



## RECYCLING

RECYCLING is all about recovering materials used in the home or in industry for further uses. After reducing and reusing, the next step is recycling, the process where waste products are taken to a special plant and broken up, melted down and made into raw materials. These raw materials can then be made into new materials. By recycling you can help keep waste out of landfill, prevent environmental pollution, provide jobs for more than 10,000 people at recycling centres, save natural resources and conserve raw materials, use less energy and save money. In many communities recycling facilities exist and roadside collections pick up materials such as paper, cardboard, steel, aluminium, glass, plastic and green waste such as garden and kitchen waste, which is sent to centres to be sorted and recycled. There are also places where you can drop off batteries, scrap metal, used printer cartridges, mobile phones and other items that are processed so they don't contaminate the environment.

## WASTEFUL WASTE

WASTE, garbage, rubbish – it's the stuff we throw away because we think it's unwanted or useless. Every day we toss things out without considering where they will end up. Waste is an increasing problem as our growing populations create more and more rubbish. The large amount of waste is putting pressure on landfill sites which are becoming harder and harder to find. It is therefore important to understand the waste management issues in your local

environment and adopt practises and behaviours that improve the way you manage the rubbish you produce so as much recyclable material can be diverted from landfill as possible.

To help change attitudes it is useful to implement the Waste Hierarchy (see diagram) which classifies waste management strategies according to their desirability. The aim is to maximise benefits for products and generate the minimum amount of waste.



## RECYCLING GLASS

ONCE the material is taken to the recycling facility, it is pushed on to a conveyor belt. The glass is sorted either mechanically or by hand into three colours: clear, brown (amber) and green.

The used glass containers (called cullet) are collected in large bins or skips.

The single-colour cullet is put on to a conveyor belt and goes through a special process called beneficiation, which removes contamination such as bottle tops, metals, ceramics and labels. The cullet is then crushed and sent to a glass furnace where it is added to the mix.

There are a few things you can do to help make the recycling process easier: remove metal and plastic lids; rinse the containers to make sure they are clean and won't attract pests; and try not to break the glass as the larger the pieces, the easier it is to sort.

Never put broken cups and plates, light globes, china, or ceramics in the recycling as they contaminate the glass.

## RECYCLING PAPER & CARDBOARD

EVER wondered what happens to those items you put in the recycling bin? Let's find out more about how some items are recycled.

### PAPER and CARDBOARD

A recycling truck takes the paper and cardboard to a recycling facility where it is sorted mechanically and/or by hand.

The paper, cardboard and newspapers are squashed into separate big cubes called bales and transported to the recycling plants. Used printed paper may need 'cleaning' or deinking with special soaps to remove the ink.

The waste paper is mixed with water in a giant blending machine breaking it into a thin slurry of fibres. It is then screened to remove contamination such as plastic, string and paper clips, making it ready to be re-made into paper.

Newspapers, magazines and brochures, telephone directories, printed or typed reports, used files, manila folders, computer printouts, wax coated boxes or paper, envelopes and cardboard boxes and cartons (e.g. cereal/food boxes) are all types of paper and cardboard that can be recycled.

## RECYCLING PLASTICS



PLASTIC containers are removed from the recycling stream and sorted into polymer types at the recycling facility. A Plastics Identification Code is stamped onto products to identify the polymer type of the 40 different plastics in use today. Bales of different types of plastic are transported to factories for reprocessing where large contaminants are removed. The plastics are shredded, chopped or ground and then washed to remove further contaminants. The plastic is melted and pushed through an extruder, a bit like an old fashioned mincer or a spaghetti maker. It is then cooled and pressed through a die and chopped or pelletised into granules, ready to be made into new products.



**NEXT WEEK: MATHS MIND – Problems to Solve**