

# Meadow Park: Sequence of Learning Overview 2024-2025



## Subject- Design technology

Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
<b>KS2</b>					
PMB 9 – accurately measure, mark out, cut and shape materials and components	PEA 1 – talk about their design ideas and what they are making	PMB 10 - accurately assemble, join and combine materials and components	PDB 13 - use computer-aided design to develop and communicate their ideas	PEB 18 - how well products have been made	PMB 15 - use a wider range of materials and components than KS1 , including construction materials and kits, textiles, food ingredients , mechanical components and electrical components
PDB 11 – model their ideas using prototypes and pattern pieces	PMA5 - produce appropriate lists of tools, equipment and materials that they need	PEA 8 – identify the strengths and areas for development in their ideas and products	PDB 9- make design decisions, taking account constraints such as time , resources and cost	PMB13 - demonstrate resourcefulness when tackling practical problems	PTK 20 - how to use learning from mathematics to help design and make products that work
<b>Year 7</b>					
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 woods, 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				
<b>Year 8</b>					
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	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 woods, 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	materials including textiles, metals, polymers and woods	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	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 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 8 - how to make adjustments to the settings of equipment and machinery such as drilling machines		MB 6 - recognise when it is necessary to develop a new skill or technique		EB 3 - products that they are less familiar with using themselves	
EB 5 - how products can be developed considering the concept of 'cradle to grave'	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 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
MB 1 - make use of specialist equipment to mark out materials		TK 17 - use learning from mathematics to help design and make products that work			

### Year 10

<p>C2 Learning outcome A</p> <p>Be able to understand hazards and risk for safe production of a practical production outcome</p> <p>A1 Risk Assessments</p>	<p>C2 Learning outcome A</p> <p>Be able to understand hazards and risk for safe production of a practical production outcome</p> <p>A2 Measuring , marking and setting out</p>	<p>C2 Learning outcome B</p> <p>Be able to produce a practical construction outcome</p> <p>B1 Jointing and incorporation of materials</p>	<p>C2 Learning outcome B</p> <p>Be able to produce a practical construction outcome</p> <p>B2 Accuracy in construction</p>	<p>C3 Learning outcome A</p> <p>Understand the needs of a client and the constraints on design when designing a low-rise building</p> <p>A1 Clients needs C3</p>	<p>C3 Learning outcome A</p> <p>Understand the needs of a client and the constraints on design when designing a low-rise building</p> <p>A2 Constraints on design</p>
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<p>C1 Learning outcome A</p> <p>Understand the performance requirements for low-rise construction</p> <p>A1 Low-rise construction requirements</p>	<p>C1 Learning outcome A</p> <p>Understand the performance requirements for low-rise construction</p> <p>A2 Sustainability</p>	<p>C1 Learning outcome A</p> <p>Understand the performance requirements for low-rise construction</p> <p>A3 Common structural forms for low-rise construction</p>	<p>C2 Learning outcome B</p> <p>Be able to produce a practical construction outcome</p> <p>B3 Dimension checks on final outcome</p> <p>C1 Learning outcome B</p> <p>Explore how sub-structures are constructed</p> <p>B1 Preconstruction work</p>	<p>C1 Learning outcome B</p> <p>Explore how sub-structures are constructed</p> <p>B2 Sub-structure groundworks</p>	<p>C3 Learning outcome A</p> <p>Understand the needs of a client and the constraints on design when designing a low-rise building</p> <p>A3 Client brief for a design of a low-rise building</p> <p>C1 Learning outcome C</p> <p>Explore how sub-structures are constructed</p> <p>C1 Sub-structure walls</p>
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**Year 11**

<p>C3</p> <p>Learning outcome B Be able to graphically communicate the design of a low-rise building</p> <p>B1</p> <p>Development of sketching techniques</p>	<p>C3</p> <p>Learning outcome B Be able to graphically communicate the design of a low-rise building</p> <p>B2</p> <p>Generation of Ideas in response to client needs</p>	<p>C1</p> <p>Learning outcome D</p> <p>Understand the work of the construction industry</p> <p>D1</p> <p>The type of work undertaken in the construction industry</p>	<p>C1</p> <p>Learning outcome D</p> <p>Understand the work of the construction industry</p> <p>D2</p> <p>The construction industry and the built environment</p>	<p>C1</p> <p>Revision &amp; Examination</p>
<p>C1</p> <p>Learning outcome C Explore how sub-structures are constructed</p> <p>C2</p> <p>Super – structure floors</p>	<p>C1</p> <p>Learning outcome C Explore how sub-structures are constructed</p> <p>C3</p> <p>Super – structure roof</p>			

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

KS4	
<b>C1</b>	<b>Construction Technology</b>
<b>C2</b>	<b>Construction in Practice</b>
<b>C3</b>	<b>Construction and design</b>