What are the 5 Ws?

When using anthropometric data, designers often work from the 5th to the 95th percentile. True or false?

True. This ensures that the product is suitable for 90% of the population.

Why must influence of fashion and style be considered when designing?

Designers need to know current trends in order to produce popular products.

Why are biodegradable carrier bags a good use for bioplastics?

Biodegradable carrier bags mean there will be less waste to fill landfill sites.

What does the circular economy encourage?

Circular economy encourages the re-use of energy, products and materials.
Name three renewable energy sources.

Energy is transferred from power stations to homes and buildings via the National Grid.

The Mobius Loop symbol shows that a product can be recycled.

What does the Mobius Loop symbol show?

A bill of materials is a list of all the materials and components needed for a product, plus their costs to purchase.

A rendered sketch is a drawing that has colour, tone or texture added to it to make it more realistic.
What is sketch modelling?

Sketch modelling is the process of creating a 3D sketch from a 2D shape using CAD.

What do exploded drawings show?

Exploded drawings show how all the parts of a product fit together.

What does a diamond shape represent in a flow chart?

A diamond shape in a flow chart represents a decision.

Name three approaches to design.

Three approaches to design are iterative design, user-centred design and the systems-based approach.

Which has the greatest tensile strength – metal or wood?

Metal has the greatest tensile strength. Wood has low tensile strength; metals have high tensile strength.
What is meant by ‘functionality’?

Functionality means whether a material has the right properties to meet the purpose of the product.

How many gsm does cartridge paper have?

Cartridge paper has 100–150gsm.

Name two chemicals that may be added during the manufacture of paper.

Chalk and dye may be added during the manufacture of paper.

What does MDF stand for?

MDF stands for medium density fibreboard.

What is a non-ferrous metal?

A non-ferrous metal is a metal that doesn’t contain iron.
Give three examples of alloys.

Examples of alloys include brass, pewter and solder.

What is a typical use of both PP and HIPS?

PP (polypropylene) and HIPS (High-impact polystyrene) are both used for packaging.

What are polyester and acrylic produced from?

Polyester and acrylic are both produced from oil.

Give examples of two technical textiles.

Kevlar and Marlan are examples of technical textiles.

Name three types of standard component that can be used with paper and board.

Clips, fasteners and bindings are standard components that can be used with paper and board.
Anodising involves electrolysis to provide a corrosion-resistant or colour finish to aluminium.

Concrete is normally reinforced with steel bars to make a composite material for building buildings.

This type of motion is called reciprocating motion.

Push–pull, tongs and moving wings are all types of linkage.

This component circuit symbol is a tilt switch.
**Programmable Components**

Why would a driver be added to a circuit with a microcontroller?

A driver would be added to enable an output device to draw a high current.

**Modelling Processes**

What polymer material is useful for making a solid concept model?

Polystyrene block is useful for making a solid concept model.

**Wastage**

Name the different types of saw used for cutting timber.

Tenon saws, coping saws, band saws, circular saws, fretsaws and jigsaws can all be used for cutting timber.

**Additive Manufacturing Processes**

What is the most common method of joining fabrics together?

Sewing is the most common method of joining fabrics together.

**Deforming and Reforming**

What does a perforation cutter do?

A perforation cutter makes a row of small holes in paper or card so that part of it can be torn off.
Ensuring Accuracy

**Digital Design Tools**

**Scales of Manufacture**

**Large-Scale Processes:** Paper, Timber and Metals

**Large-Scale Processes:** Polymers and Fabrics

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What is the purpose of a **jig** when machining?

The purpose of a jig when machining is to ensure that the machining is carried out in the **correct place on the workpiece** and/or hold it securely.

What does **CAE** stand for?

**CAE** stands for **Computer-aided engineering**.

What type of manufacture is used to produce chocolate bars in large quantities?

**Mass production** is used to manufacture chocolate bars in large quantities.

What is **die-cutting** used for?

**Die-cutting** is used to cut shapes and holes.

What is an overlocker and what is it used for?

An overlocker is a **specialised industrial sewing machine**, used to give seams and hems a professional **finish** or add decorative edges.