Science Knowledge Organiser

Uses of everyday materials	Yr 2	Main Foci: Chemistry

What should I already know?

- Objects are things that you can touch or see.
- Objects are made from materials.
- Some materials that objects are made from (e.g. **glass**, **wood**, **plastic**).
- Some words to describe materials (e.g. **shiny, soft, rough absorbent**).
- Materials which are **natural** and which are **man-made**.

What will I know by the end of the unit?

What are materials used for?

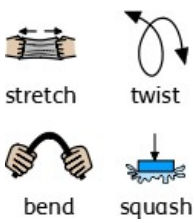
- Materials are used for different **purposes** based on their **properties**.
- For example, **wood** is used to make furniture and floors.
- **Metal** can be used to make coins, cans, cars and cutlery.
- **Glass** can used to make windows.

What **properties** of materials make them suitable for a particular use?

- Glass can used to make windows because it is **transparent.**
- Rulers can be made from **wood, plastic** or rubber because these materials are **smooth** and can be cut straight.
- Spoons are made from **metal**, because it is **waterproof** and can be cleaned easily.
- They can also be made from **plastic** for children because **plastic** is light and it cannot hurt children's growing teeth.

How can you change the shape of materials?

- The shape of some materials can be changed when they are **stretched, twisted, bent** and **squashed.**



Vocabulary

absorbent	material that soaks up liquid easily
bendy	an object that bends easily into a curved shape
brick	rectangular blocks of baked clay used for building walls, which are usually red or brown
dull	a colour or light that is not bright
elastic	a rubber material that stretches when you pull it and returns to its original size and shape when you let it go
fabrics	cloth or other material produced by weaving together cotton, wool or other threads.
foil	sheets of metal as thin as paper
glass	a hard transparent material
man-made	things are created by people
metal	a hard substance such as iron, steel, gold, or lead
natural	things that exist in nature and are not made by people
opaque	if an object or substance is **opaque**, you cannot see through it
plastic	a material which is light in weight and does not break easily
process	a series of actions used to produce something or reach a goal.
properties	the qualities or features that belong to something and make it recognisable
purpose	the reason for which it is made or done
recyclable	waste or materials which can be processed and used again
rock	the hard substance which the Earth is made of
rough	uneven and not smooth
shiny	things are bright and reflect light
smooth	no roughness, lumps, or holes
soft	not rough or hard
squash	pressed or crushed with such force that something loses its shape
stiff	firm or does not bend easily
stretchy	slightly elastic
suitable	something that is suitable for a particular **purpose** or occasion is right or acceptable for it
transparent	If an object is **transparent**, you can see through it
twist	turn something to make a spiral shape
unsuitable	Someone or something that is **unsuitable** for a particular **purpose** or situation does not have the right **properties** for it
waterproof	does not let water pass through it
wood	the material which forms the trunks and branches of trees

Procedural Knowledge

- Compare the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs).
- Observe closely the uses of different materials, and record your observations.
- Distinguish between **absorbent** and **waterproof** materials. Discuss what happens when water is placed on these materials.
- Consider why some **properties** of materials make them **suitable** or **unsuitable** for different uses.
- Investigate if some items can be made by more than one material (e.g. cutlery) and explain why.
- Investigate if some materials can be used to make more than one thing.
- Discuss which materials are **recyclable** and why. Follow the **recycling process**.
- Investigate how some objects can be changed by **squashing, bending, twisting** and **stretching**.
- Find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam.

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Question 1: The most suitable material to make windows is:	Start of unit:	End of unit:
wood		
metal		
glass		
rock		

Question 2: The reason for this is because:	Start of unit:	End of unit:

Question 3: Why do some children drink out of plastic cups rather than glass ones?	Start of unit:	End of unit:

Question 4: Stretching and twisting an object will:	Start of unit:	End of unit:
change the shape of the object		
keep the object the same		

Question 5: Match these properties of materials to the uses they are most suitable for:	Start of unit:	End of unit:

a raincoat	soft
a pillow	absorbent
a sponge	waterproof
a table	stiff