Year 7 - Scheme of Learning: Resistant Materials

Word Rich - Oracy, Vocabulary, Reading, Writing	Character (SMSC & Values)	Careers & Employability	Enrichment & Cultural Capital	Equality, Diversity & Inclusivity
❖ Tier 2/3 Vocabulary every lesson - meanings and etymology ❖ Use of texts to support reading/research ❖ Group presentations - Oracy ❖ Use of cold calling oracy in lesson questioning	● SMSC: Sustainability - FSC ● Values taught through moral choices when designing products ● Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers,	● The role of a Designer ● How skills learnt in DT are transferable to other subjects and career paths (Eg Problem Solving)	● Links to historical design movements and prominent designers. ● Investigation and use of cultural patterns in design.	● Using research and exploration, such as the study of different cultures, to identify and understand user needs

Formal Assessments (Title/Date)	Blended Learning	Home Learning
❖ Design and evaluation Design Era Clock (30 Marks) ❖ Manufacturing of Prototype Model (30 Marks) ❖ End of Module Theory Test (30 marks)	● Research ● Moodboard	● Research ● Moodboard ● Timbers ● Design and Design development

Unit of Work	Knowledge and *Skills*	Curriculum Links and Sequencing	National Curriculum *(including KS2)*
Intro to project *Lesson 1-4*	★ Intro to subject, careers and DT links ★ Sustainability - Meaning in terms of design and 6 Rs ★ Research of design movements and the work of others (Cultural design,) ★ Categories of timber (softwoods, hardwoods, manufactured boards), properties & characteristics of timber, sustainability factors of timber, joining techniques for timber, finishes for timber ★ Types of timber joints	**GCSE Link:** ➔ 7.2 The sources, origins, physical and working properties of each natural and manufactured timber and their social and ecological footprint ➔ 1.13 Investigate the work of others **Wider Curriculum Links:** ➔ Links with Art, Geography & Science ➔ Cultural SMSC	● Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists ● Analyse the work of past and present professionals and others to develop and broaden their understanding ● Use cultural design to influence and inspire design ideas and development

		Sequencing Links: ➔ 6 Rs across all DT and progresses in depth in Y8/9 ➔ Understanding how research influences design	
Responding to a design brief & Specification *Lesson 5*	★ Design brief: Design Era Clock ★ Responding to a specification - consider constraints, materials and user needs ★ Developing a mood board based on the specification, brief and previous research	**GCSE Link:** ➔ 2.1 NEA Design and Develop **Wider Curriculum Links:** ➔ Careers: (Product Design) **Sequencing Links:** ➔ Understanding Specification - links to All DT areas and future progression	• use research and exploration, to identify and understand user needs • identify and solve their own design problems and understand how to reformulate problems given to them • develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations • use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses develop and communicate design ideas • using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools
Drawing Skills *Lesson 6-7*	★ Annotated sketches, design justification and development ★ Exploded drawing ★ Generating ideas - ideation ★ Rendering techniques	**GCSE Link:** ➔ 1.17 Communication to present ideas ➔ 7.5.1 Stock forms/types: ➔ 7.3.6 Cultural and ethical factors: ➔ NEA: Design & Develop **Wider Curriculum Links:** ➔ Maths (Scale) Art (use of media) ➔ Career: CAD technician **Sequencing Links:** ➔ Basic design skills - drawing, perspective, CAD modelling to build onto more progressive techniques in Y8/9	
Manufacture *Lesson 8-10*	★ Cutting, shaping and finishing timber ★ Adhesives selection ★ **Assessment: Design movement cultural pattern influence clock**		
Evaluation *Lesson 10*	★ **Assessment: Evaluation and annotation against specification** ★ Peer and self-assessment ★ Recap skills and knowledge gained so far. ★ Review of design ideas compared to manufacture	**GCSE Link:** ➔ NEA: Evaluation **Wider Curriculum Links:** ➔ English (Structure of an evaluation) **Sequencing Links:** ➔ Use of spec to evaluate and adapt	• test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups

		design proposals	
Manufacture And Evaluation *Lesson 11-13*	★ Cutting, shaping and finishing timber ★ Health and safety, use of modelling tools ★ Properties of timbers/polymers, adhesives ★ **Assessment: Design movement cultural pattern influence clock**	**GCSE Link:** ➔ NEA: Manufacture **Wider Curriculum Links:** ➔ Maths (Measurement & Scale) ➔ Career: Model maker **Sequencing Links:** ➔ Introductory making skills to progress onto Y8/9	• select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture
End of module Test & Reflection *Lesson 14-15*	★ **Assessment: End of module test (Knowledge)** ★ Review and reflection of marks ★ Links to careers and other subjects ★ Reflect on Learning Journey and DT mapping & progressions ★ Reflect on fundamental researching, designing, making and evaluation skills that will be consistently used through their DT Learning Journey.	**GCSE Link:** ➔ Core Theory **Wider Curriculum Links:** ➔ English and Maths **Sequencing Links:** ➔ Knowledge recall through exam style questions	•