Design & Technology

Year 11

Term 2

	Material Properties			Terms related to Stakeholder			Manufacturing Considerations		
1	Absorbancy	The ability of a material to absorb light, heat or	1	Primary Stakeholder	The main person or user group a product is designed for	1	Economies of Scale	A saving in cost per product gained by making a higher number of products.	
2	moistureCorrosionThe ability of a material	2	Wider Stakeholder	The wiser audience who have an invested interest in the product	2	One-off/ Bespoke	Making a single product to a customer specification.		
2	resistance	not to be damaged by its environment			different people and many different limbs or body areas. Collated in age groups and 5 th , 50 th and 95 th percentiles.	3	Production Batch Production	Making a series of groups of identical products.	
3	Density	Mass of a material per unit volume.	2	Anthropometric		4	Mass Production	Making the same product on a large scale. Manufacturing system where items from	
4	Durability	The ability of a material to last a long time without being damaged.		Data Ergonomic Data		5	Manufacturing/	suppliers are delivered only when they are needed.	
						6	Lean Manufacturing	A systematic approach to eliminate all forms of waste in manufacturing.	
5	Elasticity	The ability of a material to return to its original shape when a force on it is removed.	3		environment a product will interact with, ensuring the product is fit for purpose.	7	Rapid Prototyping	An additive manufacturing technology, such as 3D printing, used to produce a 3D product in a single operation from a CAD model.	
6	Hardness	The resistance of a material to wear and abrasion.	4 5	Ethical Design End User	Designing with regard to people's principals, beliefs and morals. The person or people that will use a product when it is completed.	8	Jig	A custom-made tool designed to achieve accuracy, repeatability and interchangeability during product manufacture.	
7	Malleable	Pliable, the ability of a material to be pressed or forced into shape without breaking.	6 7		Design of products for a limited audience. Design of products that can be used by everyone without special adaptations.	9	Pattern	A type of template that is used to trace the shape of parts of a garment onto fabric before it is cut.	
						1	Standard Components	Common parts that are commercially available in specific sizes. E.g nuts and	
8	Plasticity	The ability of a material to be shaped or moulded.	8	Product Analysis	Analysing existing products to gain useful information and opportunities for your own designs		Template	bolts, rivets, hinges, etc Used to draw a shape on material which	
9	Stiffness	How rigid an object is.				1 1	remplate	can then be cut around.	
1 0	Strength	The ability of a material to withstand a force that is applied to it.	9	User Centred Design	A design approach where the needs and wants of the end user are considered extensively at each	1 2	Tolerance	The permissible limits of variation in the dimensions or physical properties of a manufactured product or part.	
1 1	Toughness		1 0		stage of the design process. When a product is not only purchased initially but performs well enough for it to be recommended to others, and for sales to continue.	1 3	Circular Economy	A model that aims to increase the use of renewable energy and design products that are 'made to be made again'.	
						1 4	Lifecycle Assessment/LCA	A tool for systematically evaluating the environmental impact of a product at all stages of it's life.	