

### Sticky Knowledge

I can group material based on their properties.  
I can explain why a material is best suited to a particular object.

### Prior Knowledge

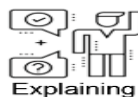
I know the names of many materials, such as wood and plastic and I know some objects that are made from this material. I know if an object can be squashed or twisted.

Different materials are used to make different objects.  
Objects should be made out of a suitable material. For example, a window must be made out of glass because it is transparent.

## Materials Knowledge Organiser



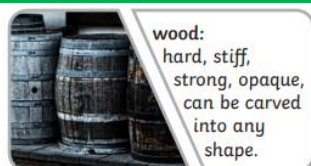
Vocabulary



Explaining

<b>Transparent</b>	You can see through it.
<b>Suitability</b>	Having the right material for the specific purpose.
<b>Properties</b>	What a material is like and how it behaves.
<b>Materials</b>	Are what an object is made from.

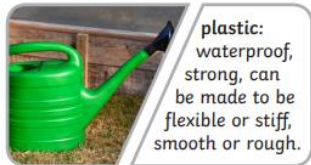
The suitability of a material also depends on whether or not it can squash, bend, stretch or twist. You would not want something that needs to be strong made of a material that is squashy.  
Wood cannot be squashed but fabric can.



wood:  
hard, stiff,  
strong, opaque,  
can be carved  
into any  
shape.



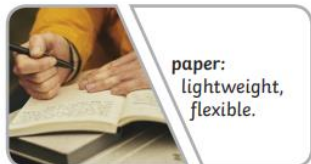
glass:  
waterproof,  
transparent,  
hard, smooth.



plastic:  
waterproof,  
strong, can  
be made to be  
flexible or stiff,  
smooth or rough.



metal:  
strong, hard,  
easy to wash.



paper:  
lightweight,  
flexible.



cardboard:  
strong, light,  
stiff.



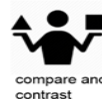
fabric:  
soft, flexible,  
hard-wearing,  
can be stretchy,  
warm, absorbent.



rubber:  
hard-wearing,  
elastic, flexible,  
strong.

The shapes of solid objects can be changed by squashing, bending, twisting or stretching. Some of these will then be able to return to its original shape.

You can group materials based on their properties.  
Cardboard, paper and fabric can be bent. Most glass cannot be bent because it needs to be strong.



compare and contrast

Squash an object by pushing both hands together.



Bend an object by grabbing both ends of the object and bringing the ends inwards together.



Twist an object by turning your hands in opposite directions.



Stretch an object by pulling your hands slowly and gently apart.

