Meadow Park: Sequence of Learning Overview 2023-2024

Subject- Design Technology

Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
Year 7					
DA 9 - take creative risks when making design decisions	DB 9 - develop and communicate design ideas using annotated sketches	MB 9 - use a broad range of manufacturing techniques including handcraft skills and machinery to manufacture products precisely	MB 11 - apply a range of finishing techniques, including those from art and design, to a broad range of materials including textiles, metals, polymers and woods	EA 2 - actively involve others in the testing of their products	TK 15 - how to construct and use simple gear trains to drive mechanical systems from a high revving motor
TK 1 - how to classify materials by structure e.g. hard words, soft woods, ferrous and nonferrous, thermoplastic and thermosetting plastics	MB 7 - follow procedures for safety and hygiene and understand the process of risk assessment	MA 1 - produce ordered sequences and schedules for manufacturing products they design, detailing resources required		EB 1 - products through disassembly to determine how they are constructed and function	
MB 1 - make use of specialist equipment to mark out materials	DA 1 - develop detailed design specifications to guide their thinking	TK 17 - use learning from mathematics to help design and make products that work	TK 20 - understand how more advanced mechanical systems used in their products enable changes in movement and force	DB 6 - combine ideas from a variety of sources	EA 1 - evaluate their products against their original specification and identify ways of improving them
EB 2 - the positive and negative impact that products can have in the wider world	TK 2 - about the physical properties of materials e.g. grain, brittleness, flexibility, elasticity, malleability and thermal				
Year 8					
DA 9 - take creative risks when making design decisions	DA 1 - develop detailed design specifications to guide their thinking	MB 9 - use a broad range of manufacturing techniques including handcraft skills and machinery to manufacture products precisely	MB 11 - apply a range of finishing techniques, including those from art and design, to a broad range of materials including textiles, metals, polymers and woods	EA 4 - produce short reports, making suggestions for improvements	TK 15 - how to construct and use simple and compound gear trains to drive mechanical systems from a high revving motor
TK 1 - how to classify materials by structure e.g. hard words, soft woods, ferrous and nonferrous, thermoplastic and thermosetting plastics	MB 7 - follow procedures for safety and hygiene and understand the process of risk assessment	MB 5 - adapt their methods of manufacture to changing circumstances		EB 1 - products through disassembly to determine how they are constructed and function	
MB 1 - make use of specialist equipment to mark out materials	DA 4 - develop design specifications that include a wider range of requirements such as environmental, aesthetic, cost, maintenance, quality and safety	MA 3 - create production schedules that inform their own and others' roles in the manufacturing of products they design	TK 20 - understand how more advanced mechanical systems used in their products enable changes in movement and force	DB 7 - use a variety of approaches, for example biomimicry and user-centred design, to generate creative ideas and avoid stereotypical responses	EA 5 - test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups
EB 2 - the positive and negative impact that products can have in the wider world	TK 2 - about the physical properties of materials e.g. grain, brittleness, flexibility, elasticity, malleability and thermal	TK 17 - use learning from mathematics to help design and make products that work			
Year 9					

DA 9 - take creative risks when making design decisions TK 8 - how to make adjustments to the settings of equipment and machinery such as drilling machines	DB 9 - develop and communicate design ideas using annotated sketches	MB 9 - use a broad range of manufacturing techniques including handcraft skills and machinery to MB 6 - recognise when it is necessary to develop a new skill or technique	MB 11 - apply a range of finishing techniques, including those from art and design, to a broad range of materials including textiles, metals, polymers and woods	EA 4 - produce short reports, making suggestions for improvements EB 3 - products that they are less familiar with using themselves	TK 15 - how to construct and use simple and compound gear trains to drive mechanical systems from a high revving motor
EB 5 - how products can be developed considering the concept of 'cradle to grave' MB 1 - make use of specialist equipment to mark out materials	MB 7 - follow procedures for safety and hygiene and understand the process of risk assessment	MA 4 - make simple use of planning tools, for instance Gant charts TK 17 - use learning from mathematics to help design and make products that work	TK 20 - understand how more advanced mechanical systems used in their products enable changes in movement and force	DB 7 - use a variety of approaches, for example biomimicry and user-centred design, to generate creative ideas and avoid stereotypical responses	EA 3 - select appropriate methods to evaluate their products in use and modify them to improve performance

Year 10- Construction

Explore techniques to improve organisational skills Time management techniques Organisational techniques	**Plan tasks and manage own responsibilities** Exploring: Hand and power tools Equipment Materials	**Making minor repairs in a house** Small electrical jobs General DIY Home security Disability support
Review techniques to improve organisational skills Strengths and weaknesses of techniques Identifying ways to improve	**Using selected tools and equipment to make wooden frame** Forming basic wood working joints Suitable finishing techniques and finishes for timber Reviewing own performance	**Managing own responsibilities and communicating effectively** Responding to requests and needs of customers Ensuring work is fit for purpose

Year 11- Construction

Explore skills needed to meet a career goal Benefits of developing a progression plan Exploring progression opportunities Setting a progression goal	**Managing own responsibilities and communicating effectively** Decision making skills: selecting tools and materials Choose correct finish for given scenarios Health and safety	**Coursework deadline has passed** **Pupils now have the chance to using skills learned over the two years to create a three dimensional timber product of their own design** Designing skills 2D/3D sketching Joinery skills Complex woodworking joints
Produce a progression plan Short and long term goals Identify skills and behaviours needed Review own skills against a progression goal	**Decorating inside walls** Preparation of walls Mixing paste Applying wallpaper Using emulsions and gloss Double coating walls	

KS3	
	Designing
	Making (MA) - Planning
	Making (MB) -Practical
	Evaluate
	Technical Knowledge

KS4	
A1	**BEING ORGANISED**
CON 7	**MAKING CARPENTRY JOINTS**
CON 10	**MAKING MINOR REPAIRS IN A HOUSE**
A2	**DEVELOPING A PERSONAL PROGRESSION PLAN**
CON 11	**DECORATING AN INSIDE WALL**