



# Who can make the strongest bridge?



## Key Vocabulary

<b>Bridge</b>	A structure across a river, road, or other obstacle.
<b>Abutments</b>	A supports that carry the load of the bridge
<b>Compression</b>	A squashing force caused when parts of a structure are pushed together
<b>Pier</b>	A vertical supporting structure, such as a pillar
<b>Structure</b>	Something which stands on its own
<b>Suspension</b>	Supported by attachment from above; hanging.
<b>Tension</b>	A stretching force caused by two parts of a structure being pulled apart
<b>Truss</b>	A truss is an assembly of beams or other elements that creates a rigid structure.



Donghai Bridge - China



Tokyo Gate Bridge - Japan



Sydney Harbour Bridge—Australia

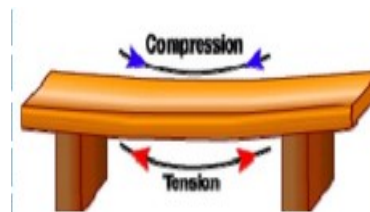
Iron Bridge (Shropshire) - Thomas Telford



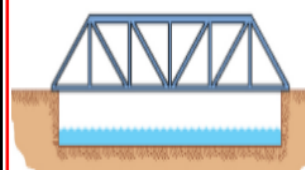
Golden Gate Bridge—San-Francisco

Here are 4 types of bridge construction:

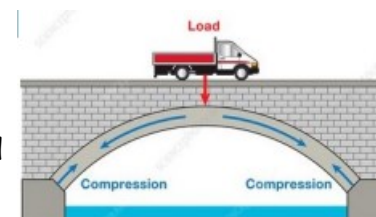
**Beam bridge** - A beam bridge is a horizontal structure that rests on two end supports. Beam bridges are often used for heavy cars and trains to pass and some are also built for people to walk on. They are simple structures and can be connected to make one longer bridge. Modern beam bridges are usually made of steel.



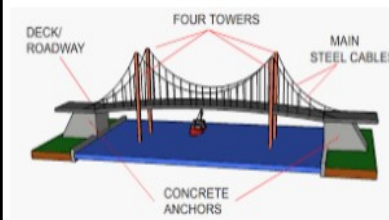
**Truss bridge** - Like the beam bridge, the truss bridge has a support at each end. It may also rest on piers in between. Its structure gives more strength than a simple beam bridge. A framework of metal or wood bars connects the two ends of the bridge. These bars fit together in triangular shapes and often form a tunnel through which the roadway passes.



**Arch bridge** - The arch bridge is a very old design. An arched structure built beneath the bridge's roadway provides its support. The curved design, has supports on each end. These supports (called abutments) carry the load of entire bridge and are responsible for holding the arch in position.



**Suspension bridge** - The roadway hangs by cables, ropes or chains from two tall towers. The main cables hang between two towers and smaller cables hang down from the curving main cables. The smaller cables hold up the roadway. Suspension bridges can span longer distances than any other type of modern bridge.





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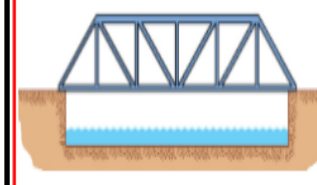
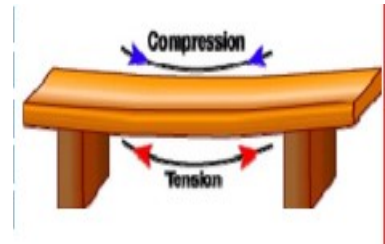
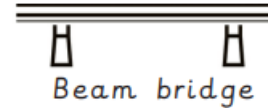
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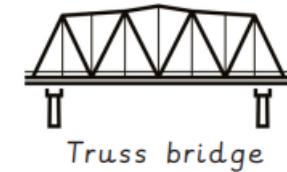
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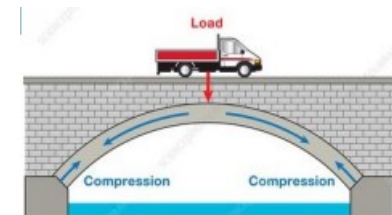
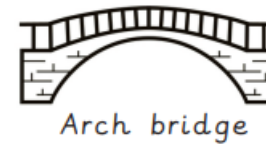
### Beam bridge



### Truss bridge



### Arch bridge



### Suspension bridge

