

Design & Technology Key Terminology

Key word	A's	Definition
Adhesives		Types of glue.
Aesthetics		The features of a shape that makes it look good.
Alloys		Metals formed by mixing together two or more metals to produce a new metal that has improved properties.
Annealing		The softening of metal by heating to a specific temperature and then allowing to cool.
Anthropometrics		Measurements of the human body.

Key word	B's	Definition
Biodegradable		A material that breaks down naturally with time. Sunlight, rain or bacteria could break down the material.
Buffed		Mechanically or hand polished to produce a high quality, shiny surface.

Key word	C's	Definition
CAD		Computer-aided design
CAM		Computer-aided manufacture machines that are computer numerically controlled (CNC).
CE mark		A declaration by the manufacturer that their product meets the requirements of the applicable European Directives.
Client/ User/ Consumer profile		A description of the typical person or people who will use the product.
COSHH		Control of substances hazardous to health.

Key word	D's	Definition
Datum edges		This is used to make all measurements from. It ensures accuracy and prevents errors accumulating.
Deburring		Removing the sharp edge from a piece of metal by drawing a file backwards and forwards.
Draw Filing		Smoothing the edge of metal or plastic by drawing a file backwards and forwards.

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Key word	E's	Definition
Electrical circuit		A number of electrical components connected together to form a functioning electronic products.
Electrolysis		The process of coating a metal by placing it into a solution of electrolyte and passing an electric current from the donor metal to the parent metal.
Ergonomic		Something that has been designed to allow people to work efficiently by making it comfortable and user-friendly.

Key word	F's	Definition
Fabrication		The joining together of pieces, whether or not they are the same material.
Ferrous		Group of metals that contain Iron.
Forging		A traditional process that uses a hammering action provided by either hand or from a machine to create a variety of shapes.
Form		Deals with the shape of the product.
Function		Deals with how the product works.

Key word	G's	Definition
Galvanised		A coating of zinc applied to steel to stop it from rusting.

Key word	H's	Definition
Hardwood		Timber that tends to be from slow growing, broad leafed trees.

Key word	I's	Definition
Inclusive design		Designs that are accessible by all members of society.

Key word	J's	Definition
Jig		An aid to fast, accurate and repeatable manufacturing operation.

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Key word	K's	Definition
Keyed		Where a surface is roughened to improve the strength of a joint when two surfaces are stuck together.
Kitemark		The mark which shows that a product has been tested to meet international standards.
Knock down fittings		A component that allows rapid assembly and disassembly, without damage to the parts being joined or separated. The fitting often has two parts, with one screwing or locking into the other.

Key word	L's	Definition
Laminating		The process of bonding two or more layers of material together to form a thicker and stronger section.
Landfill		A large hole in the ground that is filled with rubbish not being recycled.

Key word	M's	Definition
Maintenance		Cleaning, adjusting, lubricating or replacing parts of a product to allow it to continue to function correctly.
Mechanical advantage		The way in which a machine makes things physically easier to do.
Mechanical properties		Properties of materials including strength, hardness, density, durability, toughness, brittleness, malleability, ductility and elasticity.

Key word	N's	Definition
Nanotechnology		The technology used to rearrange individual atoms to create new, improved materials, systems and devices.
Non-ferrous		Group of metals that do not contain iron.

Key word	O's	Definition
Obsolescence		Lack of appeal to consumers because something goes out of date and better products become available.
Ore		A solid, natural material from which metal can be extracted.

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Key word	P's	Definition
Patent		These protect the features and processes that make things work. This lets the inventors profit from their inventions.
Physical properties		Properties of materials including fusibility, conductivity and environmental friendliness.
Polymorph		A smart material that is easily formed when heated, and solidifies when cooled.
Prototype		A model of a product that is used to test a design before it goes into production.

Key word	Q's	Definition
Quality assurance		A complete system of quality control checks and procedures throughout the manufacture of a product.
Quality control		A check made to ensure that a component meets the specification, for example correct shape, size colour.

Key word	R's	Definition
Rendering		Adding colour to a sketch to help show the materials and textures.

Key word	S's	Definition
Softwood		Timber from quick growing conifers.
Sustainable		Something that can be replaced or reused/recycled indefinitely.
Sustainability		The ability to keep making or using a product without excessive damage to the environment.

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Key word	T's	Definition
Thermochromic		Having the ability to change colour as the temperature is varied.
Thermoplastic		Become soft and pliable when heated and can be reheated as often as required. As they cool they set again.
Thermosetting plastic		Soft and pliable the first time they are heated but a chemical change takes place on cooling and they become rigid, non-flexible and cannot be reheated or changed.
Tolerance		The amount of error that can be allowed.

Key word	U's	Definition
Unique		Something that is a one off.

Key word	V's	Definition
Veneer		A thin section of timber that is cut from a log and then used to produce plywood, or is glued on top of a cheaper material.

Key word	W's	Definition
Wasting		The mechanical removal of unwanted material by use of tools or machinery that use a cutting action.
Wood turning		A manufacturing method that uses specialist tools to shape wood that is being spun or rotated.
Work hardening		As a result of deformation of a metal there is an increase in hardness that may eventually cause fractures.