



Materials in Motion

How Things Work

How Things Work is the last activity in the Materials in Motion range and is ideal for looking in more detail into how the machines or processes work.

Useful short videos that may answer some of the questions raised after a visit to the Recycling Discovery Centre. Some of the vocabulary and scientific principles touched on in these videos might be too advanced for KS1; but these links can provide some insight into what engineers do, and remove some of the mystery.

Please Note: Unless indicated with this logo:  all links are external.

Inside Vehicles

How Steering Works

<https://www.youtube.com/watch?v=hAlzPYEQWLg>

How a Recycling Collection Vehicle Works

<https://www.youtube.com/watch?v=MLLwG8mvTxk&feature=youtu.be&loop=0>

<https://www.youtube.com/watch?v=p12RbB1U3es&feature=youtu.be&loop=0>

A Day in the Life of a Collection Vehicle Driver

<https://www.youtube.com/watch?v=rXPexDU4Xal&loop=0>

How engines work

<http://mocomi.com/how-does-a-car-engine-work/>

Construction

Gillmoor Materials Recovery Facility Timelapse - External

<https://www.youtube.com/watch?v=H8tU4vEEDkc&loop=0>



Gillmoor Materials Recovery Facility Timelapse - Internal

<https://www.youtube.com/watch?v=H8tU4vEEDkc&loop=0>



How a Collection Vehicle is Made

<https://youtu.be/dRAnI4FnwPI?t=25>





How Things Work

Construction: Activities

Discussion questions:

- Why do the workers wear helmets and gloves?
- Why do the workers wear bright coloured clothes?
- Does it take a few workers to build, or a lot? Why?
- Can you spot any of the tools they are using?
- Are the workers using big machines or small tools or both?

Make your own time lapse videos of the class building, e.g. junk modelling, or Lego.

MRF Machines

Titech Scanner

<http://video.tomra.com/autosort-process-animation?start=86>

Walking Floor

<https://youtu.be/4RvVST35hjc>

Eddy Current

<https://youtu.be/zJ23gmS3KHY>

Energy From Waste

Merseyside & Halton Process

<https://www.youtube.com/watch?v=uM-76V0pxHI&feature=youtu.be&loop=0>

How an EFW Works

<https://www.youtube.com/watch?v=1HpxZ9ilSzQ&loop=0>

<https://www.youtube.com/watch?v=lmtOuAed5nM&loop=0>

The Future

These videos show improvements in machines and when building new communities, which could provide a starting point for discussing pupils' own ideas for making waste and recycling more efficient and improving where we live.

Artificial Intelligence (AI). Sorting

https://youtu.be/X_1sOPqM_VA

https://youtu.be/Q7tE_vNYzzU

Underground Recycling

<https://www.youtube.com/watch?v=AApHNrYjOHM&loop=0>

<https://www.youtube.com/watch?v=WG5pNr1YpdA&feature=youtu.be&loop=0>

<https://vimeo.com/359719465>

