Year 10 Curriculum Implementation: Design and Technology

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge & Skills	• Technical Principles – core knowledge and understanding- material and their working properties • Focused task – storage	• Technical Principles – core knowledge and understanding – design technology and our world, smart materials, composites and technical textiles • Completion of focused task- storage	• Core design and making principles- Design context and data, Design brief and specification, Developing ideas • Developing a product for a client	• Core design and making skills – Design communication modelling, production planning • Developing a product for a client	• Technical Principles – core knowledge and understanding of mechanical components, devices and electronic systems • Developing a product for a client -finish making and product evaluation	• Start of NEA- Analysis of Context 1, 2 and 3. Identifying and Investigating Design Possibilities
Links to prior learning	• KS3 materials theory, Yr7, 8 &9 D&T • KS3 practical skills Yr7, 8 &9 F&T	• KS3 practical skills Yr7,8 & 9	• KS3 drawing skills D&T • KS3 practical skills Yr7,8 & 9	• KS3 materials theory • KS3 practical skills Yr7,8 & 9	• KS3 materials theory • KS3 practical skills Yr7,8 & 9	• Theory covered in yr10 on topics and prior experience of analysing contexts
Assessment	• Assessment – material and their working properties	• End of unit practical assessment – Storge box • Exam style questions	• Unit assessment – theory	• End of unit practical assessment – Product	• Mock exam	• NEA – Eduqas mark scheme
Home learning	• Retrieval activities and practise exam questions	• Revision and retrieval activities and practise exam questions	• Revision, retrieval activities and practise exam questions	• Revision, retrieval activities and practise exam questions	• Retrieval activities and practise exam questions • Preparation for practical lessons	• Keep NEA up to date
Cultural Capital and extra-curricular opportunities	• Appreciate traditional craftsmanship and design • Develop practical skills and sustainable awareness	• Understand how materials, design, and technology shape industry, society, and sustainability • Gain practical, creative, and digital skills using CAD, CAM, and hands-on making • Appreciate craftsmanship, innovation, and responsible use of resources in real-world contexts	• Understand how technology, data, and user needs shape product design in real-world contexts • Develop creative, practical, and problem-solving skills through designing and making a product • Appreciate professional practices, client-focused design, and innovation in electronics and design industries	• Understand how mechanical systems, components, and devices are used in real-world products • Develop technical drawing, modelling, and production planning skills valued in engineering and design industries • Appreciate the process of turning ideas into functional products, linking creativity with practical problem-solving	• Understand how mechanical and electronic systems combine to create real-world products • Develop practical, technical, and problem-solving skills valued in engineering and design industries • Appreciate the process of evaluating, refining, and completing a functional product, linking creativity with real-world application	• Understand how real-world problems, users, and contexts shape design opportunities • Develop research, analysis, and critical thinking skills valued in creative and professional industries • Appreciate how design responds to cultural, social, and environmental needs
Literacy	• Tier 3 vocab • Oracy opportunities	• Use subject-specific vocabulary (CAD/CAM, sustainability, 6Rs, composites) • Read, write, and annotate technical drawings and project work • Communicate ideas clearly in discussion, presentation, and design justification	• Use subject-specific vocabulary • Read and interpret technical diagrams • Write and annotate design briefs, specifications, evaluations, and development notes • Communicate ideas clearly in presentations, discussions, and client-focused explanations	• Use subject-specific vocabulary • Read and interpret technical drawings, diagrams, and production plans • Write and annotate design ideas, plans, and evaluations clearly • Communicate design concepts effectively in discussions and presentations	• Use subject-specific vocabulary • Read and interpret technical diagrams, schematics, and production notes • Write and annotate evaluations including design modifications • Communicate ideas clearly in discussions, presentations, and client reviews	• Use subject-specific vocabulary • Read and interpret research sources, case studies, and user data • Write clear notes, annotations, evaluations, and design ideas • Communicate findings and design possibilities effectively
Numeracy	• Measuring • Estimating • Cutting/ wasting	• Measure, mark out, and calculate dimensions for materials and products • Estimating, material quantities - efficiency or waste	• Apply ratios, scaling, and dimensions when developing prototypes or designs	• Measure and calculate dimensions accurately for components and assemblies • Apply scale and proportion, in technical drawings • Use calculations for production planning, material quantities, and tolerances	• Measure and mark out components accurately • Apply calculations for dimensions, tolerances, and material quantities • Use data from testing and evaluation to make improvements or adjustments	• Estimating timings and dovetailing to fit 2 hrs
Careers Information, Education, Advice and Guidance (CEIAG)	• Furniture designer • Product designer • Carpenter/joiner • Cabinet maker • Model maker • Craftsperson	• Designer, engineer, product developer, or CAD specialist • Sustainability, materials, and supply chain roles • Craftsperson, or technical textiles specialist	• Product designer, and electrical technician	• Product designer, or CAD technician • Manufacturing engineer, production planner, or model maker • Audio engineer or technical designer (if making a speaker) • Industrial designer	• Mechanical engineer, electronics engineer, or product designer • CAD technician, manufacturing engineer, or model maker • Quality control specialist, audio engineer, or technical designer	• Product designer, industrial designer, or design researcher • Market researcher
Spirituality	• Respect natural resources – use wood sustainably • See beauty in nature – notice the patterns in timber • Show patience – take care, work accurately, and persevere • Take pride – making something useful and meaningful	• Appreciate human creativity and innovation as a reflection of God-given gifts • Reflect on responsible use of resources and stewardship of the environment • Value patience, skill, and purpose in design, making, and problem-solving	• Value careful, purposeful work and perseverance in designing for others • Reflect on ethical responsibility when creating products that serve people and society	• Appreciate creativity, skill, and problem-solving as reflections of human gifts • Value patience, precision, and care in turning ideas into functional products • Reflect on purposeful work and contributing to products that serve others	• Value patience, care, and perseverance in completing a functional product • Reflect on the purpose and usefulness of products for others and society	• Value careful research, reflection, and ethical responsibility in designing for others • Recognise the impact of design on people, society, and the environment
How can parents support the curriculum?	• Ensure home learning tasks are completed • Talk about sustainability and celebrate effort	• Ensure home learning tasks are completed • Encourage discussion about design ideas, sustainability	• Ensure home learning tasks are completed • Encourage revision of topics already covered	• Ensure home learning tasks are completed • Encourage revision	• Ensure home learning tasks are completed • Encourage revision	• Ensure NEA is up to date