	Year: Year 5	**Subject:** DT
	Title: Frame Structures	

What key knowledge do I need to have before this unit?

- Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials.
- Basic understanding of what structures are, and how they can be made stronger, stiffer and more stable.

Key outcomes:

Designing

- Carry out research into user needs and existing products.
- Develop a simple design specification to guide the development of ideas and products, taking into account constraints such as time, resources and cost.
- Generate, develop and model innovative ideas through discussion, prototypes and annotated sketches.

Making

- Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used.
- Select from, and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.
- Use finishing and decorative techniques suitable for the model they are designing and making.

Evaluating

- Investigate and evaluate a range of existing frame structures.
- Critically evaluate their product against their design specification, user and purpose, identifying strengths and areas for development.

Key knowledge:	Key Vocabulary:	Definition:
• Understand how to strengthen, stiffen and reinforce 3D frameworks. • Know and use technical vocabulary relevant to the project.	Frame structure	A structure that is made stable by a skeleton, able to stand by itself as a rigid structure without depending on floors or walls.
	Triangulation	The use of a triangular shape to strengthen a frame structure.
	Stiffen	Make something more rigid and less likely to bend or fold.
	Strengthen	To make something stronger or more effective.
	Rigid	Unable to bend or forced out of shape. Not flexible.
	Stability	Firmly fixed or not likely to move or change.
	Reinforce	To make something stronger and add stability to a structure using additional materials.