

WHITEHORSE KIDS RECYCLING BOOK



Full of facts and games for
primary school students



How to recycle
right at home



What can we do
to recycle more?



Where does your
recycling go?

Tips on reducing
your waste

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QUICK QUIZ



Using a pencil, draw a line to match some of the words used in this book to their meaning

Landfill	Items that are made into new products
Garbage	Items of garbage left in an open or public place
Recyclable materials	Gets buried in landfill
Kerbside collection	Bins at the front of your house
Resource recovery	Saves useful resources from going to landfill
Contamination	Can be placed into a compost bin
Food waste	Items that do not belong in a bin
Litter	Where garbage is buried

For an online copy of this guide please go to www.whitehorse.vic.gov.au/recycling-education-resources

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! It saves energy making stuff from old than Brand new



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 AT HOME

Keep a **recycling checklist** in the house which tells you which items belong in the recycle bin. Put the checklist somewhere your family can see, like your fridge or on a wall.



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

RECYCLING AT SCHOOL

Collect items you can **recycle**. Check you can recycle them in your classroom bin or ask your teacher for your school's recycling point, otherwise take them home for recycling.



Always put used paper in your classroom paper bins so they can be **recycled**.

In this book we use these **icons** and **colours** to represent each recycling type.
Using a pencil, draw a line to match them to their recycling name.



Cardboard

Steel

Plastics

Aluminium

Glass



TIP

Choosing items at the supermarket that are packaged using recyclable materials means you're an expert recycler!

WHY IS RECYCLING IMPORTANT?

DID YOU KNOW?

About 20 million tonnes of garbage is sent to Australian landfills each year?

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.

Garbage in landfill rots and creates methane gas and a garbage juice called leachate that can pollute our environment.

RECYCLING REDUCES THE NEED FOR LANDFILLS

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



What you put in your garbage bin will be sent to landfill and be buried underground, never to be used again!

RECYCLING PROTECTS OUR ENVIRONMENT

Landfill is wasteful. If we do not recycle 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 - a resource that cannot be replaced after it has been used.



Steel is made from iron ore



Glass is made from sand, limestone and soda ash

RESOURCE RECOVERY IN WHITEHORSE



Resource recovery saves useful resources from going to landfill

In Whitehorse, households are provided with a recycle bin, a garbage bin and can sign up for a garden organics bin. The items from the recycling bin and garden organics bin will be recycled - it's called 'Resource Recovery'.



RECYCLE BIN



GARDEN ORGANICS BIN



GARBAGE BIN



Visy's Material Recovery Facility (MRF)



YOUR RECYCLABLES ARE MADE INTO NEW PRODUCTS



Garden Organics Processor



MADE INTO MULCH OR COMPOST



Landfill



YOUR GARBAGE IS BURIED UNDERGROUND

Write the name of each type of recyclable that belongs in your recycle bin



News _____



_____ can



_____ box



_____ can



_____ carton



_____ bottle

What goes in your recycle 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 recycle bin



Newspapers, junk mail
& magazines



Food boxes



Flattened packing
boxes



Pizza boxes
(with no pizza left inside!)



Tissue boxes



Egg cartons



Envelopes
(even with windows)



Drink cartons



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 recycle bin



Paper towel



Waxed or food soiled cardboard



Tissues & napkins



Receipts



Takeaway cups

DID YOU KNOW?

You can put paper towel in your compost bin



What goes in your recycle 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 recycle bin



Drink bottles



Milk bottles



Ice cream containers



Laundry liquid containers



Yoghurt containers



Bathroom containers



Sauce squeeze bottles



Takeaway containers



**SET YOURSELF
A CHALLENGE!**

Go plastic free for a month and see how much plastic you can avoid!



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' and spray bottles can be recycled!



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



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 recycle bin



Plastic bags



Plastic food wrap



Foam or polystyrene



Disposable cutlery



Toothpaste tubes

Soft plastic items which you can scrunch in your hand and don't hold their shape do not go into the recycle bin. Soft plastics can jam the machinery in the recycling sorting process.



Muesli bar & lolly wrappers



Bread bags



Chip & pie packets

DID YOU KNOW?

Soft plastics can be taken to your major supermarkets for specialist recycling



What goes in your recycle bin?

GLASS

Bottles and Jars

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 recycle bin.



Glass containers can be re-used many times and recycled indefinitely. The energy saved by recycling a single bottle could power a washing machine for 10 minutes!*

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



Bottles & jars



Sauce & medicine bottles



HANDY HINT

All glass jars, lids and labels can be left on

Drink bottles



*<https://recyclingnearyou.com.au/resources/posters>

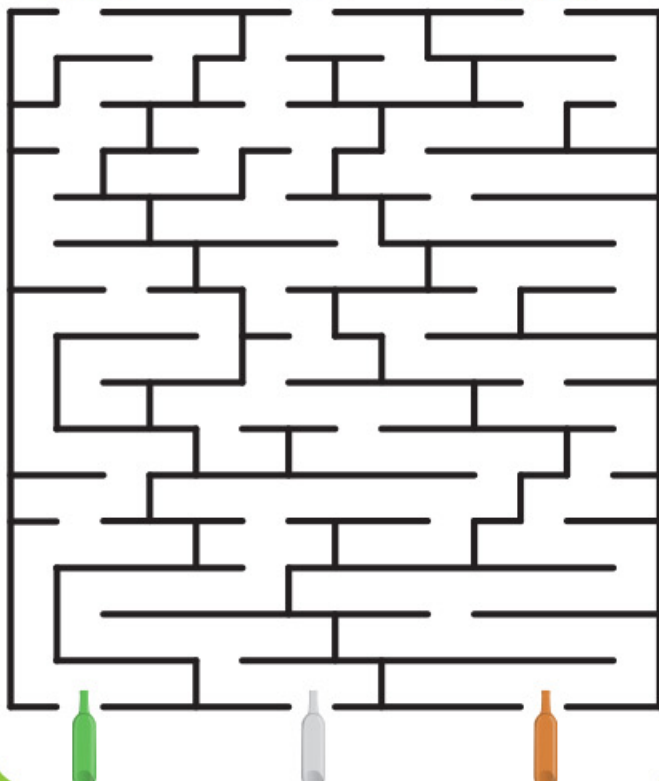
GLASS COLOURS MATTER

Only green, clear and amber glass is recycled

GREEN

CLEAR

AMBER



**DON'T
BAG YOUR
RECYCLABLES!**



Don't place your
recyclables in plastic bags
Make sure they are placed into your
recycle bin loose so they can be recycled.

TIP

Try your best to recycle your
glass bottles and jars unbroken

These glass products **do not belong** in your recycle bin



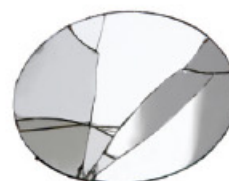
Drinking glass



Pyrex



Ceramic cups & bowls



Mirror or window glass



Cooking glassware



Decorative glass



Light globes



Light globes can
be recycled at the
Recycling and Waste Centre
and our Customer Service
Centres. Fluorescent tubes
can only be recycled
at the Recycling and
Waste Centre.

What goes in your recycle 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 recycle bin

Save your foil
until it is big
enough to make
a golf ball
size ball



Aluminium foil



Sardine cans



Aerosol spray cans



Aluminium trays

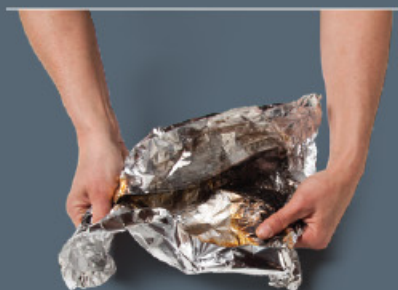


Drink cans



DID YOU KNOW?

Used foil can be recycled
just scrunch it into a loose ball
so the machines at the MRF
don't think it is paper



What goes in your recycle 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 recycle bin



Food cans



Aerosol spray cans

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



WHAT DOES NOT BELONG IN THE RECYCLE BIN?



NO RECYCLABLES IN PLASTIC BAGS

Place recycling loosely in your recycle bin



NO SOFT, SCRUNCHY PLASTIC BAGS AND FOOD WRAPPERS

Soft plastic items can be taken to dedicated collection bins at the supermarket for recycling



NO BATTERIES OR LIGHT GLOBES

Batteries and globes can be taken to our Customer Service Centres or Recycling and Waste Centre for safe disposal



NO ELECTRICAL ITEMS

Any item with a plug, battery or cord can be recycled at the Recycling and Waste Centre



NO GARDEN CLIPPINGS

Put all unwanted garden clippings in your garden organics bin or compost bin



NO FOOD SCRAPS

Put food scraps in your compost bin



NO CLOTHING, SHOES OR FABRICS

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



NO POLYSTYRENE

Put all polystyrene in your garbage bin or look for a specialist recycler



NO TOYS

If your old toys are still in good condition take them to your local charity store or toy library so other children can play with them



NO CERAMICS OR GLASSWARE



NO TAKEAWAY CUPS

REMEMBER

No soft, scrunchy plastic bags and wrapping. Take them to a dedicated collection bin at the supermarket for recycling.



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
- ✓ Take your soft plastics to dedicated collection bins at major supermarkets so they can be recycled
- ✓ Reuse items for storage or arts and crafts!

REMEMBER THE 3R'S

Reduce, Reuse, Recycle. It is Important to Reduce and Reuse first!



DID YOU KNOW

More than half of all garbage bin contents is food and garden waste – start composting and reduce waste to landfill.

THESE ITEMS GO INTO THE FOLLOWING BINS:

GARDEN ORGANICS



COMPOST



GARBAGE



Garden waste can also go in your compost bin! By doing so, you will get great compost for the garden.

WHAT HAPPENS TO YOUR RECYCLING

STEP 1

COLLECT AND SORT

1



KERBSIDE PICK UP

At your home, a recycle truck picks up the recycle 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 who 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.

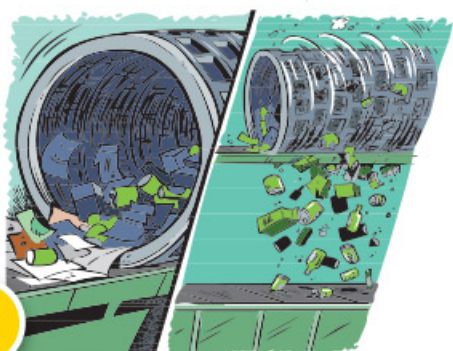


New paper and cardboard



New plastic bottles and containers

AFTER YOU PUT THE RECYCLE BIN OUT?*



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 various sites to be recycled into new products!



GLASS

GLASS CULLETT



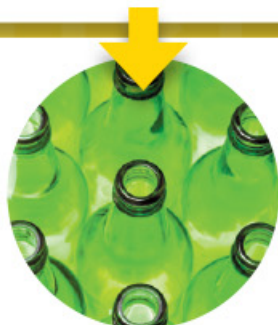
ALUMINIUM

ALUMINIUM COILS



STEEL

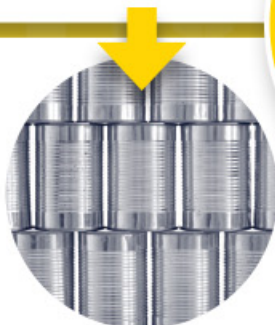
STEEL COILS



New glass bottles and jars



New aluminium drink cans



New steel food containers

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

WHAT IS LITTER?



Litter is small items of garbage 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 into 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, avoiding the cost and damage that litter and illegal dumping cause.

FIVE (NOT SO FUN) 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)

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



DID YOU KNOW?

Australians use more than six billion plastic bags per year. Tied together they would stretch around the world 42 times.


















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>

HOW LONG UNTIL IT'S GONE?

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

Newspaper		Fruit		Cardboard		6 WEEKS
Drink cartons		Cotton String		Plywood		2 MONTHS
Socks		Plastic shopping bag		Cigarette butts		3 MONTHS
Plastic milk bottle		Polystyrene tray		Aluminum cans		1 YEAR
Plastic yoke		Plastic bottles		Nappies		3 YEARS
Fishing line		Glass bottles				5 YEARS
						20 YEARS
						60 YEARS
						100 YEARS
						200 YEARS
						400 YEARS
						450 YEARS
						475 YEARS
						600 YEARS
						NEVER

LOOK AFTER YOUR ENVIRONMENT

Any litter you or someone else throws on the ground can end up in our waterways

By keeping the land clean you help keep the ocean clean too



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



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



Reduce, Reuse and Recycle as much as you can!



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 garbage 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. These are called microplastics and often eaten by marine animals, making them sick.

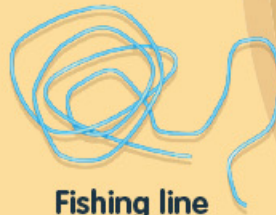
THE TOP LITTER ITEMS ON AUSTRALIAN BEACHES ARE:



Polystyrene



Cigarette butts



Fishing line



Plastic bags & bits



Plastic bottles



Aluminium cans



Food packaging

TOGETHER WE CAN MAKE A DIFFERENCE!



Bring reusable shopping and produce bags to the supermarket



Use a stainless steel flask instead of plastic bottles



Compost food scraps



Buy recycled and reusable stationery

THE LESS GARBAGE WE PRODUCE THE LESS LITTER IN THE OCEAN



Say no to plastic straws and balloons



Buy and store food in glass jars

To reduce garbage avoid buying or using single-use items such as plastic bottles or bags, disposable plates and cutlery or products wrapped in plastic.

Reuse plastic bags or bottles until they wear out and repair broken items instead of buying new ones.
Simple alternatives help reduce our plastic consumption.



Bring a reusable lunch box



Use reusable plates and cutlery for picnics



Compost dog waste or put it in the garbage bin



Get involved

Participate in **Clean Up Australia Day**, regular litter pick up groups such as beach litter patrols, or organise your own clean up day at the school or local area.



Get social

Help educate your friends and family on what happens to litter and how to prevent it, for example through talking to people and social media.

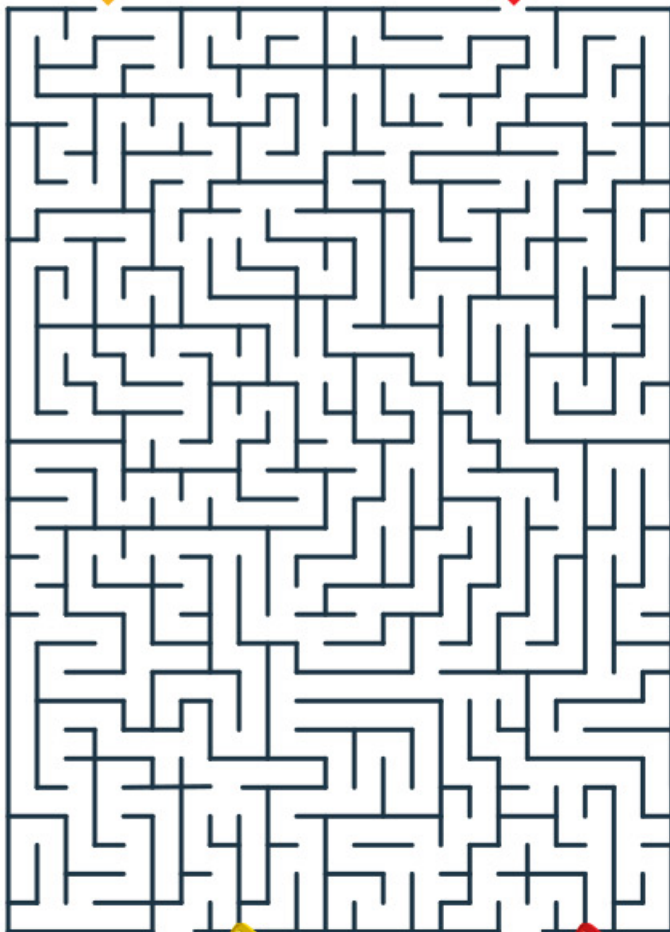
RECYCLING ACTIVITIES



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 recycle bin



QUESTION TIME

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

☐ Yes ☐ No

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

☐ True ☐ False

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

☐ True ☐ False

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

☐ True ☐ False

6. Which of the following items belong in your garbage 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?

- _____ is made from **trees**
- Plastics** are made from _____ **oil**
- _____ is made from **bauxite**
- Steel** is made from _____ **ore**
- _____ is made from **sand, limestone and soda ash**



LET'S ALL RECYCLE RIGHT!

Let's all recycle right by colouring in the items that do not belong in your recycle bin in **red**. You can then colour in the rest of the picture in whatever colours you like.

