Endpoints for Design Technology

Year 6 – Engineer

Through this topic, we will be learning about remarkable engineers and significant bridges. We will learn to identify key structural element and use this understanding to create a bridge prototype.

What I know and can explain
Significant engineers have improved, safety, people's lives and trade through their constructions
Significant bridges include: the Menai Bridge, Clifton Suspension Bridge and Forth Bridge
It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability
Strength can be added to a framework by using multiple layers or changing its shape
Triangles do not collapse or distort easily and so are used in architecture to provide support and stability

Useful Vocabulary

Aqueduct - A bridge that transports water across a gap

Beam - A long, thick piece of wood, metal or concrete, especially used to support weight on a bridge or other structure

Bridge - A structure that provides a safe route over an obstacle, such as a river, valley or road

Compression - A pushing force that squashes or makes something smaller

Concertina - Folds made alternately to the front and back of a material

Distort - To change the original shape of something

Span - The length of something from one end to the other

Support pier - A thick, strong column used to support a structure, such as a bridge

Suspension bridge - A type of bridge where the roadway is hung from vertical cables supported by towers

Tension - A pulling force that pulls things apart

Truss - A triangular framework that supports a bridge, roof or other structure