## Year 5 Design Technology

# **Bridges**

### Sticky Knowledge

Designers use annotated sketches, cross-sectional and exploded diagrams to show the detail of their designs. Exploded diagrams show the component parts disassembled so that each part can be clearly seen. 3D printing is now increasingly being used to print scale models of designs.

A variety of strengthening techniques can be used: triangles, tension, distribution of force.

Evaluation is an important part of the design and make process. Through evaluation, you can make sure appropriate decisions have been made, correct action has been taken, and work has been done to the highest possible standards in line with the objectives you started the design and make process with.

Horace Jones was a key individual in design and technology, helping to shape the world of architecture. Jones constructed over an iron frame, a technique used later in buildings. Jones's final legacy is one of the most recognised landmarks in the world – Tower Bridge. It was designed in collaboration with the civil engineer, John Wolfe Barry, who was brought in as an expert to devise the mechanism for the bridge.

Bridge design has evolved over time: cable-stayed bridges such as the Millau viaduct are now very popular.



#### Famous Work

Tower Bridge built 21st June 1886

#### Famous Person

Horace Jones
(1819-1887)
Jones was an English architect
particularly noted for his work as

an architect and surveyor for the City of London from 1864.

