



Rivington Primary School
A place where everyone matters.

Design technology Knowledge Organiser
Year 5 Summer Term: Frame Structures

**Design
Make
Evaluate**

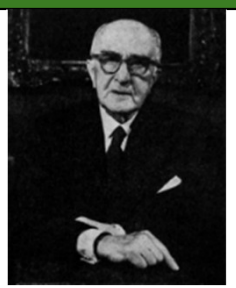
Prior Technical Knowledge

In Year 1 I made a zoo enclosure using a free standing structure.
In Year 2 and 3 I made shell structures for a car and to support a hydraulics mechanism.
Experience of cutting and joining card to create various structures in all previous year groups.

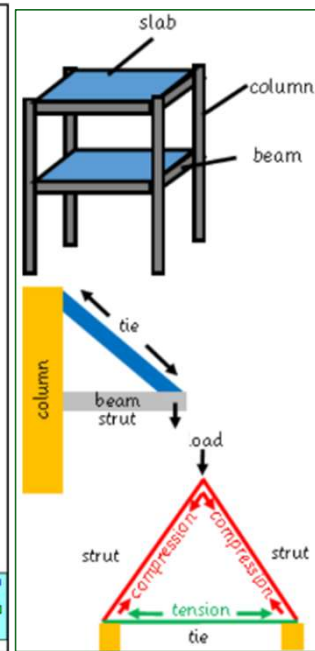
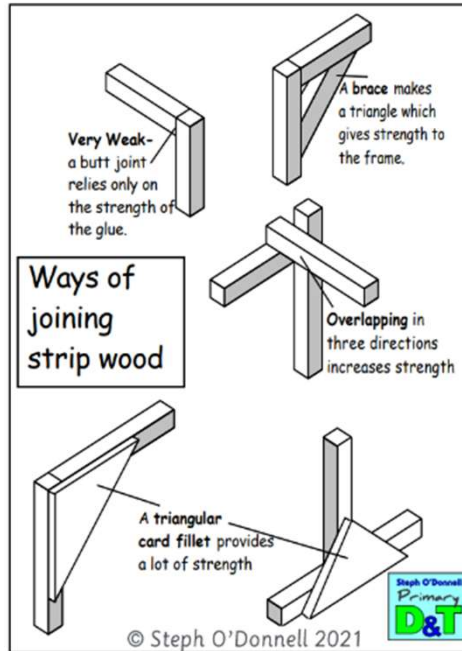
Now in Year 5

I will apply my learning to design, make and evaluate a shelter using a frame structure made from wood.

Key People



William Paterson
Engineer and designer of the Anderson Shelter



Key Vocabulary

Shell structure	A hollow structure with a thin outer covering
Frame structure	A network of beams and columns joined up for the skeleton of a building or structure.
Stability	The component through which an axle fits and rotates, it holds the axle in place.
Compression	Wooden rods for making axles.
Strut	The device that follows the movement of the cam. A lever or slider.
Tension	A piece of material to guide the movement of another.
Triangulation	Triangular shapes give strength and stability.

Safe Glue Gun Use
"Prevention is better than cure" - Desiderius Erasmus

- Students will be tempted to spread the glue with their fingers- this is NOT safe!
- Spreader sticks should be made available for students to use (popstick sticks work well for this purpose)
- Students need to be reminded to concentrate on their glueing and not get distracted

****Remember****
When glueing or reloading, Glue Gun nozzles MUST be pointed down and towards to wall

HACKSAW

PISTOL GRIP AND INDEX FINGER TO PREVENT WOBBLE

SHARP!

Wear Goggles / eye protection
Clear your workspace of equipment, chairs, stools and other people
Secure your wood to the table so it does not move
Hold your hacksaw securely and take a good stance
Wear gloves and avoid splinters

SAFETY