

# WHAT HAPPENS TO NOTTINGHAM'S WASTE?



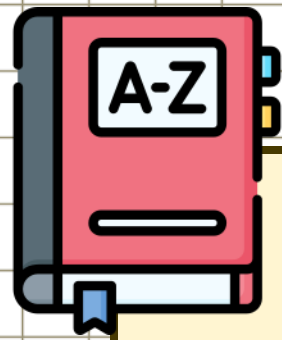
Nottingham  
City Council



# LEARNING OBJECTIVE

**To know how Nottingham's waste is used to create energy for the city.**

1. I can sort items that belong in the green household waste bin.
2. I can explain what happens to Nottingham's green bin waste after it is collected.
3. I can describe how the incinerator turns waste into energy.



# KEY VOCABULARY

**waste**



Things we throw away.

**incinerator**



A giant oven used to burn waste.

**energy-from-waste**



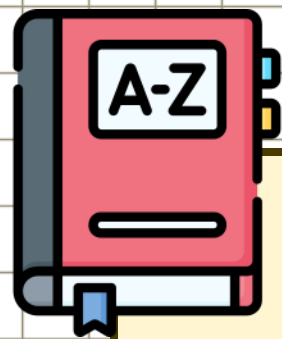
Burning waste to make heat and electricity.

**electricity**



Energy used to power lights and machines.

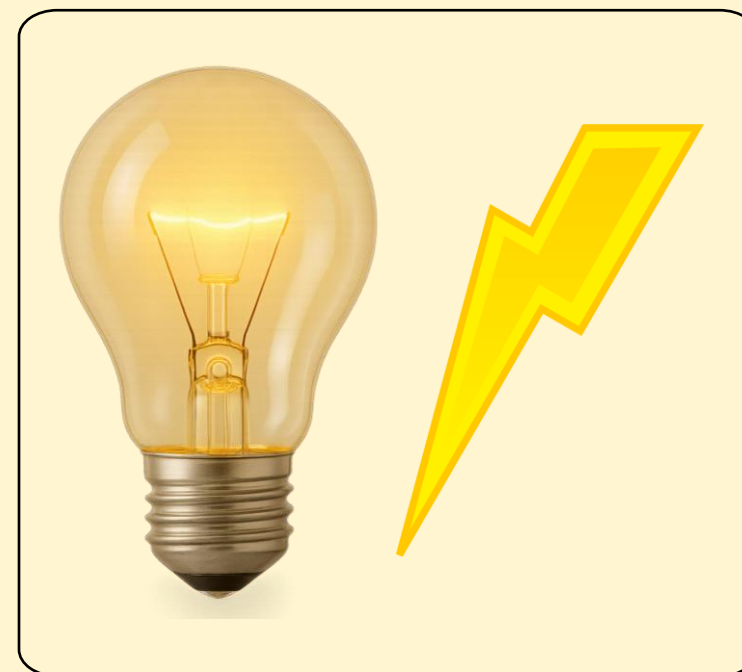




# CORRECT THE MISTAKES



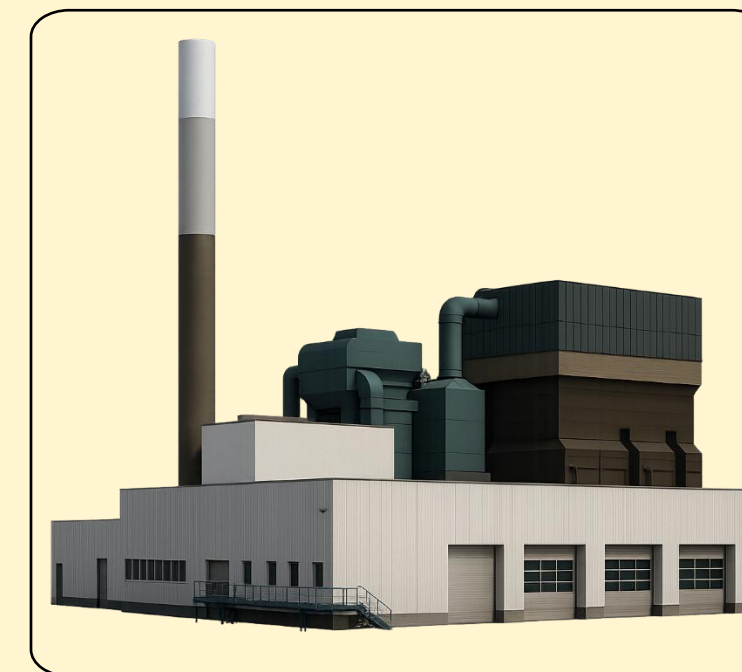
**electricity**



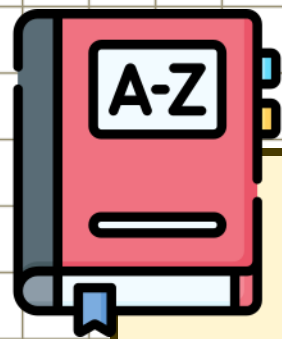
**waste**



**energy-from-waste**



**incinerator**



# CORRECT THE MISTAKES



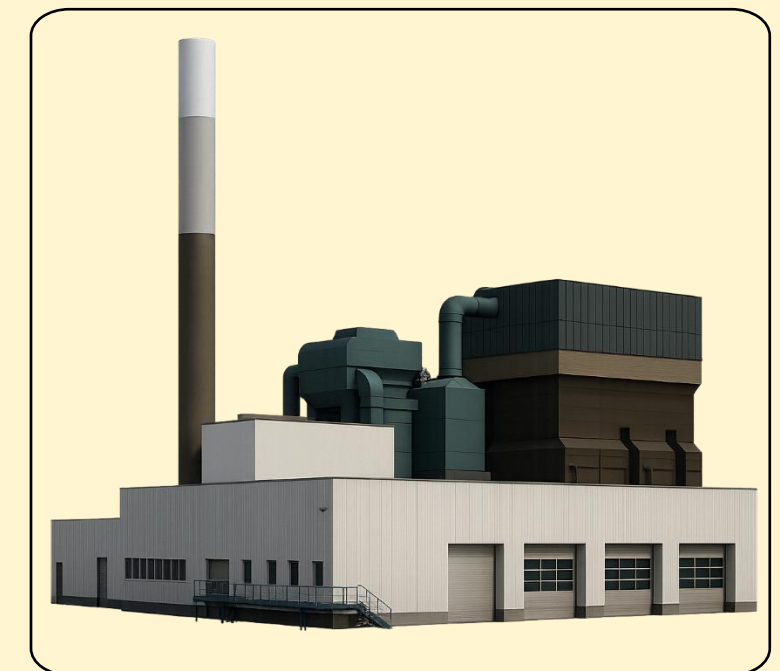
**electricity**



**waste**

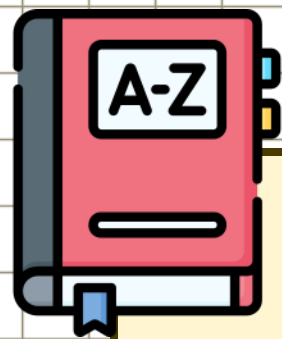


**energy-from-waste**



**incinerator**

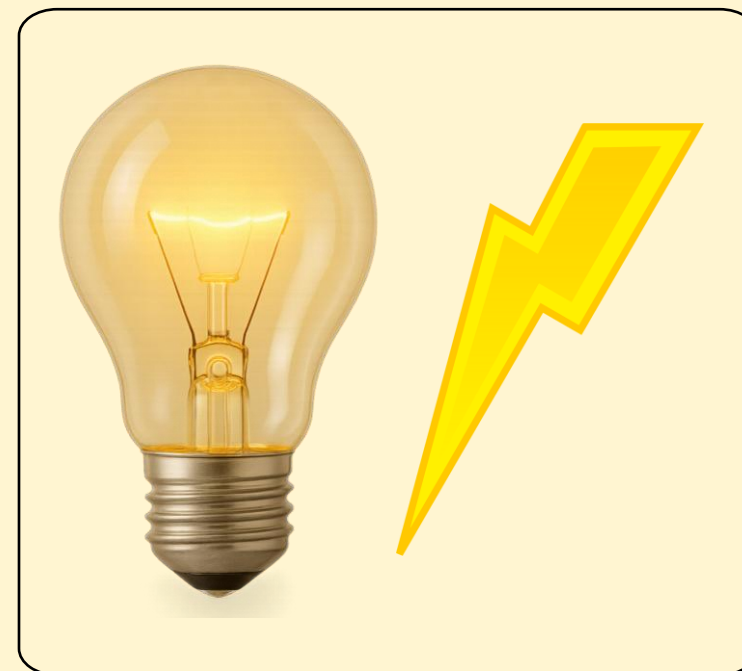




# ANSWERS



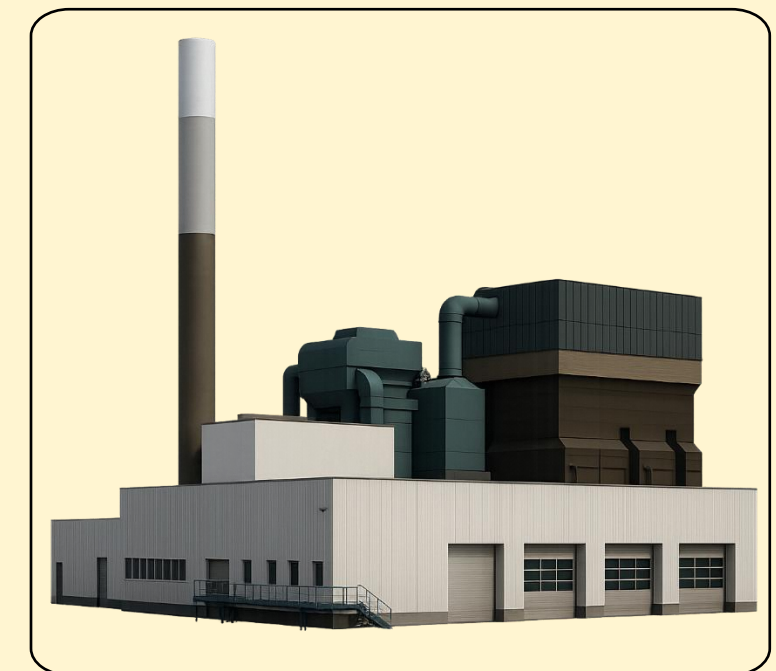
**energy-from-  
waste**



**electricity**



**waste**



**incinerator**



**Talk to your partner.**

**WHAT DO WE  
USE THE GREEN  
BIN FOR?**





**The green bin is where we put our household waste, including:**







# ODD ONE OUT

Explain which item goes in the green bin.



used tissue



plastic bottle



crisp packet

The \_\_\_\_\_ goes in the green bin because...



# ODD ONE OUT

Explain which item goes in the green bin.



used tissue



plastic bottle



crisp packet

The \_\_\_\_\_ goes in the green bin because...





# ODD ONE OUT

Explain which item goes in the green bin.



dirty takeaway  
container



clean plastic  
yoghurt pot



aluminium can

The \_\_\_\_\_ goes in the green bin because...



# ODD ONE OUT

Explain which item goes in the green bin.



dirty takeaway  
container



clean plastic  
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aluminium can

The \_\_\_\_\_ goes in the green bin because...

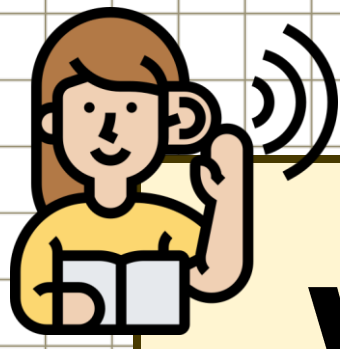




# WHERE DOES THE GREEN BIN WASTE GO?



First, waste collection crews empty the green bin waste into the truck.



# WHERE DOES THE GREEN BIN WASTE GO?



Next, the truck takes the waste to be burned at the Eastcroft incinerator.





# WHERE DOES THE GREEN BIN WASTE GO?

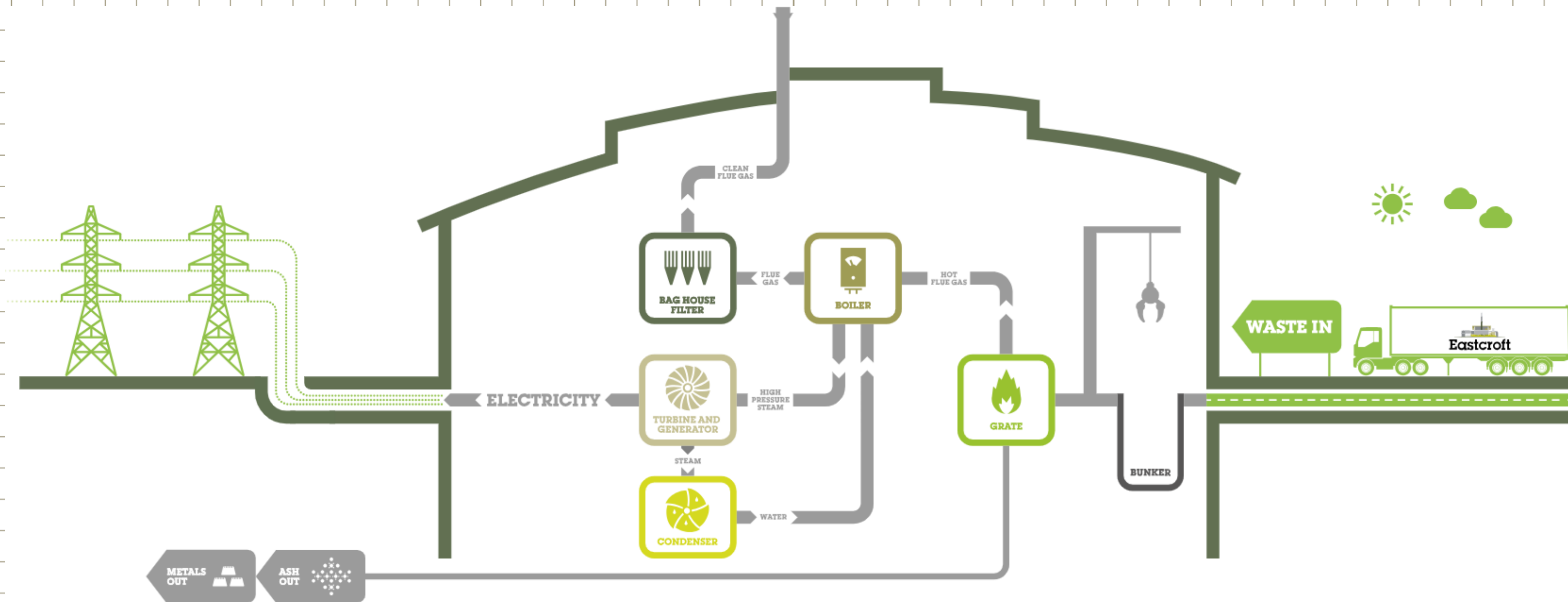


The heat from burning waste turns water into steam.

Then, the steam makes a turbine spin to generate electricity.



# WHERE DOES THE GREEN BIN WASTE GO?





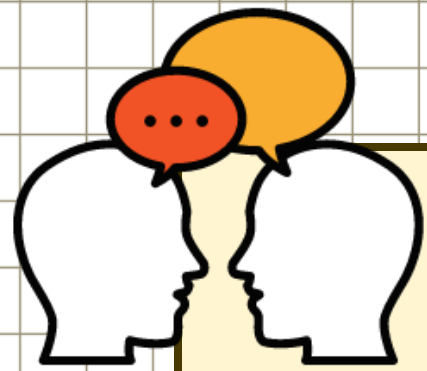


# WHERE DOES THE GREEN BIN WASTE GO?



Finally, the electricity helps to power the National Grid and buildings like the National Ice Centre while the hot water is used to heat 5,000 homes in St. Ann's. This is called energy-from-waste.





# EXPLAIN HOW NOTTINGHAM GETS ENERGY-FROM-WASTE



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

1 point	2 points	3 points
green bin truck waste burned	heat steam homes electricity	Eastcroft incinerator turbine energy-from-waste





# 👍 TRUE OR FALSE? 👎

Used tissues go in the  
green bin.





👍 **TRUE OR FALSE?** 👎

**Used tissues go in the  
green bin.**







👍 **TRUE OR FALSE?** 👎

Takeaway drink cups  
don't go in the green bin  
because they are made  
of paper.



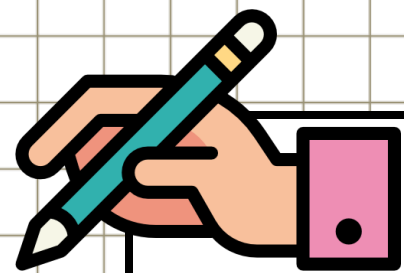


👍 **TRUE OR FALSE?** 👎

**Energy-from-waste is  
better for the  
environment than  
sending waste to landfill.**







## ACTIVITY – CHANGE MY MIND

**Explain why Bill's opinion is incorrect. Use the word bank to help your explanation.**

1 point	2 points	3 points
green bin heat waste burned	landfill environment homes electricity	methane incinerator turbine energy-from-waste



# ACTIVITY – SEQUENCING

In pairs, use the cards to order the journey of green bin waste and explain them to your partner.

**1**

**2**

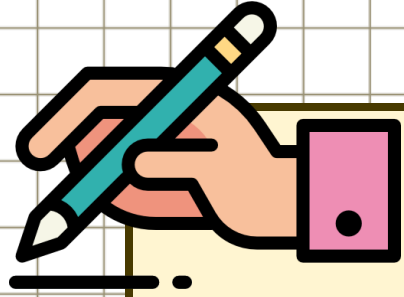
**3**

**4**

**5**

**6**





# ACTIVITY – STORYBOARDING

Use the storyboard to draw each stage of the journey of waste.  
Write a caption to explain what happens.

**1**

**2**

**3**

**4**

**5**

**6**

waste

energy

truck

green bin

incinerator

heat

steam

turbine

electricity

homes

Nottingham



# ACTIVITY – INVESTIGATE

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



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



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

