



### Year 4 Progressions of Skills - D&T

2025/26	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work		Structure: Pavilions		Mechanical Systems: Making a Slingshot Car		Electrical Systems: Torches
Enrichment opportunities						
Knowledge						
Pupils know:	Technical: <ul style="list-style-type: none"> <li>To understand what a frame structure is.</li> <li>To know that a 'free-standing' structure is one which can stand on its own.</li> </ul> Further Knowledge: <ul style="list-style-type: none"> <li>To know that a pavilion is a decorative building or structure for leisure activities.</li> <li>To know that cladding can be applied to structures for different effects.</li> <li>To know that aesthetics are</li> </ul>		Technical: <ul style="list-style-type: none"> <li>To understand that all moving things have kinetic energy.</li> <li>To understand that kinetic energy is the energy that something (object/person) has by being in motion.</li> <li>To know that air resistance is the level of drag on an object as it is forced through the air.</li> <li>To understand that the shape of a moving object will affect how it moves due to air resistance.</li> </ul> Further Knowledge:		Technical: <ul style="list-style-type: none"> <li>To understand that electrical conductors are materials which electricity can pass through.</li> <li>To understand that electrical insulators are materials which electricity cannot pass through.</li> <li>To know that a battery contains stored electricity that can be used to power products.</li> <li>To know that an electrical circuit must be complete for electricity to flow.</li> <li>To know that a switch can be used to complete and break an electrical</li> </ul>	



	<p>how a product looks.</p> <ul style="list-style-type: none"> <li>• To know that a product's function means its purpose.</li> <li>• To understand that the target audience means the person or group of people a product is designed for.</li> <li>• To know that architects consider light, shadow and patterns when designing.</li> </ul>	<ul style="list-style-type: none"> <li>• To understand that products change and evolve over time.</li> <li>• To know that aesthetics means how an object or product looks in design and technology.</li> <li>• To know that a template is a stencil you can use to help you draw the same shape accurately.</li> <li>• To know that a birds-eye view means a view from a high angle (as if a bird in flight).</li> <li>• To know that graphics are images which are designed to explain or advertise something.</li> <li>• To know that it is important to assess and evaluate design ideas and models against a list of design criteria.</li> </ul>	<p>circuit.</p> <p>Further Knowledge:</p> <ul style="list-style-type: none"> <li>• To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens.</li> <li>• To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.</li> </ul>
Skills			
Design	<ul style="list-style-type: none"> <li>• Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect.</li> <li>• Building frame structures</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a shape that reduces air resistance.</li> <li>• Drawing a net to create a structure from.</li> <li>• Choosing shapes that increase or decrease speed as a result of air</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas.</li> </ul>



	<p>designed to support weight.</p>	<p>resistance.</p> <ul style="list-style-type: none"> <li>● Personalising a design.</li> </ul>	
<p>Make</p>	<ul style="list-style-type: none"> <li>● Creating a range of different shaped frame structures.</li> <li>● Making a variety of free standing frame structures of different shapes and sizes.</li> <li>● Selecting appropriate materials to build a strong structure and cladding.</li> <li>● Reinforcing corners to strengthen a structure.</li> <li>● Creating a design in accordance with a plan.</li> <li>● Learning to create different textural effects with materials.</li> </ul>	<ul style="list-style-type: none"> <li>● Measuring, marking, cutting and assembling with increasing accuracy.</li> <li>● Making a model based on a chosen design.</li> </ul>	<ul style="list-style-type: none"> <li>● Making a torch with a working electrical circuit and switch.</li> <li>● Using appropriate equipment to cut and attach materials.</li> <li>● Assembling a torch according to the design and success criteria.</li> </ul>
<p>Evaluate</p>	<ul style="list-style-type: none"> <li>● Evaluating structures made by the class.</li> <li>● Describing what characteristics of a design and construction made it the most effective.</li> <li>● Considering effective and</li> </ul>	<ul style="list-style-type: none"> <li>● Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.</li> </ul>	<ul style="list-style-type: none"> <li>● Evaluating electrical products.</li> <li>● Testing and evaluating the success of a final product.</li> </ul>



	ineffective designs.		
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