CURRICULUM Mapping
Year 10

ST JAMES' CATHOLIC HIGH SCHOOL

4/6 Lessons Theory 2/6 Lessons Practical								EOY Assessment Point
				HT4:	Assessment Point: Summative or AFL	HT5 Overarching unit intent: **Designing and making principles - NEA** Analysis of each theme Problem/solution Research Design possibilities	HT6: Overarching unit intent: **Designing and making principles - NEA** Customer profile Existing products Specification Initial design Development	**HT1 – HT6** **Key Disciplinary Knowledge** **Designing and making principles** ***Key Concepts*** Analytical research Continual evaluation and development Innovation and creativity
			HT3: **Overarching unit intent:** Smart materials Technical textiles Understanding a systems approach when designing Systems approach explained Input devices Outputs LED's Buzzers and speakers Mechanical devices **Movement** – Linear motion Changing magnitude and direction of force ratio = Teeth driven --- Teeth driver Materials and their working properties **Paper and boards** **Boards** **Natural and manufactured timbers** **Hardwoods** **Softwoods** **Manufactured boards** **Metal and alloys** **Alloys** **Polymers**	**Polymer additives** **Textiles** **Natural fibres** Cotton – Properties & common uses Wool Silk Synthetic fibres Polyester – Properties & common uses Nylon Elastane Blended and mixed fibres Polycotton Wool&nylon Woven fabrics Warp Weft Non woven fabrics Felted fabrics Bonded fabrics Knitted textiles Weft knit Warp knit Material properties Physical properties Mechanical Design and making principles: Mini NEA Problem/solution Analyse task Customer profile Analysis of existing products Specification Design Development Garment construction	**HT3 and HT4 (with elements of HT1 and HT2)** **Key disciplinary knowledge** Developments in new materials – End of unit test Materials and their working properties – End of unit test **Key Concepts** Modern materials Smart materials Technical textiles Paper boards Textiles – Natural fibres Synthetic fibres Blended/mixed fibres Woven fabrics Non woven fabrics Knitted textiles Material properties		
	HT2: **Overarching unit intent:** Production techniques and systems How the critical evaluation of new and emerging technologies informs design decisions Energy generation and storage Renewable energy Energy storage systems, including batteries Developments in new materials Modern materials Graphene Metal foam Titanium Coated metals Liquid crystal display Nanomaterials Teflon Corn starch polymers	Assessment Point:M Summative or AFL Key disciplinary knowledge New and emerging technologies – End of unit test Energy generation and storage – End of unit test **Key Concepts** technologies Industry/Automation/Use of robotics Innovation/crowd funding/ virtual marketing & retailing. Co-operative/ Fair trade Finite resources, non-finite resources Ecological footprint/social footprint Harm caused by landfills, Resource recovery, energy recovery, incineration Designing products which meet the needs of everyone in society Needs of all groups of people, inc those with disabilities, cultures Fossil fuels Renewable energy					
HT1: **Overarching unit intent:** Core Technical Principles New and emerging Enterprise Sustainability Disposal of waste People Culture Society Environment Designing and making principles Xmas project Temporary accommodation over Christmas Design a product to bring xmas cheer to family in temporary shelter. Garment/xmas decoration/kids soft toy, Develop an analytical mood board researching chosen product. Complete analysis of existing products. (4/6 products must be analysed) Source a suitable customer and profile the customer Write a specification for the product you will design and make Design a suitable product using the profile and specification as guidance Create spot and cross patterns of sections Construct garment Test and evaluate garment								

With God all things are possible Matthew 19:26

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