

KS3 Design and Technology Curriculum Map

	Knowledge and understanding	Research and design skills	Practical skills	Analysis and evaluation
Year 7	Structures <ul style="list-style-type: none"> - Types of bridge structure - Simple forces Woods <ul style="list-style-type: none"> - Classification of woods - Characteristics of wood - Joining methods - Tools and equipment - 20th Century design movements 	Bridge <ul style="list-style-type: none"> - Using 5Ws to focus research - Finding information using internet - Creating designs on existing research Clock <ul style="list-style-type: none"> - Creating designs based on 20th Century design styles 	Bridge <ul style="list-style-type: none"> - Work shop safety - Using a glue gun - Creating triangular structures Clock <ul style="list-style-type: none"> - Lap and finger joints - Using a pillar drill - Using a belt sander - Using hand tools for wood 	Bridge <ul style="list-style-type: none"> - Use of 5Ws to structure analysis - Reflection of bridge design to inform improvements to second design - Simple evaluation of project Clock <ul style="list-style-type: none"> - Use of 5Ws to structure analysis
Year 8	Metals and plastics <ul style="list-style-type: none"> - Classifications - Properties - Tools and equipment - Shaping techniques Electronics <ul style="list-style-type: none"> - Purpose of LEDs and resistors CAD <ul style="list-style-type: none"> - 2D design tools 	Balance toy <ul style="list-style-type: none"> - Using 2D design to create a CAD drawing for laser cutter Electronics <ul style="list-style-type: none"> - To design for a target market - Generate a range of ideas with simple annotation - Development of idea leading to a final design 	Balance toy <ul style="list-style-type: none"> - Using a metal lathe - Using a tap and die - Shaping metal with hand tools - Laminating wood - Using pop rivets to join metal Electronics <ul style="list-style-type: none"> - How to solder safety - How to use strip heater - How to create a circuit 	Balance toy <ul style="list-style-type: none"> - Reflective evaluation at end of project - Evaluation of processes and skills - Peer evaluation
Year 9	Metals <ul style="list-style-type: none"> - Brazing - Joining methods - Finishing methods CAD <ul style="list-style-type: none"> - Solid Works tools - Types of drawing - Purpose of CAD/CAM 	Metal bug <ul style="list-style-type: none"> - Creating a mood board - Creating designs based on nature - Annotation with review of ideas - Isometric drawing by hand CAD <ul style="list-style-type: none"> - Isometric drawing using 2D design - Introduction to solid works to create 3D parts and assembly 	Metal bug <ul style="list-style-type: none"> - Measuring and marking out using metal work tools - Shaping metal with hand tools - Brazing and dip coating 	Metal bug <ul style="list-style-type: none"> - Task analysis at start of project using ACCESSFM - Reflective evaluation at end of project using some GCSE criteria - Peer evaluation
By KS4	To have a basic knowledge of wood, metal and plastic; classifications, types, joining and shaping	To have designed using traditional and CAD methods.	To have demonstrated a range of skills within all 3 main material areas and to have good knowledge of 2D design and Solid works.	To have demonstrated how to analyse and evaluate at different stages of the design process (NEA)