







## YEAR 9 RM HOMEWORK: MATERIALS

Name	How is it made?	Finishes	Advantages	Disadvantages
<b>MDF</b> 	<p>The recycled <b>sawdust</b> is mixed with <b>glue</b> and then <b>pressed</b> into big sheets. It comes in different thicknesses.</p>	<p>Because MDF looks like cardboard we have to <b>paint</b> it. We would then <b>varnish</b> the paint to <b>protect</b> it and to make it shiny (gloss varnish) or semi-shiny (silk varnish)</p>	<ul style="list-style-type: none"> <li>Fairly cheap to buy</li> <li>Really easy to cut and sand</li> <li>No splinters</li> <li>Nice smooth surface for painting</li> <li>Comes in a range of thicknesses</li> </ul>	<ul style="list-style-type: none"> <li>Looks horrible like brown cardboard</li> <li>Dust can be dangerous</li> <li>Not always very strong</li> </ul>
<b>ACRYLIC</b> 	<p>Crude oil is refined, cracked and fluffed to create polymer.</p>	<p>Acrylic only needs its edges finished. You first use a steel ruler to scrape the edges down followed by</p>	<ul style="list-style-type: none"> <li>Available in a range of colours</li> <li>Can be reheated and formed</li> <li>Can be finished to a high quality shine</li> <li>Easy to work with</li> <li>Strong</li> <li>Available transparent</li> <li>Can be cut using a laser cutter</li> </ul>	<ul style="list-style-type: none"> <li>Brittle</li> <li>Scratches easily</li> <li>Collects a lot of dust</li> </ul>
<b>VINYL</b> 	<p>Vinyl is not a natural substance but is a synthetic man-made material. It is a type of plastic that is made from ethylene (found in crude oil) and chlorine (found in regular salt). When processed, both the substances are combined to form Vinyl.</p>	<p>Sticky backed vinyl of this thickness does not need to be finished as it is already shiny and if cut out using a CNC cutter will have perfectly finished edges.</p>	<ul style="list-style-type: none"> <li>Can be cut into complex shapes using CNC cutters</li> <li>High gloss finish</li> <li>No need to finish</li> <li>Cheap</li> <li>Can come with adhesive backing, so easy to apply to products.</li> </ul>	<ul style="list-style-type: none"> <li>Breaks and tares easily</li> <li>Knowledge of CAD packages (2D Design) needed to use well</li> <li>Can get stuck together easily due to the adhesive back</li> </ul>

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1) Why is MDF perfect for the body of your money box?.....

2) Why do schools use Acrylic for projects?

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