



Plastic

Did You Know?

- Australians consume over 1.3 million tonnes of plastic every year - more than 71 kg for every person.
- There are over forty different plastics in use today.
- Recycling one tonne of plastics saves enough energy to run a refrigerator for a month or 84% of the energy it would take to make one tonne of plastic from raw materials.
- In March 2000, 63.7% of Western Australian households recycled plastic containers (ABS, 2000).
- Every year Australia produces: 50,000 tonnes of soft drink bottles, 30,000 tonnes of milk bottles and more than 10,000 tonnes of detergent and shampoo bottles.
- Over 24,000 tonnes of PET was recovered in Australia last year - that's over 575 million PET soft drink bottles! Around 18,000 tonnes of this were recycled in Australia, mainly into new soft drink bottles.

About Plastic

Alexander Parkes first invented plastics in 1860, however mass production has only occurred in the past few decades. Plastic production world wide now exceeds 80 million tonnes a year. In Australia, plastic production is about one million tonnes a year.

The ingredients of plastics are mainly crude oil, gas and coal. Plastics are polymers (long chains of molecules) made in large vessels with catalysts under special temperature and pressure conditions. Polymers are shaped into resin pellets or powder. The pellets or powder are heated until made soft then moulded into the required shape.

Moulding is done by injection (for cups, toys and plumbing fittings), extrusion (for plastic sheets, pipes and tubes), or blow moulding (for bottles and drums. When cooled the plastic retains the shape it was moulded into. And can be used for storing or packaging a wide variety of goods.





Being Waste Wise with Plastics

As plastics are made from petroleum products and break down very slowly in landfill, it is important that we waste wise with the plastic. There are three steps to follow:

Reduce

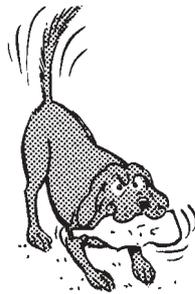
Reduce plastic waste by selecting products that contain the least amount of packaging. Ways to do this include:

- Buy products in bulk. For example multi packs of chips, lollies, biscuits and cereals require much more packaging than bulk packets.
- Avoid using plastic bags by taking your own reusable bags, or boxes to shops.
- Reduce use of cling wrap by using lunch boxes or reusable containers for storage.
- Avoid using products that come in disposable containers.

Reuse

Plastic objects can be reused in many different ways. Plastic bags, ice-cream, margarine and yoghurt containers can all be reused for a range of purposes:

- Plastic bags can be reused for future shopping trips, as rubbish bags, dog poo bags or for storage.
- Ice cream, margarine, yoghurt containers can be reused for storing almost anything in homes, workshops or schools.
- Plastic drink bottles can be reused as drink bottles or even as pots for plants.
- Bottles with a handle can be cut open and used as a handy scoop.



Recycle

Only some types of plastics can be recycled, check with your local council to find out what is recyclable in your area. Usually, Code 1 and 2 plastics are the most commonly recycled plastics. This includes milk, juice, cordial and soft drink bottles. Some councils also recycle Code 3. Plastics of other codes are produced in very small quantities and less frequently recycled. When shopping, check the codes and choose those with containers made of 1,2 or 3.

Recyclable Plastics	Uses for Recycled Material
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Code 1



Soft drink bottles, detergent bottles, clear film for packaging, carpet fibres, fleecy jackets, fabrics for soil retention, filters.

Code 2



Compost bins, detergent bottles, crates, mobile rubbish bins, agricultural pipes, pallets, kerbside recycling crates, plastic furniture

Code 3



Detergent bottles, tiles, plumbing pipe fittings, industrial flooring

Remove lids, rinse and squash bottles before placing them in the recycling bin. Plastic shopping bags can be returned to Coles supermarkets for recycling.



Reduce, Reuse, Recycle



The Recycling Process

1. The recyclables are collected from homes and the plastics are hand sorted into different codes. Sorting is done in Materials Recovery Facilities either by hand or mechanically.
2. The plastic is sliced into flakes; the flakes go through a washing process.
3. The clean plastic flakes are melted together, squeezed out through small holes, and chopped into pellets.
4. The bags of recycled plastic pellets are taken to factories where they are melted and made into new objects. There are lots of different ways of doing this.
5. In the case of soft drink bottles the recycled pellets are combined with virgin pellets. These are then melted and formed into preforms.

6. The preforms are blown to form the full size bottle this is often done at the bottling plant where they are filled and sealed.
7. Once consumed they are delivered back to the recycling plant after household recycling.

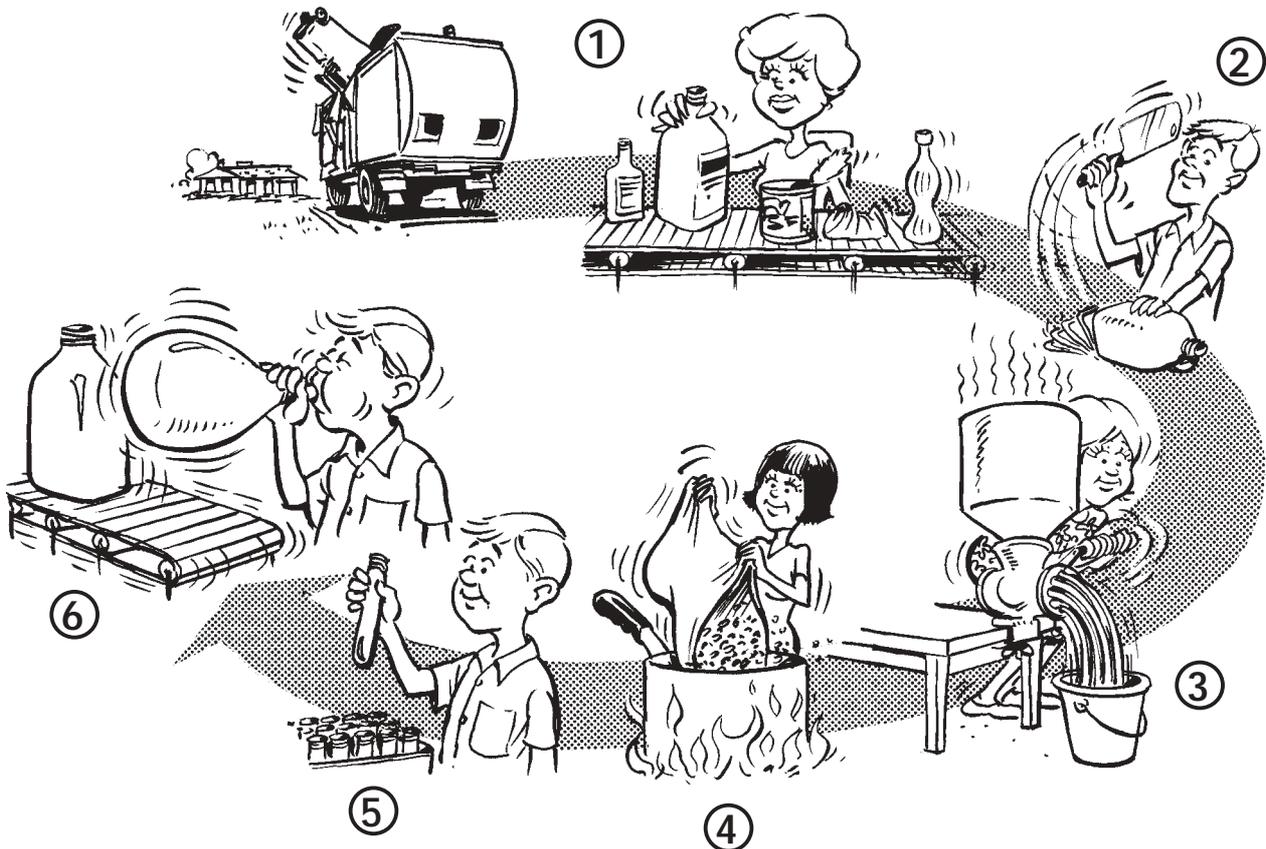
Resources:

Gould League. 1993. *Plastic Recycling Kit*.

Useful Websites:

www.plasticsa.org.au/waste.htm

www.recycle.net/recycle/Plastic/



Reduce, Reuse, Recycle



The Waste Wise WA Program

There are a number of programs working towards educating the community to minimise waste.

These projects are funded by the Waste Management and Recycling Fund from money collected as a Waste Levy whenever garbage is delivered to landfill.



Waste Wise WA display trailer

The trailer is a mobile interactive display about waste and recycling available for schools, community groups, expos and shows. A Waste Education Officer will staff the display to answer questions and provide Fact Sheets.

Waste Wise WA Website: www.wastewise.wa.gov.au

This website contains comprehensive information about issues relating to waste minimisation in Western Australia. It includes information on the 3Rs; organic waste; landfill; the school program; regional waste and workplace waste reduction. The complete series of Fact Sheets are also available to download.

Waste Wise WA Youth Grants

The Youth Grants provide opportunities for youth community groups to undertake waste minimisation projects in their local area. Grants of up to \$5,000 are available, with applications assessed monthly.

Waste Wise Schools Program

This program empowers schools to minimise their waste outputs and incorporate waste issues into the curriculum. The program provides teacher workshops, the Waste Wise Schools Kit, a network of Support Schools, Accreditation and Awards programs and ongoing support.

Earthcarers

The Earthcarers project is directed at a Regional Council level. It trains, guides and supports community volunteers to foster domestic waste minimisation behaviours. The program involves all levels of the community working together.

Contact

For further information about any of these projects, contact the Waste Wise WA officers at the Department of Environmental Protection.

Phone: 08 9222 7000 or 08 9278 0300.

Email: wastewise@environ.wa.gov.au



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