



Design & Technology Progression Map

Subject Intent

Beverley's Design Technology curriculum offers a coherently planned sequence of lessons to help teachers ensure they have progressively covered the skills and concepts required in the National Curriculum. Design Technology intends to prepare each student for their next phase of education whilst at the same time giving all students a broad and balanced experience and understanding of tools and techniques. Students will develop a well-rounded knowledge of design and evaluation.

The Design Technology concepts are to master practical skills, design, make, evaluate and improve and to take inspiration from design throughout history. The concept of mastering practical skills involves developing the skills needed to make high quality products (we have highlighted a range of skills but they may be added to or changed as appropriate for your pupils). The concept of designing, making, evaluating and improving involves developing the process of design thinking and seeing design as a process. The concept of taking inspiration from design throughout history involves appreciating the design process that has influenced the products we use in everyday life.

For EYFS we have designed a curriculum based on key skills, that allows exploration, creativity and imagination. For those students above Milestone 3 they will follow the appropriate National Curriculum or accreditation routes.

Subject Implementation

At Beverley we weave DT through termly Key Stage projects. By using Project Based Learning (PBL), we aim for our students to develop real life skills through various projects that our students can make connections and reference to. By using this focussed, practical approach, PBL encourages active enquiry to engage and enthuse our students about materials, computing, electricals and electronics, construction and mechanics. Our curriculum offers opportunities to design, create and evaluate, drawing on developments in technology over the years and encouraging students to think about technology in the future, and the environmental effects it has on our planet. Through revisiting and consolidating skills, our lesson plans and resources help children build on prior knowledge alongside introducing new skills and challenge. The revision and inclusion of key vocabulary is built into each lesson to ensure that students are allowed opportunities to repeat and revise this knowledge.

Subject Impact

Beverley Students are happy, engaged and active enquirers in learning activities. They will develop their skills, knowledge and understanding in DT. Our DT curriculum promotes the four areas of preparation for adulthood. Students are encouraged to make choices about their work and projects, building on their

employability skills. Students are encouraged to work with independence through adult modelling and prompts such as instructions and schedules. They are also encouraged to build teamwork and leadership skills through consolidating pupils' knowledge by allowing opportunities for coaching and mentoring others. Students are taught all necessary health and safety measures in order to stay safe in the workshop and maintain good health. Our students will achieve progress through National Curriculum objectives, Beverley Steps, Accreditation outcomes and EHCP outcomes.

Subject Progression

Level Expected at the End of EYFS

We have selected the most relevant statements from the Development Matters age ranges for 0 -3 and 3 – 4 years olds as well as highlighting the statements within the ELGs which feed into the programme of study for Design Technology.

Design & Technology		
0 - 3	Understanding the World	<ul style="list-style-type: none"> • I can explore different materials, using all their senses to investigate them. • I can manipulate and play with different materials. • I can use my imagination as I consider what I can do with different materials. • I can make simple models which express my ideas. • I can repeat actions that have an effect. • I can explore materials with different properties. • I can explore natural materials, indoors and outside.
3 – 4	Understanding the World	<ul style="list-style-type: none"> • I can explore different materials freely, to develop my ideas about how to use them and what to make. • I can develop my own ideas and then decide which materials to use to express them. • I can join different materials and explore different textures. • I can use all my senses in hands-on exploration of natural materials. • I can explore collections of materials with similar and/or different properties. • I can talk about what I see, using a wide vocabulary. • I can explore how things work. • I can talk about the differences between materials and changes I notice.
Reception	Understanding the World	<ul style="list-style-type: none"> • I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • I can share my creations, explaining the process I have used. • I can return to and build on previous learning, refining my ideas and developing my ability to represent them.
ELG	Understanding the World	<ul style="list-style-type: none"> • I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • I can share my creations, explaining the process I have used.

The following curriculum progression map comprehensively shows the progression of historical skills and concepts from Pre Milestone 1 – Milestone 3. For those students above Milestone 3 they will follow the appropriate National Curriculum/ Accreditation routes.

Accreditation routes are in parentheses eg. (Entry Level 1 – Entry Level 2).

	<p align="center">Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)</p>	<p align="center">Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)</p>	<p align="center">Pre Milestone 3 Beverley Steps P8 - 9 (Working Towards Entry Level – Entry Level 1))</p>
<p>MASTER PRACTICAL SKILLS - MATERIALS</p>	<ul style="list-style-type: none"> • I can assemble provided components. • I can contribute to activities. • I can grasp and move simple tools. • I can explore options within a limited range of materials. • I can use basic tools appropriately. • I can demonstrate preferences for products. • I can demonstrate preferences for materials. 	<ul style="list-style-type: none"> • I can recognise familiar products. • I can explore the different parts products are made from. • I can watch others using basic tools. • I can copy the correct action for using a tool. • I can contribute in making exercises. • I can operate familiar products. • I can explore products to see how they work. • I can use basic tools or equipment in simple processes. • I can choose appropriate tools and equipment. • I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> • I can explore various products. • I can communicate views about products. • I can manipulate basic tools in making activities. • I can use tools and equipment appropriately. • I can contribute in decision making. • I can discuss what I am going to do and why.

<p align="center">Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)</p>	<p align="center">Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)</p>	<p align="center">Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)</p>
<ul style="list-style-type: none"> • I can cut materials safely using tools provided. • I can measure and mark out to the nearest centimetre. • I can demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • I can demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). 	<ul style="list-style-type: none"> • I can cut materials accurately and safely by selecting appropriate tools. • I can measure and mark out to the nearest millimetre. • I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • I can select appropriate joining techniques. 	<ul style="list-style-type: none"> • I can cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • I can show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).
<p align="center">Milestone 4 Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	<p align="center">Milestone 5</p>	
<ul style="list-style-type: none"> • I can select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture • I can select from and use a wider, more complex range of materials, components and ingredients, considering their properties 	<ul style="list-style-type: none"> • I can use the correct tools, materials and equipment (including CAM, where appropriate) and demonstrate a high level of understanding of their use. • I can show a high level of quality control is planned to ensure the prototype would be accurate. 	

	<ul style="list-style-type: none">• I can understand and use the properties of materials and the performance of structural elements to achieve functioning solutions.	
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MASTER PRACTICAL SKILLS – ELECTRICALS AND ELECTRONICS	Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)	Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)	Pre Milestone 3 Beverley Steps P8-9 (Working Towards Entry Level – Entry Level 1))
	<ul style="list-style-type: none"> • I can assemble provided components. • I can contribute to activities. • I can grasp and move simple tools. • I can explore options within a limited range of materials. • I can use basic tools appropriately. • I can demonstrate preferences for products. • I can demonstrate preferences for materials. 	<ul style="list-style-type: none"> • I can recognise familiar products. • I can explore the different parts products are made from. • I can watch others using basic tools. • I can copy the correct action for using a tool. • I can contribute in making exercises. • I can operate familiar products. • I can explore products to see how they work. • I can use basic tools or equipment in simple processes. • I can choose appropriate tools and equipment. • I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> • I can explore various products. • I can communicate views about products. • I can manipulate basic tools in making activities. • I can use tools and equipment appropriately. • I can contribute in decision making. • I can discuss what I am going to do and why.
	Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)	Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)	Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)
	<ul style="list-style-type: none"> • I can diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage) 	<ul style="list-style-type: none"> • I can create series and parallel circuits. 	<ul style="list-style-type: none"> • I can create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).
Milestone 4	Milestone 5		

	<p>Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	
	<ul style="list-style-type: none"> I can understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs] 	<ul style="list-style-type: none"> I can show good evidence that various iterations are as a result of considerations linked to testing, analysis and evaluation of the prototype. I can make detailed reference to any modifications either proposed or undertaken.

MASTER PRACTICAL SKILLS – COMPUTING	Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)	Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)	Pre Milestone 3 Beverley Steps P8-9 (Working Towards Entry Level – Entry Level 1))
	<ul style="list-style-type: none"> • I can assemble provided components. • I can contribute to activities. • I can grasp and move simple tools. • I can explore options within a limited range of materials. • I can use basic tools appropriately. • I can demonstrate preferences for products. • I can demonstrate preferences for materials. 	<ul style="list-style-type: none"> • I can recognise familiar products. • I can explore the different parts products are made from. • I can watch others using basic tools. • I can copy the correct action for using a tool. • I can contribute in making exercises. • I can operate familiar products. • I can explore products to see how they work. • I can use basic tools or equipment in simple processes. • I can choose appropriate tools and equipment. • I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> • I can explore various products. • I can communicate views about products. • I can manipulate basic tools in making activities. • I can use tools and equipment appropriately. • I can contribute in decision making. • I can discuss what I am going to do and why.
	Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)	Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)	Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)
	<ul style="list-style-type: none"> • I can model designs using software. 	<ul style="list-style-type: none"> • I can control and monitor models using software designed for this purpose 	<ul style="list-style-type: none"> • I can write code to control and monitor models or products. • I can use instructions to set up and use CAD/CAM to manufacture parts
	Milestone 4	Milestone 5	

	<p style="text-align: center;">Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	
	<ul style="list-style-type: none"> • I can apply computing and use electronics to embed intelligence in products that respond to inputs [e.g, sensors], and control outputs (e.g, actuators), using programmable components [e.g, microcontrollers]. 	<ul style="list-style-type: none"> • I can show evidence of good development work, using a range of 2D/3D techniques (including CAD where appropriate) in order to develop a prototype. • I can select materials/components that are mostly appropriate with good research into their working properties and availability. • I can use the correct tools, materials and equipment (including CAM where appropriate) and operate safely with a good level of skill.

MASTER PRACTICAL SKILLS – CONSTRUCTION	Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)	Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)	Pre Milestone 3 Beverley Steps P8-9 (Working Towards Entry Level – Entry Level 1))
	<ul style="list-style-type: none"> • I can assemble provided components. • I can contribute to activities. • I can grasp and move simple tools. • I can explore options within a limited range of materials. • I can use basic tools appropriately. • I can demonstrate preferences for products. • I can demonstrate preferences for materials. 	<ul style="list-style-type: none"> • I can recognise familiar products. • I can explore the different parts products are made from. • I can watch others using basic tools. • I can copy the correct action for using a tool. • I can contribute in making exercises. • I can operate familiar products. • I can explore products to see how they work. • I can use basic tools or equipment in simple processes. • I can choose appropriate tools and equipment. • I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> • I can explore various products. • I can communicate views about products. • I can manipulate basic tools in making activities. • I can use tools and equipment appropriately. • I can contribute in decision making. • I can discuss what I am going to do and why.
	Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)	Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)	Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)
	<ul style="list-style-type: none"> • I can use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products. 	<ul style="list-style-type: none"> • I can choose suitable techniques to construct products or to repair items. • I can strengthen materials using suitable techniques 	<ul style="list-style-type: none"> • I can develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).
Milestone 4	Milestone 5		

	<p style="text-align: center;">Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	
	<ul style="list-style-type: none"> • I can develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools. 	<ul style="list-style-type: none"> • I can show a high level of quality control is planned to ensure the prototype would be accurate.

MASTER PRACTICAL SKILLS – MECHANICS	Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)	Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)	Pre Milestone 3 Beverley Steps P8-9 (Working Towards Entry Level – Entry Level 1))
	<ul style="list-style-type: none"> • I can assemble provided components. • I can contribute to activities. • I can grasp and move simple tools. • I can explore options within a limited range of materials. • I can use basic tools appropriately. • I can demonstrate preferences for products. • I can demonstrate preferences for materials. 	<ul style="list-style-type: none"> • I can recognise familiar products. • I can explore the different parts products are made from. • I can watch others using basic tools. • I can copy the correct action for using a tool. • I can contribute in making exercises. • I can operate familiar products. • I can explore products to see how they work. • I can use basic tools or equipment in simple processes. • I can choose appropriate tools and equipment. • I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> • I can explore various products. • I can communicate views about products. • I can manipulate basic tools in making activities. • I can use tools and equipment appropriately. • I can contribute in decision making. • I can discuss what I am going to do and why.
	Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)	Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)	Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)
	<ul style="list-style-type: none"> • I can create products using levers, wheels and winding mechanisms. 	<ul style="list-style-type: none"> • I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). 	<ul style="list-style-type: none"> • I can convert rotary motion to linear using cams. • I can use innovative combinations of electronics (or computing) and mechanics in product designs.
Milestone 4	Milestone 5		

	<p>Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	
	<ul style="list-style-type: none"> • I can understand how more advanced mechanical systems used in their products enable changes in movement and force. 	<ul style="list-style-type: none"> • I can generate imaginative, creative and innovative ideas with full consideration of functionality, aesthetics and innovation.

DESIGN, MAKE, EVALUATE AND IMPROVE	Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)	Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)	Pre Milestone 3 Beverley Steps P8-9 (Working Towards Entry Level – Entry Level 1)
	<ul style="list-style-type: none"> • I can demonstrate preferences for products. • I can demonstrate preferences for materials. 	<ul style="list-style-type: none"> • I can recognise familiar products. • I can explore the different parts products are made from. • I can watch others using basic tools. • I can copy the correct action for using a tool. • I can contribute in making exercises. • I can operate familiar products. • I can explore products to see how they work. • I can use basic tools or equipment in simple processes. • I can choose appropriate tools and equipment. • I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> • I can explore various products. • I can communicate views about products. • I can manipulate basic tools in making activities. • I can use tools and equipment appropriately. • I can contribute in decision making. • I can discuss what I am going to do and why.
	Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)	Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)	Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)
<ul style="list-style-type: none"> • I can design products that have a clear purpose and an intended user. • I can make products, refining the design as work progresses. • I can use software to design. • I can use new vocabulary in different contexts. 	<ul style="list-style-type: none"> • I can design with purpose by identifying opportunities to design. • I can make products by working efficiently (such as by carefully selecting materials). 	<ul style="list-style-type: none"> • I can design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • I can make products through stages of prototypes, making continual refinements. • I can ensure products have a high-quality finish, using art skills where appropriate. 	

		<ul style="list-style-type: none"> • I can refine work and techniques as work progresses, continually evaluating the product design. • I can use software to design and represent product designs. 	<ul style="list-style-type: none"> • I can use prototypes, cross-sectional diagrams and computer aided designs to represent designs.
	<p style="text-align: center;">Milestone 4 Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	<p style="text-align: center;">Milestone 5</p>	
	<ul style="list-style-type: none"> • I can identify and solve my own design problems and understand how to reformulate problems given to me. • I can develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations. • I can use a variety of approaches [e.g, biomimicry and user-centered design], to generate creative ideas and avoid stereotypical responses. • I can test, evaluate and refine my ideas and products against a specification, considering the views of intended users and other interested groups. • I can understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists. 	<ul style="list-style-type: none"> • I can show a high level of quality control is planned to ensure the prototype would be accurate. • I can create an exceptionally high-quality prototype that has the potential to be commercially viable has been designed and fully meets the needs of the client/user. • I can show extensive evidence that various iterations are as a direct result of considerations linked to testing, analysis and evaluation of the prototype design, including well considered feedback from third parties. • I can demonstrate comprehensive testing of all aspects of the final prototype design against the design brief and specification. Fully detailed and justified reference is made to any modifications proposed. 	

TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY	<p>Pre Milestone 1 Beverley Steps P4 - 5 (Working Towards Entry Level)</p>	<p>Pre Milestone 2 Beverley Steps P6 – 7 (Working Towards Entry Level)</p>	<p>Pre Milestone 3 Beverley Steps P8-9 (Working Towards Entry Level – Entry Level 1))</p>
	<ul style="list-style-type: none"> I can explore options within a limited range of materials. 	<ul style="list-style-type: none"> I can communicate preferences for designing and making. 	<ul style="list-style-type: none"> I can communicate views about products. I can contribute in decision making. I can discuss what I am going to do and why.
	<p>Milestone 1 Beverley Steps P10 – 11 NC Y1 & 2 (Entry Level 2 – Entry Level 3)</p>	<p>Milestone 2 Beverley Steps P12 – 13 NC Y3 & 4 (Level 1 Emerging – Level 1 Developing)</p>	<p>Milestone 3 Beverley Steps P14 -15 NC Y5 & 6 (Level 1 Secure – Level 2 Emerging)</p>
	<ul style="list-style-type: none"> I can explore objects and designs to identify likes and dislikes of the designs. I can suggest improvements to existing designs. I can explore how products have been created. 	<ul style="list-style-type: none"> I can identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. I can improve upon existing designs, giving reasons for choices. I can disassemble products to understand how they work. 	<ul style="list-style-type: none"> I can combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. I can create innovative designs that improve upon existing products. I can evaluate the design of products so as to suggest improvements to the user experience.
	<p>Milestone 4 Beverley Steps 16+ NC Y7+ (Level 2 Developing - GCSE 4+)</p>	<p>Milestone 5</p>	

<ul style="list-style-type: none"> • I can use research and exploration, such as the study of different cultures, to identify and understand user needs • I can analyse the work of past and present professionals and others to develop and broaden their understanding • I can investigate new and emerging technologies. 	<ul style="list-style-type: none"> • I can consider the costs, commercial viability and marketing of products • I can show good design focus and understanding of the impact on society including; economic and social effects • I can show evidence of investigation into the work of others that has had some influence on my ideas.
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This Progression Map complements the Curriculum Map, which covers subject content over time. These are planned in Key Stages and can be found on TEAMS.

