



Year 1: Everyday materials



Kindness Enjoyment Achievement

<p>Key Concepts:</p> <p>All objects are made of one or more materials. Know that materials related to what things are made from, not just fabric Some objects can be made from different materials, e.g. plastic, metal or wooden spoons.</p> <p>Materials can be described by their properties, e.g. shiny, stretchy, rough... Understand the difference between hard and solid.</p> <p>Some materials eg. Plastic can be in different forms with very different properties (e.g. different colours, smooth/ rough...)</p> <p>Test materials' properties. (This is also covered in Y2: care needed not to overlap) Y1: tests of absorbency of different papers or fabrics; tests of transparency or waterproofness.</p>	<p>Types of Enquiry:</p> <p><u>Sorting and classifying:</u> Classify objects made of one material in different ways e.g. a group of objects made of metal - could ask children to bring in one item made of... wood/ metal/ plastic/ fabric... each week.</p> <p>Classify in different ways one type of object made from a range of materials (eg. A collection of spoons made of different materials.</p> <p>Classify materials based on their properties.</p> <p><u>Fair/ comparative test:</u> Transparency test (what is the best material for Duck in the Truck's windscreen?- see PSTT Taps resource) Which paper/ fabrics are best for Cinderella to mop up after the ugly sisters?</p> <p><u>Use of secondary sources:</u></p> <p><u>Change over time:</u></p> <p><u>Pattern seeking:</u> Look for any patterns in results of fair tests.</p>	<p>Vocabulary:</p> <table border="0"> <tr><td>Object</td><td>foil</td></tr> <tr><td>Material</td><td>card</td></tr> <tr><td>Wood</td><td>rubber</td></tr> <tr><td>Plastic</td><td>wool</td></tr> <tr><td>Glass</td><td>clay</td></tr> <tr><td>Metal</td><td>hard/ soft</td></tr> <tr><td>Water</td><td>stretchy/ stiff</td></tr> <tr><td>Rock</td><td>bendy/ floppy</td></tr> <tr><td>Brick</td><td>waterproof/ absorbent</td></tr> <tr><td>Paper</td><td>breaks/ tears</td></tr> <tr><td>Fabric</td><td>smooth/ rough</td></tr> <tr><td>Elastic</td><td>see through/ not see through</td></tr> <tr><td>Shiny/ dull</td><td></td></tr> </table>	Object	foil	Material	card	Wood	rubber	Plastic	wool	Glass	clay	Metal	hard/ soft	Water	stretchy/ stiff	Rock	bendy/ floppy	Brick	waterproof/ absorbent	Paper	breaks/ tears	Fabric	smooth/ rough	Elastic	see through/ not see through	Shiny/ dull	
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	<p>Working scientifically skills:</p> <p><u>Questioning:</u> Can children ask questions about different materials? Answer questions developed with a teacher through a scenario (e.g Which paper is best for Cinderella's mop?) Guess which material is in the box? - 20 questions type activity.</p>	<p>How it fits in with the rest of the curriculum:</p> <p>EYFS: Ask questions about the place they live. Talk about why things happen and how things work Discuss the things they have observed such as natural and found objects.</p> <p>Manipulate materials to achieve a planned effect.</p>																										



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Observing: Find rough objects around the school for rubbings, What patterns are made by different materials? Take ipad camera out: what can they find made from metal/ brick/ wood...

Identify and classify: Identify different materials; group in different ways. Distinguish between the object and the material from which it is made. Compare and group variety of everyday materials on basis of their simple physical properties.

Testing: Carry out fair tests of transparency/ absorbency/ waterproofness.

Recording: photos, drawings, oral recounts, liists,

Communicating: Use ipad camera to collect images of different materials; make a feely board/ book for children to feel objects which are fluffy, stringy, bumpy, rough, smooth, elastic.... Etc. Make a feely collage.

Concluding: With help recognise the "best" and "worst" item from their test results.

Y2: Identify and compare the suitability of a variety of everyday materials including wood, metal, glass, brick, rock, paper and cardboard for particular uses. Find out how shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Y3: Compare and group together different kinds of rocks based on their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped in rock. Recognise soils are made from rocks and organic matter.

Y4: Comapre and group materials together according to whether they are gases, solids or liquids. Observe that some materials change state when heated or cooled and measure/ research the temperature at which this happens. Identify the part played by condensation and evaporation in the water cycle.

Y5: Compare and group together everyday materials based on their properties including hardness. Solubility, transparency, conductivity (electrical and thermal) and response to magnets.



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		<p>Now some materials will dissolve in a liquid to form a solution, describe how to recover a substance from a solution.</p> <p>Decide how mixtures might be separated including through filtering, sieving and evaporating.</p> <p>Reversible/ irreversible changes.</p>
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