

# WHAT HAPPENS TO NOTTINGHAM'S RECYCLING?



Nottingham  
City Council



 Nottingham recycles

  
Carbon Neutral Nottingham 2028



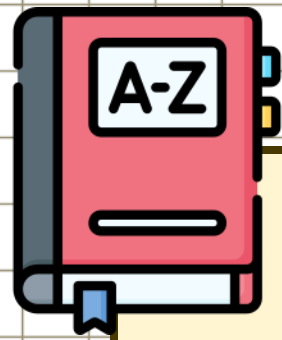
Nottingham  
City Council

# LEARNING OBJECTIVE

**To know how Nottingham's recyclable waste is sorted at a Materials Recovery Facility.**

1. I can sort items that belong in the grey-lidded recycling bin.
2. I can explain what happens to recycling after it is collected.
3. I can describe how the MRF sorts different materials using their properties.





# KEY VOCABULARY

## recycle



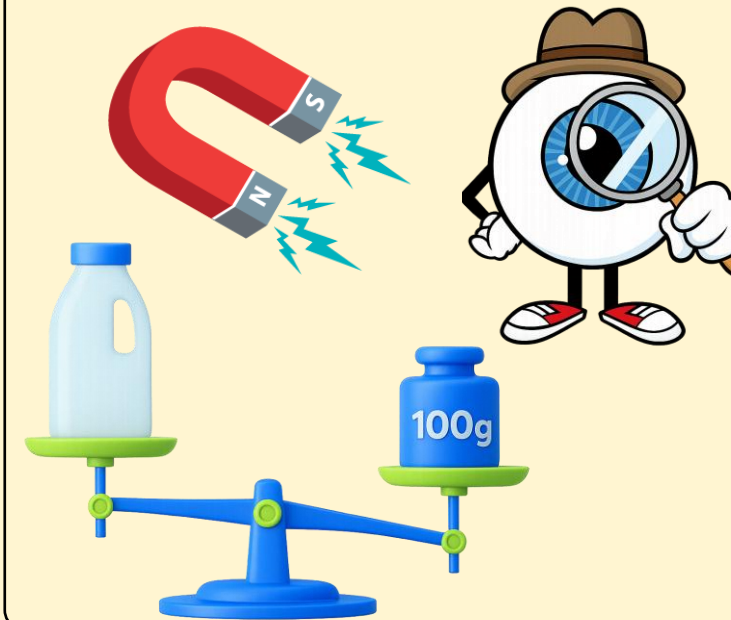
Turning waste into new things.

## contamination



Mixing materials with dirty items in the bin.

## material properties



Features of a material – like magnetic, transparent or light.

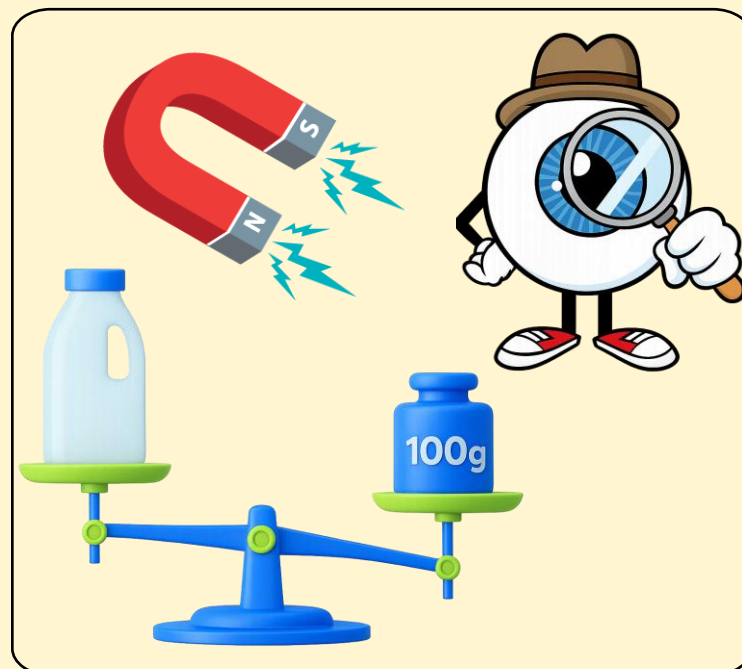
## Materials Recovery Facility (MRF)



Where recycling gets sorted.



# CORRECT THE MISTAKES



**contamination**



**recycle**

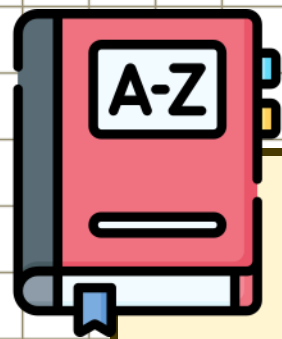


**Materials  
Recovery  
Facility**

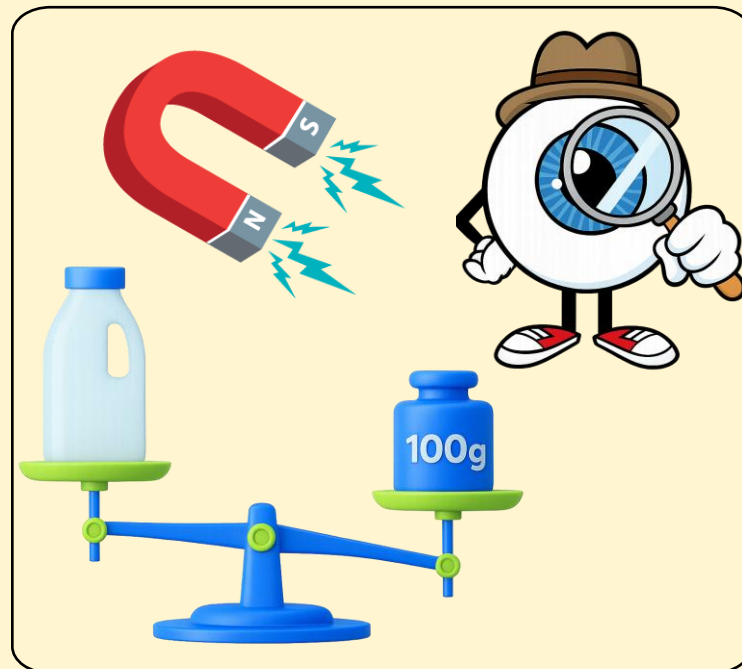


**material  
properties**





# CORRECT THE MISTAKES



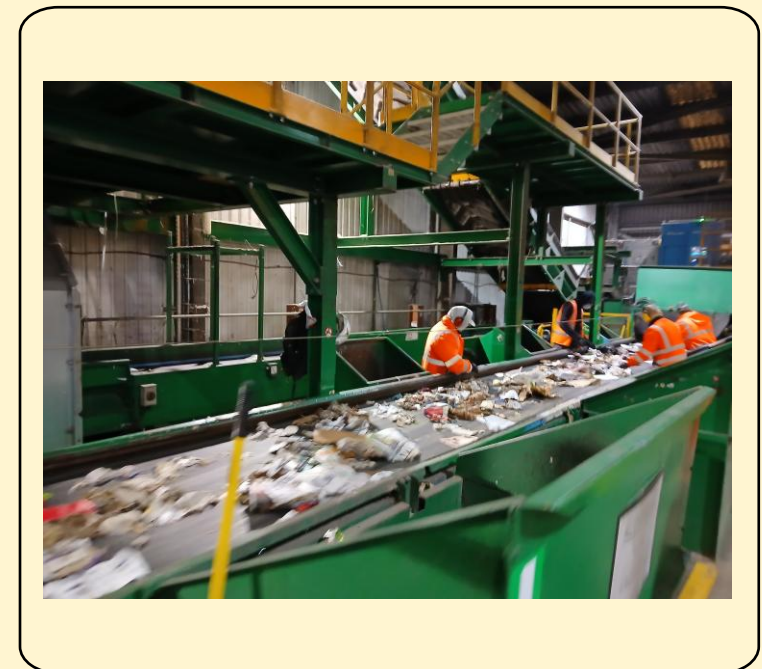
**contamination**



**recycle**



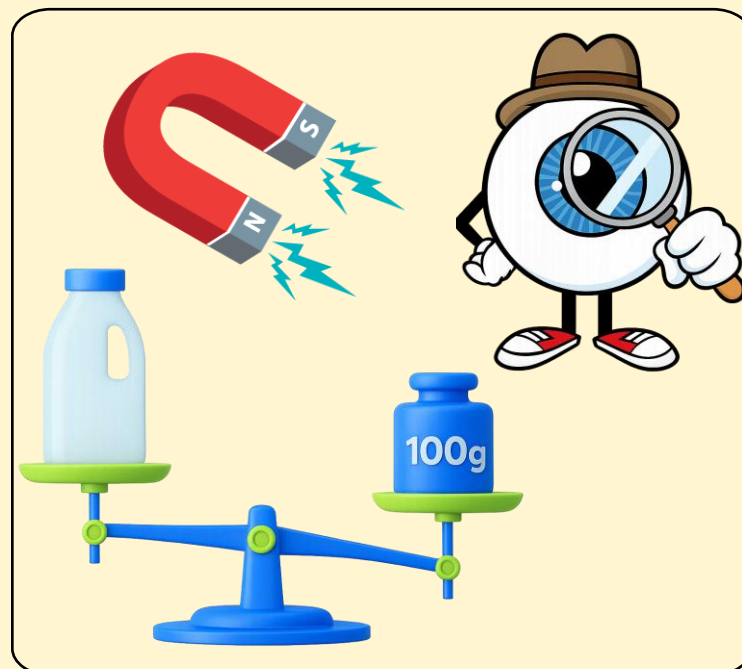
**Materials  
Recovery  
Facility**



**material  
properties**



# ANSWERS



**material  
properties**



**recycle**



**contamination**



**Materials  
Recovery  
Facility**





**Talk to your partner.**

**WHAT DO WE  
USE THE GREY-  
LIDDED BIN FOR?**



**The grey-lidded bin is where we put all our waste that can be recycled, including:**







# ODD ONE OUT

Explain which item does not go in the grey-lidded bin.



crisp packet



plastic bottle



used tissue

The \_\_\_\_\_ does not go in the grey-lidded bin because...



# ODD ONE OUT

Explain which item does not go in the grey-lidded bin.



crisp packet



plastic bottle



used tissue

The \_\_\_\_\_ does not go in the grey-lidded bin because...





# ODD ONE OUT

Explain which item does not go in the grey-lidded bin.



used pizza box



empty yoghurt pot  
and lid



clean takeaway  
container

The \_\_\_\_\_ does not go in the grey-lidded bin because...



# ODD ONE OUT

Explain which item does not go in the grey-lidded bin.



used pizza box



empty yoghurt pot  
and lid



clean takeaway  
container

The \_\_\_\_\_ does not go in the grey-lidded bin because...





# WHERE DOES RECYCLABLE WASTE GO?



First, the bin lorry empties the grey-lidded bin and takes the recycling away.





# WHERE DOES RECYCLABLE WASTE GO?



Next, the recycling goes to the Materials Recovery Facility, which has different stages where materials are sorted by their properties.





**Next, iron-based metals are sorted using magnetism.**







## AT THE MRF...



After, light and heavy materials are separated using an air classifier.

Then, an optical sorter uses a laser to scan and separate different types of plastics.







# AT THE MRF...

plastic



paper



The materials are stored separately in different holding bays.

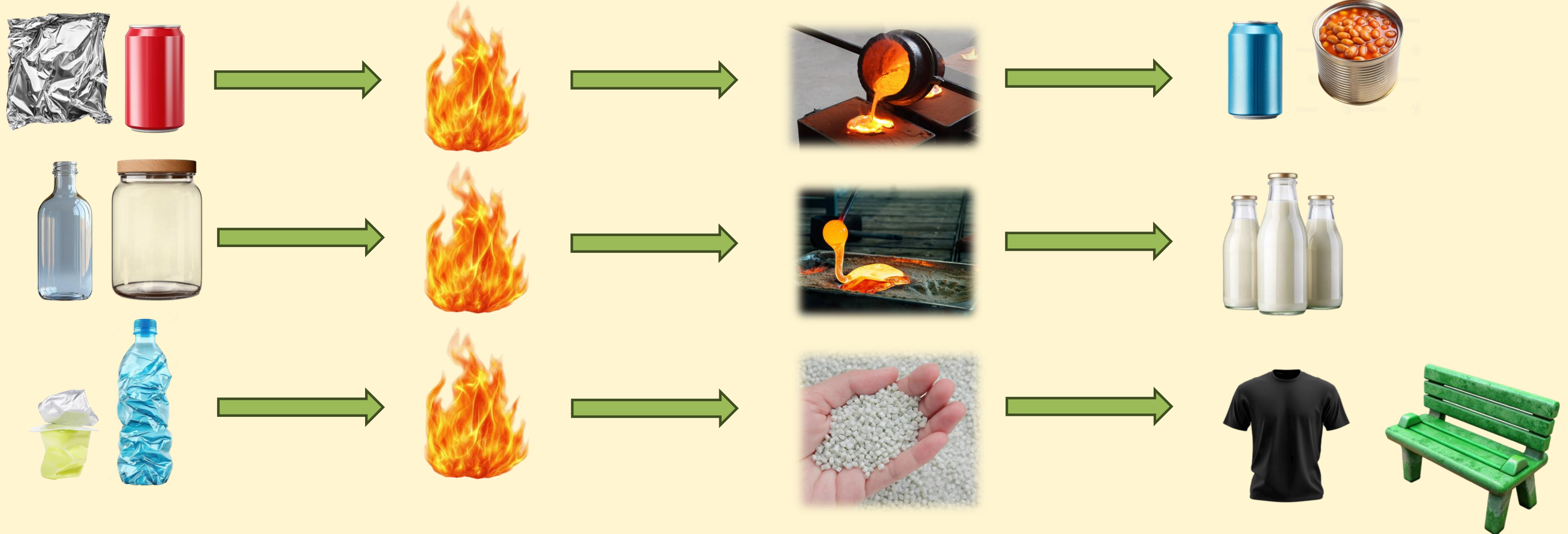
The materials are squashed into cubes, called bales.







# WHERE DOES RECYCLABLE WASTE GO?

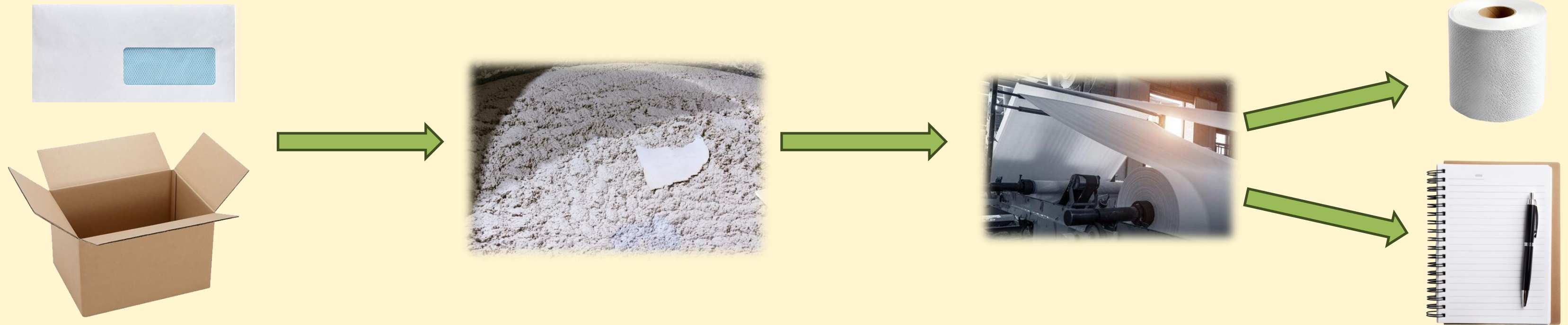


Metal, plastic and glass are melted and recycled into new products, saving energy and resources by reusing the resources we have already.

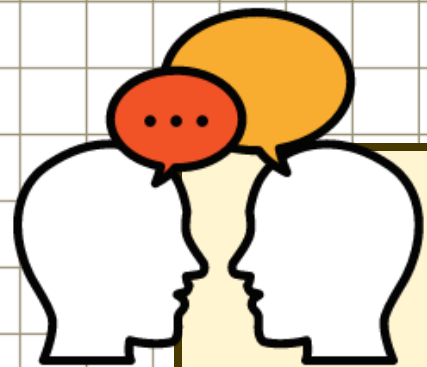




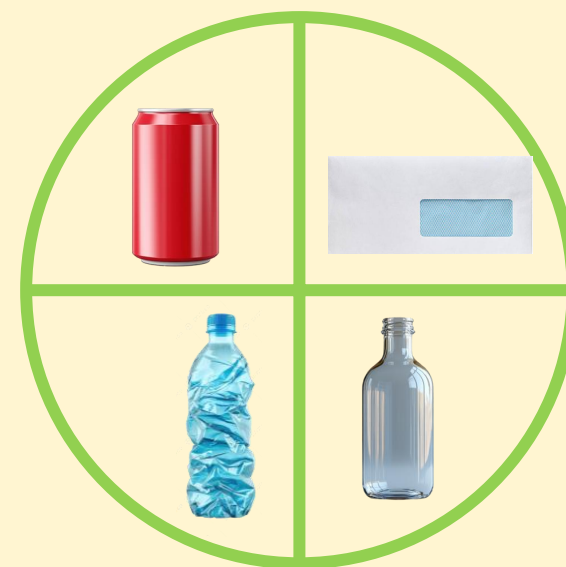
# WHERE DOES RECYCLABLE WASTE GO?



Paper and card is squished with water to make pulp, then dried into new paper.



# EXPLAIN HOW NOTTINGHAM RECYCLES MATERIALS



Use these words in your explanation – how many points can you score?

1 point	2 points	3 points
grey-lidded bin recycle sort paper, glass, plastic, metal	MRF contamination material properties magnet	optical sorter air jets conveyor belt bale pulp





 **TRUE OR FALSE?** 

**Dirty takeaway  
containers go in the  
grey-lidded bin.**





👍 **TRUE OR FALSE?** 👎

**Dirty takeaway  
containers go in the  
grey-lidded bin.**







# 👍 TRUE OR FALSE? 👎

**Tissues are made of paper, so they can be recycled in the grey-lidded bin.**





👍 **TRUE OR FALSE?** 👎

**Tissues are made of paper, so they can be recycled in the grey-lidded bin.**







# 👍 TRUE OR FALSE? 👎

**Glass and aluminium  
are infinitely recyclable.**



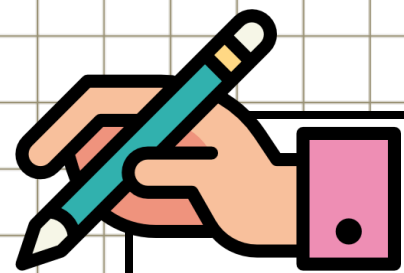


👍 **TRUE OR FALSE?** 👎









**Glass and aluminium  
are infinitely recyclable.**





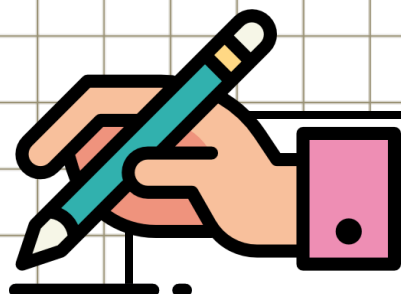


### RECYCLABLE MATERIALS

1. 	2. 
<hr/> <hr/>	<hr/> <hr/>
3. 	4. 
<hr/> <hr/>	<hr/> <hr/>
5. 	6. 
<hr/> <hr/>	<hr/> <hr/>
7. 	8. 
<hr/> <hr/>	<hr/> <hr/>

## ACTIVITY – CHOCOLATE BAR

Write down one item or material that can go in the grey-lidded bin on bin no.1. Swap your ideas with your classmates – who can fill all eight bins first?



Clue 1	Clue 2	Clue 3	Material
I am infinitely recyclable.	I am melted at the recycling facility.	I am blown into the shape of a new bottle or jar.	
I can be recycled about 5 times before my fibres are too damaged.	I am mixed with water and chemicals to make pulp.	I am dried and flattened to make new sheets for notebooks and printers.	
I am sorted at the MRF using a magnetic separator.	I can be steel cans and aerosol bottles.	I am recycled into new products like paper clips.	
I am usually packaging that can be either rigid or soft.	I am sorted using an optical sorter.	I am melted into pellets and recycled into new products like t-shirts.	
I am infinitely recyclable.	I am melted at the recycling facility.	I am moulded into the shape of a can.	

#### Word Bank

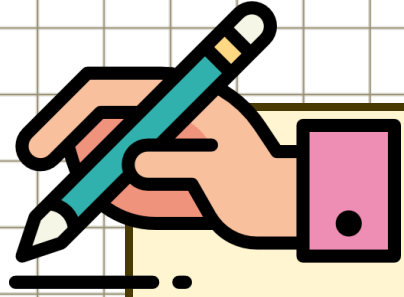
Aluminium   Iron-based metal   Plastic   Glass   Paper & Card

## ACTIVITY – WHAT MATERIAL

### AM I?

Use the clues and your knowledge of material properties to identify what the recyclable material is.





# ACTIVITY – STORYBOARDING

Use the storyboard to draw each stage of the journey of recyclable materials. Write a caption to describe what happens.

**1**

**2**

**3**

**4**

**5**

**6**

recycling

grey-lidded bin

contamination

MRF

conveyor belt

sort

material properties

magnetic sorter

air jets

optical sorter

melt

pulp



# ACTIVITY – INVESTIGATE

Check the recycling bins in your school to see if the right materials are in there.



- ☐ paper and card
- ☐ plastic bottles
- ☐ cardboard
- ☐ clean foil
- ☐ crisp packets and sweet wrappers



- ☐ used tissues
- ☐ dirty items
- ☐ pencil shavings
- ☐ drink and yoghurt pouches

