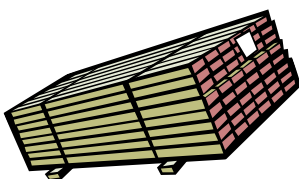
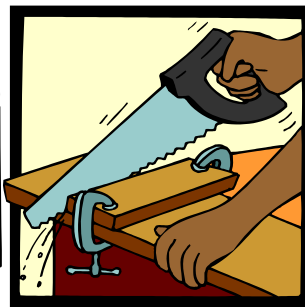
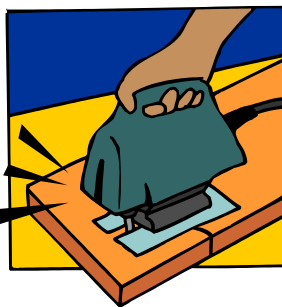
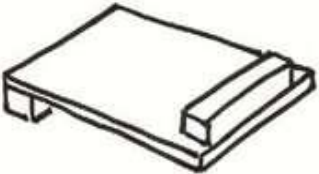




Design and Technology  
Resistant materials  
Key words and definitions



Word	Definition
Acrylic	a type of thermoplastic, which is hard and can be transparent. Used to make shop signs. Perspex © is a trade/brand
Alloy	a metal that is made by melting two or more pure metals together, and/or by adding small quantities of a non-metal.
Aluminium	a lightweight silver coloured pure metal that is the most common on earth.
Anneal	To do this to a metal is to make it less brittle, and hence easier to work, by heating it and then cooling it.
Ash	a type of hardwood, with a light colour.
Balsawood	a very lightweight hardwood used in model-making
Bench hook	a flat piece of wood with one block fixed at the back edge of the top and another fixed under the front edge. 
Blow-moulding	a method of producing articles by extruding molten plastic into a split, shaped mould and then blowing hot air inside it until the plastic fits the mould. Used to make plastic bottles.
Brass	a yellowish, non-magnetic metal; it is an alloy of copper and zinc.

Braze	to use heat from a gas torch, and spelter (solder) made of copper and zinc, to join metals together
Butt joint	two flat edges of a material are joined together without complicated connections.
Cast	to pour liquid materials into moulds so that they solidify to produce shapes that may be quite complex.
Chipboard	a flat manufactured board made from small wood chips glued together under great heat and pressure. (used for kitchen work surfaces with a finish or washable surface added).
Chisel	a sharp tool, often used with a mallet, for cutting and shaping wood or stone.
Cramp or clamp	a device to hold things firmly when they are being glued, sawn or drilled
Coping saw	has a narrow blade that can be used for cutting shapes in wood and plastics.
Dip-coating	lowering a heated object into plastic granules to cover it with a protective coating.
Dowel	a small rod of wood, used to hold joints together. (a good dowel joint should be un seen)
Enamel	to heat powdered, coloured glass on a metal base, such as copper or silver, until it melts to form a design.
Etch (etching)	to cut a pattern into the surface of a material
Ferrous	a metal that contains iron and is usually magnetic.

File	a steel handtool, with small, sharp teeth on its surfaces, that is used for smoothing wood, plastic or metal.
Forge	to shape metals by heating and hammering or pressing them into the required shape.
Form	to alter the shape of materials in a controlled manner.
Glass-fibre reinforced plastic	a composite material made from fine fibres of glass in polyester resin.
Grain	the pattern of curves and lines that shows up when the wood is cut or polished and are the result of the growth rings of the tree. .
Hacksaw	has an adjustable frame and a replaceable blade and is used for cutting metal and plastics.
Hardboard	a thin sheet material that is made from compressed wood fibres. Has one shiny side and one textured side.
Harden	to heat metal to a high temperature and cool it quickly.
Hardwood	timber that comes from trees that lose their leaves in winter.
Injection moulding	the process of forcing a liquid material, such as plastic or molten metal, into a mould under pressure and letting it harden.
Jig	a device made up to hold a piece of work when it is being cut, bent, shaped or drilled.
Kevlar®	a material that is made from a polymer that is at least five times as strong as steel. Used for bullet-proof vests.

Laminate (laminated, lamination)	to glue or fix several thin sheets together to make a thicker product. Plywood is an example
Centre Lathe	a machine that can be used for shaping metal or plastic by rotating it against a sharp tool.
Wood Lathe	a machine that can be used for shaping wood by rotating it against a sharp tool.
Line-bender	a tool that heats up just a narrow strip on a plastic sheet so that it can be bent accurately.
Mahogany	a tropical hardwood that is usually reddish brown in colour.
Manufactured board	made from smaller pieces of wood that have been glued together, using heat and pressure. (come in large sheets and will not warp.)
Marking gauge	a tool for measuring and scratching a line, usually on timber, parallel to one edge.
MDF Medium-density fiberboard	a dense, manufactured board made from wood fibres that have been heated and compressed.
Mild steel	an alloy of iron with small amounts of carbon.
Mould	A shape into which liquids are poured and left to set
Non-ferrous	metals that do not contain iron. (also non-magnetic).
Nut	a small hexagonal metal block which screws onto a thread.

Plane	a tool to smooth wood.
Plastic memory	a term relating to materials such as thermoplastics that, after being heated and shaped, return to their original shape when heated again.
Plywood	formed by gluing several thin sheets of wood together, with their grains running at right angles, to form stronger sheets of timber.
PET	a very clear and strong plastic used for plastic bottles for drinks.
Polyethylene (Polythene ©)	a thermoplastic used for making food containers, pipes, bags, buckets and bowls.
PVA	commonly used as a paper or wood glue in schools.
Bought components	products made in commonly used sizes, such as bearing, screws, bolts.
Rivet	a soft metal rod used for joining materials; it is passed through holes in the material and hammered to tighten and shape the head.
Safety rule	protects the user's fingers when they are cutting materials with a craft knife.
Shape memory alloy	a metal that returns to its original shape, when gently heated, after being bent or twisted.
Smart materials	A material that reacts to a stimulus which changes its properties. The material returns to its original state when the stimulus is removed

Softwood	comes from trees that keep their leaves/needles all year round. Can grow to maturity in under 30 years.
Solder	to use a soldering iron or a gas torch to melt solder to join metals.
Sprue	the excess material left on a mould where the molten material was poured into the mould.
Steel	a magnetic metal which is an alloy of iron and carbon.
Stock size	the standard sizes of materials that manufactures or stockists usually make or have available in stock.
Styrofoam	a fine textured, polystyrene modelling foam. Often blue in colour.
Tenon saw	has a metal strip, usually brass, that that supports the back of the blade, used to cut straight lines in wood.
Template	a pattern used to mark out shapes where many identical copies are required.
Thermoplastic	A plastic that can be formed and reformed many times, using heat.
Thermoset	a plastic which can be shaped once, using heat, but heating it again will not soften it. (used for electrical fittings)
Timber	a general name for wood, and sometimes for trees.
Try square	a tool for measuring or marking out accurate right angles on wood

Vacuum former	moulds sheet thermoplastic, softening it by heating it, then uses a vacuum to form it over a pattern.
Veneer	a very thin sheet of one material, that can be glued onto the surface of another material.
Vice	is a tool for holding materials when they are being sawn, filed, drilled or planed.
Weld	to join materials, usually steel, by heating them to melting point.