RE DISCOVERY HUB

RE THINKING WASTE Activity Book

Hello!

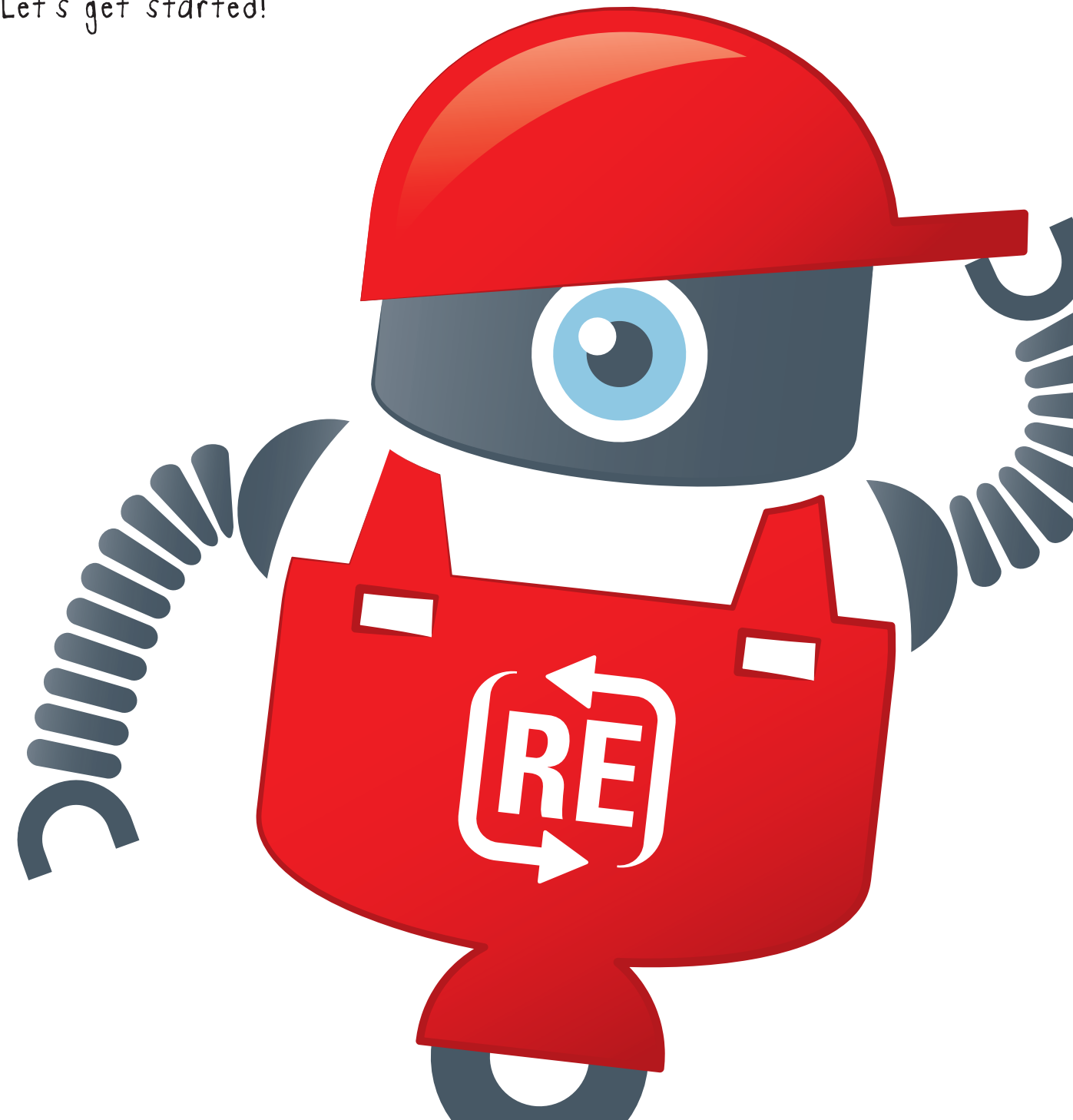
Today we're going to talk about rubbish. Lots and lots of rubbish!

It starts at breakfast when the milk carton is empty and there's no more Vegemite in the jar… Don't just stand there – put these empty containers in the bin! But which bin? You know different bins are for different types of waste, but did you know that most of our waste can be recycled and used again and again? Turn the page to find out more – but first, meet Robin the Recycling Robot!

Can you help Robin the Recycling Robot?

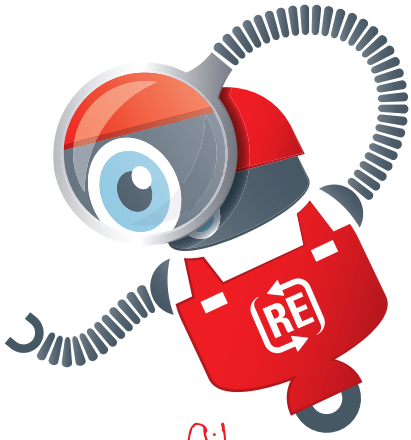
We are sending too much rubbish to landfill and we need to work out some ways to RETHINK, REDUCE, RE-USE and RECYCLE!

Let's get started!



RE THINK

What are they made from?



Can you guess what each of these materials is made from? These raw materials are taken from the environment and turned into something else. If we don't recycle them, they're lost forever in landfill!

Draw a line to match the object to its raw material.

Iron Ore

is mined from the soils and rocks of the Earth's crust

Bauxite

is an ore which consists mainly of aluminium oxides and clay. Bauxite is mined in Queensland, Western Australia, and the Northern Territory

Wood

comes from trees which have been cut down. Most of these trees have been planted in big fields to grow big enough for them to be harvested

Sand

is mined in coastal areas, like Minjerribah (Stradbroke Island)

Oil

is formed over millions of years as rotting organic matter like plants and animals slowly buried, heated and compressed

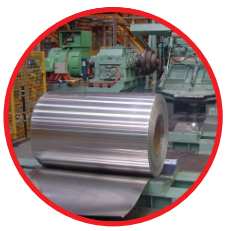
Some materials are renewable (we can make or grow more of it) and others are non-renewable (once we run out, it's gone forever). Which materials do you think are renewable and non-renewable? Put a tick next to the renewable materials, and a cross next to the non-renewable materials.

Glass

Plastic

Steel

Paper



Aluminium

REDUCE

Let's go shopping!

When we do the grocery shopping, we bring home a lot of waste with us as well. Some of this can be recycled, and others need to be sent to landfill. The best way to have a positive impact on waste is to buy less of it!

Below are some items you might find in your lunchbox. You have $10 to spend on your lunch. Choose the items that have the least amount of waste.

Remember! You need lots of healthy food to fuel your brain!

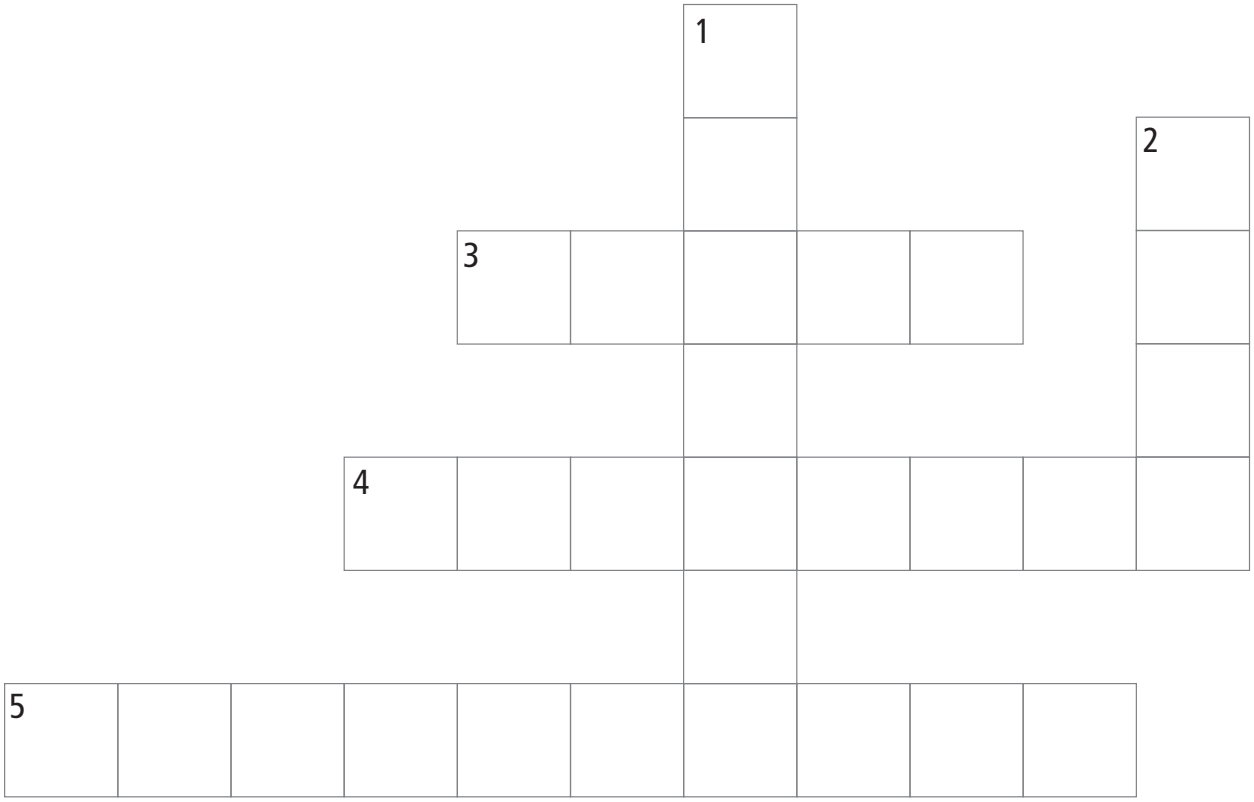
Chip packet $1.50
Sandwich in zip-lock bag $3.50
Sandwich in container $3.50
Banana $1.00
Apple (whole) $1.00
Apple (cut in zip-lock bag) $1.50
Muesli bar $2.00
Yoghurt pouch $1.50
Box of sultanas $0.50
Popper $1.50
Container with muffin $1.50
Packet of biscuits $2.00

REUSE

Crossword

There are lots of things that get thrown away once they break, but did you know we can fix many things in our houses? Try and find things that can be repaired instead of thrown away.

Have a think about things in your house that have broken before. Could some of those things have been repaired? Have you or your family ever had anything repaired?



Down:

1. Something you wear
2. Something you play with

Across:

3. Something used to call or text someone
4. Something soft you might find on your couch
5. A device used to watch movies or shows

RECYCLE

How does a MRF work?

Everything that we put into our yellow-lidded bin ends up at the Materials Recovery Facility, or the MRF.

Have a look at the picture of how the MRF works, then fill in the blanks below.

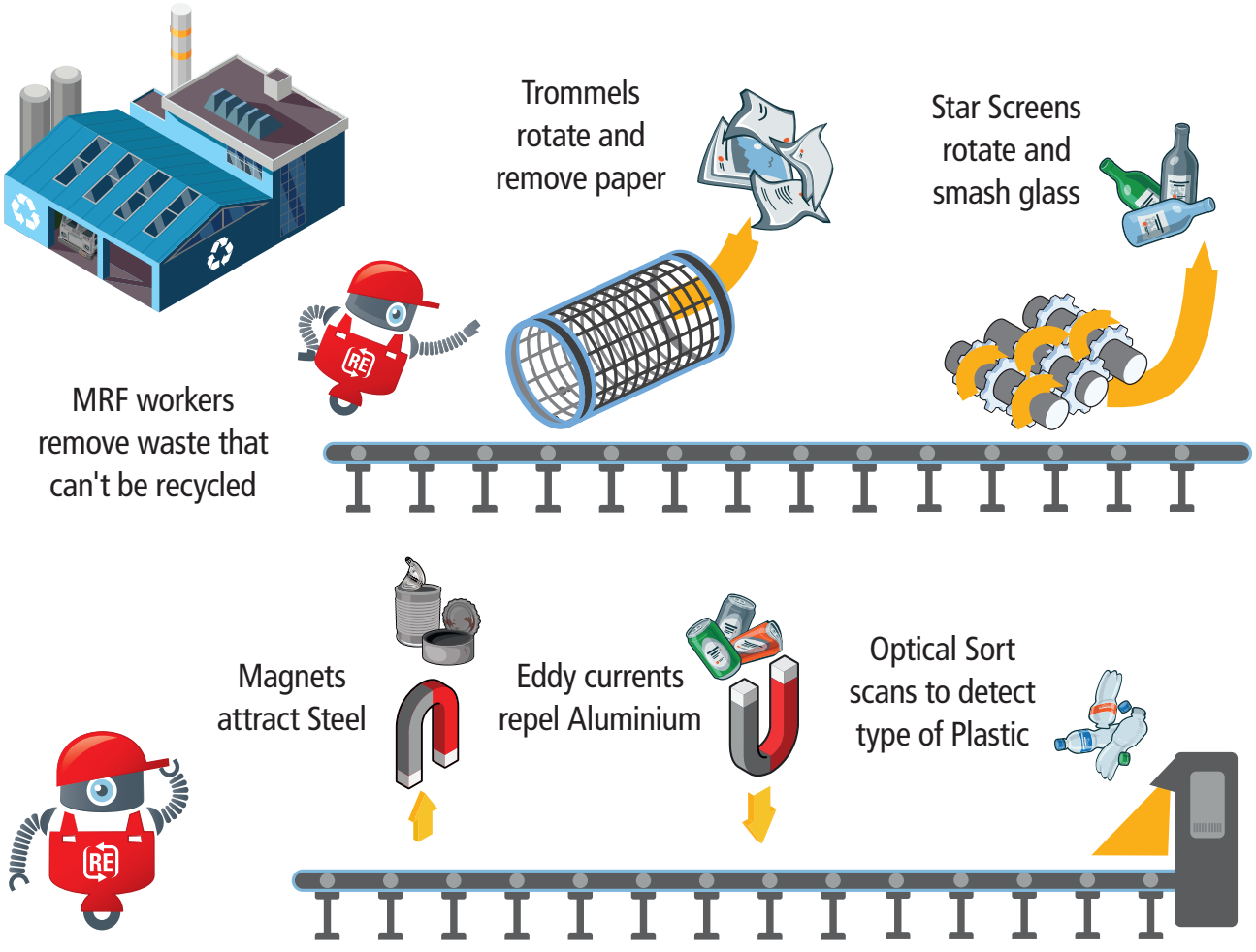
What are the 5 materials that are separated at the MRF?

_____ _____ _____

_____ _____

What new items/objects do you think those materials could be recycled into?

_____



RECOVER

Energy Solutions

We've talked about resources being renewable (we can make or grow more), and non-renewable (once it's used up, it's gone forever). A lot of energy is made by using non-renewable resources. So that we can continue to live the way we want to, we need to think of clever solutions to our growing energy needs.

There are lots of ways to make electricity; all we need is to make a turbine spin really quickly and some magnets. Find the following words in the box below to learn more about energy options.

Turbine	Sun	Steam	Generation
Wind	Heat	Waste	Power
Solar	Hydro	Spin	Water

E H W E E W N T A O P R D H
W S Y S A O N H O A S I A W
R A T D A S M E R T E E T O
W W T S R P A A O E T P S A
I N T E U O E T M Y W S D O
R E A D R N R T E I S O E N
I N A R N I A E Y T S E P I
O I R A W I E E E P R T N O
B B I W N U W A I W I U A H
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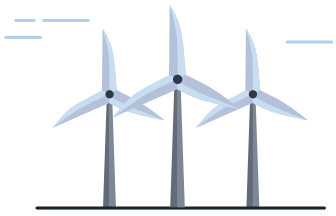

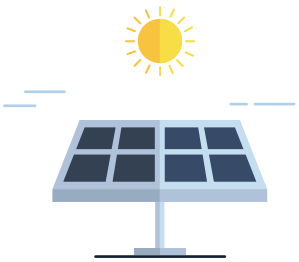

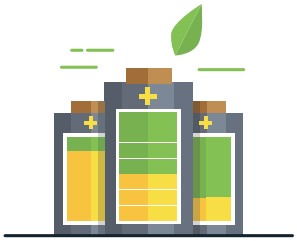

Look closely; some words might be backwards or diagonal! Can you find them all?

Last RESORT

Managing the landfill

This is what the cross-section of a landfill looks like. There are some types of pollution that landfills make, that we don't want going out into the environment. Have a look at all the layers in the landfill, and answer the questions below.

What do you think would happen if leachate wasn't captured on site?

How might the environment be impacted if rubbish escaped the landfill?

Why do you think there are so many birds at the landfill?

Why would we want to keep them away?

Why is it important to manage the smell at a landfill?

Answers

RETHINK

Iron Ore – Steel (non-renewable)
Bauxite – Aluminium (non-renewable)
Wood – Paper/cardboard (renewable)
Sand – Glass (non-renewable)
Oil – Plastic (non-renewable)

REDUCE

Chip packet, sandwich in zip lock bag, apple cut in ziplock bag, muesli bar, yoghurt pouch, packet of biscuits – Uh oh! There's some soft plastic here!
Sandwich in container, muffin in container – Almost waste free, especially if you baked the muffin yourself.
Box of sultanas, popper – This packaging is recyclable, but we could have made less waste
Banana, apple – The waste from these can go into a compost bin!

RE-USE

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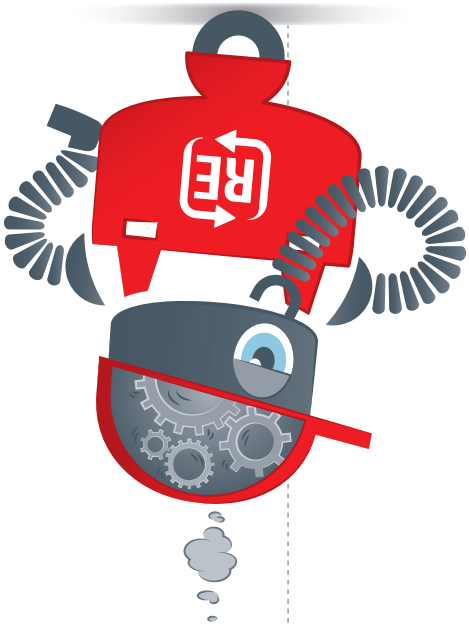

RECYCLE

Paper/cardboard, steel, aluminium, glass, plastic

RECOVER

E H W E E W N T A O P R D H
W S Y S A O N H O A S I A W
R A T D A S M E R T E E T O
W W T S R P A A O E T P S A
I N T E U O E T M Y W S D O
R E A D R N R T E I S O E N
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N R R D W T M N S R S E B T
A U A T S O L A R E I I S R
S T E E N E E E S N W D E E
S W A S T E A T D P W E S W
N O I T A R E N E G E A S T

Last RESORT

Could escape into nearby water sources and pollute them. Impact surround plants and wildlife
Impact surrounding environments, plants, and wildlife
There is a lot of food in the rubbish – some birds are looking for food, other birds are looking to prey on animals eating food in the rubbish (such as rodents)
The birds could easily accidentally eat plastic or some other waste that is harmful to them. They could also be a problem for people living nearby, as they can make a mess (moving rubbish off site) and a lot of noise. People who live near the landfill don't want to smell it all day long! We are always trying to make sure people who live near landfills aren't impacted negatively, and this includes managing the smell.

Pledge of Commitment

If everyone does a little bit, we can help make our environment cleaner for everyone to enjoy. What's something you can do to help our environment?

I, ... ,

write your name

do solemnly pledge to:

- ☐ Always use a re-usable water bottle instead of buying plastic
- ☐ Use less plastic in my lunchbox by using re-usable plastic containers which I can wash and re-use
- ☐ Talk to my family and friends about where our waste goes, and how things are recycled
- ☐ Eat everything in my lunchbox so I'm not wasting food

Signed ..... Date .....

RE DISCOVERY HUB

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REMONDIS is one of the world's largest recycling, service and water companies. The group has branches and associated businesses in more than 30 countries across Europe, Africa, Asia and Australia. With over 38,000 employees, the group serves around 30 million people as well as many thousands of companies.

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