

PROJECTS	DISCOVERY METHODS	IDEATION METHODS	ITERATION METHODS	PLANNING METHODS	EXECUTING METHODS	EVALUATION METHODS						
Y7	<p>PEOPLE</p> <ul style="list-style-type: none"> Entrees Design Funnel Human Centred Design Role play user needs Mood board Mind Mapping Brainstorming Key Words Word association 	<p>PRODUCTS</p> <p>Product Analysis Questions QUESTIONING GRID</p> <ul style="list-style-type: none"> Iconic Design Line-Ups Product Pairs 	<p>(FORMATIVE EVALUATION)</p> <p>Product Analysis Questions</p> <ul style="list-style-type: none"> Six Thinking Hats ACCESSFM Ranking Sustainability Analysis Evaluate against specifications 	<ul style="list-style-type: none"> Contexts Mood board Mindmap User target Sketch Techniques Sketching Rules Scatter Shapes Old School Orbits Iterate (NOT drawing) 6-3-5 Word and Picture Board 	<ul style="list-style-type: none"> Scruffiti Time Trial Knock-Out Abacus What's Next? Design Families Alternative Uses (Affordances again) CHINDOUGU @ Building Blocks Team Table Design 	<ul style="list-style-type: none"> 12 minute discussions Consultations Using grids Develop the idea 4 x 4 Flat to 3D The Shape's the Limit 2D / 3D Tangram 3D Blocks 	<p>PROTOTYPING</p> <ul style="list-style-type: none"> Sequence Mapping CAD planning Group planner Manufacturing Specification Film Strip / Storyboard Manufacturing Specification 	<p>MAKING</p> <ul style="list-style-type: none"> Iterate (NOT drawing) Rapid Modelling 	<p>FORMATIVE EVALUATION</p> <p>Product Analysis Questions</p> <ul style="list-style-type: none"> PMI Six Thinking Hats ACCESSFM Ranking Sustainability Analysis Evaluate against specifications 			
Y8	<ul style="list-style-type: none"> People vs Tasks Learn from other cultures Winners and Losers Be a problem finder (Affordances) Needs of Ageing Live like the user Observe People and Products 	<ul style="list-style-type: none"> Use Materials Footprints Big and Small Questions 	<ul style="list-style-type: none"> Display Look from a different Angle Right Angle CAFEQUE 	<ul style="list-style-type: none"> Design Matrix Morphology Getting Ideas? Pattern Design Materials Collection Handling Collection 	<ul style="list-style-type: none"> 6R's Rapid Modelling Pictograms/Symbols Your own Iso-Tool Corrugate JAMBLE Design Pincer Phi φ Fibonacci Rule of Thirds Biomimicry 	<ul style="list-style-type: none"> Beq, Borrow, Steal Champions Improvise, play and experiment Get expert help Three minute sketching Design Pincer Geometric Structure Laver Up Designer Maker User 	<ul style="list-style-type: none"> Consequence diagrams Matrices Flow Charts Sequencing Working in teams planning sheet Manufacturing Specification 	<ul style="list-style-type: none"> Iterate (NOT drawing) Rapid Modelling 	<ul style="list-style-type: none"> Display Look from a different Angle Right Angle CAFEQUE 			
Y9	<ul style="list-style-type: none"> The BIG picture A day in the life of... Centring the User PIES Walk around Why put it right? User Profile - Needs People vs Tasks The problems of ageing 	<ul style="list-style-type: none"> Inspirational Products Product Design Questions Questioning Chart Parts Count 	<ul style="list-style-type: none"> CET Key Concepts Compare and Contrast Market Feedback Dieter Rams 10 Rules Everyday evaluation 	<ul style="list-style-type: none"> Negative Space Deconstruct Rel Designs Modify the ... New from Old Wild Side Order from Chaos In the style of... 	<ul style="list-style-type: none"> Anthropomorphic Emotional Design Juxtaposition 101 Juxtaposition 102- Flow/Clash Typography Firmatas - Utilitas - Venustas 10 to 1 The Maker's Bill of Rights Circular Economy Maintenance 	<ul style="list-style-type: none"> Building a design Group crisis SCAMPER Design Dice 10 to 1 The Maker's Bill of Rights Circular Economy Maintenance 	<ul style="list-style-type: none"> Lego Charting work flow Gantt Chart Sustainable materials Product impact Manufacturing Specification 	<ul style="list-style-type: none"> Iterate (NOT drawing) Rapid Modelling 	<ul style="list-style-type: none"> CET Key Concepts Compare and Contrast Market Feedback Dieter Rams 10 Rules Everyday evaluation 			
Advanced	<p>IDEO DESIGN KIT</p> <p>1. Innovate</p>	<p>IDEO DESIGN KIT</p> <p>2. Research</p>	<p>IDEO DESIGN KIT</p> <p>3. Sketch</p>	<p>IDEO DESIGN KIT</p> <p>4. Render</p>	<p>IDEO DESIGN KIT</p> <p>5. Prototype</p>	<p>IDEO DESIGN KIT</p>	<p>IDEO DESIGN KIT</p>	<p>IDEO DESIGN KIT</p>				
Current Commercial Design Practise	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 	<ul style="list-style-type: none"> DESIGN COUNCIL IDEO DELFT 				
PURPOSEFUL ASSESSMENT	DISCOVERY ASSESSMENT		IDEATION ASSESSMENT		ITERATION ASSESSMENT		PLANNING ASSESSMENT		EXECUTING ASSESSMENT		EVALUATION ASSESSMENT	
KNOW	1. Have knowledge of a wide range of research tools, techniques and strategies. 2. Know that information gained only has value unless when USED in designing and making.		1. Have knowledge of a wide range of design ideation and creativity tools, and strategies. 2. Know how they are used appropriately and creatively in different situations for specific purposes.		Have knowledge of a wide range of design development and modelling tools and strategies. Know how they are used appropriately and creatively in different situations for specific purposes.		1. Know how to plan and schedule work to make efficient use of time and resources. 2. Know why it is important to plan ahead.		1. Have knowledge of a wide range of hand, machine and CNC tools and processes. 2. Know of a wide range of school workshop and industrial manufacturing processes.		1. Know that evaluation is a tool used to identify and judge strengths and weaknesses in products and processes. 2. Know that good evaluation produces useful information to help in designing.	
UNDERSTAND	Understand how to use a wide range of research tools, techniques and strategies and why they are used in different situations.		Understand how to use a wide range of design ideation and creativity tools and strategies and why they are used for specific purposes.		Understand how a wide range of design, development, and modelling tools and strategies are used in different situations for specific purposes.		Understand how to use a range of planning tools in order to make efficient use of time and resources. Understand why it is important to plan ahead.		Understand how products are made in school and industrially and the differences and similarities between the processes. Understand how tools work on different materials.		Understand how and why different evaluation tools are used in different situations to gain specific information and valuable judgements.	
APPLY	1. Apply a range of research techniques to gain and present valuable information to inform design work. 2. Apply information gained in the designing of products and solutions.		Apply a wide range of design ideation techniques and creativity tools and strategies to create a range of innovative initial ideas to meet a client's needs.		Apply a range of development and modelling techniques to successfully develop and improve design work and working prototypes that meet a client's needs.		Apply planning tools effectively to predict and ensure efficient use of time, tools and resources.		Apply knowledge of materials and a range of hand, machine and CAD CAM tools to make high quality products.		Apply a range of evaluation tools in different situations to gain specific information and make useful, valuable judgements.	
ANALYSE	Analyse relevant information and use the judgement to concisely present relevant information in a format that is useful to designing.		Analyse the use of a wide range of design ideation, and creativity tools and strategies to identify how and why they work in specific situations.		Analyse the use of a wide range of development and modelling techniques being used in order to identify and match methods to tasks.		Analyse how different planning tools are used in different situations to predict, and ensure efficiency.		Analyse how you and others use manufacturing techniques to identify how to achieve particular results.		Analyse the use of evaluation tools to identify how to improve the quality of judgements.	
EVALUATE	Evaluate the work of others to make judgements about their quality. Evaluate the quality of information and research analysed.		Evaluate the use of a wide range of design ideation, and creativity tools, and strategies then use the judgements to improve designing, prototyping and making.		Evaluate the use of a wide range of development and modelling techniques.		Evaluate how effectively you have used planning tools and ensured efficient use of time, tools and resources.		Evaluate the quality of products, systems and concepts. Make judgements about the quality and effectiveness of manufacture in school and industry.		Evaluate objectively and subjectively using a range of tools in different situations to make judgements on quality. Evaluate and monitor the use of evaluation tools over a period of time.	
CREATE	Use high quality research to: (1) Inform the creation of fully justified specifications. (2) Fuel the creation of original and innovative design concepts and products.		Create and refine innovative and original design ideas and concepts using a wide range of techniques with skill and efficiency.		Create and refine innovative and original ideas, models and products using combinations of techniques with skill and efficiency.		1. Use planning tools to ensure you have space and time to create effectively. 2. Create your own planning tools. Incorporate planning into work in an innovative and original way.		1. Create high quality products using a wide range of manufacturing techniques with skill, innovation and originality. 2. Create and develop concepts for manufacture using high quality modelling skills.		1. Creatively apply evaluation to gain original judgements and innovative insights. 2. Try using evaluation tools in an original and innovative way.	
Powerful Mindsets												
Assessment Sections	Section A: Identifying and investigating design possibilities (10 marks)		Section B: Producing a design brief and specification (10 marks)		Section C: Generating design ideas (20 marks)		Section D: Developing design ideas (20 marks)		Section E: Realising design ideas (20 marks)		Section F: Analysing and evaluating (20 marks)	
KS4 Project Design 'Methods' Y9/Y10 NEA prep only	DO THIS...		DO THIS...		DO THIS...		DO THIS...		DO THIS...		DO THIS...	
Assessment Phrases.	10% A. Design possibilities identified and thoroughly explored, directly linked to a contextual challenge demonstrating excellent understanding of the problems/opportunities. B. A user/client has been clearly identified and is entirely relevant in all aspects to the contextual challenge and student has undertaken a comprehensive investigation of their needs and wants, with a clear explanation and justification of all aspects of these. C. Comprehensive investigation into the work of others that clearly informs ideas. D. Excellent design focus and full understanding of the impact on society including; economic and social effects. E. Extensive evidence that investigation of design possibilities has taken place throughout the project with excellent justification and understanding of possibilities identified.		10% A. Comprehensive design brief which clearly justifies how they have considered their user/client's needs and wants and links directly to the context selected. B. Comprehensive design specification with very high level of justification linking to the needs and wants of the client/user. Fully informs subsequent design stages.		20% A. Imaginative, creative and innovative ideas have been generated, fully avoiding design fixation and with full consideration of functionality, aesthetics and innovation. B. Ideas have been generated, that take full account of on-going investigation that is both fully relevant and focused. C. Extensive experimentation and excellent communication is evident, using a wide range of techniques. D. Imaginative use of different design strategies for different purposes and as part of a fully integrated approach to designing.		20% A. Very detailed development work is evident, using a wide range of 2D/3D techniques (including CAD where appropriate) in order to develop a prototype. B. Excellent modelling, using a wide variety of methods to test their design ideas, fully meeting all requirements. C. Fully appropriate materials/components selected with extensive research into their working properties and availability. D. Very detailed manufacturing specification is produced with comprehensive justification to inform manufacture.		20% A. The correct tools, materials and equipment (including CAM where appropriate) have been consistently used or operated safely with an exceptionally high level of skill. B. A high level of quality control is evident to ensure the prototype is accurate by consistently applying very close tolerances. C. Prototype shows an exceptionally high level of making/finishing skills that are fully consistent and appropriate to the desired outcome. D. An exceptionally high quality prototype that has the potential to be commercially viable has been produced and fully meets the needs of the client/user.		20% A. Continuous analysis and evaluate your work in the iterative design process, and use your decisions to improve outcomes. B. This will include A) defining requirements, B) analysing the design brief and specifications along with C) the testing and evaluating of ideas produced during all stages. C. Your final prototype(s) will also undergo a range of tests, including: - testing by the user, on which the final evaluation will be formulated. - include market testing. - include detailed analysis of the prototype(s).	
Project Completion Checklist	A. Design possibilities - Identified - Thoroughly explored - Linked to context - Excellent understanding of problems / opportunities B. User & client - Relevant - Identified - Needs investigated- all explained and justified - Wants investigated- all explained and justified C. Work of others - Design movement - All information used in designing - Specific designer(s) - All information used in designing - Specific designer's products - All information used in designing - Product analysis – commercially available products - All information used in designing D. Excellent/ full understanding of - Design focus - Impact on society - Social, behavioural, personal - Economic		A. Design brief (within context) - clearly justified from user/client's - needs - Wants B. Design Specification - very high level of justification linking to - needs and - wants of the client/user. - Shown to be used well in all design stages.		A. Ideas- - Imaginative, - creative and - innovative - avoiding design fixation - full consideration of - functionality - aesthetics - innovation. B. Ideas take full account of - fully relevant on-going investigation - fully focused investigation C. Extensive/excellent - experimentation - communication - wide range of techniques D. Different design strategies used - Imaginatively - for different purposes - and as part of a fully integrated approach to designing.		A. Prototype development work - Very detailed - Uses a wide range of 2D/3D techniques & CAD B. Excellent modelling - wide variety of methods - used to test your design ideas - fully meeting all requirements. C. Materials/components selected - fully appropriate - With extensive research into - working properties - availability. D. Manufacturing specification - fully detailed - is produced with comprehensive justification - Informs all aspects of manufacture.		A. Correct tools, materials and equipment (incl. CAM) - consistently used or operated safely - exceptionally high level of skill. B. Quality control - high level - ensures the prototype is accurate by - very close tolerances. - Applied consistently C. Making/finishing of prototype - exceptionally high level of skills - fully consistent - appropriate to the desired outcome. D. Prototype - exceptionally high quality - potential to be commercially viable - fully meets the needs of the client/user.		A. Various iterations are shown to be as a direct result of - considerations linked to - Testing of the prototype, - analysis of the prototype, - evaluation of the prototype, - well considered feedback from third parties. B. Design brief and specification used to - test all aspects of the final prototype. - Propose and/or undertake modifications which are fully justified by testing C. Ongoing analysis and evaluation - shown throughout the project - clearly influences - the design brief - the design specification - the manufacturing specification	