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| Unit of study: Structures | | | |
| Learning Objective | DT content | Learning Outcome | Key Knowledge/Skills |
| Can I make a range of different shaped beam bridges?  Can I design a stable structure that is able to support weight?  Can I build a wooden bridge structure? | Can I test and analyse various types of bridge to determine their strength and stability?  Can I explore material properties and sources, before marking, sawing and assembling a wooden truss bridge? | Can I design a stable structure that is able to support weight?  Can I create a frame structure with a focus on triangulation?  Can I make a range of different shaped beam bridges?  Can I use triangles to create truss bridges that span a given distance and support a load?  Can I build a wooden bridge structure?  Can I independently measuring and marking wood accurately?  Can I select appropriate tools and equipment for particular tasks?  Can I use the correct techniques to saws safely?  Can I identify where a structure needs reinforcement?  Can I explain why selecting appropriating materials is an important part of the design process?  Can I understand basic wood functional properties?  Can I adapt and improve my own bridge structure by identifying points of weakness and reinforcing them as necessary?  Can I suggest points for improvements for my own bridges and those designed by others?  Can I understand some different ways to reinforce structures?  Can I understand why material selection is important based on properties?  Can I understand the material (functional and aesthetic) properties of wood?  Can I understand the difference between arch, beam, truss and suspension bridges?  Can I understand how to carry and use a saw safely? | Children to design, make and evaluate their own bridge structures. They should consider how to make their bridge as strong as possible by reinforcing it with different materials. |