Design & Technology

Design & Technology

	Autumn Term 1.1	Autumn Term 1.2	Spring Term 2.1	Spring Term 2.2	Summer Term 3.1	Summer Term 3.2
Year 7	**House Leaf:** Students introduced to School Values, CAD – 2D Design - and CAM – laser cutter to create a leaf for the House Values Tree	**Context – Get Organised:** Consider what items need organising in different rooms. Wooden tube manufacture Timber joints skill – Dowel joint and Finger Joint. Understanding relevant data	**Context – Get Organised:** Design techniques - isometric drawing and sketching Orthographic drawing design ideas for storage unit	**Context - Get Organised** Intro to 3D CAD - TinkerCAD Designing item for storage unit Creating individual final product	**Context - Get Organised** Creating individual final product. Using TinkerCAD to create final product	**Mechanical Systems** Understanding keywords linked to movement Building card mechanisms Applying learning to mechanisms
Year 8	**Context – Mindfulness and Well Being.** Considering what can be done to improve M&WB and products to create Skill Product Analysis Skill - Card modelling techniques	**Context – Mindfulness and Well Being.** Research skill - 20th and 21st Century Designers Electronic systems - understanding inputs, outputs and components. Skill - creating circuit boards and soldering	**Context – Mindfulness and Well Being.** Design techniques - Form over function and design through a lens. Designing own light top	**Context – Mindfulness and Well Being.** Creating own light top Completing circuit construction	**Context – Mindfulness and Well Being.** Recap on TinkerCAD skills, designing light component on TinkerCAD for 3D Print	**Context – Mindfulness and Well Being.** Introduction to Microbit
Year 9	**Context – Design4SDGs** Considering the given SDGs for the Design4SDG competition. Collaboration to decide design direction and chosen design route Initial design ideas using design technique Random Image Inspiration	**Context – Design4SDGs** Finalising design ideas and starting to generate final Graphics, 3D Prototype, Campaign, Spoken word, Video or Wildcard. Also making use of Canva.com and TinkerCAD	**Context – UN SDGs Microbit** Recap/Intro to Microbit using SDG tasks on microbit.com	**Context – DATA Inspired by Design - Wearable Technology context** Working through User Centred Design project to create wearable technology using Microbit, modelling, and 3D Printing	**Context – DATA Inspired by Industry - Wearable Technology context** Working through User Centred Design project to create wearable technology using Microbit, modelling, and 3D Printing	**Context – DATA Inspired by Industry - Wearable Technology context** Introduction to Sculpt in Autodesk Fusion 360, given tasks. Modelling final prototypes for wearable technology using Fusion 360
Year 10	**Skills Development:** Timber joints Forming polymers Use of 2D Design **Theory:** Usability, ergonomics and anthropometrics. Energy types and energy storage.	**Skills Development:** Forming polymers cont… Modelling methods – card and paper, Styrofoam. **Theory:** Mechanical Devices and Electronic Systems	**RSA Competition:** GCSE NEA skills development using RSA Competition contexts as driver. **Theory:** Understanding Stakeholders Design Methods – Scruffitti, Random image idea generation, Form before function, Design through a lens.	**RSA Competition:** NEA skills development using RSA Competition contexts as driver. **Theory:** Fibres and Fabrics and Timbers and Manufactured Boards	**CAD skills:** Introduction to Autodesk Fusion 360. CAM – 3D Printer. **Theory:** N&ET and Smart and Modern Materials, and Composite Materials	**GCSE NEA launch - 1st June 2025** Launch Day and Strand 1 – Investigation for GCSE NEA Project. **Theory:** Polymers and Past and Present Designers

Design & Technology

Year 11	**GCSE NEA:** Finalising Strand 1 and Strand 2 – Design Ideas **Theory:** Lifecycle Assessment/LCA and SM&C Issues	**GCSE NEA** Strand 2 – Design Ideas - Design Development. **Theory:** Communicating design ideas - Isometric, 2Pt perspective and orthographic	**GCSE NEA** Strand 4 – Final Design Prototype.	**GCSE NEA** Strand 5 – Final evaluation and completion of NEA	**Theory** Focused revision for GCSE 2 hour exam concentrating on In Depth sections and longer answer questions.	N/A
Year 12	**Skills Development:** Recapping and development of GCSE practical skills **Theory** 10 Principles of Good Design - Deiter Rams 20th and 21st Century Designers Smart and Modern Materials	**Skills Development:** Recapping and development of GCSE practical skills **Theory** Product Lifecycle Material types and finishes	**RSA Competition:** A Level NEA skills development using RSA Competition contexts as driver.	**RSA Competition:** A Level NEA skills development using RSA Competition contexts as driver.	**A Level NEA:** Strand 1 – Feasibility study and Investigation	**A Level NEA:** Strand 1 – Feasibility study and Investigation completion and Strand 2 – Initial Design Ideas.
Year 13	**A Level NEA:** Strand 2 – Design Ideas and Design Development	**A Level NEA:** Strand 2 – Design Development and Strand 4 – Final Design Prototype	**A Level NEA:** Strand 2 – Design Development and Strand 4 – Final Design Prototype	**A Level NEA:** Strand 2 – Design Development, Strand 4 – Final Design Prototype and Strand 5 – Evaluation and Testing	**Theory:** Focused revision for A Level Paper 1 and Paper 2 concentrating on Paper 2 Problem Solving in D&T and longer answer questions.	N/A

Overview