





## The challenge

Under the supervision of an adult, collect as many used batteries as possible and put them in your recycling box. Why not ask your parents, relatives, neighbours, or even local shops, libraries or community centres?

Complete the activities in this booklet.

Adults – please see the safety information on page 7

## Why recycle batteries?

Batteries can be recycled, just like newspapers, soft drink cans and plastic bottles. Recycling is very important – it helps the environment in two main ways:

- It reduces the amount of rubbish going to landfill batteries in landfill sites can take 100 years to decompose.
- 2 It saves energy.

## Stay safe

Always speak to an adult before handling batteries and ensure they read through the safety information before you start collecting any to put in your box.

## Don't forget!

Make sure to return your Big Battery Hunt collection boxes to your teacher so you and your school can be in with a chance of winning some great prizes

four teacher will collect your filled battery collection boxes and add them to your schools battery recycling container. How fast can your class get to the top?

## With every recycled battery, you're helping the planet!

1000 1000 1000

Did you know?

Over 20,000 tonnes of batteries end up in landfill sites - that's as heavy as 4,000 elephants!

## **Battery Estimation**

1

Estimate the number of batteries that you have in your home. Think about the number of battery-powered devices your family has (e.g. torches, remote controls, toys, digital cameras, battery-powered toothbrushes, travel alarm clocks) and how many batteries might be in each of these, as well as any spare batteries.

I estimate that there are ...... batteries in our home.

## **Battery Tally Chart**

Most batteries can be recycled but for this project we want you to focus on four different types— AAA, AA, C and D. Have a look inside the battery-powered devices in your home and keep a tally of the number of each type you find. Remember not to remove them if they are still working.

you reach 5 of a particular type, so you'd write 7 like this:



AAA	
<b>AA</b>	
C	
D	

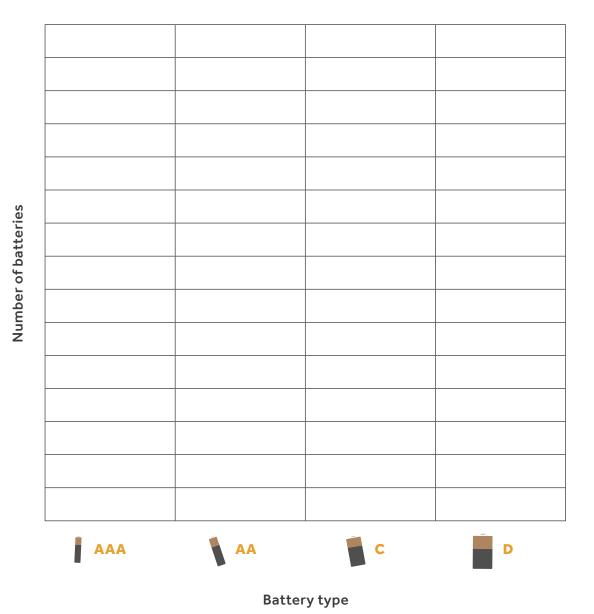
#### NOTE:

Don't forget to add the number of used batteries to the space on your Battery Collection Box. Keep a tally of how many used batteries you place in your box as you collect them.

How many of your batteries at home were ready to be recycled?.....

## **Battery Bar Chart Challenge**

Use the information in your tally chart to create a bar chart. Don't forget to use a ruler when drawing your bars.



#### **Bar Chart Questions**

Use your bar chart to help you answer these questions.

1 How many batteries in your home altogether?

What was the difference between the total number of batteries and your estimate?

Which was the most common type of battery in your home?

Which was the least common battery type in your home?

# Now it's time to start your Big Battery Hunt!

Under the supervision of an adult, collect as many used batteries (of the types AAA, AA, C and D) as you can and add them to your Battery Recycling Box.

Were any of the batteries you counted in your household devices completely worn out? If so, add them to the box.

Check with your parents/carers if you can ask relatives, neighbours or local shops and community centres for their worn-out batteries too.

Every battery counts – you don't have to only include Duracell batteries!



Solve the number problems and use the key to crack the code to reveal an important message. The first two have been done for you, as an example.

2 = C	3 = F	5 = M	7 = A	8 = D	9 = G	10 = H
11 = J	12 = E	14 = S	15 = W	16 = I	18 = N	21 = X
22 = P	23 = Y	24 = B	25 = O	27 = K	29 = Q	30 = R
31 = U	32 = T	33 = V	34 = Z	35 = L		

(24-6) (Halve 24)  $(3 \times 11)$   $(3 \times 4)$  (Double 15)

N E

 $(8 \times 4)$  (30/3) (45-15)  $(5 \times 5)$  (Halve 30)

(19+5) (14/2) (25+7) (36-4)  $(4\times3)$   $(3\times10)$  (Double 8) (7+5) (24-10)

 $(4 \times 4) \quad (9 + 9)$ 

(40-8) (Halve 20) (15-3)

 $(6 \times 4)$  (11 + 5) (20 - 2)

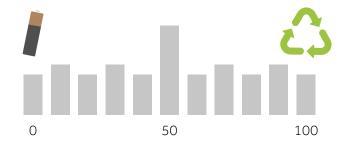
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## Extra challenge (optional)

Use the key to code a short message of your own.

## Did you know?

It can take batteries 100 years to decompose (break down and disappear).



# Safety instructions for adults supervising any battery collecting

- Discarded batteries present a very small risk of fire and source of ignition. The risk can be greatly reduced by taking the following simple precautions:
  - Keep batteries dry and away from sources of heat
  - Do not put damaged batteries in the collection box
  - Store the box/batteries away from combustible or flammable materials
  - Do not put any items other than batteries in the collection box
- We are only collecting AAA, AA, C and D batteries for this activity, but please see guidance on alternative batteries:
  - Button cells present a choking / ingestion hazard keep away from young children
  - Insulate (tape up) terminals on batteries that can easily short circuit (e.g. 9V batteries)
  - For leaking batteries place in a small plastic bag and then put in the collection box, or keep separate and take directly to an alternative recycling point



