ACTIVITY BOOK

Recycling Heroes

PACKED WITH CHALLENGES, SURPRISES AND FUN

Hello everyone

Recycling is an excellent way to help the environment. This activity book offers lots of fun and useful information on sorting and recycling waste.

We recommend that you read through the information on the first page of each section before getting started with the activities.

We hope you have fun and learn lots!

CONTENTS

Sorting your waste	4
Plastic packaging	11
Paper	15
Carton packaging	19
Drinks containers	23
Glass packaging	27
Metal	35
Electronics	39
Batteries	43
Cars and tyres	47
Wooden packaging	55
Solutions	58

MORE FUN! You'll find a card game in the centre of this book – pop out the cards and challenge a friend to a recycling themed game.

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FEEDBACK

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Luther

Characteristics: kind, strong, thinks before he acts Superpower: teleportation

Mackie

Characteristics: loves to laugh and have fun, wants to fit in

 $\mathbf{0}\mathbf{0}$

Superpower: floating

Blue Flash

Characteristics: high-speed, bossy, never gets tired

Superpower: zapping

Didi

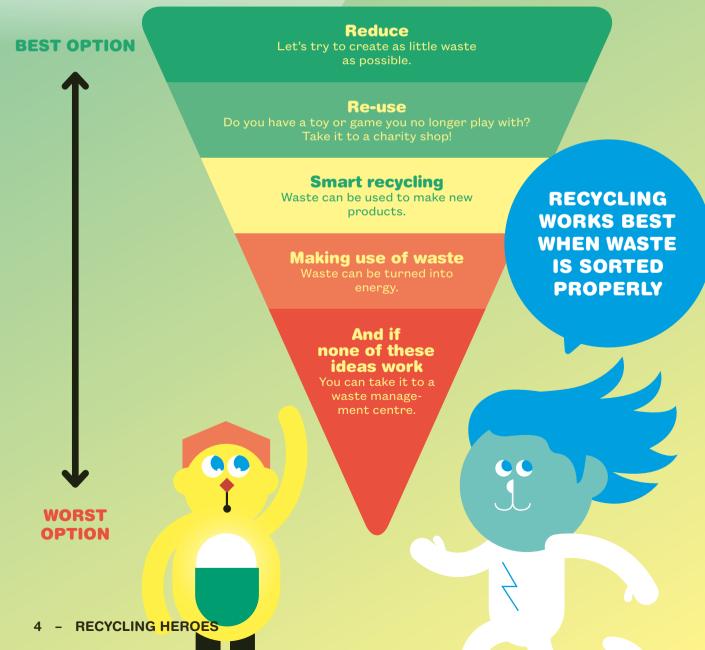
Characteristics: loud, not afraid of anything, always on the go

Superpower: fast as a cheetah

Reduce, re-use, recycle

Sorting and recycling our waste is everyone's job. Recycling helps us to make better use of the Earth's resources and keep our environment clean and tidy. Here in Finland, we have something called the Waste Act. It is a law that says we should all work hard to make sure that nothing ends up in landfill. This law applies to how products are made, how they are transported, how they are sold and what we do with our waste.

THE WASTE HIERARCHY





Charlie Chump's picnic gone wrong

Charlie Chump still has a lot to learn about recycling. Fill out the missing words and help Charlie out.

Once upon a time there was... Charlie Chump. Charlie was a bit grumpy and set in his ways and clueless too. He was always dragging his feet, a bit shy and with a black-and-white way of seeing the world. But Charlie's heart was in the right place. It's not that he didn't care, he just had a lot to learn.

One sunny	, Charlie decided to have a picnic			
in the garden. As he sat down on the			, a	
rusty little	comes off	the bac	krest. Oh dear	°,
, he thinks.	There's a			boy
sat next to him. "That sharp			is dangerous,"	the boy
says. You need to take it to the			Charlie Ch	ump
does just that. He spots a		ne	xt to the recyc	ling
bins. He doesn't pick it up. Hey Charl	lie! That ne	wspape	er belongs in th	ne

After all this recycling, Charlie's feeling hungry. He takes out a can of fizzy drink and an egg. He guzzles down the drink and throws it _______. Come on Charlie, you know you're not supposed to do that! You need to take that aluminium can back to the _______, because you'll get your______

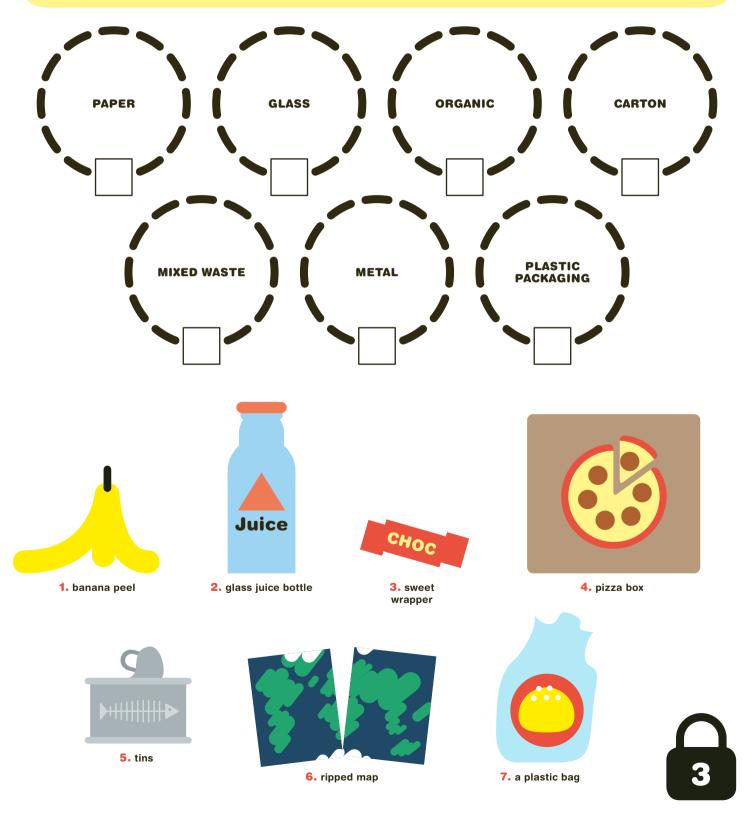
back. Charlie peels his egg and scatters the bits of shell all over
______. What on earth! Egg shells belong in the

_____ . Charlie Chump shuts his eyes, sighs

quietly and says he still has a lot to learn.

After a camping trip

Heading out into the great outdoors is a fun thing to do, but it's a big responsibility too. You mustn't leave any rubbish behind. When you pack up don't forget to pick up too! Can you sort and recycle all this rubbish to make sure it ends up in the right place? Which bit of rubbish goes into which bin?



Put rubbish in its place

Why not head out for a litter-pick near where you live? Grab an empty bag and bring it with you. Keep an eye out for rubbish on your street, at the local shopping centre or your school playground. What did you find? Where should the rubbish go? Pick it all up and sort it into the correct bins. Write down what you found below.



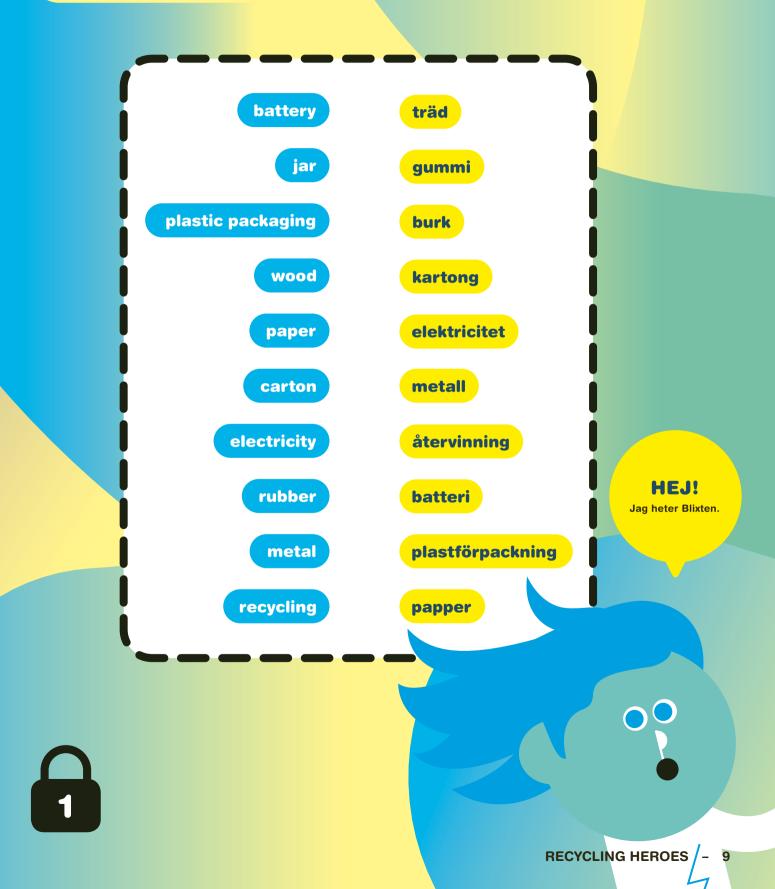
Can you give Charlie Chump a helping hand?

Charlie Chump can't tell the difference between mixed and recyclable waste yet – can you help our recycling hero-in-training? Could you pick out five bits of rubbish that belong in the recycling bin?



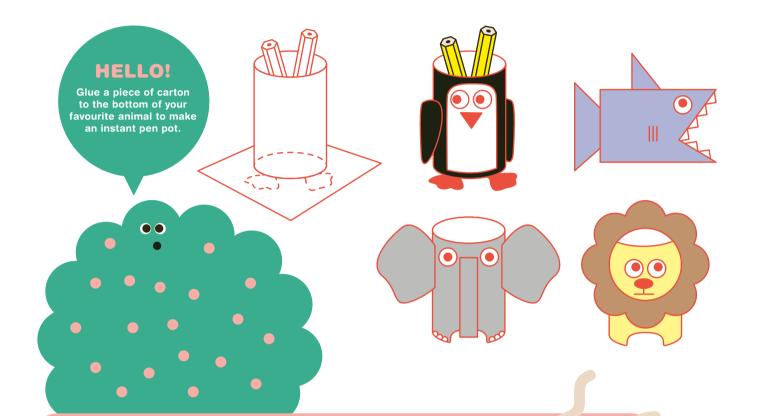
Kan du svenska?

How's your Swedish? See if you can match the words!



Create your own zoo

A ferocious shark, a super cute penguin or something in between? Use empty toilet roll tubes to create a wild and wonderful animal world. Why not invent names and life stories for your creations too?



Are you a banana or an envelope?

Try this recycling themed chair game.

The rules.

1.Get all the participants to write down something you can recycle, like newspaper. Everyone stands up.

2. The caller should now ask everyone that belongs in the paper recycling bin to sit down, followed by the plastic, and so on.

3.If you sit down at the wrong time, you're out. The last one standing is a recycling superhero!

WEE, I'M A PLANE!

Plastic packaging

- The purpose of plastic packaging is to protect the items inside it.
- Recycled plastic is used to make new plastic items like washing up brushes and plant pots.
- Every kilo of recycled plastic means 1.5 kilos less of carbon dioxide emissions.
- Sorting plastic is easy, because you can put all different types of plastic packaging in your recycling bin.
- Rinse the packaging with a bit of cold water or give it a wipe if it's soiled. You just need to do enough to make sure your bin doesn't go smelly.
- Remember to separate out all tops, lids, dispenser pumps and other loose parts. But don't worry about the labels.

YES, PLEASE!

- all plastic packaging used at home, like plastic food packaging, yoghurt pots, margarine, cheese, sliced meat and ready meal containers
- empty detergent, shampoo and soap bottles
- plastic bags and shrink wrap
- other empty plastic bottles, canisters and tubs, ideally flattened

NO, THANKS!

- jars and tins with hazardous waste, like paint, chemicals, petrol or medicines
- jerry cans
- PVC belongs in mixed waste
- toys, toothbrushes, watering cans and other plastic items that are not packaging should go into mixed waste

OOPS!

Did you know that chucking just a few slices of ham in the bin creates a bigger carbon footprint than the manufacturing and recycling of the plastic packaging it comes in put together?

Glossary

Bioplastic = Not all plastic is made from oil. Alternative raw materials include sugar cane, maize and wood fibre.

Biodegradable = Some bioplastics are also biodegradable, but that does not mean that you can dispose of them anywhere – they only decompose under carefully controlled circumstances. Biodegradable plastics cannot be recycled into new plastic products so they tend to be used in other ways.

Recycled plastic = Plastic made using plastic that has already been used once before.

Microplastics = Microscopically tiny plastic particles no bigger than 5mm in diameter.

Re-use = Re-using packaging or parts of packaging for the same purpose. For example, bread is often delivered to supermarkets in plastic crates. These crates are re-used again and again.

PLASTIC IS NOT BAD BUT IT WILL CAUSE PROBLEMS IF IT BECOMES LITTER. WE ALL HAVE AN IMPORTANT ROLE TO PLAY WHEN IT COMES TO RECYCLING PLASTIC: WHEN YOU SORT YOUR PLASTIC WASTE CORRECTLY, IT WILL GET USED AGAIN AND AGAIN.

Where do these go?

Which of these items belong in the collection bin for plastic packaging? Tick the right ones!

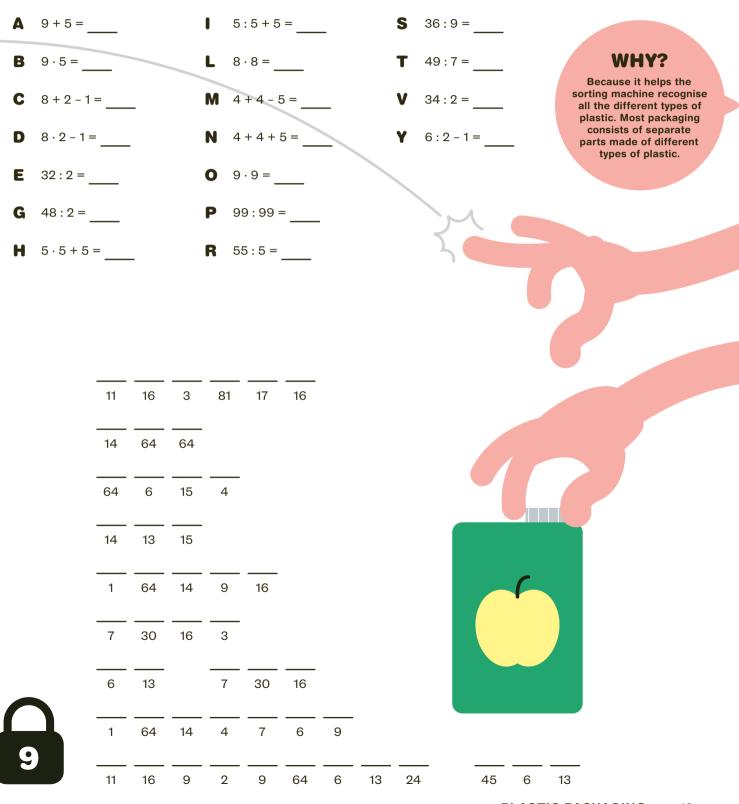
PSST!

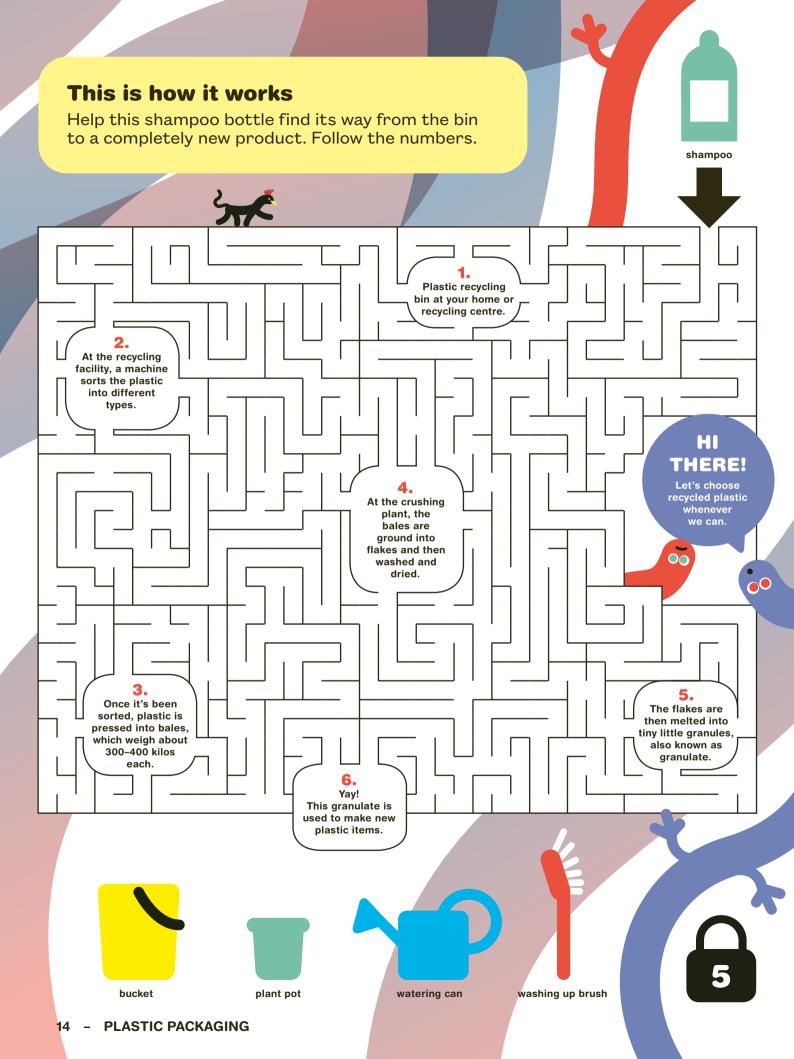
Only plastic PACKAGING belongs in the plastic recycling bin.



Top tips from a master recycler

Unlock the code to find out what a master recycler does before they put their plastic packaging in the recycling bin.





Paper

- Paper can be recycled around five times. Recycled paper can be turned into lots of things, including newspaper and toilet paper. You save one tree for every 70 kilos of paper you recycle.
- Did you know that alongside the Germans, Finns are some of the most enthusiastic recyclers of paper in the world?
- Here's a good rule of thumb: everything that's delivered through your letterbox belongs in the paper recycling bin.
- The paper you recycle should be clean and dry. You don't need to remove staples, paper clips or envelope windows.

YES, PLEASE!

- newspapers and magazines
- advertising leaflets and brochures
- envelopes
- softback notebooks and books, including non-hardback school textbooks
- copy and printer paper
- white drawing paper
- white paper bags

NO THANK YOU!

- wet or soiled paper
- brown paper bags
- brown wrapping paper
- surface dyed gift wrap
- florist paper
- sugar and flour bags

YUMMY!

The first ever paper recycling campaign was launched in Finland in 1947. The winning prize was some sweets.

Glossary

Paper recycling = Recovering paper so it can be used again.

Tissue = Soft, lightweight paper like toilet paper and kitchen roll that breaks up quickly in water. Made of recycled paper. Used tissue belongs in the bio or mixed waste bin.

Surface printing = A gift wrap printing method that means gift wrap can't be recycled.

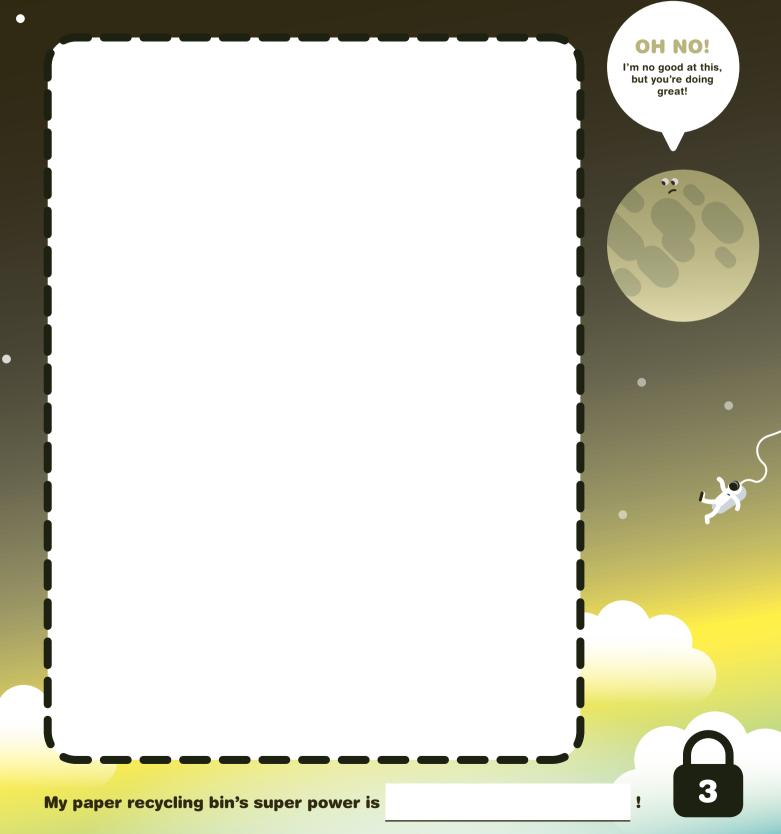
Deinking =The process for removing printing ink and other contaminants from recycled paper. Deinked paper can be used to make more newspaper or tissue paper.

Secondary use = Reusing materials to create new products.

SCHOOLS, WORKPLACES AND GOVERNMENT AGENCIES SEND ALL THEIR CONFIDENTIAL MATERIAL, INCLUDING LETTERS CONTAINING PEOPLE'S PERSONAL DATA, TO A SPE-CIALIST SERVICE PROVIDER, WHERE IT IS SHREDDED AND DESTROYED SAFELY.

Finland's greatest recycling bin

Let your imagination run wild! Design a paper recycling bin that will stop people in their tracks. Draw some of the things that belong in this bin.



Mackie's silky soft paper quiz

Paper is incredibly versatile. Put your knowledge to the test.

1. 3. 2. Which of these Which of the The first paper ever belong in the paper invented was called following is a type recycling bin? a) Papyrus of tissue paper **b)** Romulus a) magazines and a) cotton wool c) Rumilus newspapers **b)** toilet paper **b)** used tissues c) scrunched up drawing c) anything that's delivered paper through the letterbox 4. 5. 6. Where would you Paper as we know **Documents that have** it today was first find the world's private information made by a Chinese most enthusiastic on them should go man called recvclers? a) under the mattress **b)** in the confidential waste a) Pa Per a) Europe paper bin b) Littl' Un b) USA c) in the normal paper c) Ts'ai Lun c) China recycling bin 7. 8. 9. Which of the Wrapping paper What is deinking? following belongs in can't go in the paper a) getting a tattoo removed **b)** a new dance move paper recycling? recvcling because c) removing ink from a) white paper bags a) it might offend the person wrapping paper **b)** brown paper bags who gave the present c) all paper bags **b)** it has too much ink c) it goes in its own recycling bin

Tree rescue

You save one tree for every 70 kilos of paper you recycle. Count how many of these you need to save one tree.

1. 10 kilo bundles?

X

3. 1 kilo bundles?

X

5.

100 gram newspapers?

X

7. 10 gram sheets of A3?

X

2. 7 kilo bundles?

X

4.

500 gram bundles?

X

6.

50 gram leaflets?

X

UMMM... I'M A FEW TWIGS SHORT OF A TREE TODAY

18 - PAPER

Carton packaging

- When you recycle your cereal packets and chocolate wrappers, you never know, they might come back to you as kitchen rolls or food waste bags! Carton packaging can actually be recycled up to 6 or 7 times over.
- Recycled carton packaging can also be turned into furniture. For example, your desk at school or some of the equipment at your playground might well be made with laminate made of carton packaging.
- Rinse and dry all drinks cartons before putting them in the recycling bin.
- You don't need to remove any staples or tape.

SQUASH AND SQUEEZE

Grab some cardboard packaging, like milk cartons, flatten them and see how many you can fit inside just one!

YES, PLEASE!

- corrugated cardboard boxes
- milk, juice and yoghurt cartons, including those with an aluminium lining (the plastic lids belong in the plastic recycling bin!)
- biscuit and cereal packets
- sugar and flour bags
- sweet wrappers made of paper
- pizza boxes and egg cartons
- paper bags in all colours
- disposable paper plates and other dishes
- empty toilet and kitchen rolls

NO THANK YOU!

dirty cardboard packaging

Glossary

Carton = Thick paper that's often used to make packaging.

Cardboard = Thick carton.

Corrugated cardboard boxes = Consists of an inside liner, outside liner and a fluting layer in between. Corrugated cardboard can be used outdoors.

Laminate = layers of material glued together. Laminate can be used to make furniture and other things.

Core = The cardboard centre in a roll of toilet paper.



Mixed waste or carton packaging recycling?

Can you find all the rubbish that belongs in the mixed waste bin? Write C for carton packaging recycling and M for mixed waste.





Mackie's hidden words

Find all eight card related words in the grid.

•

YAY! I'm on cloud nine: I found all the words.

B^{VE}BVE

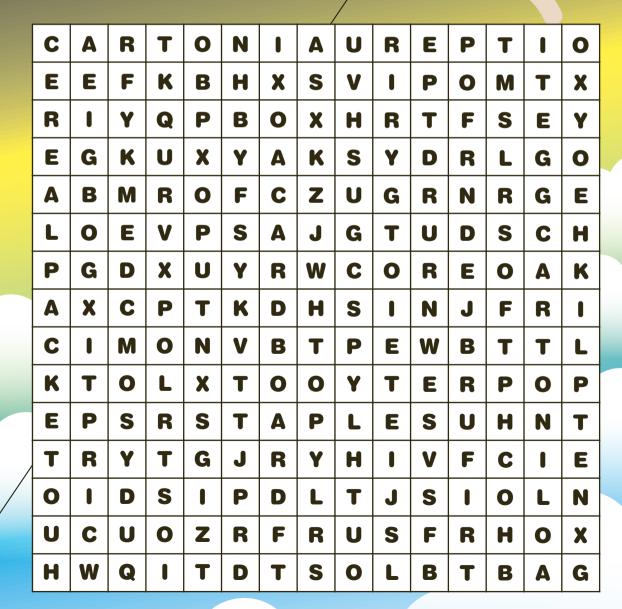
- **1. CEREAL PACKET**
- 2. CARDBOARD
- 3. EGG CARTON
- 4. CORE

 \bullet

- 5. BAG
- 6. CARTON
- **7. BOX**

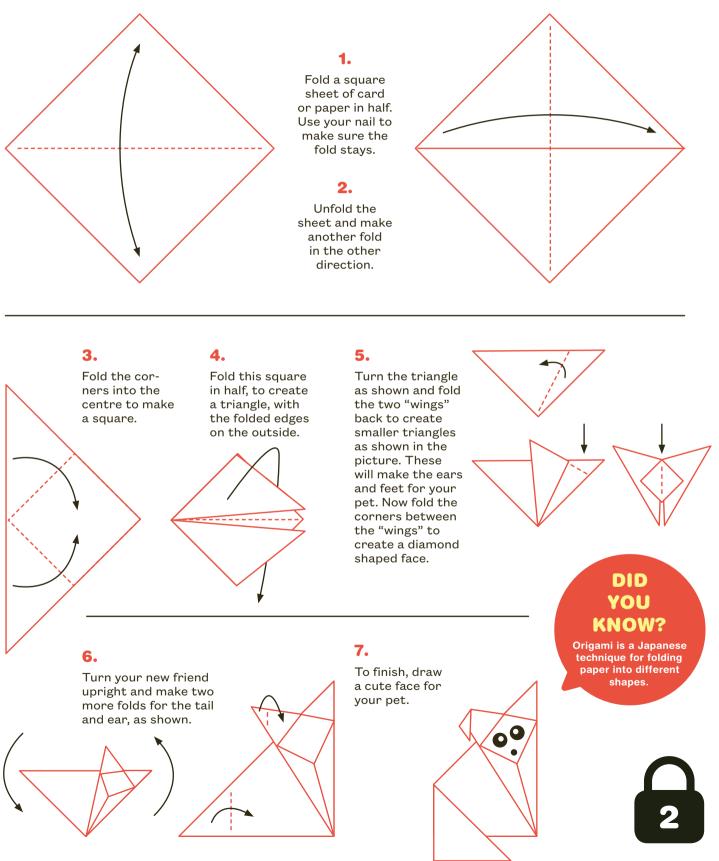
16

8. STAPLE



Create your very own pet

You can use carton packaging to make a little fox with a cute floppy ear.



Drinks containers

- Drinks containers like cans and glass bottles that are part of the deposit scheme can be recycled almost endlessly. Clear plastic bottles are ideal for making new plastic bottles. The majority of all cans and bottles with a deposit are turned into new drinks containers.
- When you return a drinks container with a deposit symbol to the supermarket, you will get 10, 15, 20 or 40 cents in return. Pop that money into a piggy bank and pretty soon, you will have a tidy sum to spend on something fun.
- The reverse vending machine accepts all cans and bottles that are empty and unbroken. The label also needs to be intact.
- You can leave the lids on any plastic bottles you're returning, but remember to put metal lids in the metal recycling bin.
- The Palpa app tells you whether your drinks containers carry a deposit.

WOW!

Each year, every single person in Finland returns 342 bottles and cans for recycling. That's enough to pave the road from Helsinki all the way to Kittilä.

YES, PLEASE!

- all empty drinks cans (including non-deposit containers)
- plastic bottles with deposits
- recycled glass bottles

NO THANK YOU!

- containers with drink or rubbish still inside them
- plastic bottles without a deposit
- glass bottles without a deposit

Glossary

Aluminium can = An enclosed drinks container that's opened by pulling on a clip found on the lid. Aluminium cans are perfect for recycling because they can be turned into new cans.

Label = A strip of paper printed with product information found glued onto glass and plastic bottles. Every label also has a barcode and a number that you can use to check the value of the deposit on it at extra.palpa.fi/palpa/pantillisuus.

Recycled glass bottle = Glass drinks bottle that's part of the Finnish deposit scheme.

Deposit = When you buy a drink, you'll be charged a deposit on top of the price. You'll get your deposit back when you return the empty bottle or can. The value of the deposit is printed on the container.

PET plastic bottle = Plastic bottle made of Polyethylene terephthalate. Recycled PET can be turned into new bottles, packaging and textiles.

RECYCLED ALUMINIUM CANS ARE CRUSHED INTO HUGE BALES AND MELTED INTO BARS. THESE BARS ARE PRESSED INTO THIN SHEETS THAT ARE USED TO MAKE NEW CANS.

Who will make more?

Imagine you're out picking up empty drinks containers with a friend. At the end of the day, you take all the containers with deposits you've found to the reverse vending machine at your supermarket. Which of you has earned more money?



24 - DRINKS CONTAINERS

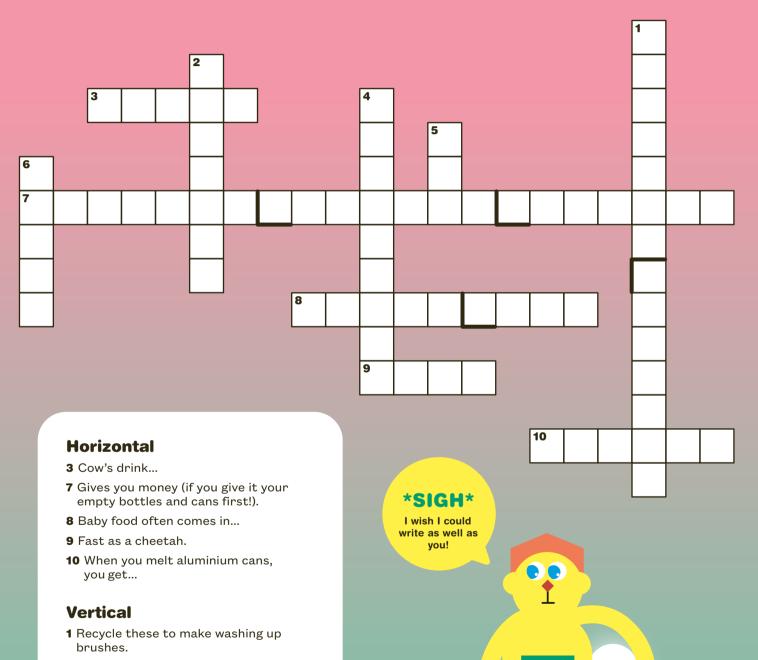
Best drink ever

If you got to create your very own drink, what would it be? Invent a flavour and create a funky name for it. Colour the can, add a logo and don't forget to include the deposit information, including how much it is.

Name Slogan Flavours I got my idea from	
	<complex-block></complex-block>

Luther's brain teaser

Are you a drinks container expert too? Complete this crossword puzzle using the clues provided.



- 2 10, 15, 20 or 40 cents.
- 4 Pizza boxes are made of...
- **5** This is the place for your old and worn out shoes but not bottles and cans.
- 6 When it's hot it's important to have a...

Glass packaging

- Glass can be recycled again and again to make new glass jars and bottles.
- It's super easy to recycle glass packaging because only empty glass jars and deposit-less glass bottles are recycled. All other glass items, like drinking glasses and glass dishes should be placed in mixed waste or the bin your local council asks you to use. They can't be turned into new glass packaging.
- Give your empty glass packaging a quick rinse with some cold water. Remove all lids and caps, but don't worry about labels and security bands. You can recycle glass in all colours.

YES, PLEASE!

- glass bottles
- glass jars

NO THANK YOU!

- drinking glasses
- oven dishes and coffee pots
- crystal, porcelain and ceramics
- window glass
- mirror glass
- milk glass
- metal tops and lids
- light bulbs

Glossary

Security band = A plastic or metal ring around the neck of a glass bottle or jar. Also known as a tamper-evident band.

DON'T FORGET! Drinking glasses

are not glass

packaging.

Heat-resistant glass = Glass that's been designed to withstand high temperatures, like oven dishes and coffee pots. These can be used in the oven or on the hotplate of a coffee machine. They can't be recycled together with glass packaging.

Glass jar = A recyclable glass packaging like a juice bottle, olive, jam, pickle or baby food jar.

Opal glass = White, translucent glass, also known as milk glass. It's often used for make up and moisturiser. You should put this type of glass in mixed waste or the bin your local council asks you to use.

Porcelain and ceramics = Clay objects hardened by heat, like plates, mugs and the cute little cat that sat in your bookcase. These can't be used to make glass packaging. This type of glass belongs in mixed waste too or in the bin your local council asks you to use.

OVER 90% OF DEPOSIT-LESS GLASS PACKAGING IS RECYCLED. GLASS IS FOREVER: IT CAN BE RE-USED AGAIN AND AGAIN.

Roll up your sleeves

Jam

You've been asked to sort a whole load of glass items. Tick the ones you think should go in glass recycling.

Soy sauce

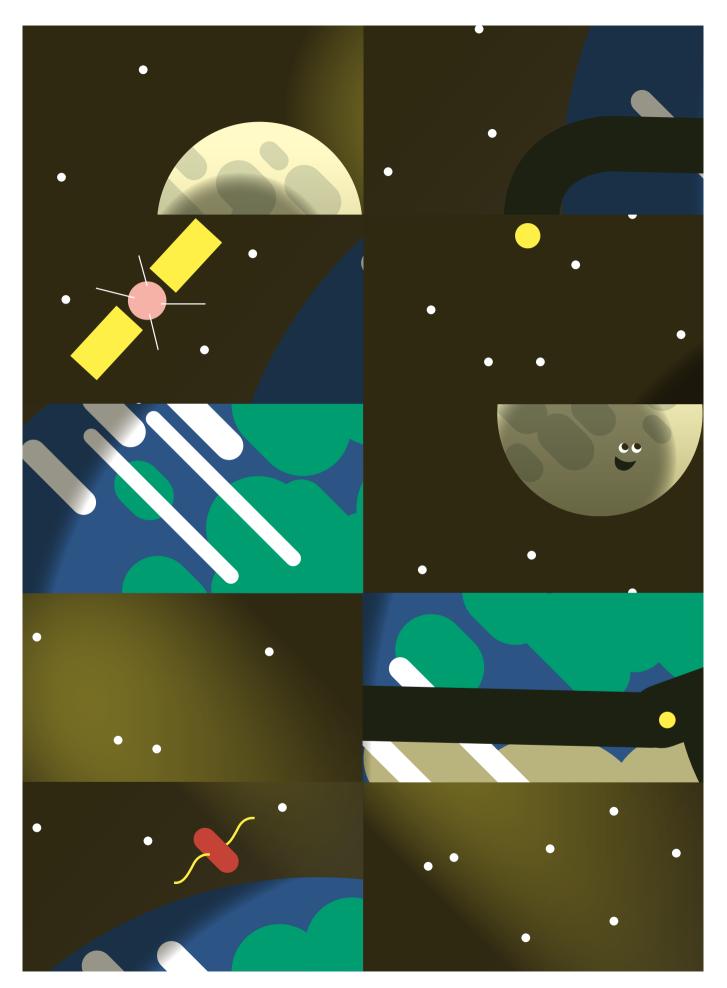
duice

Cinnamon

Olive oil

Pickles

Bab,



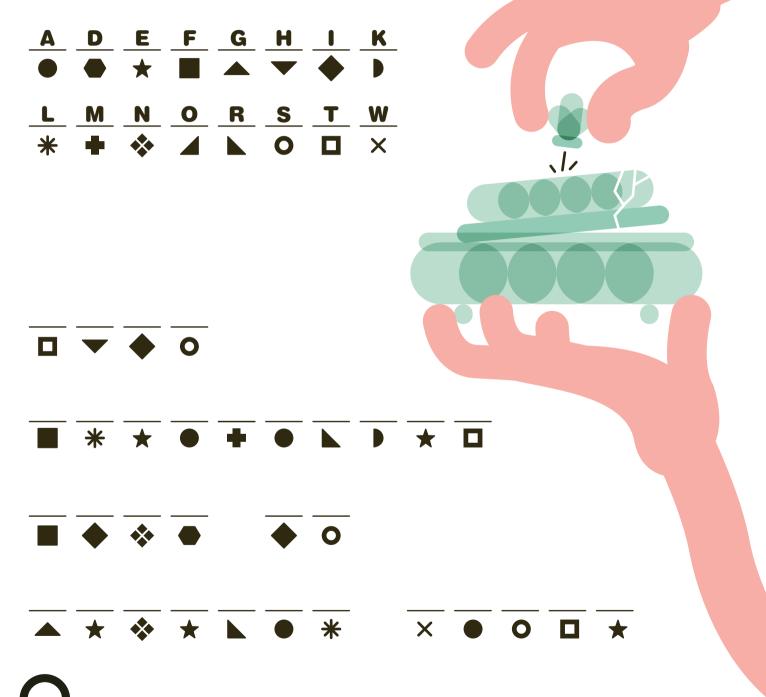






The mystery of the crystal jewellery box

You've inherited a jewellery box – it looks expensive but it's broken. The story goes that the King of Sweden once used it for his false teeth. There is a piece of paper in the box with strange symbols written on it. Can you crack the code and find out whether the jewellery box belongs in the safe or somewhere else?



5

How many is many? **TOP IDEA!** See how quickly you can work out which of the three Challenge your friend. The first to finish wins! options matches the number of jam jars. Tick the correct answer. 2+42 + 59 - 14-2 2 + 53 + 3UMMMM One plus one makes eleven? 5-2 2+64 + 32 + 58-3 1 + 334 - GLASS PACKAGING

Metal

- Metal is forever when metal packaging waste and small metal items are sorted correctly, they can be turned into new metal products.
- Did you know that at least 25% of all metal packaging comes from recycled sources? Isn't it nice to know that, when they're sorted properly, your empty cat food tins get to become new cat food tins!
- Work out whether something is made of metal or plastic: Grab an item, like a yoghurt lid, and squeeze it tight. If it doesn't spring back into its original shape, it's probably metal. If it straightens back out again, it's probably plastic.

YES, PLEASE!

- tins and cans
- non-deposit drinks cans
- chocolate egg and chocolate bar foil wrappers
- aluminium trays and aluminium foil
- metal lids and tops
- metal tea light cases
- empty aerosol bottles that don't slosh or hiss
- small metal items like cutlery, keys and metal tools

NO, THANK YOU!

- crisp packets
- sweet wrappers
- coffee packets
- half-empty aerosol bottles

DID YOU KNOW?

Aluminium from tea light cases can be used to make aluminium boats.

Glossary

Pressurised container = A metal aerosol bottle, like a hairspray or spray paint bottle.

Aluminium = The third most abundant element and the most abundant metal in the world. Supermarket ready meals often come in aluminium containers.

Packaging waste = Waste generated from packaging. In Finland, there are five main types of packaging waste: fibre, glass, metal, plastic and wood packaging.

Small metal waste items =

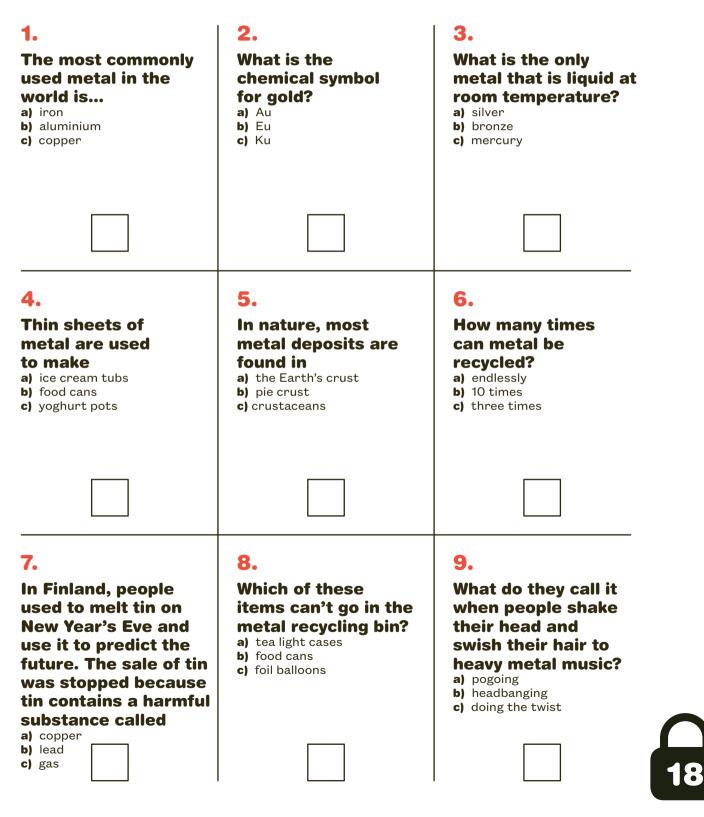
Domestic metal waste like frying pans that are small enough to fit through the metal recycling bin opening.

Food can = Air tight, thin metal packaging that's used to transport and store food. Pea soup is an excellent example of canned food. You shouldn't store an opened can in the fridge. Always put any leftover food into another container first.

BEFORE YOU RECYCLE ANY METAL ITEMS, PLEASE MAKE SURE THEY ARE CLEAN FIRST. IF YOU SPOT ANY LEFTOVER FOOD, GIVE IT A LITTLE RINSE WITH SOME COLD WATER.

Blue Flash's hard as nails metal quiz

Humankind discovered metals thousands of years ago. Test your knowledge of these essential elements.

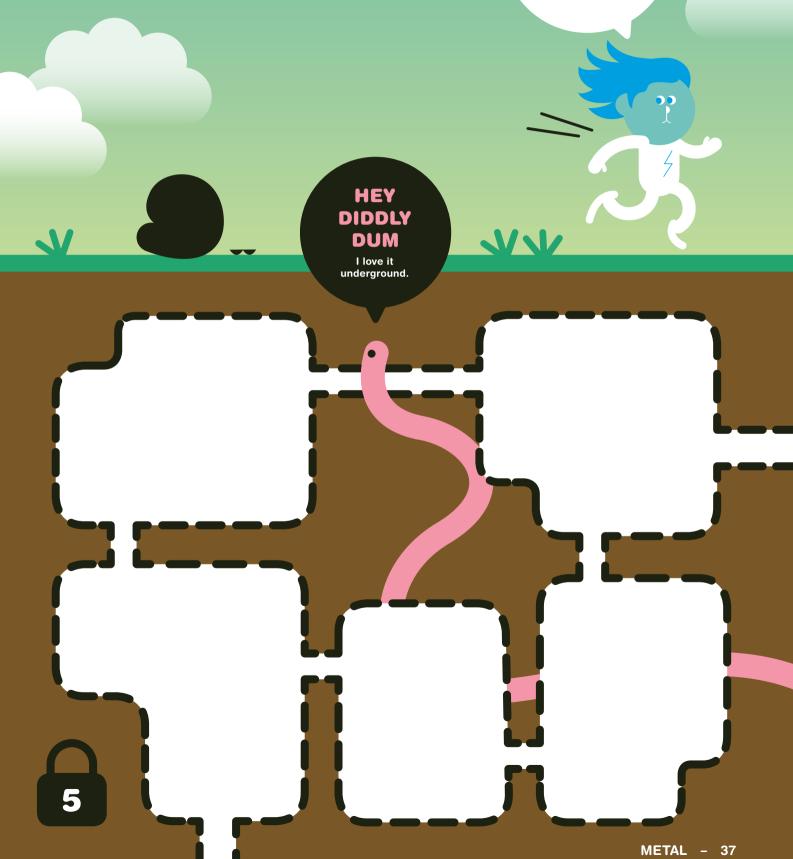


Let the treasure hunt commence!

Draw five items you could discover with a metal detector.

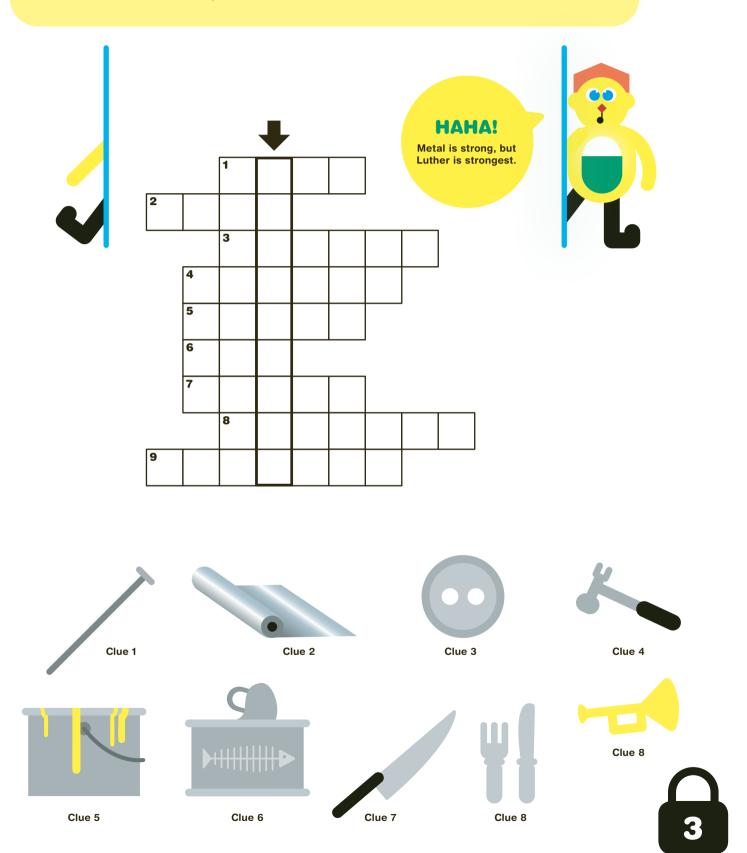
IMPORTANT!

If you think you've discovered an ancient treasure, stop digging and call The Finnish Heritage Agency at once!



The stuff aeroplanes are made of

This lightweight yet durable metal is used to make lots of things. Solve the crossword puzzle and find out which one it is.



Electrical devices

- You can easily recognise an electrical device because they all come with a plug or a battery or have a solar panel in them.
- Many electrical devices contain harmful chemicals, which is why it's important to make sure that they're recycled properly. You should always take your old appliances to a waste collection point or a home electronics store.
- Some appliances can be repaired and reused. The ones that can't will be sorted into metal, plastic and glass. The materials are crushed and used for lots of different purposes.
- For example, 99% of what's found in old computers can be recycled and used to build new products.

YES, PLEASE!

- Small and large domestic appliances, like fridges and electric toothbrushes
- Games consoles, computers, printers, screens, keyboards and computer mice
- Energy-efficient and LED bulbs, fluorescent lights, lamps and flashlights
- Mobile phones, radios, televisions, cameras, tape recorders, loudspeakers and DVD players
- Electronic toys
- Sat nav devices and digital thermometers
- Electric tools
- Fire alarms

NO, THANK YOU!

- Incandescent light bulbs and halogens
- Vehicle batteries
- Loose batteries
- Batteries

Glossary

Energy efficient light bulb = Like a fluorescent light, with a screw base. You can recognize an energy efficient bulb because it takes a while for the light to come on. They are currently being phased out and replaced by LEDs.

Waste management station = A plant where waste is taken for processing, these are always manned. To find the nearest one, go to kierrätys.info

LED light = A light emitting diode (LED) produces light when electricity flows through it. An LED comes on immediately. It can last for up to 25 years.

WEE =Appliances of all sizes that were once powered by electricity are known as waste electrical and electronic equipment (WEEE).

Hazardous substance =Harmful chemicals found in electrical equipment, like lead, mercury and cadmium.

BLOWN A BULB? YOU CAN RETURN ANY ENERGY EFFICIENT AND LED BULBS TO ANY STORE THAT SELLS THEM. IT IS THE STORE'S LEGAL DUTY TO ACCEPT THEM.

OH DEAR!

Each year, more than 100,000 electrical devices are sent for repair.

Word jumble

What's going on here? Looks like Blue Flash has got his words in a twist. Can you sort them out?





Catch the thief!

There's a burglar about who's been stealing electronic waste. Guess the name of the appliance and take it to the recycling centre before the thief gets his hands on it.

You would • hold me in vour hand or strapped to your forehead. You can't see in the dark without me.

Inside me, • it's always winter. And there's usually a few pizzas, a lot of berries and an ice cream tub hanging around too.

When I'm on, **3** all eyes are on me.

Depending Δ • on who you ask, I'm either a decoration you hang above a baby's bed or something you make calls with. You use me everyday, sometimes a bit too much.

I have two ■ "arms" that spin around really fast. I make things go smooth.

It's silly but • it's true. I'm big and I get dirty from washing.

I usually hang • around your living room, but I'm often missing. I'm so popular, people sometimes fight over me.



People use 9 me in the morning and at night, and I make a funny buzzing noise.

l exist to • entertain you. When you have the controls, you're the boss.

3.		
4.		
5.		
6.		
7.		
8.		
9.		

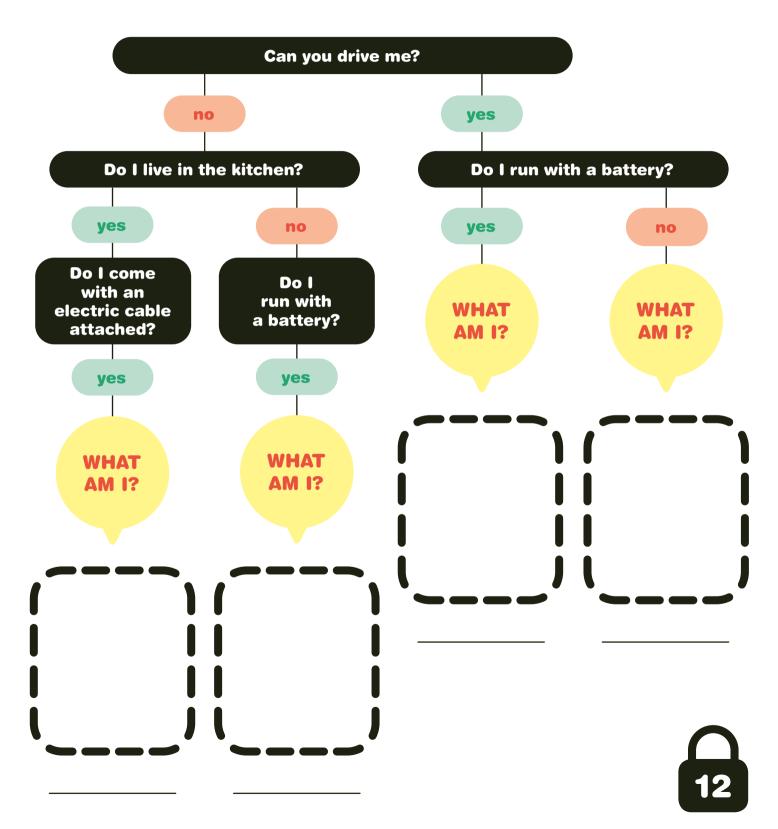
1.

10.

′OU'RE NOT TAKING THIS!

What am I?

Name me and draw me at the end of the flow chart.



Batteries

- More than half of the materials recovered from batteries can be used again. Alkaline batteries, for example, can be turned into fertiliser.
- All batteries can be returned to any shop that sells them.
- All batteries have a positive and a negative end; the plus and the minus. When you connect the two ends, you create energy.
- The lead-acid battery was invented more than 150 years ago. Cars run and mobile phones work during power cuts thanks to these stalwarts. You can even store the sun's energy in a lead-acid battery.
- These days, large lithium batteries tend to be used for electric scooters, motorbikes and bicycles.

They are lighter and longer-lasting than lead-acid batteries.

WHERE ARE THE TERMINALS ON A BUTTON BATTERY?

The whole battery is one big terminal. One side of it is positive, and the other is negative.

Glossary

Battery = Powers machinery, cars and toys. Turns chemical energy into electrical energy. Can be charged using a charger. Vehicle lead-acid batteries can be used to make new lead-acid batteries.

Regional collection point = A collection point you can use to recycle your own goods. To find your nearest one, go to kierrätys.info.

Battery terminal = An essential feature of all batteries. Don't forget to tape them up!

Button cell = A small and flat battery that's used to power watches and toys. Dangerous if swallowed.

Short circuit =When the positive and negative terminals come into contact with one another when they are not meant to conduct electricity. May create sparks or even a fire.

Disposable battery = Batteries power many domestic appliances, like wall clocks and gaming controllers. A brand new disposable battery is fully charged. As it's being used, the battery drains and they usually can't be re-charged.

YES, PLEASE!

TO YOUR LOCAL SHOP

- Return small batteries to any shop that sells them.
- Return lead-acid automotive batteries to a specialist shop.

TO YOUR REGIONAL COLLECTION POINT

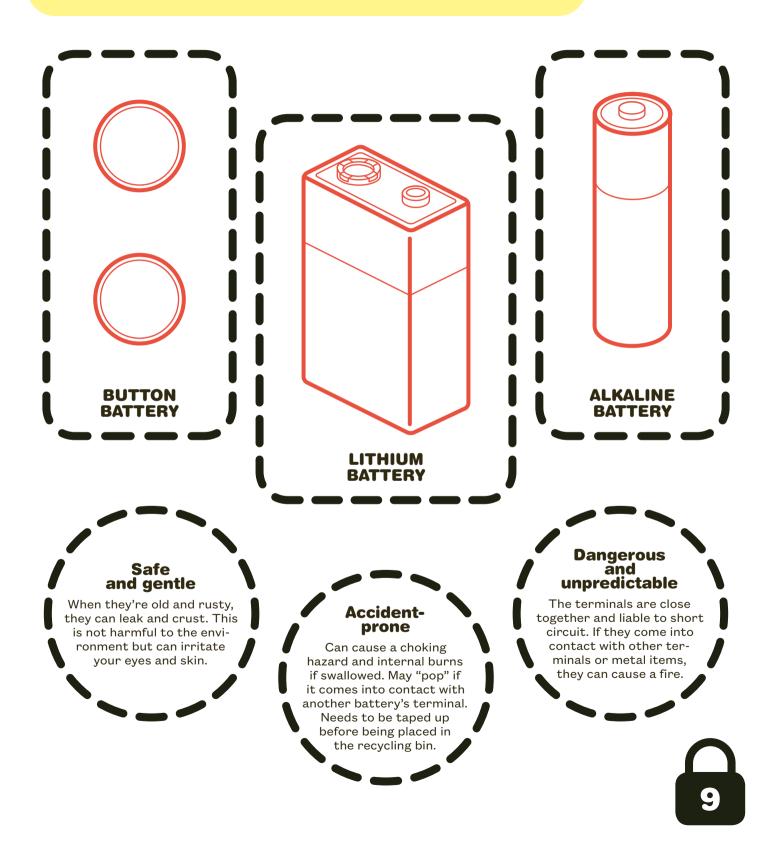
- Large lithium batteries
- Also small batteries and lead-acid automotive batteries.

ALL BATTERIES, ESPECIALLY RECHARGEABLE BATTERIES, WILL ALWAYS HAVE A LITTLE BIT OF CHARGE LEFT. THAT'S WHY IT'S IMPORTANT TO TAPE THEM UP BEFORE RECYCLING.

BY TAPING THEM UP, YOU CAN PREVENT THE TERMINALS COMING INTO CONTACT WITH ONE ANOTHER, SHORT CIRCU-ITING AND STARTING A FIRE.

Positive thinking!

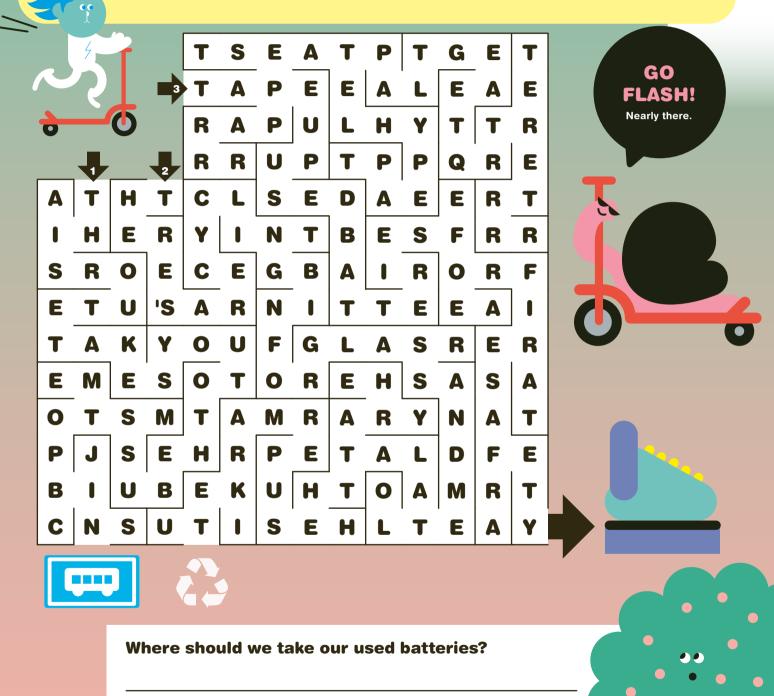
Every battery has two ends called terminals. They are marked with a plus and minus symbol. Mark these batteries with + / - and connect them with the correct blurb.



Give a helping hand

As you know, Blue Flash is always on the go, but sometimes he should really stop and think before acting. Right now, Blue Flash is about to make a mistake. Can

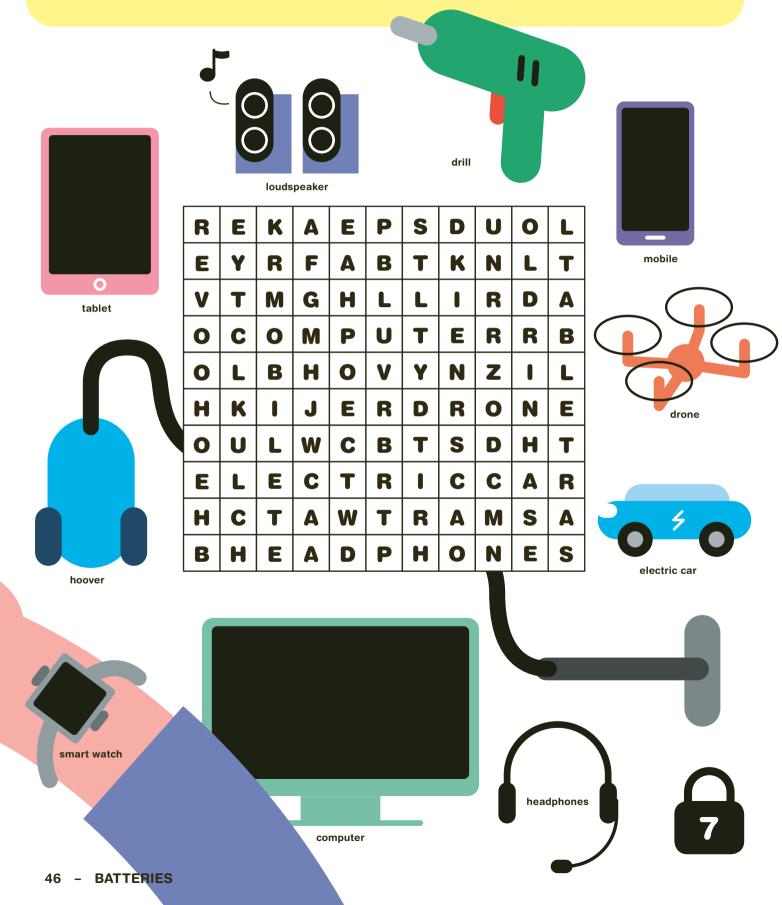
you help him recycle his batteries properly? Which of the three routes will take him where he needs to be?



What important advice did you find along the way?

Charge me up

Can you find 10 things that are battery-powered and can be charged? Try searching up, down, forward and backward! Find and circle all of the words.



Cars and tyres

- Cars are super safe when they're wearing sturdy tyres. If the tyre surface is worn out and smooth, you will need new ones.
- There's a handy coin test for checking your tyres: put a €2 coin in the groove. If you can see the silver edge of the coin, the tyre is no longer safe to use.
- Used car tyres can be recycled and used for lots of different things, they don't need to end up as waste!
- Cars usually stay on the road for about 20 years before they're scrapped.

WOW!

The largest vehicle tyres in the world are

more than 4 metres

high!

• Did you know that the metal recovered from cars can be turned into pots, pans, spoons and forks? This means that you might have eaten your breakfast using someone's old car this morning!

YES, PLEASE!

- Cars that have come to the end of their useful life can be dropped off at a Finnish Car Recycling Ltd centre. It's a free service.
- They will also take your used tyres for free.

OLD TYRES ARE TURNED INTO

- tyre granules for artificial turf
- soft liners for sports and playgrounds
- chips for horse riding arenas
- retread tyres
- blasting mats for construction sites

CARS ARE TURNED INTO

- spare parts
- new steel and metal products

Glossary

Vehicle metal = Cars are mainly made of metal. A single car yields about 740 kilos of recycled steel.

Tyre chips = A cut from a car tire, can be used as a playground base structure to replace natural stone material. Tyre chips can also be used for water filtering.

Scrapping = Cars that have come to the end of their life are removed from the vehicle register and recycled.

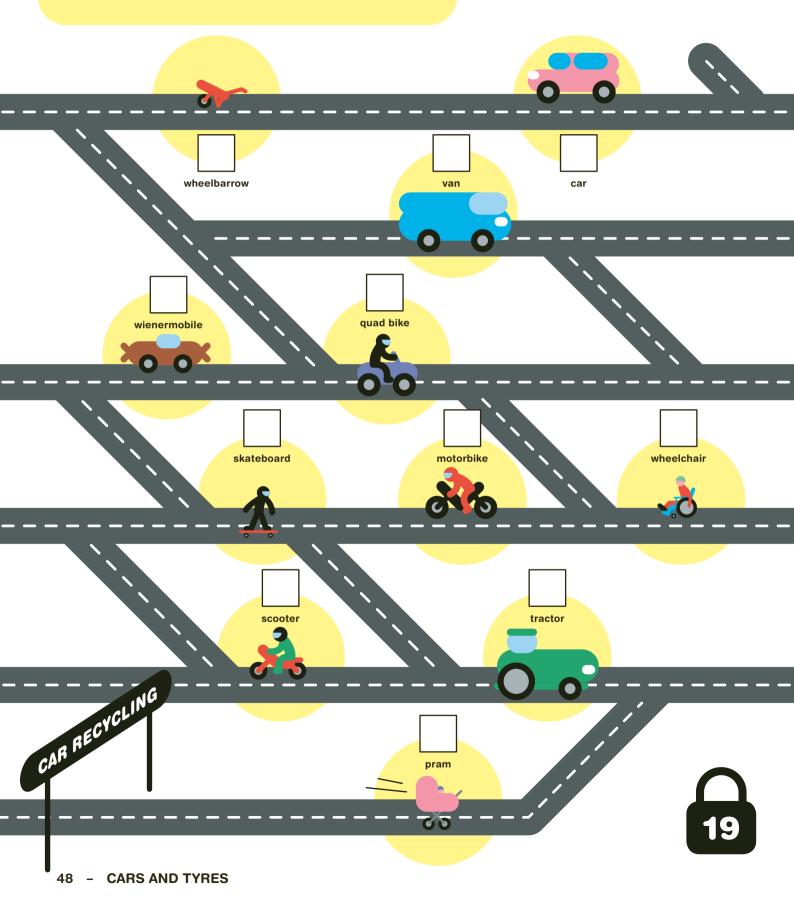
Blasting mat = A mat made of lorry tyres bound together with strong wire. They are used to protect people, buildings and other things during blasting.

Retreaded tires = A tyre that's been carefully inspected and had a brand new tread added to it. Truck tires are retreaded on average twice in Finland

LEGO IS THE WORLD'S LARGEST TYRE MAKER. THEY MAKE MORE THAN 300 MILLION TOY TYRES EVERY YEAR! THE LARGEST LEGO TYRE IS ABOUT 10 CM IN DIAMETER.

Demolition derby for oldies

Tick off all the vehicles that can be taken to a Finnish Car Recycling centre.



Road safety

Fill in the missing words to learn more about tyre safety

CONSIDER THIS

In 2050, will cars still have tyres or something else? What could that be?

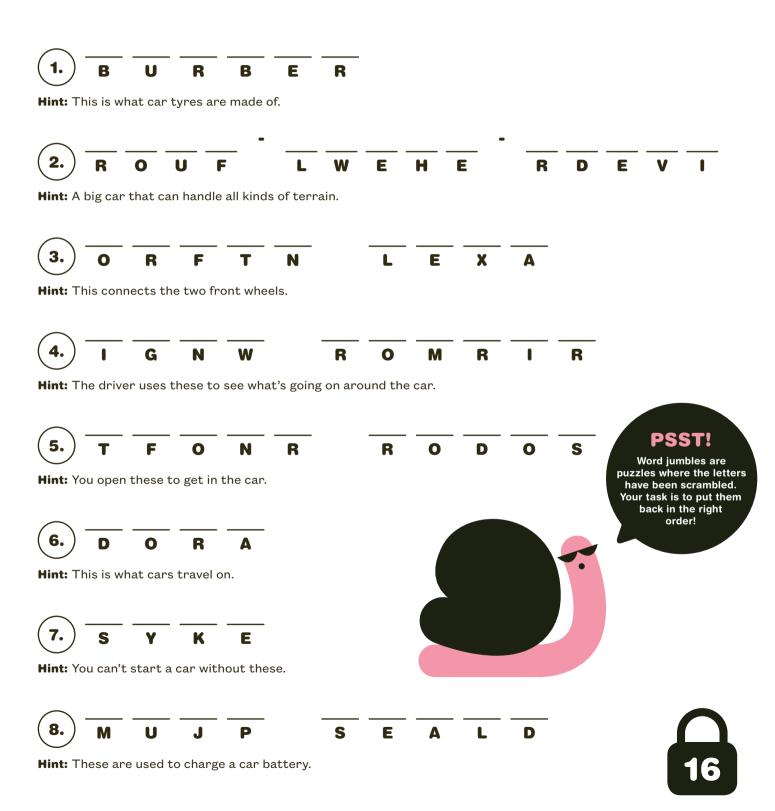
1.	Car tyres have grooves called
2	They're designed to remove water and slush to
	• make the stick to
the r	oad surface better.
2	Finnish law says that summer tyres must
3	ullet have at least a 1.6 mm tread, but the
	is at least 4 mm.
	In addition to,
4	• you need to check your tyres for hardening and
	king.
_	Old and worn out tyres are an
5	• risk and have poc
ract	tion.
_	You need to check your tyre surfaces and
6	• regularly.
	· ogular ly
7	Not all accidents leave marks. Sometimes tyres c
	• have
	Tyres should always be stored in a cool
D	ullet and dry area and safe from oil, grease and
	Most tyre retailers offer a tyre
9	•
_	- All types can be
4 (All tyres can be • nothing gets wasted.

MISSING WORDS:

- TYRE PRESSURE • INTERNAL DAMAGE • SAFETY
- RECOMMENDATION
- TYRE
- STORAGE SERVICE
- TREAD
- RE-PURPOSED
- SURFACE • AQUAPLANING
- AQUAPLANING
- CARS AND TYRES 49

Say what again?

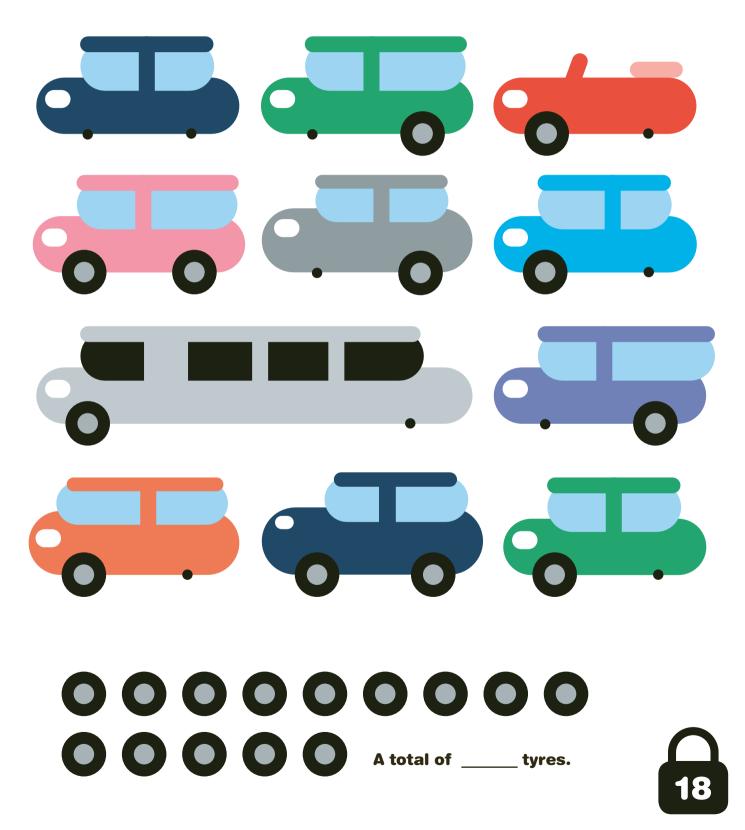
Charlie Chump has listed his favourite car-related words, but something's gone wrong. Can you help him out by sorting out the jumbled up words?





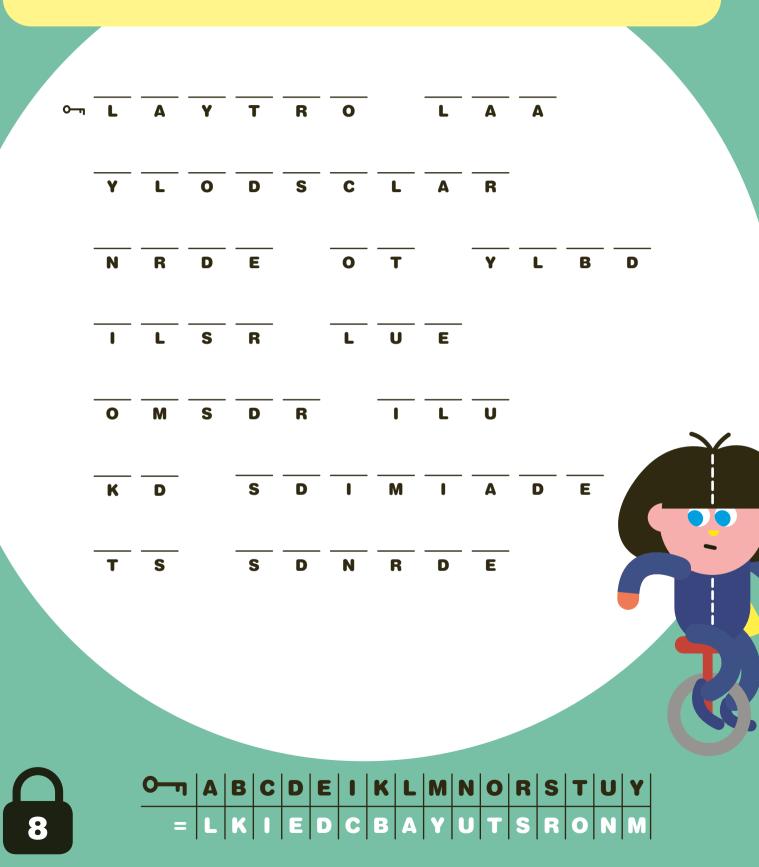
Don't count sheep, count tyres instead!

After you attach the missing tires to the vehicles, how many tires are left?



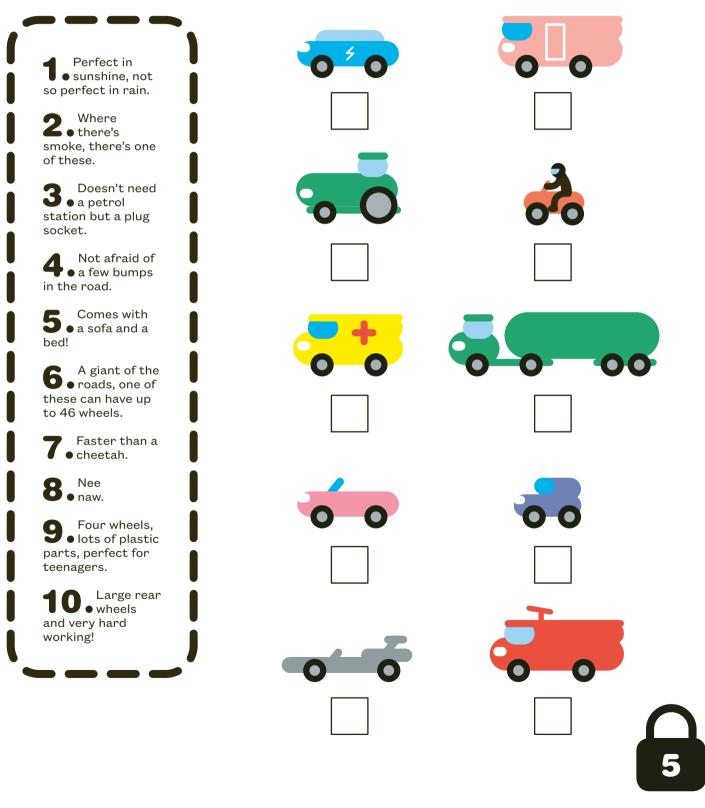
Reveal Didi's hidden message

Didi is faster than a cheetah, but he might have written this important message down a bit too quickly. What should the note say?



Guess the speed machine

Solve the riddle and write down the correct number under each car.



Wooden packaging

- Wooden packaging is mainly used in retail and manufacturing. You might sometimes find it in private homes if people have been doing gardening or some building work.
- When wooden packaging is recycled, it can often be re-used just as it is. The rest can be repaired, turned into new products, mixed into compost or burned to generate energy.
- In 2017, a total of 321 million kilos of wooden packaging was re-used.
- There was just over 225 million kilos of wooden packaging waste. Of this, 33 million kilos was recycled. The rest was used for energy.

Glossary

Cable reel =A spool used to carry electrical cables. You won't often see these at home, but they're very common on building sites.

Pallet =A wooden structure used to transport and store goods. They're often used for paving slabs, bricks, sacked goods, windows and doors.

Other wooden packaging =Other wood products used as packaging. These might be wooden supports used to make sure that everything stays in place.

Crates =Wooden boxes used to transport and store goods. Suitable for things that consist of lots of different parts or that need to be stored carefully.

Wooden barrel = A cylindrical container with a bottom and lid, made of wooden staves. Used to store both liquids and dry goods. Historically, a barrel was also used as a measuring unit.

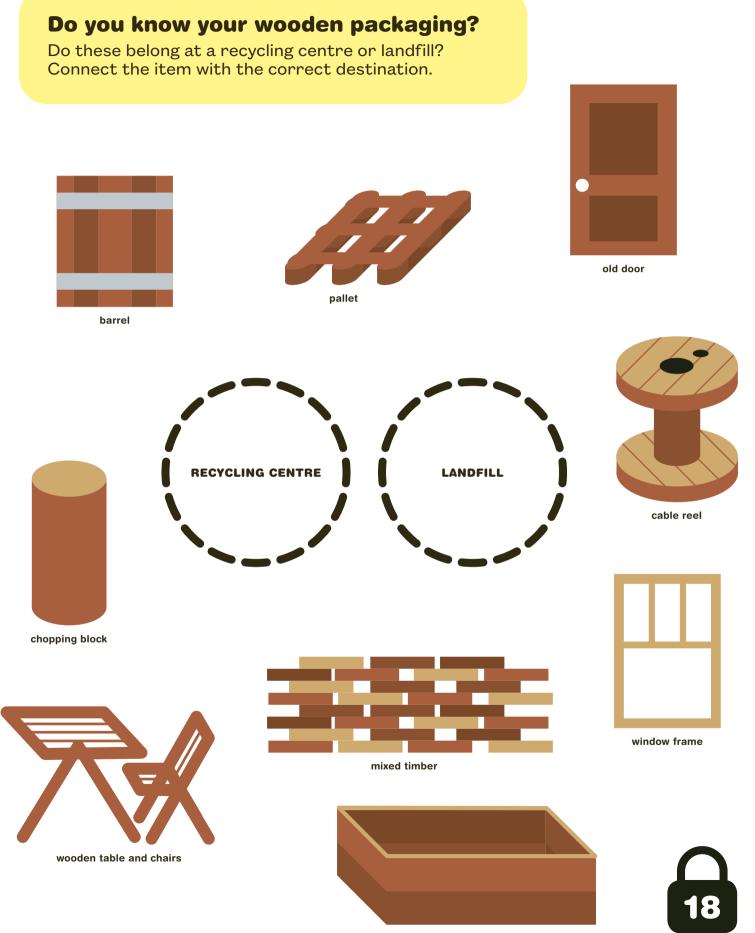


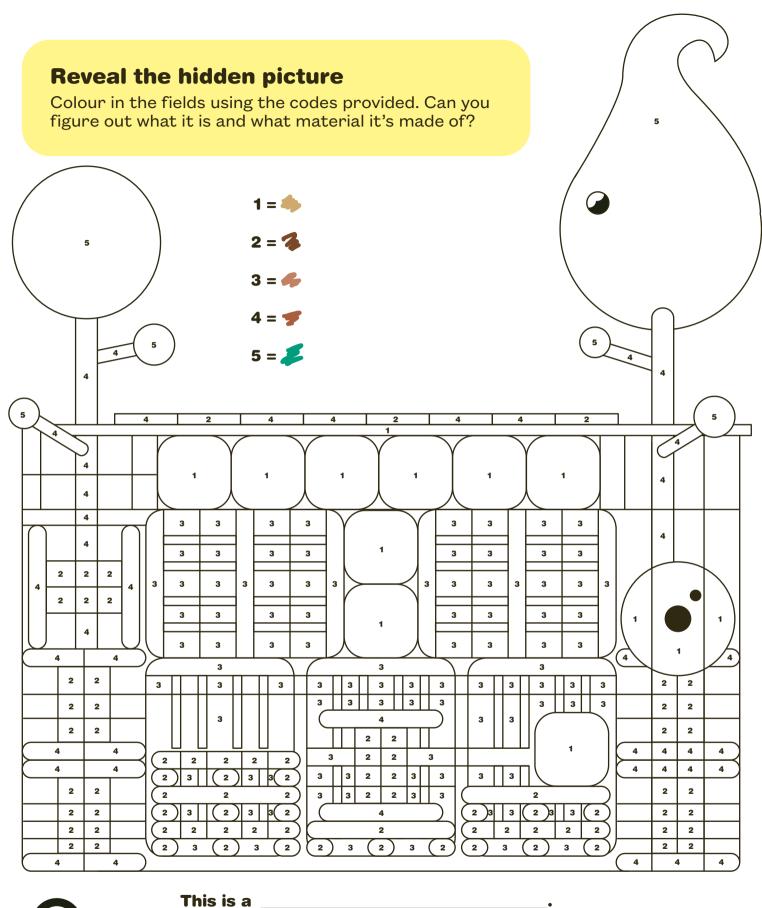
- pallets
- boxes
- crates
- barrels
- cable reels
- other wooden packaging



PSST! Reusing is the best form of recycling.

REMEMBER TO WEAR GLOVES WHEN YOU HANDLE WOODEN PACKAGING SO YOU DON'T END UP WITH A HAND FULL OF SPLINTERS.







It's made with

_____ and _____

ANSWERS

Page 6: After a camping trip

banana peel-food waste, glass juice bottle-glass recycling, sweet wrapper-mixed waste, pizza box-carton recycling, can-metal recycling, torn map-paper recycling, plastic bagplastic recycling

Page 8: Can you give Charlie Chump a helping hand?

jam jar, shampoo bottle, battery, magazine, drinks can

Page 9: Kan du svenska?

battery-batteri, can-burk, plastic packagingplastförpackning, wood-träd, paper-papper, cartonkartong, electricity-elektrisitet, rubber-gummi, metalmetall, recycling-återvinning

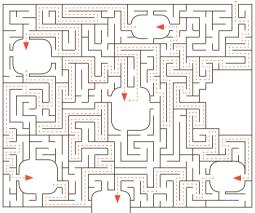
Page 12: Find the right address

juice bottle, bread bag, spinach pancake container, beef mince wrapping

Page 13: Top tips from a master recycler

Remove all lids and place them in the plastic recycling bin.

Page 14: This is how it works



Page 17: Mackie's silky soft paper quiz 1-c, 2-a, 3-b, 4-c, 5-a, 6-b, 7-a, 8-b, 9-c

Page 18: Tree rescue

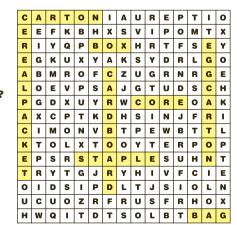
1) 7 bundles, 2) 10 bundles, 3) 70 bundles, 4) 140 bundles, 5) 700 newspapers, 6) 1,400 leaflets, 7) 7,000 sheets

Page 20: Mixed waste or carton packaging recycling?

The tin of crisps, biscuit packet, pizza box, paper bag, white crafts card, milk carton, cardboard transport box and paper sweet wrapper all belong in the carton recycling bin. The coloured crafts carton and colourful gift bag go in the mixed waste bin.

Page 21: Mackie's hidden words —>

Page 24: Who will make more? Left-hand pile makes €4.45, right-hand pile makes €9.50.





juice bottle, jam jar, baby food jar, pickle jar, olive oil bottle, soy sauce bottle, vinegar bottle, cinnamon jar

Page 33: The mystery of the crystal jewellery box This fleamarket find is mixed waste.

Page 34: How many is many?

2 + 5, 3 + 3, 4 + 3 and 8 - 3

Page 36: Blue Flash's hard as nails metal quiz 1-b, 2-a, 3-c, 4-b, 5-a, 6-a, 7-b, 8-c, 9-b

Page 38: The stuff aeroplanes are made of _>



Page 40: Word jumble

scissor kick, ghost frog, battery terminal, battery acid, trampoline trick, spider crab, recycling centre, electrical energy, lead battery, mobile phone camera

Page 41: Catch the thief!

1. flashlight 2. freezer 3. television 4. mobile 5. electric whisk 6. washing machine 7. remote control 8. walkie talkie 9. electric toothbrush 10. gaming console

Page 44: Positive thinking!

- Safe and gentle = alkaline battery
- Accident-prone = button battery
- Dangerous and unpredictable =
- lithium battery

Page 45: Give a helping hand

Number 3 is the correct route: tape up used batteries for fire safety

Page 46: Charge me up

R	Е	к	A	Ε	Ρ	S	D	U	0	L
E	Y	R	F	Α	в	т	к	Ν	L	т
V	т	м	G	н	L	L	T	R	D	A
0	С	0	м	Р	υ	т	Ε	R	R	в
0	L	в	н	0	v	Y	Ν	z	I	L
н	к	I	J	E	R	D	R	ο	Ν	Е
ο	U	L	w	С	в	т	s	D	н	т
Е	L	E	С	т	R	I	С	С	A	R
н	С	т	Α	w	т	R	A	м	S	A
в	н	E	Α	D	Ρ	н	0	Ν	E	S

Page 48: Demolition derby for oldies

car, van, quad bike, motorbike, scooter, tractor

Page 49: Road safety

- 1. tread 2. tyre 3. safety recommendation
- 4. surface 5. aquaplaning 6. tyre pressure
- 7. internal damage 8. petrol 9. storage service 10. re-purposed



S

Page 50: Say what again?

1. rubber 2. four-wheel drive 3. front axle 4. wing mirror 5. front doors 6. road 7. keys 8. jump leads

Page 51: Rubber rubber everywhere

building site, riding astroturf pitch, playground

Page 52: Don't count sheep, count tyres instead! 4 tyres

Page 53: Reveal Didi's hidden message

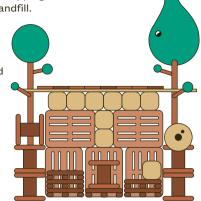
Almost all materials used to make cars and tyres can be recycled or reused.

Page 54: Guess the speed machine

1. open top car 2. fire engine 3. electric car 4. quad bike 5. motor home 6. lorry 7. F1 racing car 8. ambulance 9. quadricycle 10. tractor Page 56: Do you know your wooden packaging?

The barrel, pallet, cable reel and crate all belong at the wood recycling centre. The old door, mixed timber, window frame, chopping block and wooden table and chairs go to landfill.

Page 57: Reveal the hidden picture This is a den. It's made with wooden crates and huge cable reels.



A BONUS CHALLENGE! What happened to Charlie Chump?

On the pages of this book, there are 37 numbers hidden inside padlocks. Find them, complete the challenge and continue the story using the code below.

Charlie Chump is cute and well meaning but often gets things a bit wrong – and sometimes a lot wrong! Thanks to his new friends, he has learned lots of new things and is a lot more clued up now. He realised that he wants to dedicate his life to eradicating waste and...

р. 6	p. 8	p. 9	p. 10	p. 12	p. 13	p. 14		p. 16	p. 17	p. 18	p. 20	p. 21
p. 22	p. 24	p. 25	p. 26	p. 28	p. 33							
p. 34		p. 36	p. 37	р. 38	p. 40	p. 41	p. 42	p. 44	p. 45	p. 46		
p. 48	p. 49	p. 50	p. 51	p. 52	p. 53	p. 54	p. 56	p. 57				
	0	1 1	I = A		7 = 6	à ·	13 =	М	19 =	S	25 =	Y
		2	2 = B		8 = H	l ·	14 =	N	20 =	Т	26 =	Ζ
		3	$\mathbf{S} = \mathbf{C}$		9 = I		15 =	0	21 =	U		
		4	l = D	1	$0 = \mathbf{J}$	•	16 =	Ρ	22 =	V		
			5 = E		11 = K		17 =		23 =			
			$5 = \mathbf{F}$		2 = L		18 =		24 =			

