

UPPER KEY STAGE TWO

Science, Technology, Engineering and Maths

Lesson one

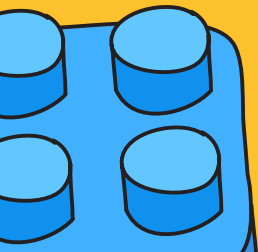
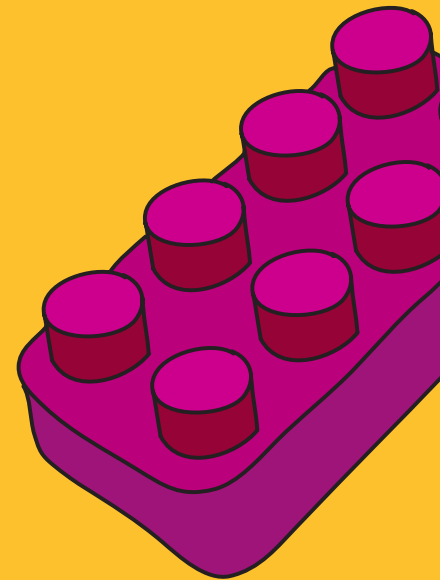
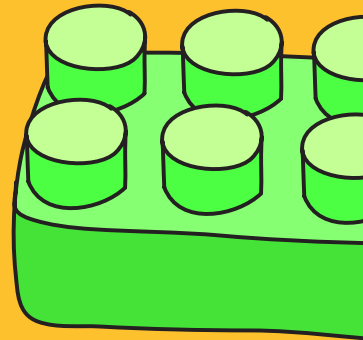
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Learning objective

To be able to recognise simple properties of materials and sort them into categories

To understand how the different properties of materials and science help when sorting materials at a recycling facility



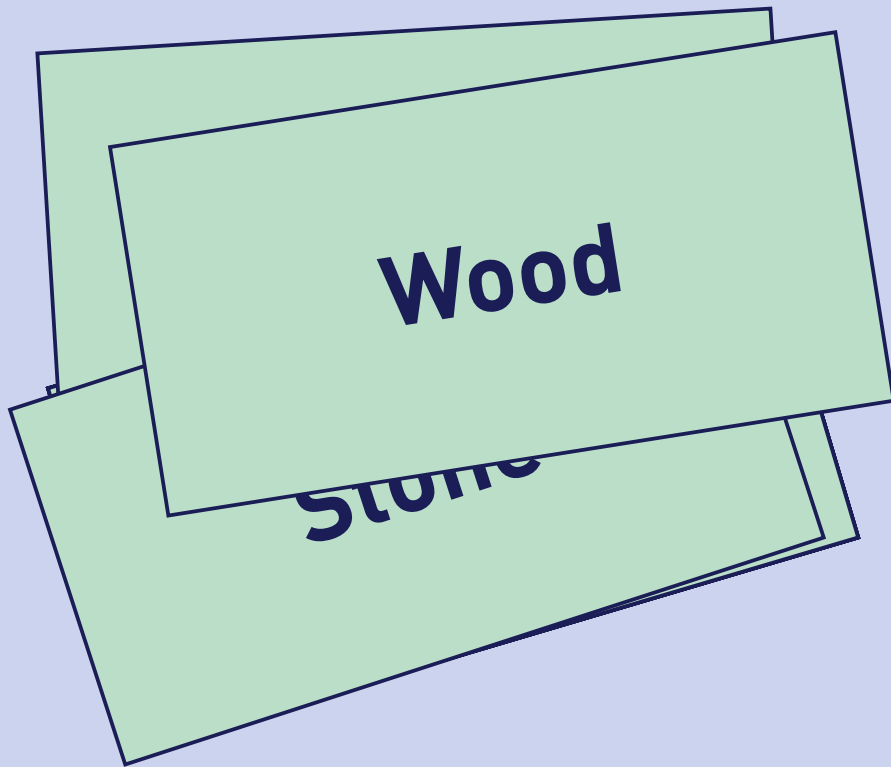
Are the everyday materials we throw away valuable?



youtu.be/fTeRj_mGpSM

Activity one

Who is my match?



Activity two

What words describe the **properties** of these **materials**?

- ▶ Glass is and,
it is a good material to make windows from.
- ▶ Paper is and,
it is a good material for magazines.
- ▶ Steel cans are and

Flexible

Lightweight

Waterproof

Transparent

Magnetic

Shiny

Activity two

What words describe the **properties** of these **materials**?

- ▶ Glass is **Transparent** and **Waterproof**, it is a good material to make windows from.
- ▶ Paper is and, it is a good material for magazines.
- ▶ Steel cans are and

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- ▶ Paper is **Flexible** and **Lightweight**, it is a good material for magazines.
- ▶ Steel cans are **Magnetic** and **Shiny**.

Flexible

Lightweight

Waterproof

Transparent

Magnetic

Shiny

Do you know what raw materials these are made from?

Paper

Plastic

Metal

Fabric

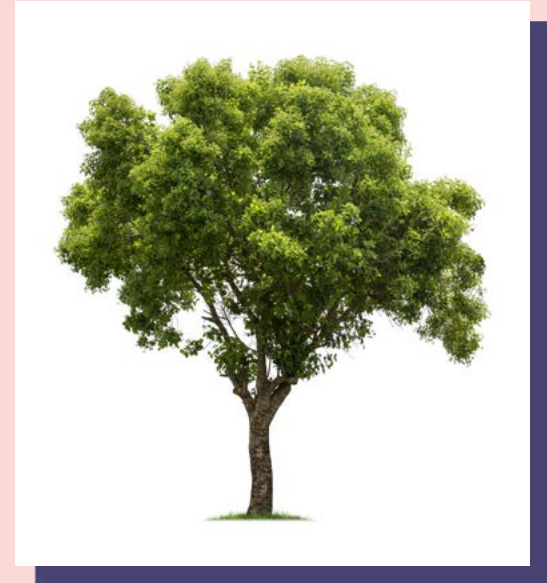
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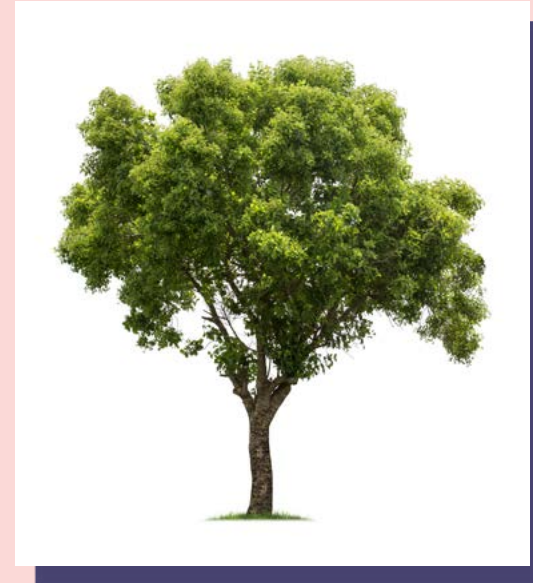
Do you know what raw materials these are made from?

✓ Paper

✓ Plastic

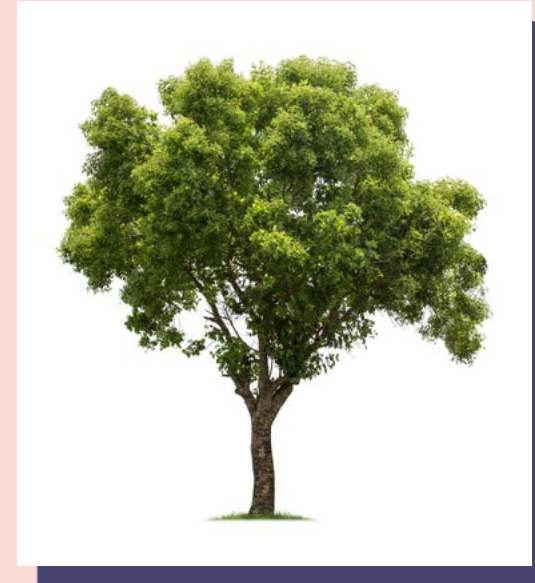
Metal

Fabric



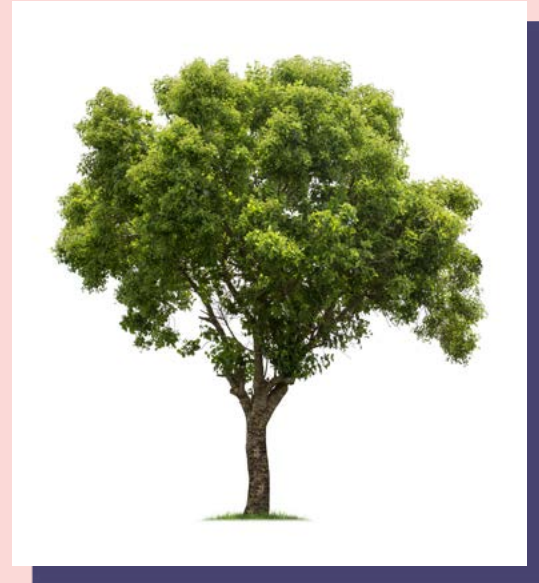
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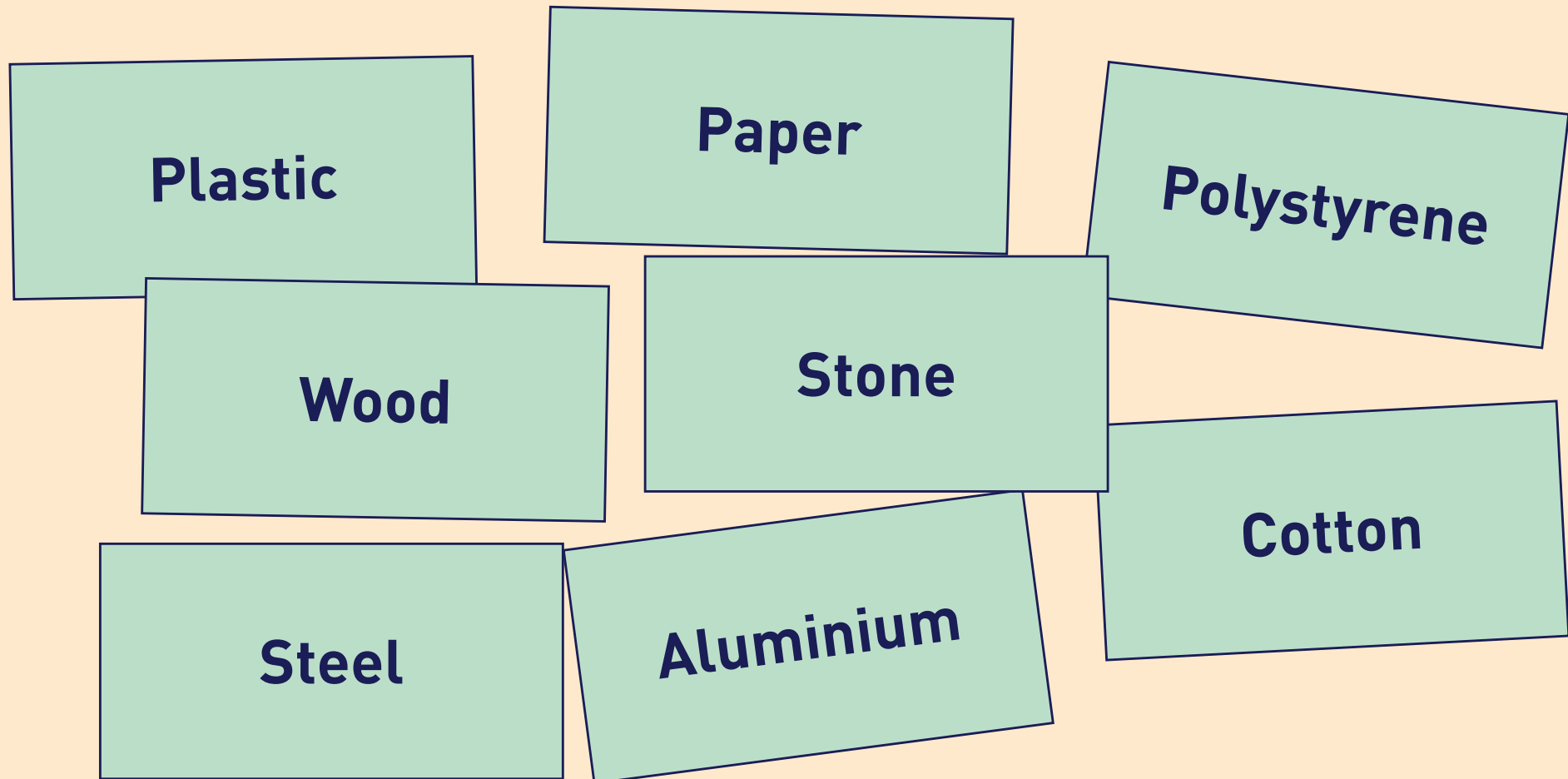
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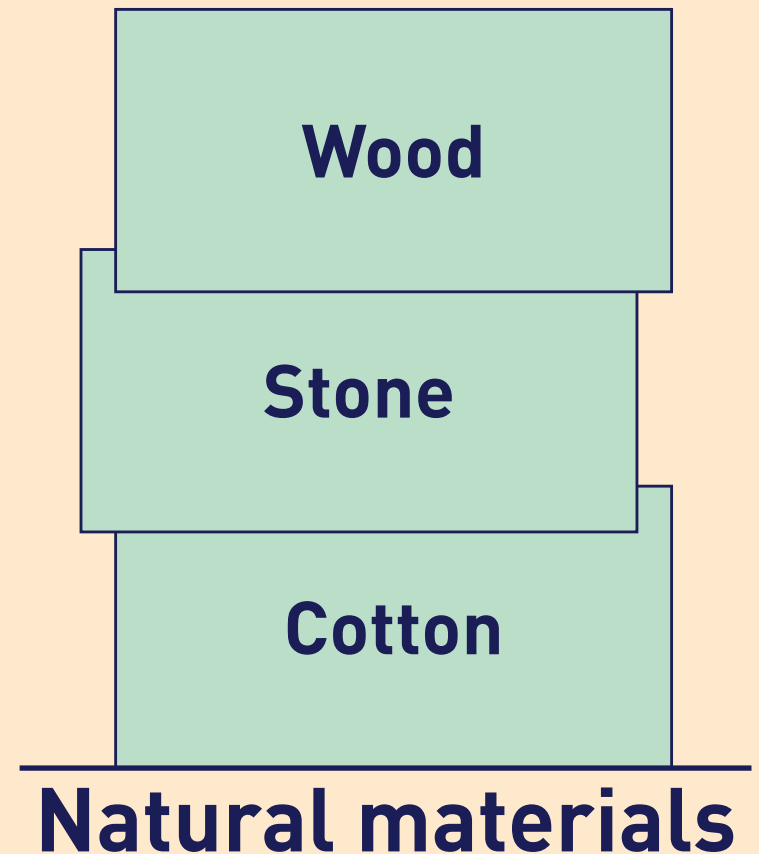
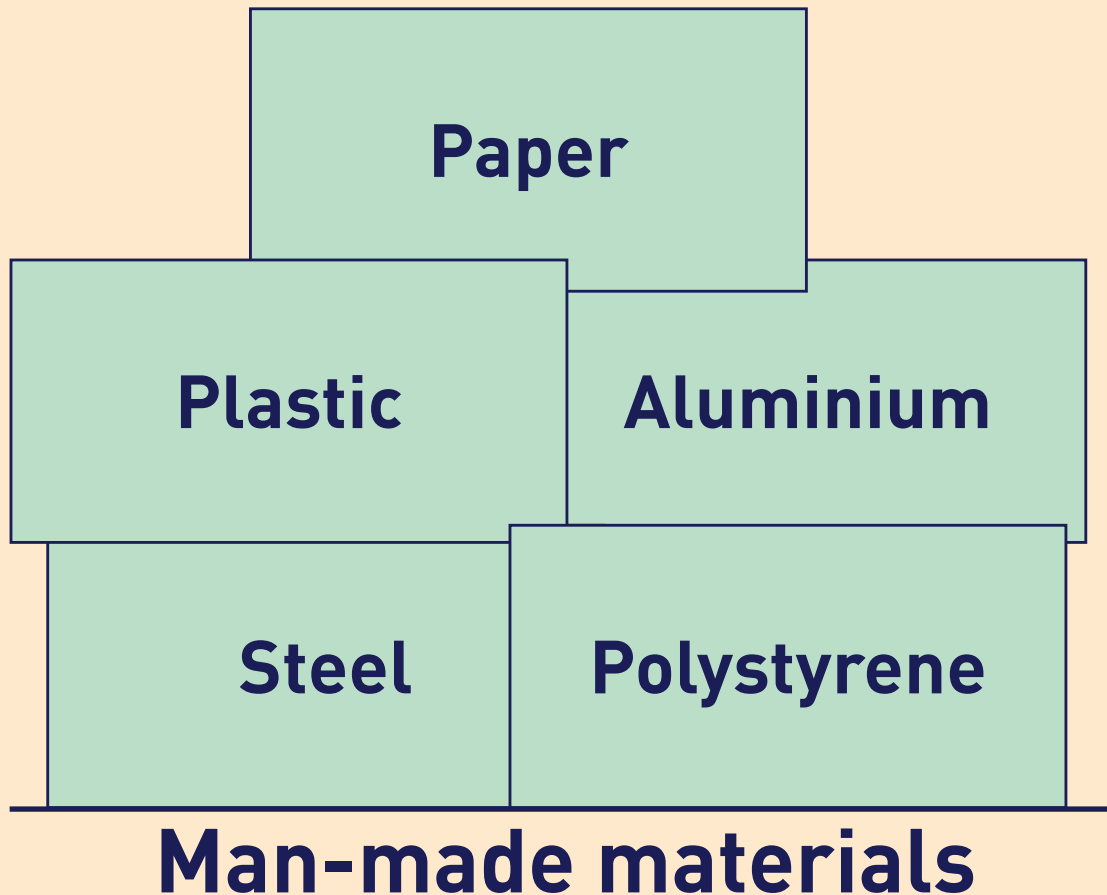
Activity three

Sort these materials into two categories, natural materials and man-made.



Activity three

Sort these materials into two categories, natural materials and man-made.



At a materials recycling facility, we sort the recycling into different categories



Paper

Plastic

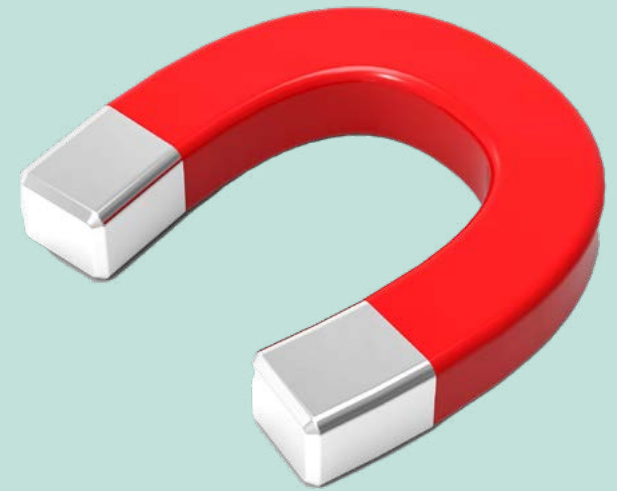
Cardboard

Steel

Glass

Aluminium

We use the magnetic properties of steel to help separate the two categories of metal



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Activity four

Pick four objects, quickly sketch the item, name the material, list the properties and then categorise them into recyclable or non-recyclable, man-made or natural.

Sketch	Material	Properties		Man-made or natural
	Steel	Hard, rigid, waterproof, magnetic	✓	Man-made

What have we learnt about materials today?

Properties of materials

Magnetic

Shiny

Waterproof

Soft

Stretchy

Hard

Transparent

Flexible

Lightweight

Opaque

Categories

Magnetic and non-magnetic

Recyclable and non-recyclable

Natural and man-made

What have we learnt about materials today?

The **properties** of materials help to separate the different materials found at a materials recycling facility.

Environment

Raw materials are precious and will eventually run out.

Recyclable materials are valuable as they can be made into other objects.