

Holy Family Catholic School Curriculum Overview Year 12 – Technology: Design Tech (Product Design) (A Level)



	Curriculum Content	Suggested Reading or Extension Activities
Half Term 1 (Sept-Oct)	Introduction to Product Design(JAL) <u>COURSEWORK</u> 1) Investigation on given topics during summer term (Tasks 1&2) 2) Investigation and Analysis on Similar Products of your choice with detailed labelling and annotation 3) Investigation on a need for a product (Photo evidence of situation (gap in the market) brainstorm/WH analysis, client profile, mood board, Analysis of Situation... Homework assessments to focus on: - Research topics given in Summer term - Design Context Lesson plenary assessment to focus on: - Writing conclusions for each research undertaken <u>THEORY(JAL):</u> Unit 2 - Performance characteristics of polymers Introduction to Product Design(NAS) <u>H&S):</u> Rules, regulations & training for the correct use of the BAND SAW <u>THEORY(NAS):</u> Unit 1 - Performance characteristics of papers and board <u>MINI-PROJECT(NAS):</u> CAD/CAM	• Completion of worksheet resources for Unit 2 - <u>Performance characteristics of polymers</u>(Characteristics, Applications,Stock forms and types, Elastomers & Biodegradable polymers) • Completion of worksheet resources for Unit 1- <u>Performance characteristic of paper and card</u>(Performance,application ns & recycling) • Completion of practical assessment for the safe use of the BAND SAW • Visit www.aqa.co.uk: to refer to the specification and past exam papers • Visit www.bbcbitesize.co.uk: for theory knowledge • Youtube/how its made: to learn new invasion and new skills • www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 2 (Nov-Dec)	<u>COURSEWORK(JAL)</u> 4) Disassembly and well detailed Analysis of Existing Products with diagrams or photo evidence 5) Interview with Experts and Analysis of the response you have got from the expert 6) Investigation on current trends, analysis and your conclusion 7) Research on Anthropometric data with analysis and your conclusion	• Completion of worksheet resources for Unit 4 - Performance characteristics of metals(Stock forms, performance,testing & finishes) • Completion of worksheet resources for Unit 3-Performance characteristics of woods(stock

	8) Range of initial ideas with annotation and evidence to show a variety of Colouring/drawing techniques including ICT and photo evidence of test models <u>THEORY(JAL):</u> Unit 4 - Performance characteristics of metals <u>THEORY(NAS):</u> Unit 3 - Performance characteristics of woods <u>MINI-PROJECT(NAS):</u> Bent furniture	forms,performance,testing and finishing) - Visit www.aqa.co.uk: to refer to the specification and past exam papers - Visit www.bbcbitesize.co.uk: for theory knowledge - Youtube/how its made: to learn new invasion and new skills www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 3 (Jan-Feb)	<u>COURSEWORK(JAL)</u> 9) Well detailed / comprehensive Design Specification (must be measurable) 10) Investigation & Analysis on Materials and Manufactured Items (for your best design) (Practical with photographic evidence) 11) Investigation and Analysis on intended Processes and Finishes (for your best design) (Practical with photographic evidence) <u>THEORY(JAL):</u> Unit 7 - Processing and working with polymers <u>THEORY(NAS):</u> Unit 5 - Composite, smart & modern materials <u>MINI-PROJECT(NAS):</u> Project Anything	- Completion of worksheet resources for Unit 7- Processing and working with polymers (working with polymers,forming polymers,finishing polymers) - Completion of worksheet resources for Unit 5- Composite, smart & modern materials(composite materials,smart materials,modern materials) - Visit www.aqa.co.uk: to refer to the specification and past exam papers - Visit www.bbcbitesize.co.uk: for theory knowledge - Youtube/how its made: to learn new invasion and new skills www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 4 (Feb-Mar)	<u>COURSEWORK(JAL)</u> 11) Investigation and Analysis on intended Processes and Finishes (for your best design) (Design development Continued) (Practical with photographic evidence) 12) Development of chosen idea with a <u>variety of materials</u> and <u>proportions</u> (photos of models and ICT evidence of testing is a must) 13) Materials and Manufactured items List with costing 14) Working Drawing and Details of Final Idea (orthographic, 3D drawing using ICT and any joining details hand drawn or ICT)	- Completion of worksheet resources for Unit 9 - Processing and working with metals(forming, joining and wasting of metals) - Completion of worksheet resources for Unit 6 - Processing and working with paper and boards(forming processes & bonding,jigs and fixtures) - Visit www.aqa.co.uk: to refer to the specification and past exam papers - Visit www.bbcbitesize.co.uk: for theory knowledge - Youtube/how its made: to learn new invasion and new skills

	<u>THEORY(JAL):</u> Unit 9 - Processing and working with metals <u>THEORY(NAS):</u> Unit 6 - Processing and working with paper and boards <u>MINI-PROJECT(NAS):</u> Vinyl manipulation + material investigation page for CW	• www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 5 (Apr-May)	<u>COURSEWORK(JAL)</u> 15) Well Detailed/ Comprehensive Production Plan for Final Idea with Quality Control Checks, safety and Estimated Time <u>MAKING THE PROJECT with NAS</u> <u>THEORY(JAL):</u> Unit 11 - Product design considerations <u>THEORY(NAS):</u> Unit 8 - Processing and working with woods <u>MINI-PROJECT(NAS):</u> Mechanisms + material investigation page for CW	• Completion of worksheet resources for Unit 8 - Processing and working with woods(working with wood & forming wood) • Completion of worksheet resources for Unit 11 - Product design considerations(product development,inclusive design,safe working practices,protecting designs & manufacture,repair, maintenance and disposal • Visit www.aqa.co.uk: to refer to the specification and past exam papers • Visit www.bbcbitessize.co.uk: for theory knowledge • Youtube/how its made: to learn new invasion and new skills • www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 6 (Jun-Jul)	<u>COURSEWORK</u> Making the Project(continued) <u>THEORY:</u> Unit 12 - Product design and development <u>THEORY:</u> Unit 10 - Modern industrial & commercial practise <u>MINI-PROJECT:</u> Paper/card manipulation + material investigation page for CW	• Completion of worksheet resources for Unit 12 - Product design and development(feasibility studies,enterprise and marketing communication data,design communications) • Completion of worksheet resources for Unit 10 - Modern industrial & commercial practise(scales of production,efficient use of materials,computer systems and digital design) • Visit www.aqa.co.uk: to refer to the specification and past exam papers • Visit www.bbcbitessize.co.uk: for theory knowledge • Youtube/how its made: to learn new invasion and new skills

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Examples of Home Learning Tasks	Completion of past exam papers, completion of coursework page in order to meet the deadline
Assessment Tasks, Methods & Frequency	INTERIM Assessment 1 w/b 17.10.26 - Context & all research using 5 different research methods - Initial ideas with colours and annotation INTERIM Assessment 2 w/b 05.12.26 - Well detailed specification based on all research done so far - Section A of past paper to check knowledge on materials and properties INTERIM Assessment 3 w/b 06.02.2027 - Presentation of final idea details through models (photo evidence) - Presentation of well detailed production plan INTERIM Assessment 4 w/b 27.03.2027 - Presentation of modified production plan INTERIM Assessment w/b 29.05.2027 - mock exam
Equipment that Students Need	• Pencils, pens, colouring pencils/pens, ruler, fine liner pens, rubber, glue sticks, scissors sharpener, computer access, calculator

Parent / Carers can help their child by:	• Proof reading their coursework for gaps and errors. Also to ensure that the deadline for coursework submission is met
Useful Websites	• Visit www.aqa.co.uk • Visit www.bbc bitesize.co.uk • Youtube/how its made
Extra-Curricular Activities & Career Opportunities	• Ex-students and members from the engineering/architecture industry to address Y10-Y13 on careers and university choices

Who Can I Contact?	Head of Technology	Miss Layla Jaber
	Teachers of Year 12 Technology	Miss Layla Jaber/ Mr Peter Kwarteng/ Mr Dion Shabani

Holy Family Catholic School Curriculum Overview Year 13 – Technology: Design Tech (Product Design) (A Level)



	Curriculum Content	Suggested Reading or Extension Activities
Half Term 1 (Sept-Oct)	<u>COURSEWORK</u> 16) Making the Project(continued) 17) Photographic Evidence of Production Line with Modifications (All Identified Problems and Solutions while making the product must be included) <u>THEORY</u> Unit 12 - Product design and development(continued from Y12) <u>THEORY</u> Unit 10 - Modern industrial & commercial practise(continued from Y12) <u>MINI-PROJECT</u> Paper/card manipulation + material investigation page for CW	• Completion of worksheet resources for Unit 12 - Product design and development(feasibility studies,enterprise and marketing communication data,design communications) • Completion of worksheet resources for Unit 10 - Modern industrial & commercial practise(scales of production,efficient use of materials,computer systems and digital design) • Visit www.aqa.co.uk: to refer to the specification and past exam papers • Visit www.bbcbitesize.co.uk: for theory knowledge • Youtube/how its made: to learn new invasion and new skills • www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 2 (Nov-Dec)	<u>COURSEWORK</u> 18) Photographic evidence of Final product with annotation 19) Detailed and Comprehensive Testing Strategy and well detailed conclusions 20) Survey among user group with written evidence and detailed analysis <u>THEORY</u> Unit 14 - Design processes <u>THEORY</u> Unit 13 - Design methods <u>MINI-PROJECT</u> Metal fabrication + material investigation page for CW	• Completion of worksheet resources for Unit 14 - Design processes(Use of design process,Prototype development, Industrial contexts, Critical analysis, Third party testing, Tools, equipment and processes, Accuracy in design) • Completion of worksheet resources for Unit 13 -Design Methods(Design methods and processes, Design influences, Designers and their work, Socio economic influences, Developments in technology, Social considerations, Product life cycles) • Visit www.aqa.co.uk: to refer to the specification and past exam papers

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Half Term 3 (Jan-Feb)	<u>COURSEWORK</u> 21) Evaluation of Final Product against Specification 22) Use survey results to suggest modifications to improve the effectiveness of the final product 23) Bibliography and front cover for your folder... <u>THEORY</u> Past exam questions <u>THEORY</u> Unit 15 - Responsible Design <u>MINI-PROJECT:</u> Polymer manipulation + material investigation page for CW	- Completion of worksheet resources for Unit 15 - Responsible design(Environmental issues, Circular economy, Conservation of energy, Planning for accuracy, Planning for accuracy, Standards) - Visit www.aqa.co.uk: to refer to the specification and past exam papers - Visit www.bbcbitessize.co.uk: for theory knowledge - Youtube/how its made: to learn new invasion and new skills www.pinterest.co.uk (for visual aid, ideas and exploring graphic techniques)
Half Term 4 (Feb-Mar)	<u>THEORY</u> Past exam questions	
Half Term 5 (Apr-May)	<u>THEORY(JAL):</u> Past exam questions	
Half Term 6 (Jun-Jul)	Exams	

Examples of Home Learning Tasks	
Assessment Tasks, Methods & Frequency	INTERIM Assessment 1 w/b 24.10.26 - Second full mock exam(carried out in class) to determine final UCAS grades INTERIM Assessment 2 w/b 12.12.26 - Exam questions focussing on maths questions INTERIM Assessment 3 w/b 13.02.2027 - Exam style questions focussing on 6-12 mark questions INTERIM Assessment 4 w/b 03.04.2027 - Full mock exam-paper2 (PGonline version)-1.5 hrs, to be marked internally INTERIM Assessment w/b 08.05.2027

	- Full mock exam-paper1 (PGonline version)-2.5 hrs, to be marked internally
Equipment that Students Need	Pencils, pens, colouring pencils/pens, ruler, fine liner pens, rubber, glue sticks, scissors sharpener, computer access, calculator

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