

Year 5 DT Bridges

Key Skills

1. To explore how to reinforce a beam (structure) to improve its strength
2. To build a spaghetti truss bridge
3. To build a wooden truss bridge.
4. To complete, reinforce and evaluate my truss bridge.



Vocab/Key Words

Arch bridge - A bridge which is built with a curved arch.

Beam bridge - A bridge which is built with horizontal beams and vertical pillars.

Reinforce - To make a structure or material stronger, especially by adding another material or element to it.

Suspension bridge - A bridge which is supported by vertical cables and suspended by cables which run between pillars that are connected onto either end of the bridge.

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.

Key Knowledge

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



Pulls and pushes are both forces.



Truss bridge



Suspension bridge



Beam bridge



Arch bridge

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.



Previous Learning

- ◆ Pavilions (Year 4)
- ◆ Castles (Year 3)
- ◆ Baby Bear's Chair (Year 2)
- ◆ Windmills (Year 1)

What I will know/be able to do by the end

- This topic develops children's understanding of secure structures and introduces them to measuring, sawing and joining wood accurately. After learning about different types of bridges and also exploring how the strength of structures can be affected by the shapes used. Children create their own wooden bridge and test its durability.
- I can follow health and safety rules
- I can suggest appropriate design criteria points to fulfil the design brief

Websites/Signposting/Connection to a famous person

<https://www.youtube.com/watch?v=h26ghvVbkpY>

<https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/structure-bridges/>