

## MTP – D&T – Spring 2



<b>Topic</b>	What do we know about the Victorians and the way they lived? (BV LINK) (D&T Kapow: Structures: Constructing a windmill – Year 1 unit & Baby Bear’s chair – Year 2 unit)				
<b>N.C Learning Objectives</b>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>Design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their ideas and products against design criteria</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> </ul>				
<b>Vocabulary</b>	<p><b>Design</b></p> <p>To make, draw or write plans for something.</p>	<p><b>Net</b></p> <p>A flat 2D shape, that can become a 3D shape once assembled.</p>	<p><b>Structure</b></p> <p>Something that has been made and put together. For example, a building, bridge, chair or table.</p>	<p><b>Windmill</b></p> <p>A structure with sails that are moved by wind.</p>	<p><b>Strong</b></p> <p>It doesn’t break easily.</p>
	<b>LEARNING OBJECTIVE</b>	<b>STICKY KNOWLEDGE FACT</b>	<b>CORE LEARNING</b>		
<b>Lesson 1</b>	We are learning to include individual preferences and requirements in our design	A design criterion is a list of points for the product to meet the needs.	<p>Explore stability: To explore the concept and features of structures and the stability of different shapes</p> <p>Designing the structure: To include individual preferences and requirements in my design</p>		
<b>Lesson 2</b>	We are learning to make a stable structure	Stable structures are safer because they do not easily topple over or fall down.	<p>Strengthening materials: To understand that the shape of the structure affects its strength</p> <p>Assembling the structure: To make a stable structure</p>		

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<b>Lesson 3</b>	We are learning to assemble the components of my structure	A windmill has three main parts, a turbine, an axle and a structure.	Assembling the windmill: To assemble the components of my structure
<b>Lesson 4</b>	We are learning to evaluate my project and adapt my design	Evaluation is to look at the good and bad points about something to help us improve, and testing a product lets us find out if everything works as it should.	Test and evaluate: To produce a finished structure and evaluate its strength, stiffness and stability
<b>Outcome</b>	Creating a windmill		