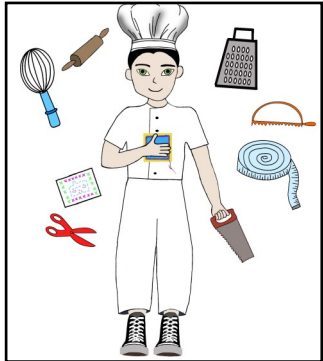
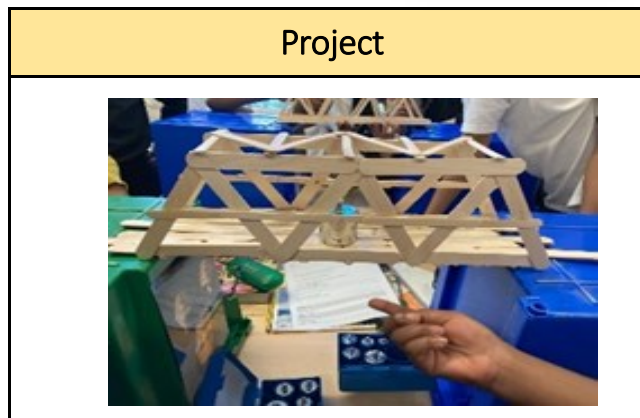
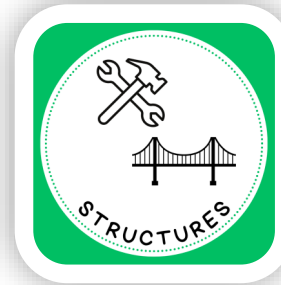




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Concept

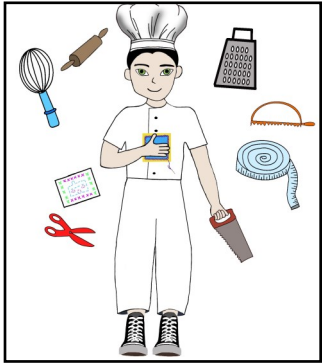


Technical knowledge
Beam bridges are the simplest structural forms for bridge spans supported by a pier at each end. - A truss bridge is a bridge with its load-bearing structures composed of a series of wooden or metal triangles, known as trusses. Frame structures give shape and are useful for support & weight bearing. Frame structures have joints which are formed according to the design requirements and materials being used.

Prior experiences or knowledge learnt
- Apply understanding of how to strengthen, stiffen and reinforce more complex structures A wider base can help a structure to be more secure. - Frames should be able to stand on their own, providing a skeleton structure.

Skills I am practising
- Research structures (bridges) and consider how these structures work - Understand different methods of strengthening bridges. - Practise a range of structural designs to create bridges. - Generate ideas and design a structure including strengthening techniques (bridges) - Use appropriate tools and construction materials to make a structure (bridges) - Evaluate my structure and suggest ways for improvement

Sequence of learning	
1)	To understand our design brief and look at bridges throughout history.
2)	To master practical skills (measuring & cutting)
3)	To design a bridge.
4)	To make a bridge (double lesson).
5)	To evaluate the success of our bridge.



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Key vocabulary

Tier 2	Tier 3
Beam - long, sturdy piece of squared timber or metal used to support the roof or floor of a building.	Truss—a framework, typically consisting of rafters, posts, and struts, supporting a roof, bridge, or other structure.
Frame -a rigid structure that <u>surrounds</u> something	Weight-bearing—how much weight or force is put through an object.
Construct— build or make something.	Load-bearing—supporting much of the weight of the <u>overlying</u> parts of a building or other structure.