

Year 11 Design and Technology – Vocabulary List

(Tier 2 and Tier 3)



Automation - the use of control systems for operating equipment such as machinery and processes in factories; this reduces human input.

Commercial process - manufacturing method used to produce products in quantity.

Commercial product - a product intended to make money.

Conceptual stages (of design) - use of models, sketches and computer aided design (CAD) to show the design of a product as it develops.

Continuous improvement - the identification of improvements and subsequent evolution of products.

Co-operative - a group of people united to meet common social, economic or cultural need through a jointly-owned business.

Crowd funding - a large number of people who raise money for a project or venture.

Ecological - the consideration of the environment and the impact that design can have on it.

Ethics - moral decisions when designing and manufacturing.

Fabricate - using processes such as cutting, bending, joining and assembly to produce products.

Finite - a material or source which will one day run out.

Functionality - how well a product carries out its purpose.

Fusibility - how well a material is converted by heat into a molten or liquid state dependent on its melting point.

Iterative design - design methodology based on a cyclical process of analysing, prototyping and testing to refine a product. Each iteration and result starts the process again.

Lean manufacturing - reducing and eliminating waste in a manufacturing process.

Life cycle assessment – a technique used to assess the environmental impact of a product at all stages of its manufacture, use and disposal.

Market pull - products developed to meet the needs of society or a specific section of the market.

Mechanical device - mechanism which produces and/or changes movement.

Nesting - the tessellation of shapes or nets on a material to minimise the amount of waste during manufacture.

Physical properties - properties that refer to the actual matter that forms the material (eg insulation, conductivity, fusibility).

Planned obsolescence - deliberately designing the lifecycle of a product to be short, forcing the user to update their products quickly.

Primary source - research collected first-hand by a designer to develop a product or idea.

Primary source (of materials) - where materials originate (polymers from oil etc) and the raw material that needs to be converted into a workable form.

Product - item or artefact developed for an intended audience to solve a problem or meet a need.

Prototype - An early model or sample of a product used to test a concept.

Schematic diagram - Graphic symbols or simplistic diagrams used to convey a system (eg an underground map).

Social footprint - The impact a product or individual has on society.

Social responsibility - The idea that a designer needs to evaluate the impact their product could have on society and take action to make this better.

Stock form - The standard shape and size of materials as they are bought.

Technology push - Technological discoveries used to drive the development of a product.

Tolerance - The minimum and maximum measurements that can be accepted when manufacturing.

User - The person/people who make use of the product that has been developed by a designer.

User centered design - Design development with the user at the centre of the focus. The designer tries to envisage how the product will actually be used, as opposed to focusing on other areas such as cost.

Working properties - How a material reacts to external forces.