



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

| 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 of plastic by drawing a file backwards and forwards.                  |

| 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. |

| 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.   |

| 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. |

| 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. |