



# Year 5 Properties and Uses of Materials Knowledge Organiser



Materials	
ceramic	concrete
glass	metal
plastic	rock
rubber	textile
water	wood
Investigations	
<u>Carrying Out A Scientific Investigation</u>	
1) <b>What are you investigating?</b>	
Think of a question to ask.	
2) <b>What do you think will happen?</b>	
Make a prediction. Why did you make it?	
3) <b>What will you change?</b>	
You can only change 1 thing - this is your variable.	
4) <b>How is it fair?</b>	
You need to keep everything else the same - these are your constants.	
5) <b>What will you measure?</b>	
What are you going to be looking for?	
What equipment will you need to measure it?	
6) <b>How will you record your results?</b>	
What is the best way? Table, bar chart, line graph, pie chart.	
7) <b>What did you conclude?</b>	
Describe what happened.	
Are there any patterns? Why is this?	
Are there any odd results that don't fit with the others?	
Was your prediction right?	
Did anything unexpected happen?	

Properties of Materials	
<b>Elastic</b> An elastic material will stretch and then return to its original shape. Rubber is used to make rubber bands because it is elastic. 	<b>Flexible</b> Flexible materials bend without breaking. We use leather to make shoes because it is flexible. 
<b>Rigid</b> Rigid materials do not bend easily. We use wood to make tables because it does not bend easily. 	<b>Hard</b> A hard material is difficult to scratch or wear away. We make knives out of steel because it is hard. 
<b>Soft</b> A soft material easily scratches or wears away. We draw pictures using chalk because it is soft and wears away easily. 	<b>Transparent</b> A transparent material allows light to pass through it. We use glass to make windows because it is transparent. 
<b>Tough</b> Tough materials do not break if they are hit or dropped. We use rubber to make balls because it is tough. 	<b>Opaque</b> Opaque materials do not let light through. We cannot see through them. We make curtains from fabric because it is opaque. 
<b>Strong</b> Strong materials do not bend or break when force is applied to them. We use bricks to build houses because they are strong. 	<b>Weak</b> Weak materials are easy to break. We use paper to wrap presents because it is weak - we can tear it easily. 
<b>Absorbent</b> Absorbent materials soak up water. Towels are made of cotton fabric because it is absorbent. 	<b>Waterproof</b> Waterproof materials do not let water through them. Nylon fabric is used to make tents because it is waterproof. 
<b>Electrical Conductor</b> An electrical conductor allows electricity to pass through it. Copper is used to make wires because it is a good electrical conductor. 	<b>Electrical Insulator</b> An electrical insulator does not allow electricity to pass through it. Plastic is used to coat wires because it is an electrical insulator. 

Key Vocabulary	
<b>Conductor</b>	A material or device which allows heat (thermal) or electricity (electrical) to carry through.
<b>Decompose</b>	Make or become rotten, decay or cause to decay.
<b>Ductile</b>	Able to be drawn out into a thin wire.
<b>Durable</b>	Able to withstand wear, pressure, or damage.
<b>Insulator</b>	A substance which does not readily allow the passage of heat (thermal) or electricity (electrical).
<b>Magnetic</b>	Capable of being magnetised or attracted by a magnet.
<b>Opaque</b>	Not able to be seen through, not transparent.
<b>Reusable</b>	Able to be used again or more than once.
<b>Saturated</b>	Holding as much water or moisture as can be absorbed.
<b>Soluble</b>	Able to be dissolved, especially in water.
<b>Transparent</b>	Allows light to pass through so that objects behind can be seen.
<b>Viscosity</b>	The state of being thick, sticky, and semi-fluid in consistency.