

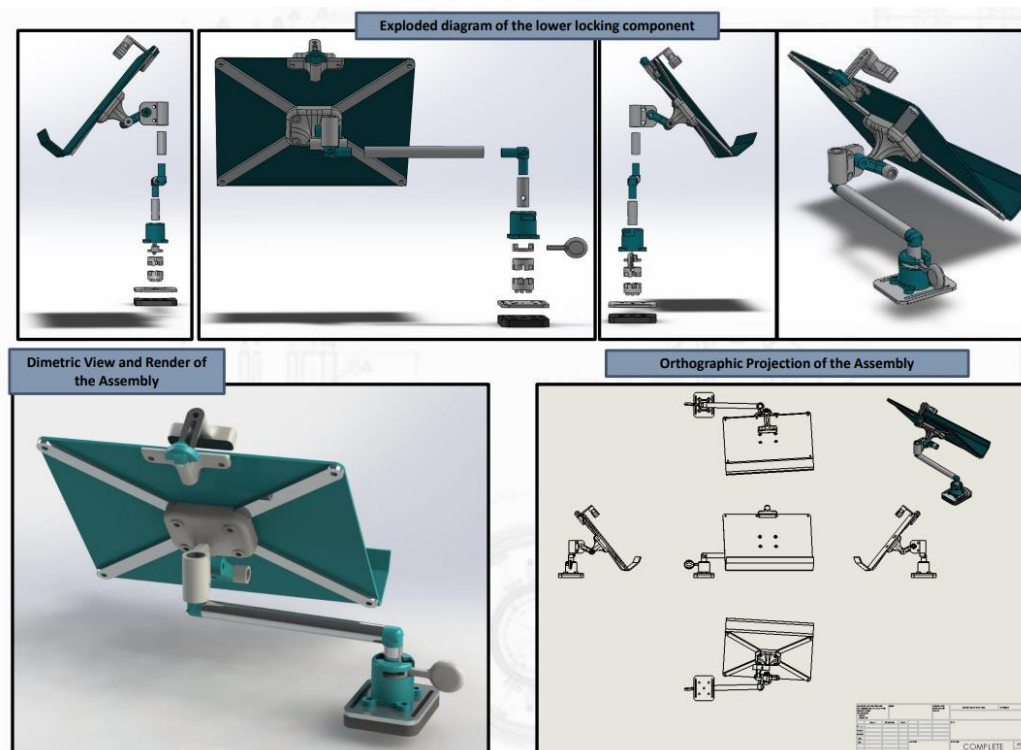
Long Term Curriculum Plan – ADT – Design Technology

In Design Technology: Product Design, we aim to encourage open minded, creative, critical reflective thinkers who have the courage and confidence to discover and contribute to the world around them. Students combine both their practical and theoretical skills to learn about the iterative design process and how it is used by designers. We teach students how to accurately manufacture by both hand and CAD/CAM as well as how to draw in all different styles ranging from 2D freehand sketching to two-point perspective. Our students learn how to think creatively, present their work accurately and then solve problems given to them. Students are taught how to consider real life design constraints from human capabilities to manufacturing capabilities and they then put this into practice through a broad variety of mini design and make tasks.

Our core values that we aim to instil into our students are:

- The use of creativity and imagination. To forgo design fixation and develop blue sky thinking
- The confidence to work with all different materials including papers and boards, Styrofoam, plasticine, timbers, polymers and metals
- To confidently use different CADs including 2D Design, SolidWorks and Fusion 360 and then to be able to confidently use our 3D printers and laser cutter
- To take design risks and to not be afraid to fail
- To develop critical thinking skills to allow for a fully developed iterative process
- To develop their independence

Finally, the most important aim for Design Technology: Product Design is to encourage and spark a passion for the subject. To develop an infectious enthusiasm and enjoyment which is passed on from student to student.



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Year 7 - 1 rotation Year 8 – 2 rotations						
Year 7 DT	Rotation (1/3rd of year) Coaster/ clock / key fob - MAKING SKILLS (each project is a mini assessment) Isometric drawing and 1 point perspective drawing – DRAWING SKILLS Computer Aided Design (CAD) Bookmark – DESIGN AND MAKING SKILLS (mini assessment)					
Year 8 DT	Rotation 1: Cufflinks and presentation box (mini assessment) Card-board modelling (mini assessment)			Rotation 2: Styrofoam modelling (assessment) Thumbnail sketches, 3D CAD and presentation		
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 9 DT Theory assessments roughly once a ½ term	Acrylic phone holder: manufacturing (assessment) Isometric Drawing: - hand drawn furniture (assessment)	Isometric Drawing: - CAD development (assessment) Tea light holder: manufacturing (assessment)	Tea light holder: manufacturing and accompanying sheets	Aftershave project: - moodboard - design ideas - Development (assessment)	Aftershave project: - manufacturing the bottle and painting - net design (assessment)	Solid Works: - train tutorials - key-ring and 3D printing
Year 10 DT Theory assessments roughly once a ½ term	Scouse Monopoly - designing - modelling and development (assessment)	Scouse Monopoly - final development - assembly	Lamp: - designs and development - modelling - portfolio production (assessment)	Lamp: - manufacturing - portfolio production (assessment)	Torch: - disassembly and PP Yr 10 Exam	NEA: - investigation - research - design brief and specification (NEA is worth 50% of the overall GCSE – a continuous assessment)
Year 11 DT Theory assessed during exam week(s)	NEA - design ideas - review of design ideas - development of design ideas	NEA - development of design ideas - review of chosen idea - manufacturing Formal assessments	NEA - manufacturing - testing and evaluation	NEA - completion of whole NEA Theory revision lessons, working through a revision itinerary	Theory every lesson, working through a revision itinerary	Formal examinations

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Sixth Form roadmap	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 12 DT: Product Design Theory assessments roughly once a term	Induction - isometric drawing - briefly cover 1 and 2 point perspective (assessment) Garden stool: - manufacturing	Garden stool: - Manufacturing (assessment) Design inspiration: - portfolio production (assessment)	Scale model chair: - design and development - modelling	Scale model chair: - design and development - modelling - completion of presentation board (assessment)	Goodies in boxes: mini practical tasks Formal assessments Enrichment week	NEA: - grid 1 – exploration into a problem - grid 2 – investigation and research - grid 3 – design brief and specification (NEA is worth 50% of the overall A Level – a continuous assessment)
Year 13 DT: Product Design Theory assessed during exam week(s)	NEA: - grid 4 - design ideas - grid 5 - developing design ideas	NEA - grid 5 - developing design ideas - grid 6 - final design solution - grid 7&8 – manufacturing specifications	NEA - grids - 9&10 manufacturing the prototype Formal assessments	NEA - grids 9&10 - manufacturing the prototype - grid 11 - testing and evaluation Revision lessons Formal assessment	Theory every lesson, working through a revision itinerary	Formal examinations