



Knowledge Organiser

Y3 Bridges (Victorians)



Before	Now	Next
Y2 Fire Engines	Y3 Bridges	Y4 Wind turbines

Famous Victorian bridge and designer

Clifton Suspension Bridge (Bristol) – Isambard Kingdom Brunel



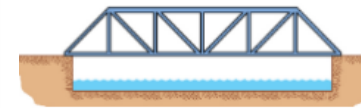
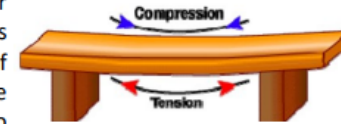
Isambard Kingdom Brunel was an English **inventor** and civil **engineer**. Civil engineers design and build structures for the public. Brunel designed **bridges, railroads**, and the first **steamship** to travel regularly across the **Atlantic Ocean**. He is considered to be one of the greatest civil engineers of the 1800s.

Vocabulary

Bridge	A structure across a river, road or other obstacle	Truss	A truss is an assembly of beams or other elements that creates a rigid structure
Arch bridge	A semi-circular structure with abutments on each end	Keystone	Forces are carried across the arch via the keystone because its weight pushes the surrounding stones
Abutments	Supports that carry the load of the bridge	Pressure	Continuous physical force exerted on or against an object
Hanging/suspension bridge	A bridge that is suspended from two or more cables and is anchored at the ends	Span (Beam)	The distance between two bridge supports
Suspension	Supported by attachment from above; hanging	Framework	An essential supporting structure of an object
Beam bridge	A rigid, horizontal structure that is resting on two piers – one at each end	Support	A thing that bears the weight of something or keeps it upright
Cantilever bridge	A bridge built using cantilevers	Compression	Shortening something's length when it is pressed down
Cantilever	Something that sticks out sideways from a support. It is only supported at one end	Tension	The force when something is being pulled from both ends

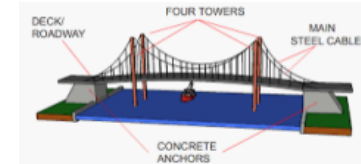
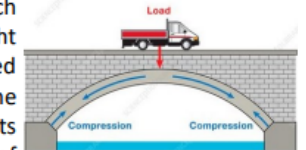
There are 4 main types of bridge construction:

Beam bridge – The force of compression manifests itself on the top side of the beam bridge's deck (or roadway). This causes the upper portion of the deck to shorten. The result of the compression on the upper portion of the deck causes tension in the lower portion of the deck. This tension causes the lower portion of the beam to lengthen.



Cantilever/Truss bridge - a bridge built using cantilevers, structures that project horizontally into space, supported on only one end. For small footbridges, the cantilevers may be simple beams; however, large cantilever bridges designed to handle road or rail traffic use trusses built from structural steel, or box girders built from prestressed concrete.

Arch bridge - a curved design, which does not push load forces straight down, but instead they are conveyed along the curve of the arch to the supports on each end. These supports (called abutments) carry the load of entire bridge and are responsible for holding the arch in the precise position unmoving position. Conveying of forces across the arch is done via central keystone on the top of the arch.



Hanging/Suspension bridge - suspend the roadway by cables, ropes or chains from two tall towers. These towers support the majority of the weight as compression pushes down on the suspension bridge's deck and then travels up the cables, ropes or chains to transfer compression to the towers. The towers then dissipate the compression directly into the earth.



Knowledge Organiser Y3 Baking bread



Before	Now	Next
Y2 Sandwiches/cookies	Y3 Baking bread	Y4 Soup/stew

Yeast Breads

Whole Wheat Bread
Loaf for sandwiches

Multigrain Bread
Loaf for toasts, & sandwiches

White Bread
Loaf for toasts, & sandwiches

Brown Bread
Loaf for sandwiches

Baguette
Loaf for sandwiches

Grissini
Breadsticks to eat with toppings & dips

Brioche
Sweet pastry bread for breakfast

Challah
Braided rolls for sandwich & stuffed items

Ciabatta
Loaf for sandwiches & toasts

Focaccia
Flat, round bread for appetizers

Croissant
Crescent rolls to eat with jam, cream etc.

Bagel
Ring-shaped buns for toasts & sandwiches

Banana Bread
Loaf for sandwiches & dessert items

Sourdough

Leavened Breads (no yeast)

Sourdough bread
Loaf for toasts & sandwiches

Pumpernickel
Sliced bread for sandwiches & appetizers

Cornbread
Quick bread for breakfast, side dish, & stuffing

Rye bread
Loaf for sandwiches & toasts

Flatbreads

Pita Bread
Round flatbread to serve with hummus

Naan
Fluffy flatbread to serve with curries & dips

Tortilla
Flatbread for burritos, tacos, & fajitas

Key Vocabulary

bread products – white, brown, granary, wraps, naan, pitta etc

texture – the feel, appearance or consistency of a substance

knead – to work dough with your hands

hygiene – the practice of keeping clean to stay healthy

carbohydrates – foods such as bread, potatoes and grains that provide us with energy

gluten – a protein that allows bread dough to develop and create large pockets of air

yeast – single celled microorganisms used in the baking of bread

leavening/proofing – the final rise in the dough before baking

ingredients – the products combined to make something

(for bread these are plain flour, salt, fat, water and yeast)



Health and Safety

Remove jewellery and tie back long hair.



Long hair must be tied back

Wear an apron and roll up your sleeves.



Wear protective apron

Wash your hands carefully with soap and hot water. For 20 seconds.



Wash your hands before handling food

Use equipment safely and with an adult supervising



Always clean up properly when you have finished.

