Royal Academy of Engineering

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Battery technologies

Activity sheet 1

Exactly what does measuring capacity in **Amp-hours** or **Watt-hours** describe?

Amp-hours:

Watt-hours:

Suggest the advantage and disadvantage of each approach:

Complete the table to calculate each battery's capacity in Wh.
Put each application in order of capacity, from (1) = highest to (6) = lowest

	Ah	V	Wh	Order
Predicted UK grid storage in 2025	95 MAh	230 V		
Compact electric vehicle (EV)	110 Ah	360 V		
Earbud (single)	90 mAh	3.7 V		
Cordless drill	4 Ah	18 V		
Smartphone	3.2 Ah	3.7 V		
eBike	8.5 Ah	36 V		

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Battery technologies

Activity sheet 2

Write how each of the 6Rs can contribute to a sustainable, circular economy for lithium batteries. Include broader ideas to make the production and consumption of batteries more sustainable.

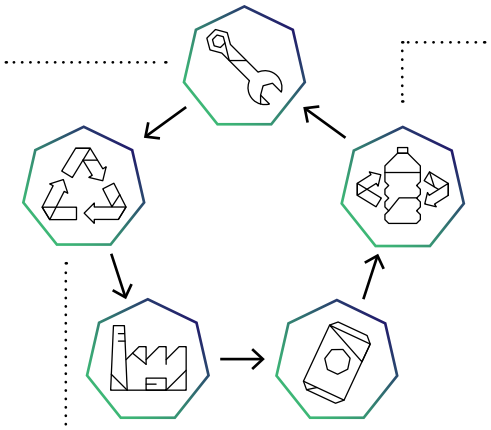
Rethink:

Refuse:

Reduce:

Materials flow in a cycle that maximises their value.

Repair:



Reuse:

Recycle:

Production:

Consumption: