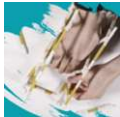




Subject: DT	Year group: 5 Term: Spring	Title: Structures - Bridges							
What should I already know? • Through research and development of designs, I can make a functional, appealing product that is fit for purpose. • How to use a wide range of tools and materials to perform practical tasks. • How to investigate and analyse a range of existing products, evaluate designs and consider how to improve.	Facts I will learn • To recognise that supporting shapes can help increase the strength of the bridge and allow it to hold more weight. • To use triangles to create truss bridges and test them. • To Identify beam, arch and truss bridges and describing their differences. • To cut the required beams to the correct size, using the <i>Truss bridge cutting mat</i> as a visual reference. • To following each stage of the truss bridge creation as instructed.	Key questions • Can you suggest other ways to make the bridge stronger and/or stiffer? • What is the difference between a beam, arch and truss bridge? • What techniques did you use to improve the strength of the beam last lesson? • What other factors could change to increase the strength, stability and stiffness of the bridge? • Can you identify some areas for improvement through evaluating the success of your bridge, and reinforce as necessary.  Truss bridge  Suspension bridge  Beam bridge  Arch bridge							
Key Skills • Evaluate designs already available. • Generate and develop own design through drawings and creating templates/patterns. • Select textiles which can be used to make design. • Use a range of joining techniques to make design.	Experiences that school will provide To investigate how bridges can be made stronger. To use different materials to create bridges. 	<table><tr><th>Key vocab</th><th>Definition</th></tr><tr><td>arch bridge</td><td>A bridge that is built with a curved arch.</td></tr><tr><td>beam bridge</td><td>A bridge that is built with horizontal beams and vertical pillars.</td></tr></table>		Key vocab	Definition	arch bridge	A bridge that is built with a curved arch.	beam bridge	A bridge that is built with horizontal beams and vertical pillars.
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Evaluate.		suspension bridge	A bridge which is supported by vertical cables and suspended by cables which run between pillars that are connected onto either end of the bridge.
Web links https://www.youtube.com/watch?v=oVOnRPefcno (What makes bridges so strong?)	Experiences that could be provided at home Identifying bridges. Making a beam bridge with paper. 	truss bridge	A bridge which is built from a series of triangular beams.
		structure	Something which stands, usually on it's own.
		reinforce	To make a structure or material stronger, especially by adding another material or element to it.