

Knowledge Organiser Design & Technology Year 5 Summer

Structures - Bridges



St Elizabeth's Catholic Primary School
 "Love one another as I have loved you"

Accurate	Neat, correct shape, size and pattern with no mistakes.	Arch Bridge	A bridge which is built with a curved arch.
Beam bridge	A bridge which is built with horizontal beams and vertical pillars.	Bench hook.	A tool which hooks onto the edge of the work bench. It is used to hold wood when sawing.
Coping saw	A saw with a narrow D-shaped metal blade, used for cutting curves in wood.	File	A tool used to smooth rough edges on wood or metal.
Mark out	To measure and mark where a piece of material needs cut.	Reinforce	To make a structure or material stronger by adding another material.
Sand Paper	Strong paper with sand on one side to smooth and polish wood.	Set Square Try Square	A right angle triangular plate used for drawing lines at 90, 45, 60 and 30 degrees.
Shape	The form of an object	Structure	Something which stands, usually on its own.
Suspension bridge	A bridge which is supported by vertical cables and suspended by cables which run between pillars connected at either end of a bridge.	Tenon Saw	A saw with a flat blade, used for cutting in straight lines
Tension	A stretching force caused by two parts of a structure being pulled apart.	Truss bridge	A bridge which is built from a series of triangular beams.

Design → Make → Evaluate

Knowledge and skills covered in this topic

Forces
 Forces can change the shape of an object, they can also make objects begin to move, speed up or slow down.

Push and pull are both forces.

Gravity
 Gravity is a force which pulls everything towards the centre of the Earth. The weight of something is the force that the Earth's gravity is having on it.

Prior knowledge

Year 1: Learning the importance of a design criteria. Creating structures with paper and glue. Creating rotating parts using axles.

Year 2: Creating sketches and models to communicate ideas. Beginning to identify materials. Connecting structures using joints and glue.

Year 3: Designing a structure based on the needs of an individual or purpose. Identifying materials for different purposes. Creating geometric shapes using 2D nets.

Year 4: Choosing appropriate materials that meet the needs of the design brief. Building frames to support weight. Creating a range of frames and structures, choosing appropriate materials for structure and cladding. Beginning to reinforce materials with added materials.

