Icknield High School 'Raising the Achievement of All' KEY STAGE 3 CURRICULUM MAP Subject: Design & Technology Year:8

WELL-SEQUENCED **CONTEXUALISED/INCLUSIVE** **AMBITIOUS**

	Autumn 1/Spring 2	Autumn 2/Summer 1	Spring 1/Summer 2
Key Questions	• What is a dog tag and what links can be made to history? • What tools and equipment is needed to work with metal based materials • Why has the environment we live in become so important? • What can be done to create a more sustainable future?	• How is wood joined together? • What is the iterative design process and why is it important? • How can students develop their confidence in using workshop tools?	• What is a surface finish ? • Why is a surface finish applied? • Why do you need to evaluate? • How does evaluating help with the iterative design process
Content: 'Know what'	• **Aluminium dog tag practical** - To know a range of tools used to cut and shape aluminium in order to create a dog tag (Hack saw, junior hack saw, scriber, file, centre punch, letter stamp, cordless drill. • **Practical activity pine base**- To know what tools, machines and equipment used to cut, shape and sand MDF wood. Using a range including: Tennon saw, Coping saw, scroll saw, sand paper, steel rule, bench hook, try square • **Work of others** - Investigate range of designers and identify their style, ethos and work. Designers including: Charles Rennie Mackintosh, Morag Myerscough, Malika Favre, Le Corbusier • **Environment and sustainability** - To know the 6R's are, global warming and landfill. The impact these have on our planet and the environment we live in and how we can reverse climate change through design. How reusing a plastic bottle to grow plants can help contribute towards a more sustainable future.	• **Wood joints** - To know the different joining methods to join two pieces of wood together using a butt joint • **Iterative process: Design ideas** - Thinking creatively - The importance of the designing process and how it helps with being creative and problem solving. • **Iterative process** – To know the process of improving design ideas through development and feedback.	• **Practical activity** - To know what tools, machines and equipment used to cut, shape and sand MDF wood. Using a range including: Tennon saw, Coping saw, scroll saw, sand paper, steel rule, try square, scroll saw, belt and bobbin sander. This is applied to the four side designs. • **Surface finishes** – identify the different surface finished applied to timber for protection and aesthetical reasons. • **Recall - T**imber and plastic theory from Year 7 • **Evaluation** – To know the different elements to creating a detailed and constructive evaluation based on a final product
Expertise 'Know how'	• **Aluminium dog tag practical** - Teacher led demonstration - Safely and accurately use hand tools to shape and waste metal material. Work is carried out in the workshop (Hack saw, junior hack saw, scriber, file, centre punch, letter stamp, cordless drill.). Linking to History and the War. • **Practical activity Pine base** - Teacher led demonstration - Students start to manufacture their square box in the workshop using a range of tools, equipment and machines. Including the following: Scroll saw, coping saw, sand paper and rasp. They need to know how to accurately use the steel rule and try square to mark and measure the four sides to help with the manufacturing process. • **Work of others** - Investigating the work of others is carried out through using the internet to research their work and creating mindmaps. Students will analyse their work to gain a deeper understanding using ACCESSFM and know how to incorporate their design style into their own work. • **Environment and sustainability** Students are introduced to the 6R's through class discussion, reading information and answering questions to help solidify their understanding.	• **Wood joints** - Teacher led demonstration on marking and measuring the half-lap joint. Students will use workshop tools to mark, measure and cut out the butt joint. They will use a tenon saw, coping saw, steel rule, try square, bench hook. • **Iterative process: Design ideas** Students are tasked to create 12 design ideas for the sides of their plant pot holder project based on their chosen designer and their style, work and from students own imagination • **Iterative process – Developing** Iterative process – Students will select four design ideas to further develop through sketching and feedback from others and how well it meets the design brief and spec. • **Wood joints** Teacher led demonstration - Students start to manufacture their square sidesin the workshop using a range of tools, equipment and machines. Including the following: Scroll saw, coping saw, sand paper and rasp. They need to know how to accurately use the steel rule and try square to mark and measure the four sides to help with the manufacturing process.	• **Practical activity** - To know what tools, machines and equipment used to cut, shape and sand MDF wood. Using a range including: Tennon saw, Coping saw, scroll saw, sand paper, steel rule, bench hook, try square, scroll saw • **Surface finishes** - Teacher led demonstration – students will apply the knowledge of painting and apply paint to the surface of their box and side designs in the style of their chosen designers work using a mixture of poster paint and acrylic paint. Work is carried out in the workshop. • **Metal theory** - Metal theory is delivered through discussion, examples, reading and answering questions to solidify the knowledge. • **Recall -** Recall of timber and plastic happens through questioning and discussion. • **Evaluation** - Students will answer set questions to help evaluate their final product and how successful or unsuccessful they have been at meeting the brief, design spec criteria.
Literacy/ Numeracy/ SMSC/	• Marking and measuring out using steel rule for the aluminium dog tag and the MDF box • Reading extracts to help with answering questions for the environment section	• Marking and measuring out using steel rule for the side design ideas and the measurements on the piece of wood	• Reading extracts to help with answering questions for the metal theory • Reading and answering questions for the evaluation
Disciplinary literacy	• Discussion on the different Health & Safety aspects in the workshop • Discussion on the different tools used - DT specific tools • Definition of key words (Tier 2-3) through discussion • Reading of text on the powerpoint • Independent reading • Reading out loud • Discussion on answers from students • Reviewing answers from students and getting students to read out loud • Answering questions with a short answer	• Class demonstrations by the teacher • Student involvement during demonstrations – questions being asked • Starter activities on key words and the key tools used for each process • Meaning and uses of each tools used	• Discussion on what evaluation is and its importance • What is the evaluation process • Discussing the questions • Students use the powerpoint/paper to write their evaluation based on the plant holder Students will base their answers on a set questions including their own personal opinions • In-depth analysis of the modifications for the design
Careers	• Class discussion on career pathways linking to designing and making and problem solving • Starter activities linked to careers and work of others to show the different designers and their field of expertise	• Class discussion on career pathways linking to designing and making and problem solving • Environment based careers is a focus • Starter activities linked to careers	• Class discussion on career pathways linking to designing and making with material selection • Starter activities linked to careers

*Due to the carousel, the different terms have been merged into the same column where the changeover would happen