

MONASH KIDS RECYCLING BOOK



Full of facts and games for primary school students



How to
recycle right



What can we do
to recycle more?



Where does your
recycling go?

Tips on reducing
your waste

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DEFINITIONS

These words are often used when talking about recycling

Recyclable materials are items that can go in your recycling bin

Litter is items of rubbish left in an open or public place

Rubbish refers to unwanted items that cannot be recycled or composted

Kerbside collection starts by placing your bins at the front of your house

Resource recovery saves useful resources from going to landfill

MRF or material recovery facility is where accepted recyclables are sorted and separated for recycling

Contamination are items that do not belong in a bin

Landfill is where rubbish is buried



The colour yellow and the three linked arrow symbol called a mobius are used to represent recycling

For more information on recycling you can visit www.visy.com.au/recycling/education

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LET'S GET RECYCLING!

Recycling uses what we already have over and over again!



Recycling is a great way for us to do something good for the environment.

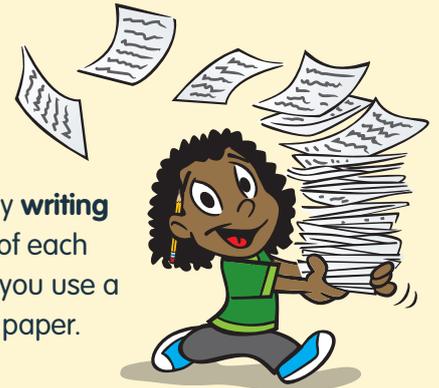
We come in contact with recyclables each and every day so it's important to know how to get recycling right. We can recycle at school, home and at work and if we can teach others how to get it right, we can have a really positive impact on the environment.

RECYCLING TIPS!

Keep a **recycling checklist** in the house which tells you which items belong in the recycling bin.



Save paper by **writing on the back** of each sheet before you use a new piece of paper.



Remember to collect your recyclables in a bin **without using a plastic bag**.



Always **put used paper** in the recycling bin.



In this book we use these **icons** and **colours** to represent each recycling type.



Aluminium



Cardboard



Glass



Plastics



Steel

SMART SHOPPING

Choose items at the supermarket that are packaged using recyclable materials

WHY IS RECYCLING IMPORTANT?



The choices we make today will have a big impact on the world we live in so it's up to us to recycle right and reduce the amount of waste we create.

Recycling helps protect our environment by creating new products without having to remove natural resources from the earth. By recycling more we are able to reduce the amount of waste we send to landfill. Landfills create a toxic gas called methane which damages our ozone layer.

RECYCLING REDUCES THE NEED FOR LANDFILLS

The less waste sent to landfill reduces the amount of methane produced in the landfill.



What you put in your rubbish bin will be sent to landfill and be buried underground.

RECYCLING PROTECTS OUR ENVIRONMENT

If we do not recycle enough at home and at school, these are the natural resources we must take from the earth to make new products:



Paper and cardboard is made from **trees**



Plastics are made from **crude oil**



Aluminium is made from **bauxite**

Apart from trees, all these **raw materials** come from '**non-renewable**' resources. This means the resource is used up faster than it can be made by nature and once it is all used up, there is no more available.



Steel is made from **iron ore**



Glass is made from **sand, limestone and soda ash**

RESOURCE RECOVERY IN MONASH

Resource recovery saves useful resources from going to landfill



In Monash, all households are provided with a recycling (yellow) bin, a food and garden (green) bin and rubbish (red) bin. The items from the recycling bin and food and garden bin will be reused - it's called 'Resource Recovery'.



RECYCLABLE ITEMS



Recycling bin



Visy's Material Recovery Facility

GO!

YOUR RECYCLABLES ARE MADE INTO NEW PRODUCTS



FOOD & GARDEN ITEMS



Food & Garden bin



Local Composting Facility

GO!

YOUR FOOD & GARDEN ITEMS ARE MADE INTO COMPOST FOR USE ON FARMS AND GARDENS



RUBBISH ITEMS



Rubbish bin



Landfill



YOUR RUBBISH IS BURIED UNDERGROUND

What goes in your recycling bin?



PAPER AND CARDBOARD



Paper and cardboard are such a big part of our households. You can recycle cardboard and paper found in the kitchen, bathroom and laundry.

All these paper and cardboard products **belong in** your recycling bin



Paper, newspaper, junk mail and magazines



Food boxes



Flattened cardboard boxes



Tissue boxes



Egg cartons



Envelopes (even with windows)



Pizza boxes

QUIZ

If one household recycles **1kg of paper and cardboard per week**, how many kilograms would they recycle **every year**?

DID YOU KNOW?



You don't need to remove sticky tape from boxes when you put out for recycling as it comes off when the cardboard is washed.



Wire bound books are also recyclable.

DO YOU REUSE PAPER IN YOUR CLASSROOM?



To save resources at school, why not reuse single-sided paper when writing or drawing?

EVEN PAPER TAKEAWAY BAGS ARE RECYCLABLE!



These paper and cardboard products **do not** belong in your recycling bin



Takeaway cups



Tissues



Napkins



Tetra Paks



DID YOU KNOW?

Tetra Pak items are made from a mix of materials including cardboard, plastic and aluminium which cannot be easily separated in the recycling process.



Waxed cardboard boxes



Shredded paper



Paper towel

What goes in your recycling bin?



PLASTICS

Hard plastic bottles and containers



Plastics are such a big part of our households. You can recycle plastic bottles and containers found in the kitchen, bathroom and laundry.

All these plastic products **belong** in your recycling bin



Drink bottles



Milk bottles



Ice cream containers



Laundry liquid containers



Takeaway containers



Bathroom containers



Sauce squeeze bottles



Yoghurt containers

HANDY HINT

Bottles and containers should not be flattened for recycling.

DID YOU KNOW?



You can keep lids on plastic bottles as it's the best way for them to be recycled.



Labels can be left on too.



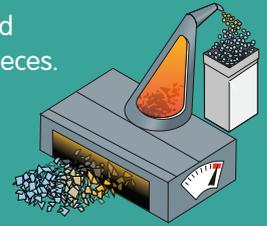
Even 'hand pump' products can be recycled!

PLASTIC BOTTLES CAN BE MADE INTO NEW BOTTLES. HERE'S HOW:



1. Wash and Flake

The plastic is washed and chopped up into small pieces.



2. Pelletising

The plastic flakes are heated to melting point and squeezed through an extruder to make pellets.

3. Bottle forming

The pellets are heated and moulded into a new bottle.



PETE



HDPE



V



LDPE



PP



PS



OTHER

These symbols can be found on most plastic items.

The number in the middle of the triangle tells us what type of plastic it is. It does not tell us whether it can be recycled or not.

These plastic products **do not belong** in your recycling bin



Plastic bags



Plastic food wrap



Foam or polystyrene



Toothpaste tubes

Soft plastic items do not go into the recycling bin.

Soft plastics can jam the machinery in the recycling sorting process.



Bread bags



Chip packets



Muesli bar and lolly wrappers



Pie packets

DID YOU KNOW?

Soft plastic items, such as **plastic bags** and **food wrappers**, can be easily scrunched in your hand.

What goes in your recycling bin?



GLASS

Bottles and Jars



Glass containers can be re-used many times and recycled indefinitely. The energy saved by recycling a single bottle could light a 15-watt low energy light bulb for 24 hours!*

All these glass products **belong in** your recycling bin



Sauce and medicine bottles



TIP

Leftover medicine tablets should be taken to the pharmacy for environmentally friendly disposal.



Bottles and jars



HANDY HINT

Lids and labels can be left on all glass jars.



Drink bottles

HANDY HINT

Bottle and jars don't need to be clean to be recycled.

Just make sure most of the food contents are removed before placing in your recycling bin.



DON'T BAG YOUR RECYCLABLES!

Plastic bags cannot be safely opened at the MRF. Even if the bag contains recyclable items, bags will be removed and sent to landfill.

Place items loose into your recycling bin so they can be sorted and separated for recycling.



TIP

Try your best to recycle your glass bottles and jars unbroken.

These glass products do not belong in your recycling bin



These types of glass have different melting points to glass containers, which creates problems when making new glass.



Drinking glass



Decorative glass



Pyrex



Light globes

These can be recycled at the Monash Recycling and Waste Centre and other locations. Check out recyclingnearyou.com.au



Cooking glassware



Mirror or window glass



Ceramic cups and bowls

What goes in your recycling bin?



ALUMINIUM

Drink cans, spray cans,
trays and foil



Aluminium can be recycled over and over again.
Each can recycled, saves enough energy to run a TV for 3 hours.*

All these aluminium products **belong** in your recycling bin



Drink cans



Pet food cans/tins



Aluminium trays



Aerosol spray cans (empty)



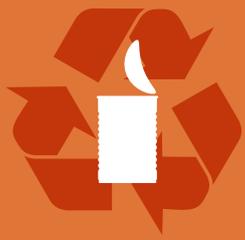
Aluminium foil

DID YOU KNOW?

All used foil can be recycled!
Just scrunch it into a loose ball so the machines at the MRF don't mistake it for paper.



What goes in your recycling bin?



STEEL

Food and spray cans

DID YOU KNOW?

You can leave the labels on your steel cans!



Steel is a very valuable resource. Making steel cans from recycled material uses 75% less energy than producing them from raw materials.*

All these steel products **belong** in your recycling bin



Food cans



Pet food tins



Aerosol spray cans (empty)

AEROSOL CANS NEED TO BE EMPTY!

Make sure that there is no spray left in the can.



NO NEED TO RINSE OUT FOOD CANS!

Just ensure they are as empty as possible.



*<https://recyclingweek.planetark.org/recycling-info>

WHAT DOES NOT BELONG IN THE RECYCLING BIN?



NO RECYCLABLES IN PLASTIC BAGS

Place items loosely in your recycling bin



NO SOFT, SCRUNCHY PLASTIC BAGS AND FOOD WRAPPERS

Avoid soft plastics where possible. Check with Monash Council for options to recycle soft plastics you can't avoid



NO BATTERIES, GLOBES OR MOBILES

Take to the Monash Recycling and Waste Centre and other locations for safe disposal



NO GARDEN CLIPPINGS

Lawn clippings and garden prunings can go in your food and garden bin



NO ELECTRICAL ITEMS

Electrical items include any item with a battery, plug or cord. Take these to the Monash Recycling and Waste Centre for safe disposal.



NO FOOD SCRAPS

Put all food and vegetable scraps in your compost bin or food and garden bin



NO CLOTHING, SHOES OR FABRICS

Items that are still in good condition can be taken to your local charity store



NO POLYSTYRENE

Clean polystyrene can be taken to the Monash Recycling and Waste Centre



NO TOYS

If your old toys are still in good condition take them to your local charity store



NO CERAMICS OR DRINKING GLASSES



NO TAKEAWAY CUPS



REMEMBER

No soft, scrunchy plastic bags and wrapping. Check with Council for dedicated recycling programs.

TIPS ON REDUCING YOUR WASTE

There are many different ways to avoid sending waste to landfill. Here are some handy tips which we can use in our everyday lives to help protect the environment.

- ✓ Buy products made from recyclable packaging
- ✓ Buy products in bulk
- ✓ Make compost from food scraps
- ✓ Donate unwanted clothing, shoes or blankets



THESE ITEMS GO INTO THE FOLLOWING BINS:

RUBBISH BIN



FOOD AND GARDEN BIN



WHAT HAPPENS TO YOUR RECYCLING?

STEP 1

COLLECT AND SORT



1

KERBSIDE PICK UP

At your home, a **recycle truck** picks up the recycling bin from outside your house and empties it into the truck.



2

MATERIAL COLLECTION

Material is delivered to a **Visy Materials Recovery Facility** where a front end loader pushes the material onto the conveyor belt.



3

MANUAL SORTING

The material travels along a **conveyor belt**, which passes by a number of **manual sorters** which remove any obvious contamination.



6

THE MAGNET

A **magnet attracts** the steel items such as food cans, and separates them from the rest of the material.



7

AIR CLASSIFIER

This machine projects a **continuous blast of air** that blows low density, light weight plastics, aluminium and paper up while the bottles fall downwards.



8

EDDY CURRENT

A process called Eddy Current, uses a **magnet to eject aluminium** such as soft drink cans, by repelling it off the conveyor belt down a chute.

STEP 2

RECYCLING PROCESS

Once the recyclables are separated, they are sent for recycling. Recyclables can be used to manufacture new packaging and other products.



PAPER REELS



PLASTIC PELLETS

STEP 3

MANUFACTURING PROCESS

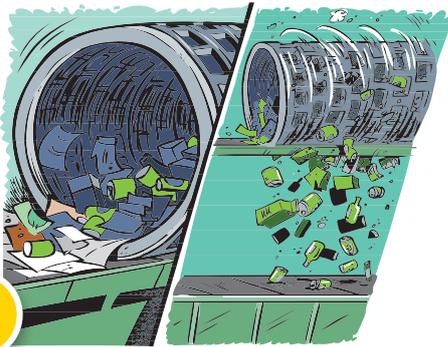
New products can be manufactured using recyclables.



New paper and cardboard



New plastic bottles and containers



4

THE TURNING TUNNEL

It enters a **trommel**, which is like the inside of a constantly turning washing machine with large holes so products such as plastics, glass and metals **drop down** to a lower conveyor belt, leaving paper and cardboard to travel through the trommel.



5

BOUNCING TRAMPOLINE

The paper passes over an **inclined conveyor belt** that vibrates. The heavy items bounce and fall back down the bouncing trampoline and the paper, which doesn't bounce makes it over the top.



9

THE PERFORATOR

The plastic containers continue their journey until they reach the perforator - which **punctures and flattens** plastic containers by using a series of spikes and spindles.



10

OPTI-SORT

After being flattened, the plastics travel through **infrared light** to detect the type of plastic and **a jet of air transports** the plastics into separate streams.



11

BALES

Each stream is **compressed and baled** into a large cube which is then distributed to Visy sites around Australia and sold overseas to be recycled into new products!



GLASS

GLASS CULLETT



ALUMINIUM

ALUMINIUM COILS



STEEL

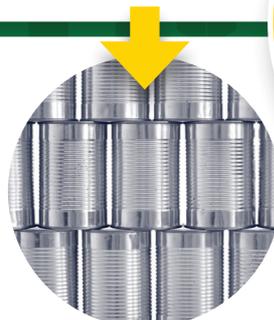
STEEL COILS



New glass bottles and jars



New aluminium drink cans



New steel food containers

Visy takes your recyclables and makes them into new products that contain recycled content. That's called 'closing the loop'.

WHAT IS LITTER?



Litter refers to small items of rubbish which are left in an open or public place. Illegal dumping refers to larger items of waste.

Not everyone intends to litter, for example the waste that is thrown to a public bin might miss and fall on the ground. Other actions are more deliberate, but there are small things that we can all do to reduce littering and dispose of waste correctly.

BY KEEPING THE LAND CLEAN YOU HELP KEEP THE OCEAN CLEAN TOO.

Put your rubbish in the bin. If the bin is already overflowing, take your rubbish with you.



Safely pick up some rubbish when you go for a walk on the beach, in the park, in your neighbourhood or along waterways.



WHERE DOES LITTER GO?

Litter is washed down storm drains by the rain



Storm drains empty into nearby creeks and rivers



Rivers flow into bays and the ocean

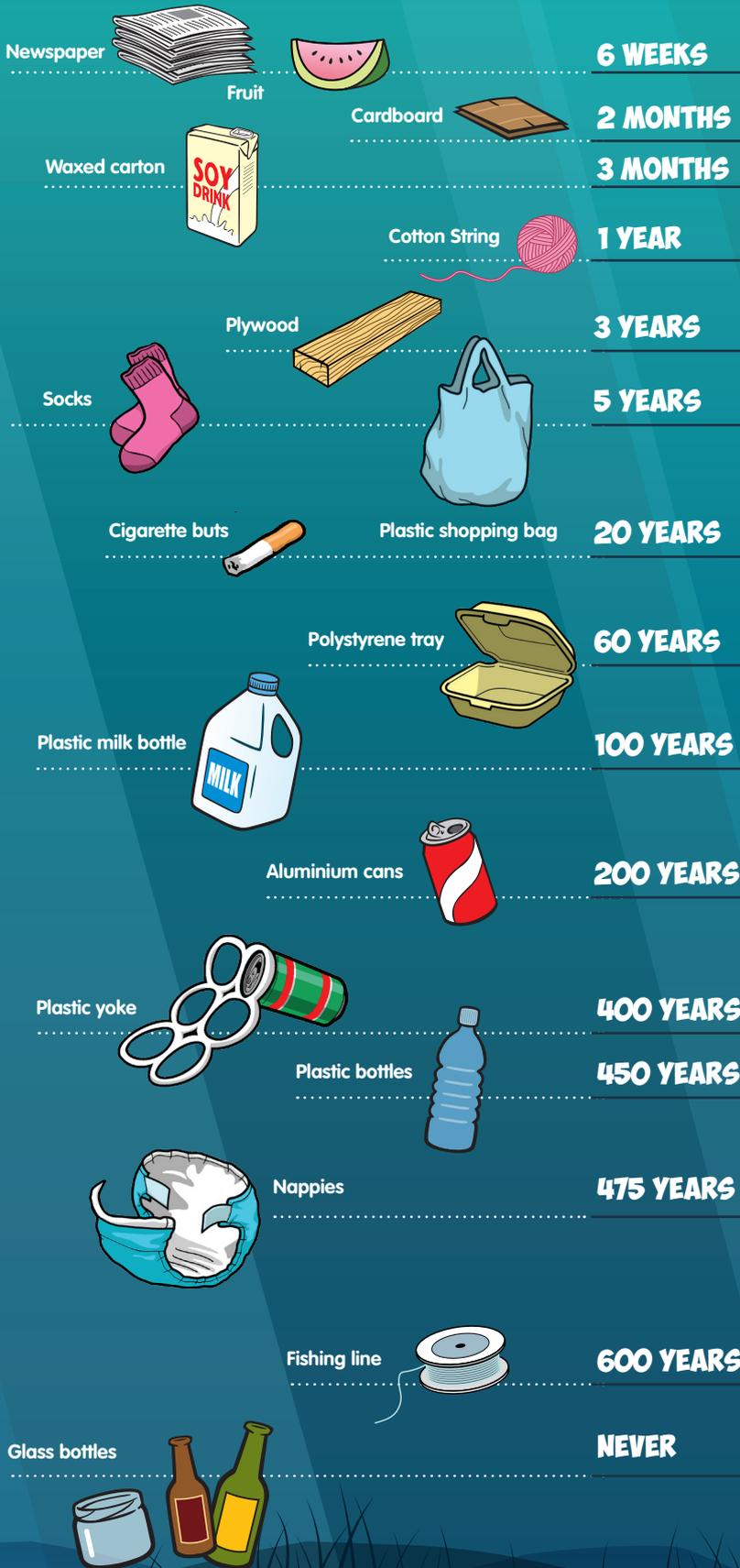


The litter pollutes the ocean and beaches



HOW LONG UNTIL IT'S GONE?

Wow! Look how long it takes these items to break down in the ocean!



FIVE FACTS ABOUT LITTER

1. People are more likely to litter in areas that are already littered
2. 95% of litter on our beaches comes from suburban streets through the stormwater system
3. Litter can cause flooding by blocking the stormwater system
4. Litter harms marine life by polluting their habitat, being mistaken for food, and trapping or injuring them
5. Litter can be a fire hazard (e.g. lit cigarettes thrown from vehicles) and a health hazard (e.g. broken glass, needles and syringes)



As you can see, it's best to recycle as much as you can!

Source: Sustainability Victoria
Victoria Marine Science – this was on the 'What is marine debris' fact sheet from Tangaroa Blue Foundation <https://tangaroablue.org/resources/fact-sheets/category/29-marine-debris-fact-sheets.html>

LET'S CLEAN UP THIS MESS!

Over 7 million tonnes of plastic enter the ocean every year - that's 8 million pieces per day. This is three times as much rubbish as the annual weight of fish caught.

In Australian waters, you can find anything from a few thousand to more than 40,000 pieces of plastic per square kilometre.

Objects of any size and shape end up in the ocean. Toothbrushes, fridges, shoes, bottles, packaging, furniture, fishing gear, toys and much more have been found.

About three quarters of these objects are plastic, often broken up into small fragments, and some almost invisible. Even the beads found in some shower gels or exfoliating creams are plastic and get washed into the sea.

THE TOP LITTER ITEMS ON AUSTRALIAN BEACHES ARE:



Polystyrene



Cigarette butts



Fishing line



Plastic bags & bits



Plastic bottles



Aluminium cans



Food packaging



TOGETHER WE CAN MAKE A DIFFERENCE!



Switch to a reusable water bottle



Buy recycled and reusable office supplies



Switch to reusable produce bags



Use reusable shopping bags at the supermarket

RECYCLING IS GREAT, BUT REDUCING AND AVOIDING WASTE IN THE FIRST PLACE IS EVEN BETTER.



Say no to straws and balloons

Say no to single-use items and look for reusable alternatives.



Buy and store food in glass jars



Use reusable plates and cutlery for picnics



Bring a reusable lunch box

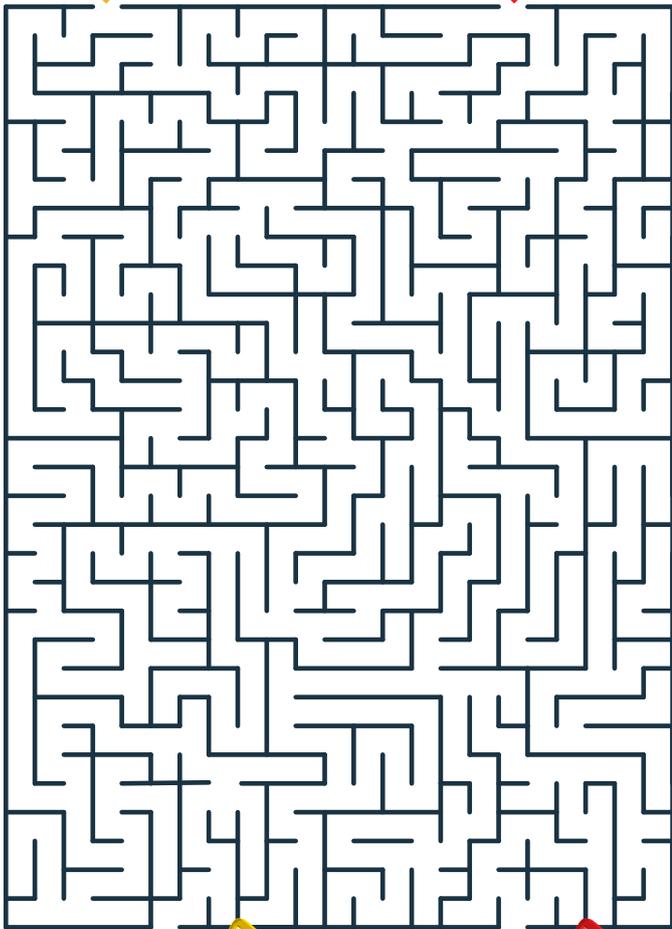
RECYCLING ACTIVITIES



It's time to test what you have learnt!

BIN IT RIGHT!

Which bin do these items belong in?



MEMORY TEST

Put a cross through the items below that **DO NOT** belong in your recycling bin:



QUESTION TIME

1. Do plastic bottles and containers belong in the recycling bin?

Yes No

2. Recyclables placed in plastic bags, when placed in your recycling bin, could end up in landfill?

True False

3. Which of the following items should we **KEEP OUT** of our recycling bin?

- Plastic bags
- Polystyrene cups and trays
- Garden clippings
- All of the above

4. Lids and labels can be left on plastic bottles when placed into the recycling bin?

True False

5. Aerosol cans must be empty before placing in the recycling bin?

True False

6. Which of the following items belong in your rubbish bin?

- Plastic bottles
- Pizza boxes
- Plastic bags
- Aerosol cans
- Paper napkins



WORD FIND

Do you have a keen eye for finding words?

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | H | E | V | J | P | I | G | W | A | S | T | E | K | R |
| S | D | N | C | I | L | T | J | M | E | J | D | H | C | E |
| U | B | V | L | H | A | F | S | R | E | U | S | E | N | D |
| S | K | I | U | I | S | T | R | E | E | S | Y | L | B | U |
| T | E | R | N | B | T | G | K | C | X | N | R | C | P | C |
| A | A | O | P | T | I | U | E | Y | Q | E | E | A | A | E |
| I | L | N | F | G | C | S | F | C | E | W | Q | R | N | D |
| N | U | M | O | R | A | C | F | L | Z | S | D | T | G | M |
| A | M | E | G | N | T | A | P | E | W | P | F | O | L | Y |
| B | I | N | W | E | Z | N | J | V | O | A | P | N | A | C |
| L | N | T | O | L | R | S | W | P | A | P | E | R | S | T |
| E | I | Y | H | T | U | M | A | Q | W | E | V | I | S | Y |
| X | U | I | Q | T | S | Y | T | W | L | R | D | I | U | P |
| S | M | R | V | O | X | J | E | V | K | H | O | N | A | K |
| C | A | R | D | B | O | A | R | D | C | G | R | E | E | N |

ENVIRONMENT
SUSTAINABLE
WATER
TREES
VISY
ENERGY
PAPER

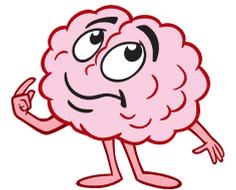
BIN
PLASTIC
CANS
CARTON
REDUCE
CARDBOARD
BOTTLE

REUSE
RECYCLE
ALUMINIUM
GREEN
WASTE
NEWSPAPER
GLASS

DO YOU REMEMBER..?

What are these five recyclable materials made from?

1. _____ is made from **trees**
2. **Plastics** are made from _____ **oil**
3. _____ is made from **bauxite**
4. **Steel** is made from _____ **ore**
5. _____ is made from **sand, limestone and soda ash**



TOGETHER WE CAN RECYCLE RIGHT!

