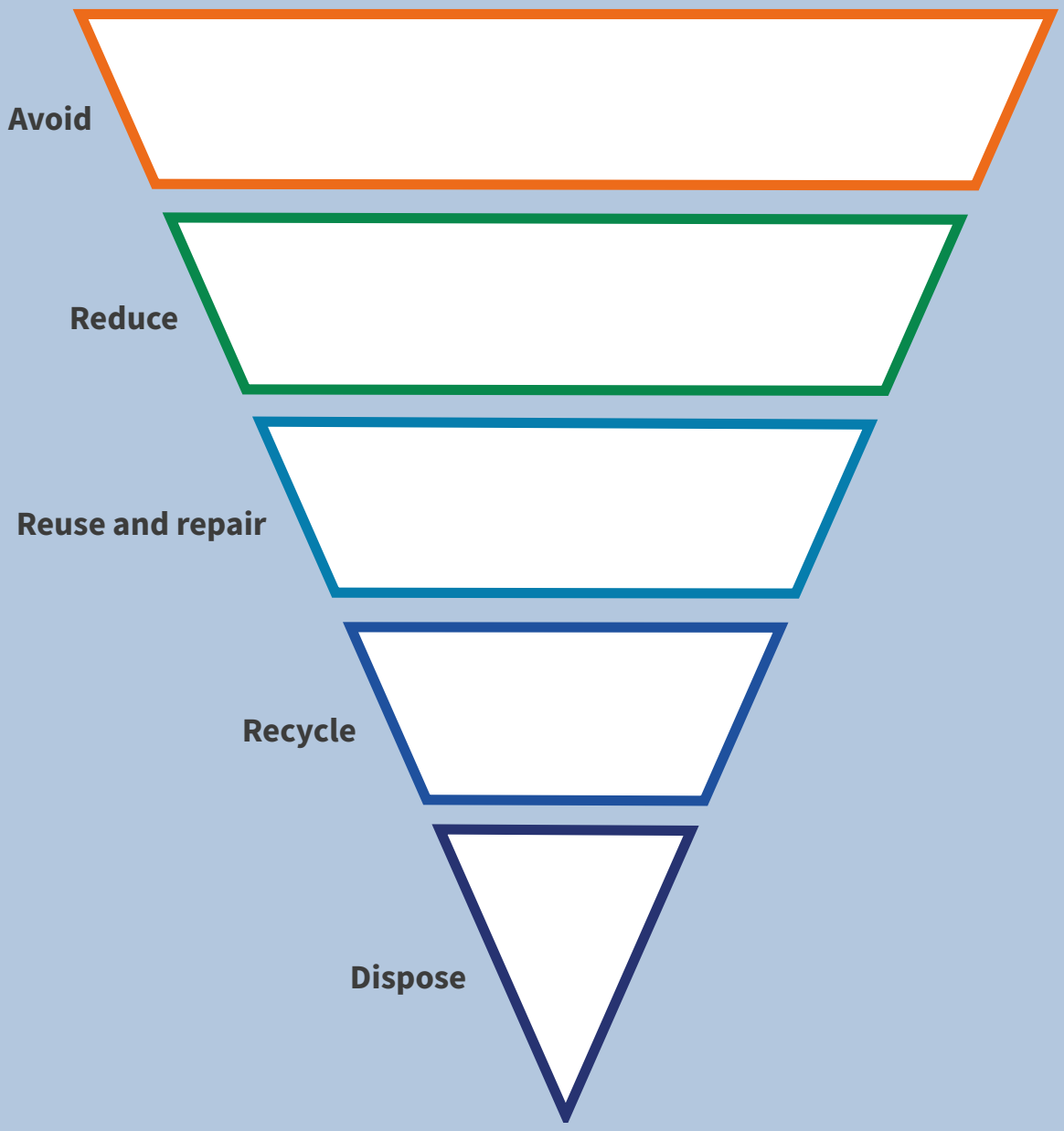
E-waste cannot be put in your household recycling bins for recycling. It must be separated and taken to recycling collection points at council transfer stations.

To recycle mobile phones, use the free Mobile Muster program which guarantees strict environmental standards for the recycling of the phones in Australia. To find the closest drop-off point to recycle your old phone, visit https://www.mobilemuster.com.au/recycle-a-mobile/

Remember, electronic waste is full of rare minerals we want to recycle and reuse, not send to landfill.

Activity 4:
The ARRRD way of life

In a small group identify some actions you could take towards living the ARRRD way of life.
Fill in each section of the triangle with some actions under each of the headings.



Activity 5:
A deadly sort – recycling relay

A copy of the game is available in *A Deadly Sort: Rubbish and recycling education games.*

Muli Muli's poster for drink containers

Container Deposit Scheme: Return and Earn

The Container Deposit Scheme was introduced to NSW in 2017 to reduce the amount of litter in the environment. People can collect certain drink containers, take them to a collection depot and receive a 10-cent refund on eligible containers. All containers collected are then recycled.

To find out where your closest CDS collection point is visit https://returnandearn.org.au

In your community project you might include activities and/or infrastructure for your community to help with container collection. These can be budgeted for in the next stage of your project. Some ideas include:

- developing local signage using artwork to promote the collection of containers – see the Muli Muli community's sign
- purchase bags or bins for households to collect containers and transport them to their closest collection point
- welding cages for container collection on the community
- designing and constructing a purpose-built trailer for collection and transport of containers
- education activities at your local school or community to promote what your project is doing on container collection and how community members can get involved
- a co-design workshop with community members to develop signage/stickers or promotional materials for your community.

See **Appendix 2** for a worksheet to help plan container collection for your community.

Return and Earn poster

4. Composting and worm farming

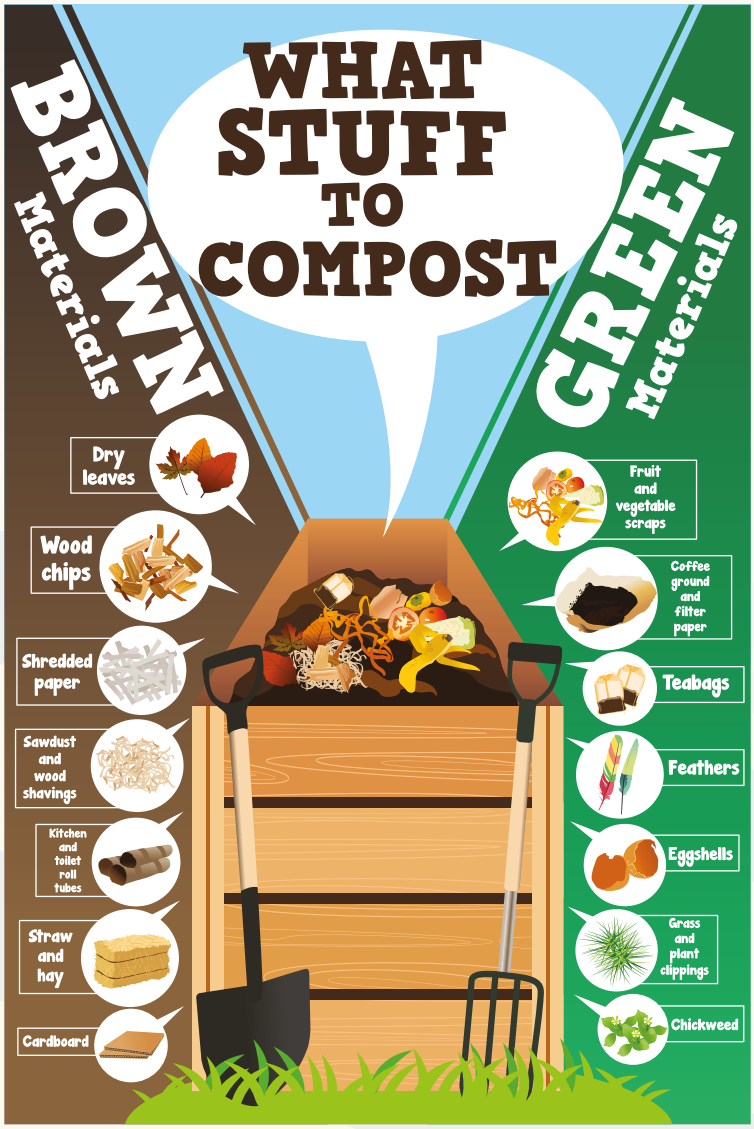
Composting

Composting turns organic waste back into soil. In nature, plants do this themselves. It's part of the natural cycle for nutrients to be returned to the Earth where plants can take them up to support life again. At home, we can return the nutrients to our soil through composting or worm farming.

Key ingredients for composting

There are some key ingredients to making compost work. An easy way to remember the key ingredients is by using the ADAM principle: composts need Air, Diversity, Aliveness and Moisture (ADAM). See the table for more details.

Natalie at Malabugilmah spreading compost in her garden.



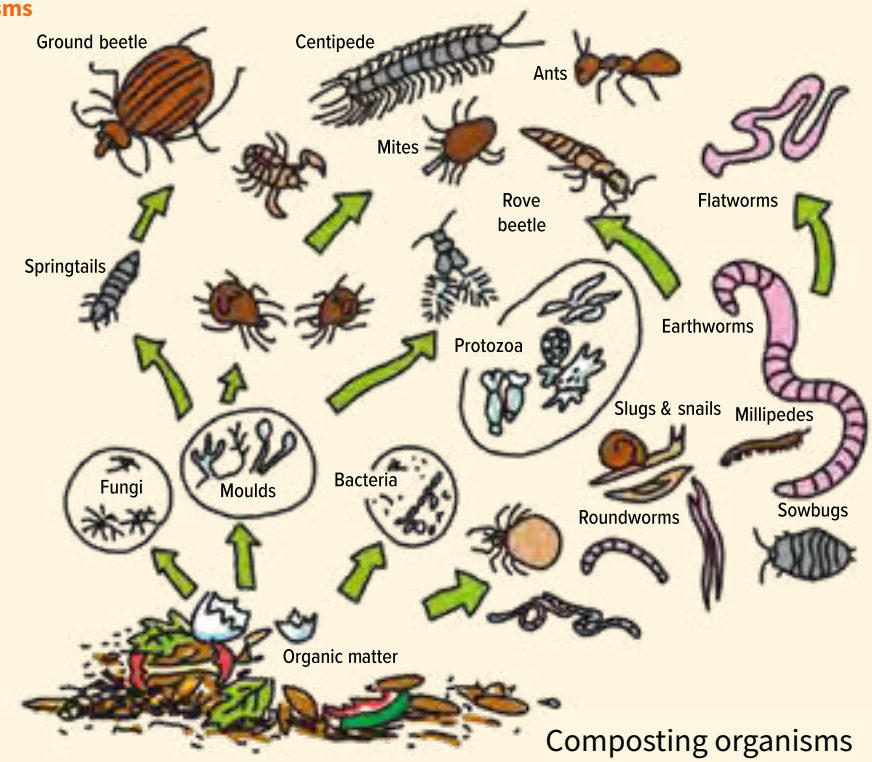
A composting poster - What stuff to compost

Air	Diversity	Aliveness	Moisture
Air is important in helping waste break down and keeping the compost pile smelling sweet rather than stinky. Help aerate your compost pile by turning it regularly.	A rich and healthy compost pile needs a diverse range of materials. Make sure you include a mix of green (nitrogen-rich) and brown (carbon-rich) materials.	A compost pile is a living system and home to billions of micro- and macro-organisms that work to break down and help kitchen and garden waste decompose.	Compost needs moisture to help materials break down. You don't want it to be too wet though or it will become smelly. Ideally compost should be as wet as a damp sponge.

Composting organisms

Every handful of compost soil contains over 7.5 billion organisms. That's right, in one handful of soil there is as much life as there are humans in the world. The illustration shows some of the animals you will find in a compost. The types of micro (small) organisms and macro (large) organisms is dependent on the temperature of your compost. Different organisms play a role in the various stages in composting.

ILLUSTRATION:
Composting organisms



Composting organisms

Hot and cold composting

Cold composting	Hot composting
• Passive composting and less labour-intensive • Can add ingredients over time, no need to build in one go • Doesn't require as much air (oxygen) • Examples include a compost bin (see picture), a pile on the ground and worm farming	• Active composting that is more labour-intensive • Pile must be large enough to retain the heat it generates (at least 1m x 1m x 1m) • Faster method of composting that produces compost sooner than cold composting • Requires you to turn the pile or aerate the pile to introduce air (oxygen) • The heat will kill diseases and weed seeds

Activity 6: Building a compost pile

Write or draw some of the key things you learnt from building a compost pile.

Videos on composting

Costa's guide to household composting: https://www.youtube.com/watch?v=Uw5JVZSzMUA

Weilmoringle Community compost school workshop: https://www.youtube.com/watch?v=8g9Jt1LO-pg

Worm farming

Worm farming is another method you can use to turn organic waste into nutritious soil. Worms are incredible composters and will eat their own body weight in a day. Compost worms are actually different species of worms from earthworms. The most common compost worms in Australia are either red worms or tiger worms.

A worm farm can be set up in your backyard by using an old bathtub, polystyrene box, a 20-litre bucket or a purpose-built farm. A ready-made worm farm will have a few layers of trays with a perforated base that stack on top of each other with each tray built up as required. If using a recycled container, you will have to start a new farm when the first one fills up to allow the worms to finish eating all the food.

Steps to starting a worm farm

1. Choose a shady spot so the worms don't get too hot, cold or wet (protect from heavy rain).
2. Ensure the farm can drain and liquid is able to flow out from the bottom. Worms need to be moist, but they breathe through their skin and can drown in too much water.
3. Start by lining the base with some wet newspaper to create bedding for the worms.
4. Add some garden soil and place the worms into the soil (you will need at least 1000 worms to get started).
5. Cover the worms with a hessian sack, old cotton t-shirt or some wet newspaper.
6. Put a lid on your worm farm to keep out the rain and flies.

Red composting worms, NSW. Photo: Tash Morton, EPA

Feeding

- Feed the worms small amounts of food scraps each day rather than a big load all at once.
- You don't have to cut the food up, but the smaller the pieces the faster the worms will be able to digest it.
- Once a month you should add a tablespoon of lime to prevent the farm becoming too acidic, otherwise the worms won't breed.
- Meat should be not be added because of the potential to attract flies to the worm farm.
- Other foods to avoid are citrus and too much bread or pasta.
- Worms love manure: it's like chocolate to them! If you are going away for a couple of weeks, a few cow patties will see them through.

Maintenance

- In a custom-made farm, when a tray is full, add another tray on top with a bit more soil and some food scraps. The worms will move through the holes and into the tray above on their own.
- In a homemade farm without trays, you will have to start a new farm while the worms finish breaking down the food in the first container.
- Aerate the bedding material once a month to keep it loose (worms need oxygen).
- Keep the farm moist but not too wet.
- Liquid can be collected from the bottom of the farm by placing a bucket under the outlet. Dilute it to the colour of weak tea and apply with a watering can directly to the garden or potted plants. It is a nutritious plant food. If your worm farm is dug into a garden bed, the liquid will drain into your garden and there will be no need to harvest it.
- REMEMBER to add a tablespoon of lime to prevent the farm becoming too acidic, otherwise the worms won't breed.

Malabugilmah community worm farm gardens, NSW. Photo: Elaine Toogood

Bathtubs can be recycled to make gardens and worm farms, NSW. Photo: Tash Morton, EPA

Activity 7:
Fascinating facts about worms

Compost worms are extraordinary creatures. After checking out the worm farm in action, write down three interesting facts you've learnt about compost worms.

Fact 1	
Fact 2	
Fact 3	

Videos on worm farming

https://www.youtube.com/watch?v=sYxgd6EGxew&list=PL6ja8Pix_6Jlc8ugB5Xj6lnMVPJor0sRX

Malabugilmah community garden made from recycled boat, NSW. Photo: Compost Central

5. Asbestos

Asbestos is a naturally occurring mineral that has been used for over 4000 years. Its tiny fibres, which can be spun into larger, longer fibres, have been used in many different products, including ropes, cloth, building materials, car brake pads and even children's crayons, toothpaste and surgical thread.

Being a mineral, it can withstand high temperatures, leading to its broad application in building products in the 1930s. However, concerns grew when medical scientists started to link the deaths of asbestos miners to the mineral's fibres found in deceased miners' lungs.

Three of the most commonly mined asbestos are:

		
Crocidolite (blue asbestos)	**Amosite (brown asbestos)**	**Chrysotile (white asbestos)**
Has needle-like fibres and its added strength provides effective thermal insulation **Considered the most hazardous and may be responsible for more deaths than any other type of asbestos** **Examples: cement sheeting and 'super 6', some spray-on coatings, pipe insulation, plastics and cement products** **Mined in the Pilbara, WA until 1966**	**Has needle-like fibres** **Commonly used in cement sheets and pipe insulation, ceiling tiles, vinyl tiles and thermal insulation products**	**Has a curved and wavy appearance making it soft and flexible and could be woven into cloth** **Commonly used in adhesives, roofing, ceiling, wall sheeting, floors (vinyl tiles), brake pads, gaskets, insulation, ducting, fire proofing and appliances** **Mined at Baryulgil, Northern NSW until 1979**

What are the dangers of asbestos?

Asbestos poses a health risk to humans and animals when its fibres are breathed in. Understanding where asbestos is, how to identify it and how to clean it up safely could help keep you and your mob safe. Asbestos is dangerous because:

- where it is disturbed, it can release microscopic asbestos fibres which can be harmful
- breathing in asbestos fibres can cause asbestosis, lung cancer and/or mesothelioma
- the risk of contracting asbestos-related diseases increases with the number of fibres inhaled and the length of time that the asbestos fibres are inhaled.

Bonded vs non-bonded asbestos

Non-friable asbestos (also called **bonded** asbestos) products are solid and rigid and cannot be crumbled, pulverised or reduced to powder by hand pressure. The asbestos fibres are tightly bound in the product and are unlikely to be released into the air unless the product is broken or weathered. A common example includes asbestos cement sheeting (often called 'fibro').

Friable asbestos (also called **non-bonded** asbestos) was not commonly used in the home. It was mainly used in industrial applications, such as pipe lagging, asbestos cloth and rope. Friable asbestos can be easily crumbled, pulverised or reduced to a powder by hand pressure when dry and as such releases more fibres. Non-friable asbestos can become friable if it is very old and weathered or if burnt, such as in a house fire.

Abandoned asbestos house on Baryulgil Community, NSW
Photo: Keith Bolton

Dumped asbestos, Woodenbong, NSW. Photo: EPA

Asbestos in the home

Asbestos fibres were used widely in building materials up until the mid-1980s and not officially banned in Australia until 2003. Approximately one-third of all Australian homes contain asbestos products. A few of these products are listed below:

- **roofing and gutters**
- **gables and eaves**
- **walls**
- **vinyl, carpet and tile underlay**
- **lining behind wall tiles**
- **imitation brick cladding**
- **packing under beams**
- **fencing**
- **sheds**
- **splash backs in wet areas**
- **telecommunication pits**
- **some window putty**
- **expansion joints**
- **concrete formwork**

Abandoned buildings and dumped asbestos

Abandoned buildings may invite curiosity and young children wanting to play inside them. This can be dangerous if the building contains asbestos, especially if the materials are damaged and broken, which may harm the health of anyone who visits the property.

Dumped rubbish can also contain asbestos, especially if old houses or building materials have been dumped. Burning asbestos can release the asbestos fibres into the air and be dangerous to those exposed to the smoke. It can also settle on the soil and increase the risk of exposure to asbestos.

Identifying asbestos

The only accurate way to identify asbestos is through laboratory testing. The EPA can help you organise this. A sampling kit can be sent to the project manager. The sampling kit contains:

- **zip lock bags to collect samples**
- **P2 safety masks**
- **instructions**
- **postal satchel**

The test results will be emailed and/or posted back to the project manager. The cost of the testing for asbestos on your project can be covered by the EPA.

Asbestos test kit, NSW. Photo: EPA

Make safe on your community

- ✔ If you suspect asbestos in dumped rubbish, contact the EPA for a sample test kit.
- ✔ Keep children away from abandoned houses.
- ✔ If you think you have asbestos in your home, don't drill it, don't sand it, don't cut it!
- ✔ Painting the surface of fibro helps seal the fibres in
- ✔ When handling asbestos products, wear protective clothing including a well-fitted P2 safety mask and type 5, category 3 protective overalls.
- ✔ Always use licensed asbestos removalists and assessors. SafeWork NSW keep an updated list on their website: https://www.safework.nsw.gov.au/asbestos-and-demolition-licence-holders

Activity 8: Taking an asbestos sample

Refer to **Appendix 3** for a copy of asbestos sampling instructions and form. Write or draw about what you learnt about taking an asbestos sample in the box below.

6. Environmental health and waste

If waste is not managed well, the health problems for communities can be significant. Food waste can attract pests and vermin which start and spread diseases. People may cut themselves on broken bottles or tin cans left lying around. Garden waste, dumped furniture and tyres can hold water and provide a breeding ground for vermin and mosquitos. Rubbish and food waste can cause diseases, including skin infections, tetanus, hepatitis A, Ross River virus, staph infections that can lead to acute rheumatic fever, and hook and threadworms. When pesticides, motor oil and other chemicals are illegally dumped and find their way into the water supply, contamination of the water may cause sickness.

Poor waste management can lead to social and economic problems for communities. When people get sick from poor rubbish management, they may have to leave the community to receive treatment, leaving behind families to take care of themselves. This can be very stressful and financially costly for the patient and their families.

In NSW, Environmental Health Officers (EHOs) of the Public Health Unit assist Aboriginal communities to identify and resolve environmental health issues. EHOs work with Aboriginal community groups and organisations to identify and address environmental health issues. EHOs have been involved in a number of programs and activities including:

- Community Action Rodent Eradication Program (CARE) which aims to reduce rodents in a community. The program includes an educational component and support for housing repairs and a maintenance crew from the community.
- Community clean-ups work with Aboriginal communities to develop waste minimisation strategies and prevent the accumulation of waste

Burning plastic waste releases harmful gases

products that present a health and safety risk to the community. EHOs assist by communicating with relevant stakeholders and advocate for funding.

- Infrastructure upgrades assist communities by advocating for funding to upgrade infrastructure. EHOs also work with other government organisations to ensure that sustainability concepts are an integral component of infrastructure upgrades.

Burning of plastics

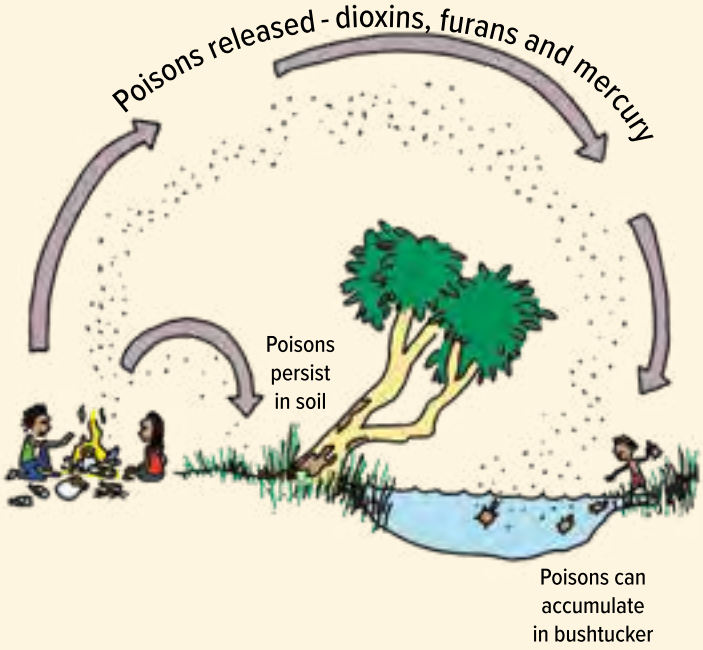
Most people who burn plastics don't realise how harmful this practice is to their health and the environment. The smoke released when burning plastic can increase the risk of heart disease, aggravate respiratory ailments like asthma and emphysema, damage the nervous system, kidneys, liver and reproductive system and cause nausea, rashes and headaches.

Burning polystyrene (foam cups, meat trays and boxes) releases harmful gases that can be absorbed through the skin and lungs. PVC (polyvinyl chloride) plastics contain organochlorides which release dioxins when burnt. Dioxins are a highly dangerous toxin that are carcinogenic (cancer-forming) and are also a known hormone disruptor.

The pollutants released when burning plastics are transported into the air with the heavy particles settling on the land and water. Pollutants like mercury, dioxins and furans persist for long periods in the environment and bio-accumulate in the tissues of living organisms, particularly top predators like humans. People can be exposed to the toxins not only through the smoke from the fires but from eating contaminated fish, meat and plants.

ILLUSTRATION:
The impacts of burning plastic on Country and your mob

Dangers of burning plastic



Activity 9:
Community environmental health risks and actions

Break into a small group. Each group will be given a picture. Identify the environmental health risk(s) in the picture (in the box on the left) and some actions you could take on your community to reduce this risk (in the box on the right).

Health risk	Actions to reduce risk

7. Role of CEAs

Becoming a Community Engagement Advisor (CEA) is an exciting opportunity for you to work with your community to engage and inspire positive waste management. The CEA is the person that helps to get the whole community involved and participating in both developing a Waste Management Plan and then putting the plan into action.

Being the CEA means that you can be an inspiration for others. This is a chance to tap into your own passions and ideas about what you want for the community and make this project fun and rewarding for yourself and everyone involved! It is also a chance for you to learn new knowledge and skills and share and practise them with your community. Ask for support from the EPA and other partner organisations where you need it. Part of your job is to communicate what help you and the community need to make your waste management project a success.

In a time where it seems the planet and humans need to make big changes in how we treat the Country we walk on and the people we share it with, the role of the Community Engagement Advisor and the Aboriginal Communities Waste Management Program is a great opportunity to be part of that change and help support others to show them a new way forward. This new way may involve acknowledging and celebrating the old ways of Aboriginal knowledge, culture and caring for Country. It is up to you and your community to make this project your way!

CEA duties will include:

- talking with the community about waste and recycling
- assisting the development of a waste management plan for your community
- assisting to organise community meetings and events
- attending meetings on the waste management project
- conducting house-to-house surveys on waste and recycling
- carrying out specific weekly tasks relevant to your community's project like waste or recycling monitoring and reporting to the project manager
- representing the project in a professional and positive manner, such as –
  - talking to the community about waste issues to educate and build capacity
  - addressing and escalating waste issues in an appropriate manner.

Salome Green the Community Engagement Advisor at Muli Muli Community.

Learning from CEAs

Salome Green

Salome Green has worked as the CEA at Muli Muli Community since February 2017. Some of the achievements made by Salome and her community include:

- collecting over seven tonnes of recycling with a new collection service run by the Githabul Rangers (a local Aboriginal business)
- clean-up of an old tip site on the community, removing 2000 tonnes of waste, contaminated soils, asbestos and metal (that was recycled)
- organising a community paint-the-bin day
- a partnership with the local school to write and develop a rap song and video clip with Desert Pea Media about recycling – check it out at https://www.youtube.com/watch?v=4BB07DimLS0
- co-design of community education resources, including recycling posters and stickers, drink container posters and signs for the community to promote Caring for Country.

The following is a list of some of the challenges Salome has faced and continues to face as a CEA and how she has overcome them or managed them:

- **motivation** – having the drive to complete duties
  'Becoming educated about the effects of waste on the land has motivated me to take care of our Country and share that with the community.'
- **family issues** – living in a small community or even with family can be challenging
  'I have learned to put issues aside and make it more about the community and not me as an individual to keep going with the project.'
- **issues with non-Indigenous people** – working in the community as part of the project
  'At times their attitudes and ways of communicating were challenging and, as the CEA, my role was to bridge the cultural gap between Indigenous and non-Indigenous people involved to get the best outcome for my community.'

Salome Green and Muli Muli youth on set creating a rap song with Desert Pea Media.

- **finding common ground** – that works well for the community and EPA
  'I looked to find a solution that works for both parties.'
- **community ownership** – allowing all community members to be part of the project and have input into the project so ownership could take place
  'Doing the survey with the community, going house-to-house, when the project started helped to get everyone's different perspectives and ideas. People then took the initiative to start different projects that they were interested in. Also, when the kids were motivated about something, it influenced their parents to get involved.'
- **working with contractors** – the differences in quotes for the same job, choosing the contractors to work with and making sure the work gets done how you want it
  'Some ways of overcoming this were to get contractors to visit the community first, meet the Elders and get the Elders' opinion and approval for them to work on the project. Also getting support from the EPA in checking quotes to make sure the pricing was fair.'
- **changing habits** – it takes a while before a new habit becomes part of a daily routine
  'My challenge was trying to help people break these old waste habits. The main way to do that was just by explaining the connection of how waste pollutes our Country. I also talked about the investment of energy and money that had gone into cleaning up our land so we didn't want it to go back the same way.'

Carol Wilson

Aunty Carol Wilson has worked as the CEA for Malabugilmah Community. Some of the achievements and highlights of their project so far include:

- getting rid of rubbish around the community
- getting rid of old cars
- making new food gardens
- getting new bins and people to recycle the right things
- learning all about waste and going to the tip
- interesting to learn about the worms and how they can help get rid of our food scraps.

'The main challenge has been getting people to sort their rubbish. The things we did to help them was I checked the bins each week and rode in with the garbage truck watching on the camera, having a firsthand look at what was in each person's bin. You wouldn't believe it till you see it from the truck!

'The whole thing has been interesting from the word go. The community has cooperated and participated 100%. I have lived at Malabugilmah for nearly 40 years and have never seen the community work together the way they have on this project. They busted their backsides!'
Carol Wilson

Aunty Carol Wilson the Community Engagement Advisor at Malabugilmah Community.

Activity 10: Sharing stories

As a group we are going to have a yarn about our experiences as CEAs, our challenges, highlights and goals. Use the box below to record a few details.

Organising meetings

One of the roles of CEAs is to help organise and facilitate community meetings. Involving community members in the project is an important part of the rubbish projects. Community meetings create an opportunity for community members to have input into the project. When people are a part of shaping a project, they are more likely to engage with the project. Some ideas for meetings you might hold as part of your project are listed below:

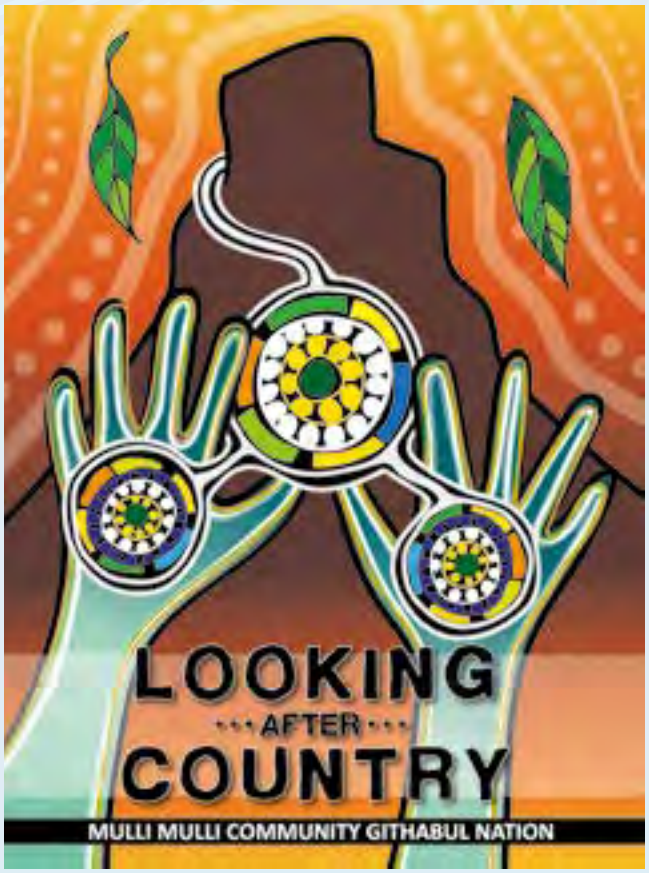
- **getting started:** sharing ideas from other projects and identifying the issues on your community
- **project planning:** sharing the data you collect in surveys and brainstorming ideas for the project
- **presenting a project plan:** presenting the ideas, getting feedback on the plan and finalising it
- **project updates:** opportunity to update community on where the project is up to, revise what's working and what isn't and identify changes needed to improve the project
- **project review:** evaluate with community members what worked, what we could do better and where we want to go next.

Things to consider when organising a meeting:

- Make a poster or flyer about the meeting (further details below).
- Go around house-to-house telling people about the meeting and giving them the poster a few weeks before.

- Work out how many people will be coming and order and buy the food, drinks, tea, ice, etc. needed for the BBQ.
- Organise someone who likes cooking to be the cook and set up the BBQ on the day. You can pay community members to organise the catering. Make sure you put this into your project budget.
- Buy some reusable plates, cups and cutlery from your local opportunity shop that you can use at different meetings rather than disposable items.
- Make sure you book the office or hall for the meeting on that day.
- Have some other people ready to help you on the day to pick up food and organise the venue.

A checklist for organising and running a meeting is provided in **Appendix 4**.



Mulli Mulli Community entry sign to community developed on the project.

Organising workshops

Workshops are a great way to learn new skills, have fun and even potentially create new business opportunities for community members. Workshops provide hands-on experience, which is what you need when you are learning new skills and ideas. Some ideas for workshops you might run or get help to run on your community as part of the project include:

- co-design education materials/signage for the project – what to recycle, an entry sign to the Community
- what can be recycled? You might play the game A Deadly Sort!
- composting and/or worm farming workshop
- excursion – organise with your local council to visit the tip and/or recycling centre to learn how it works
- reuse workshops – art workshops about making things out of rubbish
- waste-to-art workshops – you may bring in a facilitator from the region who has specialised skills in this; the Regional Arts Networks NSW are a good place to inquire http://regionalartsnsw.com.au/networks/
- repair workshops – bicycle maintenance, welding, electronics
- weaving from waste
- co-design artwork for signage on community with a local artist.

A checklist for organising and running a workshop is provided in **Appendix 4**.

How to run an effective workshop

If you think about the best workshops you've ever attended, they most likely followed these rules:

- **Hook the participants:** The first five minutes of any workshop are the most important. You've got to grab the participants' interest by exciting them, involving them in the learning and informing them about what they are going to be doing.
- **Facilitate don't lecture:** There will always be information you are delivering in a workshop. Make sure you talk for no more than 30% of the time in a workshop and allow at least 70% of the time for being active. This might include working in a small group, making or doing the activity you are learning about or problem-solving together.

We remember:
20% of what we hear
40% of what we see and hear
80% of what we see, hear and do

- **Allow time to end well:** Allow at least five minutes at the end of the workshop to revise what you have learnt. Reflecting on what you learn is an important step in the learning process. It also gives participants a chance to provide feedback to you on the workshop, which is an important step in how you improve your facilitation skills.
- **Stay on task and time:** To keep participants' interest in the workshop up, it's important to stay on task and on time. Be alert to the conversation drifting away from the learning outcomes and be ready to gently bring the group back on topic. It is the facilitator's job to keep the workshop flowing on task. You might like to divide the workshop time up into the activities and how long you plan to spend on each. This way you can track how the timing is working for the workshop and adjust the workshop as needed if people are really engaged in a particular activity. Remember to always allow for reflection time by finishing up with at least five minutes to end the workshop well.
- **Dealing with conflict:** Where there are people, there is conflict. There will always be differing opinions and ways of expressing opinions. The role of the workshop facilitator is to achieve the learning outcomes while allowing participants to express their views. It's important to allow people with differing opinions to express their ideas for a short time and to listen and acknowledge that you have heard their views. If the issue does not relate to the workshop topic, it is fair to ask participants to take the conversation outside of the workshop. Your job is not to mediate the conflict but help the participants come back to the workshop process. Chances are that they want to continue with the workshop too and not be caught up in the conflict.

Enabling behaviour change

Enabling behaviour change is about helping people to do something they've never done before. The thing about changing our behaviour is **we hardly ever change alone – we change together as a community** by observing others and talking with them about why we are changing our habits. **Only together and through practice, can we change our behaviour.**

A big part of your waste projects on the community will be to work with community members to change their behaviours and habits around waste and recycling. Habits aren't easy to change but there are a few useful tools that can help you encourage behaviour change on your community.

Another thing about behaviour change is people don't like taking risks and will stick to what they know and are comfortable with. When changing our habits and behaviours, we must move out of our comfort zone into behaviours that we aren't

familiar with. The good news is, there are tools you can use on your projects that will help create positive change.

A tool you might like to try is called the **EAST** tool. Applying some of the thinking in the EAST tool should help achieve longer lasting change and outcomes from your project.

Make it Easy	• **Reduce the hassles, make the action easy to do.** • **Simplify the messaging/education materials: use pictures.** • **You've got to make the new behaviour easy to achieve. Make it simple, cheaper, safer, easier to access, etc.**
Make it Attractive	• **Attract people's attention by making the project interesting so people want to be a part of it.** • **Design in rewards that encourage the positive behaviour changes you are working on in the project.** • **Find a role model the community look up to attend the event to model the behaviour, e.g. a sports star or an Elder.** • **Use positive language. People want to be a part of something positive.**
Make it Social	• **Run workshops where people get to interact with each other and practise the behaviour change, such as composting gardens.** • **Co-design posters/fliers with the community rather than for the community. It will make people feel a part of the process and take ownership in the project.** • **Encourage people to make a commitment or pledge and make their commitments known to the community, e.g. 'I commit to take my own bags shopping'. You might use this at a workshop where you are painting bags for reuse.**
Make it Timely	• **Prompt people when they are likely to be more responsive, such as after pay day or early afternoon.** • **At community events, practise new behaviours, e.g. set up recycling at a community meeting or use washable crockery at events rather than single-use plastic items.**

Reference: the EAST tool has been developed by the Behavioural Insights Team: UK: 2014.
https://www.behaviouralinsights.co.uk/publications/east-four-simple-ways-to-apply-behavioural-insights/

Activity 11:
Practise using the EAST tool

In a small group, identify one habit you are going to work on with your community to change. For example not crushing cans or putting the right things in the recycling bin.

Habit	

Using the EAST toolkit identify some activities and/or actions you might include in your project to inspire change.

Make it Easy	
Make it Attractive	
Make it Social	
Make it Timely	

Making a poster or flyer

Making posters or flyers to hand around to community members is a great way to promote events and achievements on your waste management project. You might also make educational posters or flyers to promote what to recycle, what containers are eligible for 10c collection, garbage collection days, bulky waste collection days or clean-up days. **Remember, co-designing these with community input will get a much better outcome**. The following are some examples of flyers and posters and how to make them:

In **Appendix 5**, we have provided a step-by-step guide on how to make a poster using the Word software program.

If you are interested in trying out Canva, the free online poster-making tool, go to https://www.canva.com/

This poster was made using a FREE internet program called Canva. It's very easy to use.

This poster was made using the Word program. It's easy to use.

Conducting surveys

Surveys are a great way to get input from community members about how they want to be involved in the project and what they want to see happen and to understand their concerns and ideas for what could help make the project work.

To get to everyone on the community you may have to do the survey over several days. Choose a time that's good for people to have a yarn.

A community rubbish survey is provided by the EPA to help you develop your rubbish management plan. The survey comes in Word format, so you can change it to make it suit your community.

Surveying community at the beginning of your project and then again at the end can help you understand what impact the project has had and what the community got out of participating in it.

Waste and recycling monitoring

Depending on what your community does as part of their waste management plan, there may be a role for monitoring the waste on the community before and after the clean-up.

When Malabugilmah re-introduced recycling to the community, the CEA's role was to monitor the recycling bins at each home to help people learn what could be recycled and what items contaminate the recycling. This involved looking in each household's bin and providing feedback each week. Malabugilmah created a checklist which they gave to each house. See **Appendix 1**: Recycling checklist on what to put in your recycling bin.

At Alice Edwards Village, the CEA completed litter audits each week. This was to see if there had been any change in littering by the community due to education during the project. The EPA can help with the resources and training to do a litter check on your community.

Paint the bin day at Muli Muli, NSW. Photo: EPA

Malabugilmah waste audit, NSW. Photo: Elaine Toogood

8. Making a film with Filmpond

Filmpond enables you to tell your stories using video. Filmpond editors help you produce your videos and share them with your community through online channels called ponds. Visit the Aboriginal NSW Pond (https://www.filmpond.com/ponds/aboriginalaffairs) to see some of the great films being made by Aboriginal Affairs staff and the communities they work with.

Ponds

Aboriginal Affairs has established 13 subponds in the Aboriginal NSW pond (https://saml.det.nsw.edu.au/sso/SSORedirect/metaAlias/idp) where staff and communities can share stories by creating films. A pond is a secure online channel for sharing your Filmpond videos. To view the active ponds under the Aboriginal NSW Pond, visit https://www.filmpond.com/ponds/aboriginalaffairs and, if you're keen to get involved, you can request to make a film.

Making a film is **free**! It won't cost you anything, just your time, passion and commitment!

Consent and intellectual and cultural property when working with Aboriginal people and communities

We encourage anyone making a film with or about Aboriginal people or communities to ensure they take the utmost care to respect the protocols and wishes of the people or communities they are working with. Photographing and filming should be based on mutual respect, trust and the principle of informed consent. This means that those producing films need to ensure that:

- participants are informed of their intellectual property rights before signing a consent to be filmed or photographed
- participants are informed that they may refuse to provide their consent or remove their consent at any time
- participants are informed about how the film will be used, including any foreseeable uses, including secondary use
- the film will not be used for financial benefit and participants will NOT be paid to appear.

Further information about Aboriginal Intellectual and Cultural Property can be found http://www.terrijanke.com.au.

How to make films

1. Contact your nearest Aboriginal Affairs NSW Office to obtain a Filmmaker Information Kit: https://www.aboriginalaffairs.nsw.gov.au/contact
2. Visit the Aboriginal Affairs pond and click on Make a Film.
3. Work online with your experienced Filmpond editor to plan and film your video.
4. Your editor will bring your story to life.
5. Publish and share your films through Filmpond, via email or your social media account.

Information and support

Ryan Taylor

Project Officer, Community Partnerships Directorate
Aboriginal Affairs NSW

Phone 02 8362 6648
Mobile 0475 961 296
Email ryan.taylor79@aboriginalaffairs.nsw.gov.au

Filmpond

Phone 1300 881 369
Email splash@filmpond.com

Appendix 1:
Recycling checklist

Household name:

Well done! All these BELONG in your YELLOW recycling bin:


☐ Clean plastic bottles and containers


☐ Clean paper and cardboard


☐ Clean newspapers, magazines and envelopes


☐ Clean cans and tins


☐ Clean glass bottles and jars

These items belong in the RED rubbish bin:


☐ Paper or cardboard with food


☐ Food


☐ Plastic bags and other soft plastic


☐ Containers with food


☐ Polystyrene


☐ Nappies


☐ Mixed product (more than one material) e.g. chip packets

Please put these items in your red rubbish bin next week.

Thanks for helping Malabugilmah be BUGIL with our waste!

Appendix 2:
Container collection activity

What could you do on your community to promote the container collection scheme as part of your project? Produce signage, posters, stickers? Work with local artists on signage? Work with a local school?

What infrastructure (bags/bins/cages) would be useful for community members to assist them transport containers to the collection points?

Where is your closest collection point, when is it open and how many containers can you take there in one go? Use the link https://returnandearn.org.au/

Appendix 3:
Collecting an asbestos sample for testing

If you have identified materials for the community clean-up that you suspect may contain asbestos, you can send a sample(s) to the WSP laboratory for testing. These procedures have been developed by WSP to ensure you take the appropriate safety measures to avoid asbestos exposure.

Equipment to prepare

- P2 disposable mask
- Small spray bottle with water
- Small and large zip lock bags (provided)
- Paint/sealant and paint brush
- Pliers or suitable hand tool to snap the sample
- Wet wipes to clean tool
- Marking pen (permanent marker)
- Postal satchel
- WSP Sample form (provided)

Figure 1: Sample size

2.5cm circle size is adequate for testing, this is the same size as a 20 cent coin.

Easy step-by-step guide to taking a sample

1. Contact the EPA project officer who can post you a kit, including masks and zip lock bags.
2. Always use a P2 disposable dust mask provided when dealing with suspect materials. For the mask to work effectively, it must have contact with your skin and create a seal to prevent dust entering your mouth or nose.
3. Use a spray bottle to wet the material you are sampling to suppress the release of dust.
4. Carefully collect a sample using a hand tool, e.g. pliers. Samples need only be the size of a 20c piece (see Figure 1: Sample size).
5. Place the first sample in a small zip lock bag (provided) and seal the bag.
6. After sampling, you should use paint to seal any broken material, as exposed materials have the potential to cause airborne asbestos dust. If you have picked the sample up from the ground and not broken any materials, there is no need for this step.
7. Use a marking pen to write on the samples in the zip lock bag:
   - your first and last name
   - the words '*Asbestos sample*'
   - location of the sample, e.g. '*NE corner of park on Willow St*' or '*front yard Mr Williams*'
8. If taking another sample from a different location, repeat the process above (Steps 1 to 7).
9. Clean your hand tools thoroughly with a wet wipe then place the wipe in the large zip lock bag provided, along with your dust mask. Place all samples in this large zip lock bag also and seal the bag.
10. Place the sealed bag in a postal satchel along with the completed sample form (provided). Seal the postal satchel.

Send the satchel to the laboratory for testing:
WSP: PO Box 2229, Fortitude Valley, QLD 4006

When sending your samples, please ensure the following criteria are met:

- Samples must be approximately the size of a 20c piece.
- Samples must be double zip lock bagged with seals fastened.
- Each sample must be clearly labelled.
- Sample form must be completed and placed in the envelope along with the sample.

Results

Your results will be emailed to you within five working days of receiving the samples. Should you require any other information regarding the results, please contact the laboratory on **07 3854 6257**.

Inquiries

ACWMP Senior Project Officer:
Tash Morton on **0459 865 625** or
email **rubbish.projects@epa.nsw.gov.au**

Asbestos sample submission form

For the NSW EPA Aboriginal Communities Waste Management Program

Client/company name	NSW Environment Protection Authority		
Local Aboriginal Land Council (LALC) name		**Community name**	
Contact person		**Address of LALC**	
Phone of contact person		**Email**	
No. of samples taken			
Sample no.	**Sample location**		**Date sampled**

Sample results will be emailed to both the LALC email and the EPA Project Officer within five working days.

Please send all samples as per instructions to:
WSP: PO Box 2229, Fortitude Valley, QLD 4006

Payment will be made by the NSW EPA
Contact Tash Morton to process payment
Senior Project Officer
02 6639 8325 or 0459 865 625
rubbish.projects@epa.nsw.gov.au

Relinquished by:

Date: **Time:**

WSP Office use only

No. of samples received:

Date samples received:

Samples checked by:

WSP Laboratory phone: 07 3854 6257

Appendix 4:
Checklist for facilitating a meeting or workshop

Organising the meeting/workshop

- [ ] Decide on a date that's good for the mob
- [ ] Book the venue
- [ ] Make a poster/flier to promote the meeting/workshop
- [ ] Distribute the poster/flier around community
- [ ] You could also make a Facebook book event page (if you are on Facebook)
- [ ] Organise materials or workshop facilitators
- [ ] Send reminders around the week before the event (by texting or via Facebook)
- [ ] Organise the food
- [ ] Organise reuseable plates, cutlery and cups (and keep a collection in the office/hall)
- [ ] Organise some help to set up
- [ ] Make sure Elders are invited and transport for them is arranged
- [ ] Make it fun and include activities that get people participating

The workshop/meeting: starting well

- [ ] Welcome everyone and acknowledge Country
- [ ] Introduce yourself and other facilitators
- [ ] Advise on housekeeping (toilet/emergency procedures)
- [ ] Overview of the workshop/meeting (including when the breaks will be)
- [ ] Icebreaker/energiser games

Information/inspiration

- [ ] Present your information/research
- [ ] Inspire others with ideas from other places/projects. Maybe use a slide show, video or YouTube

Group work (for meetings)

- [ ] Divide attendees into small working groups (up to four people)
- [ ] Give small groups open-ended questions to yarn about
- [ ] Give instructions for answering the questions
- [ ] Allow each group to present their ideas back to the whole group
- [ ] Write ideas up for everyone to see as a record of the discussion

Ending well

- [ ] Reflect on what has been learnt, allow time for a final word from everyone
- [ ] Thank everyone
- [ ] Yarn about what the next steps are
- [ ] Commit to actions from the meeting/workshop
- [ ] Clean up together

Appendix 5:
Making a poster using Word software

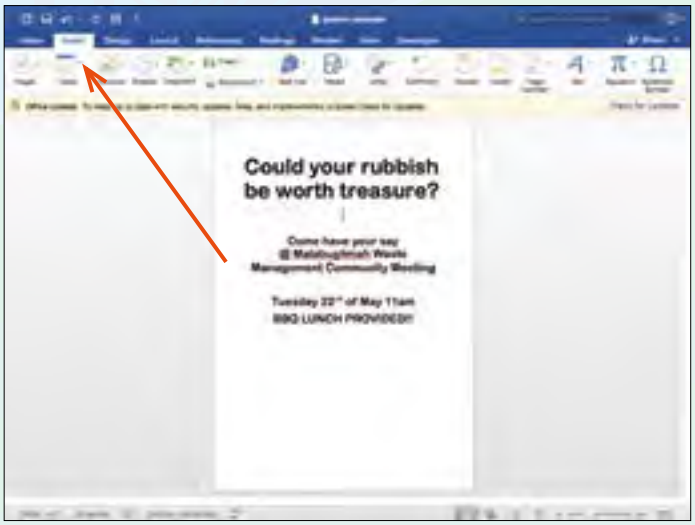
Step 1: Work out what you want to say on the poster

- For the heading think about what will interest the community and grab their attention in a language they relate to.
- What important information do you need to tell them: like where, when, what time the event will be?
- Keep it simple and clear.

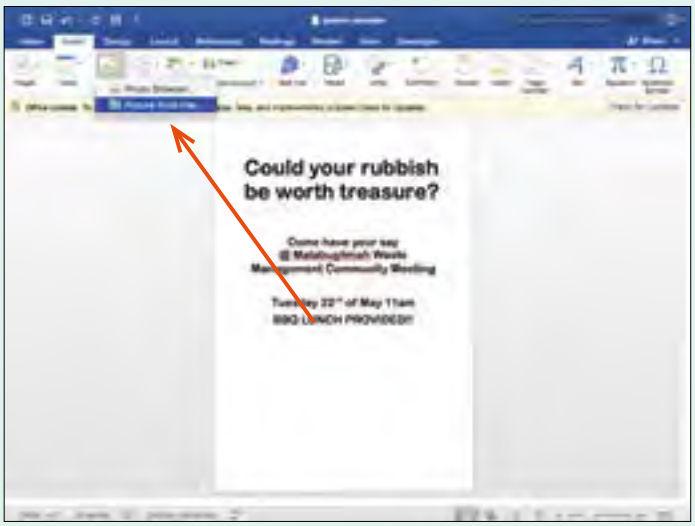
Step 2: Work out what picture you want on your poster

- Use pictures to tell the story about the meeting or event.
- Use photos you already have, take photos yourself or search the internet for images.
- Click on the document where you want to insert the image and then click Insert.

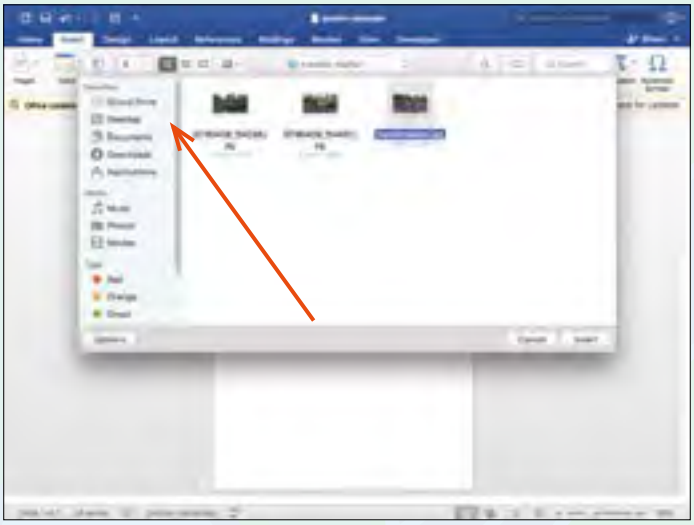
1. **Click on Insert.**



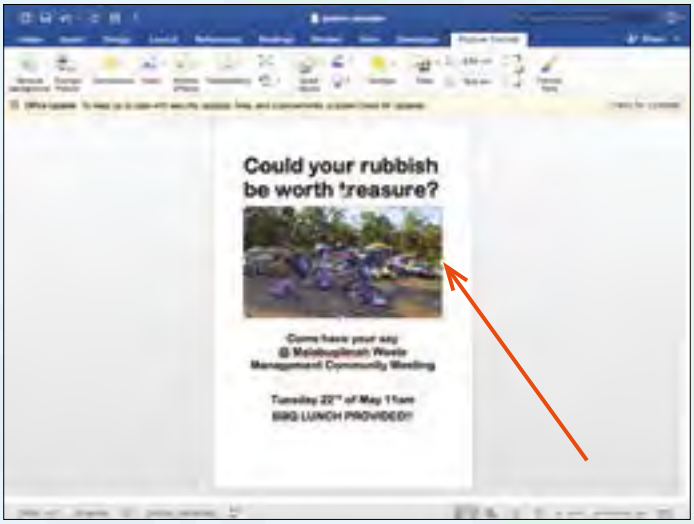
2. **Click on Picture and choose from File or Photos.**



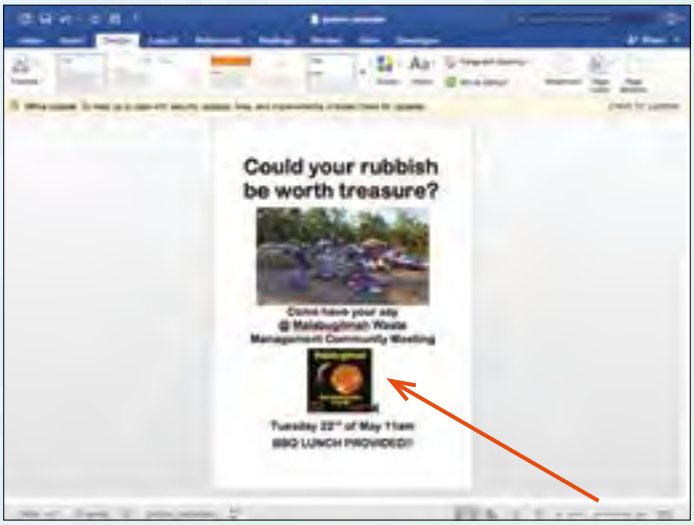
3. Select the image you want and click Insert.



4. Adjust the image by clicking and holding down to drag the corners of the image to make it bigger or smaller.

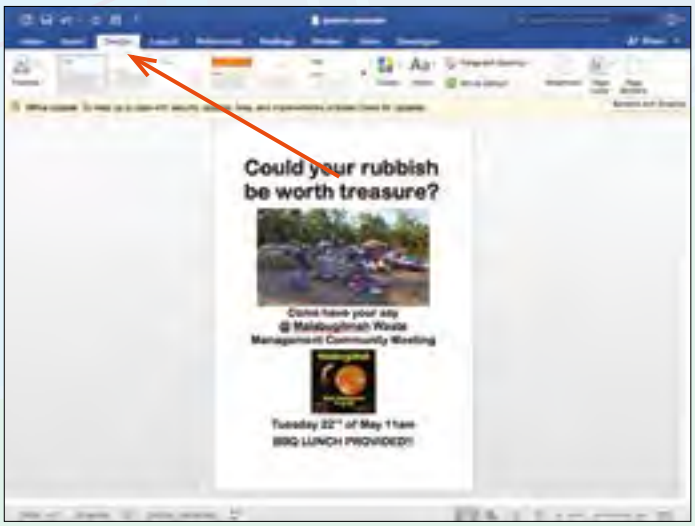


5. Add in any other images in the same way.

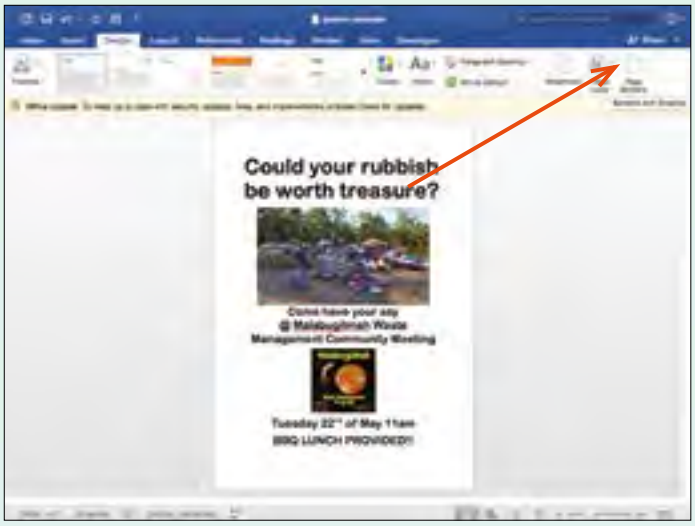


Step 3: Adding a border to the poster

6. To add a border click on Design.



7. Then click Page borders.



8. Choose the type of border you want to use, e.g. box.

9. Click on Style and choose, Colour and choose, Width and choose and Art and choose. Then you will see a preview image of what that looks like. If you are happy with that you can click OK.

Step 4: Saving and printing your poster

10. Check that you are happy with your poster and print it off!

11. Don't forget to save your poster so you can use it again. Next time you can use the same poster and just change the words and pictures!

Community poster to invite people to an event.

Aboriginal Communities Waste Management Program

The Aboriginal Communities Waste Management Program aims to reduce litter and waste and increase amenity of discrete Aboriginal communities (former missions or reserves) across NSW.

This four-year program runs from 2017 to 2021. The program aims to assist communities by providing funding, access to resources, expertise, and advice as they develop community-based solutions for waste management.

The program is an initiative of the NSW EPA and is delivered in collaboration with Aboriginal Affairs NSW, the NSW Aboriginal Land Council, NSW Department of Health, NSW Rural Fire Service and Local Government NSW.

To contact the Aboriginal Communities Waste Management Program, please email **rubbish.projects@epa.nsw.gov.au**

NSW Environment Protection Authority

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PO Box A290, Sydney South NSW 1232

Phone:	+61 2 9995 5000 (switchboard)
Phone:	131 555 (NSW only – environment information and publications requests)
Fax:	+61 2 9995 5999
TTY users:	phone 133 677, then ask for 131 555
Speak and listen users:	phone 1300 555 727, then ask for 131 555
Email:	**info@epa.nsw.gov.au**
Website:	**www.epa.nsw.gov.au**

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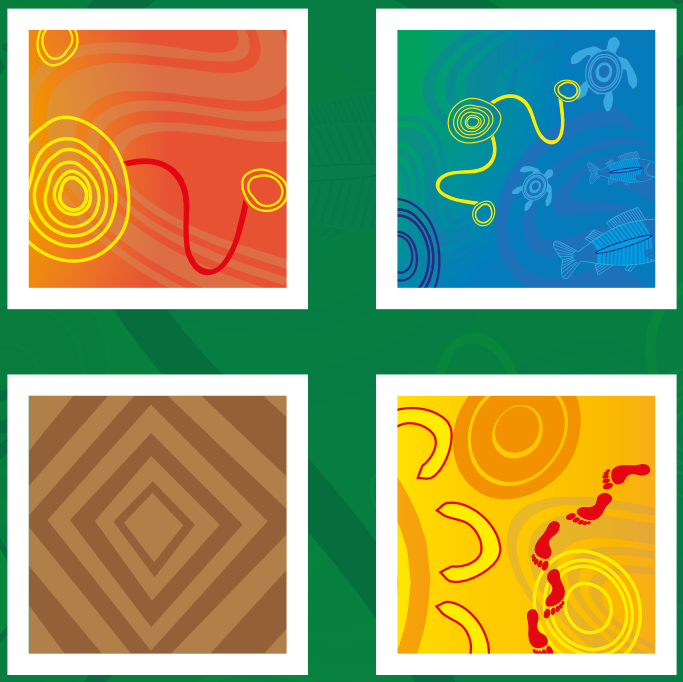

NSW EPA