

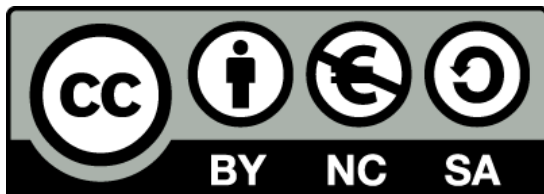


Civil Engineering

BRinging STEM into Active agING – BRAIN

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Main areas of Civil Engineering

Civil Engineering is one of the most ancient types of engineering. It focuses on structures and buildings of all kinds.

Structural engineering: focuses on the design and framework of structures

Construction engineering: involved with actually building the structure

Environmental engineering: focuses specifically on creating projects that sustain or improve the environment in which they exist.

Geotechnical engineering: focuses on The stability of the soil and rock on which a project is built

Transportation engineering: focuses on systems like railways, subways, roads and bridges that are used by people

Water resources engineering: focuses on having safe and adequate drinking water



Most Impressive Civil Engineering Projects

Lake Pontchartrain Causeway

The Lake Pontchartrain Causeway in Louisiana (U.S) spans the entirety of Lake Pontchartrain and is 23.83 miles (38.35km) in length. Despite it being opened decades ago in 1959, it is still the longest continuous stretch of bridge over water in the world.



Most Impressive Civil Engineering Projects



Burj Khalifa

Standing at 829.8 meters, the Burj Khalifa in Dubai is the tallest building in the world. The building's incredibly tall design inspired the creation of the 'buttressed core', an engineering structural system with a hexagonal core which helps to support higher buildings than ever before.



Most Impressive Civil Engineering Projects

English Channel Tunnel

The English Channel Tunnel links the shore of Kent in the UK with Pas-de-Calais in France. It has the longest undersea portion of any tunnel in the world, at 23.5 miles (37.9km). At its deepest point, it is 75 metres (250ft) below the sea bed and 115m (380ft) below sea level. It is designed to carry high-speed Eurostar passenger trains, international goods trains and a shuttle for road vehicles, making it the largest transport system of its kind in the entire world.



Most Impressive Civil Engineering Projects

Golden Gate Bridge

The Golden Gate Bridge is considered by many to be one of the most beautiful bridges in the world. This \$27 million project is a mile-long suspension bridge that spans a strait, connecting the city of San Francisco to Marin County. It opened in 1937 and was the longest suspension bridge in the world for almost three decades



Most Impressive Civil Engineering Projects

Itaipu Dam

On the Parana River, bordering Brazil and Paraguay lies the Itaipu Dam. This mega-dam produces more hydroelectric energy than any other dam in the world – measuring in at an immense 103,098,366-megawatt-hour (MWh). The energy produced by the dam is split evenly between Paraguay and Brazil, although it generates so much electricity that there is surplus energy for Paraguay which is transferred back to Brazil.



Most Impressive Civil Engineering Projects

The Colosseum

The Colosseum is one of the most recognisable structures in the world and is the largest amphitheatre ever to be built. This structure is almost 2,000 years old and has a capacity of between 50,000 and 80,000 people, making it as large as many modern stadiums.



Most Impressive Civil Engineering Projects

Great Wall of China

With a history of more than 2,000 years, the Great Wall of China is one of the greatest wonders of the world, and one of the most visited tourist attractions globally. Whilst it is known to Western cultures as the 'Great Wall', Chinese people refer to it as Chéng which means both 'wall' and 'city'.



Most Impressive Civil Engineering Projects

Great Pyramid of Giza

The Great Pyramid of Giza is one of the Seven Wonders of the Ancient World, and despite being the oldest, it remains largely undamaged. It is the largest of the three pyramids in the Giza pyramid complex and was the tallest construction in the world for over 3,800 years. It is believed that the pyramid was built as a tomb for the fourth Dynasty Egyptian pharaoh, Khufu and was constructed over a twenty-year period.





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