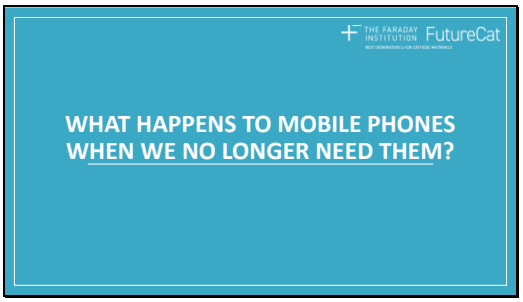
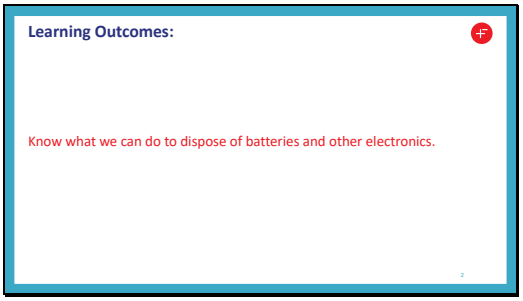
Slide 1



Slide 2



Slide 3

- Did you know humans throw away 50 million tonnes of e-waste (TVs, computers, phones, toasters) every year? That's the equivalent of 270,000 jumbo jets, or 333,333 blue whales or 8,300,000 African elephants!
  If you were to throw your phone into the rubbish bin it would most likely end up at the landfill amongst all the other household rubbish.
- Rubbish that ends up at the landfill can take hundreds or even thousands of years to decompose.
- Landfills can contaminate the ground around them, meaning harmful chemicals and materials can be released into the

environment. This can harm animals, plants and even people!

Slide 4

- Recycling involves taking a no longer useful object and using the material it is made from to make something that is useful again.
- This means very little of the material ends up at the landfill and therefore there is less waste.
- Recycling is a process with multiple steps:
    - Disassembly – the thing being recycled is taken apart into more basic parts.
    - Processing – the item is then processed. This can involve shredding, melting or even dissolving it in acid to break it down into even smaller bits.
    - Separation – the tiny bits are separated and sorted into their individual materials for different uses.

Slide 5

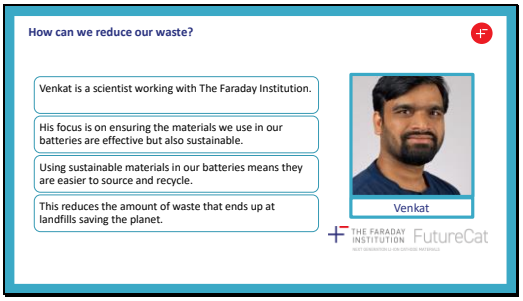
We can further stop waste by going to the landfill through three simple steps: Reduce – Reuse –Recycle

- Reduce:
  We can reduce the amount of waste we generate by only buying new things when the old ones are broken and cannot be repaired. We can also try to reduce the amount of harmful and bad materials we use.
- Reuse:
  Even if something is no longer of use to us it doesn't mean someone else can't make use of it. Rather than throwing away an old phone why not donate it to a charity that will give it to those less fortunate than you. Phones can also be taken apart and their individual components reused
- Recycle:
  If we cannot reuse our waste, we should try to recycle it wherever possible. This means we don't need to dig up new metals or produce new plastics which will increase the amount of waste.

The floor can be opened to suggestions on how to answer each question.
E.g. Reduce – don't use single use plastic bags at the supermarket, only buy a new phone when the old one doesn't work
Reuse – if you have plastic bags at home take them shopping with you so you don't need new ones from the supermarket, old items we no longer want can be donated to charity which can give them to someone who needs it more.

Recycle – make things that are easy to take apart, use materials which can be recycled, eg specific plastics for plastic bottles or carrier bags.

Slide 6



- The Faraday Institution is a research institute focusing on electrifying the UK across all sectors including grid power, and transportation.
- Venkat is a research fellow for the FutureCat group at the The Faraday Institution.
- Based at the University of Cambridge he specialises in choosing materials which increase the energy storage of batteries whilst also being easy to source and recycle.
- By selecting materials that are easier to recycle we make it easier to recycle phones and batteries as a whole reducing the amount of waste that ends up at landfills