

# Architecture

## Architecture over time

### Prehistoric

c10,000–c2500 BC

Earth barrows were constructed for worship and burial. Stone circles, called henges, were made using natural materials.



Stonehenge, England

### Ancient Egyptian

c3100–c30 BC

Enormous pyramids and temples were built from stone. A wide pyramid base supported the heavy, sloping walls.



Great Pyramid of Giza, Egypt

### Classical

c850 BC–cAD 470

Decorated stone temples supported with columns were built in ancient Greece. The Romans further developed these designs, and invented concrete to add arches and domes.



Parthenon, Greece

### Gothic

1100–1500

Buildings were taller, with pointed arches and larger windows. Arches of stone called flying buttresses supported thinner walls.



Notre Dame Cathedral, France

### Renaissance

1400–1600

Inspired by classical architecture, private villas were built with columns, arches and domes.



Villa la Rotonda, Italy

### Baroque

1600–1830

Using the domes and colonnades from the Renaissance, buildings were larger and grander with golden statues and twisted columns.



Palace of Versailles, France

### Early industrial

1700–1850

The industrial revolution led to the mass production of iron and steel. These new materials gave structures added strength.



Ironbridge, England

### Modernist

1920–1970

Buildings were designed for their use rather than their appearance. Glass, metal and concrete structures were more functional and plain.



De La Warr Pavilion, England

### Postmodern

1960–1990

Some traditional designs were given a surprising or amusing twist. Buildings were designed to make a statement or entertain.



Dancing House, Czech Republic

### Sustainable

1980–present day

Buildings are designed to reduce their environmental impact by using solar panels, environmentally friendly building materials and plants, such as grass and trees.



Bosco Verticale tower, Italy

## Greek architecture

The ancient Greeks developed the Classical style of architecture. Their temples were made from limestone or marble, and columns supported the roofs.

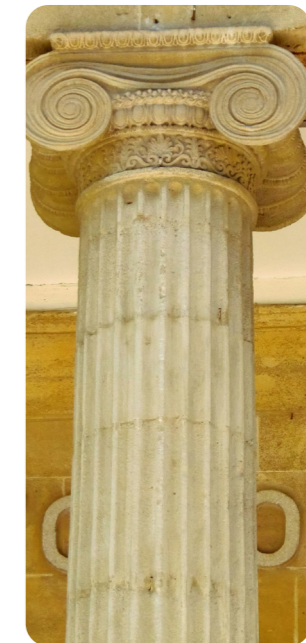


### Columns

The order of a building was determined by the style and design of the columns. Three types of columns were used in ancient Greece: Doric, Ionic and Corinthian.



**Doric** columns were plain and simple, with no decoration. They were wider at the bottom than at the top.



**Ionic** columns were thinner than Doric columns and stood on a base with scrolls decorating the capital at the top.

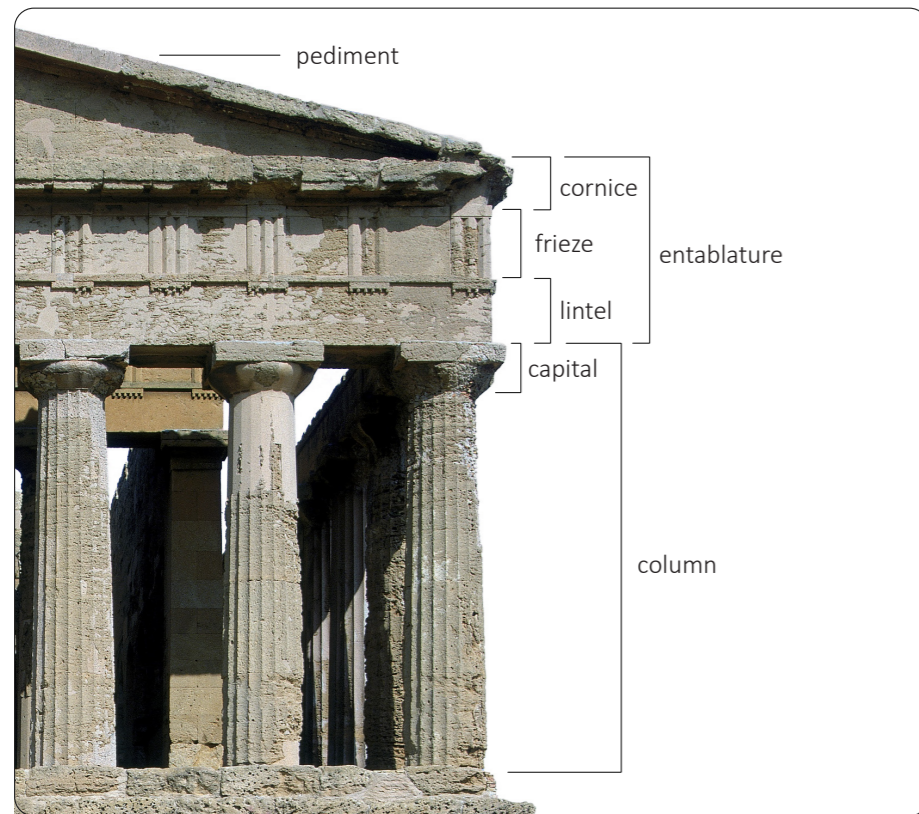


**Corinthian** columns were the most decorative, with scrolls and leaves of the acanthus plant carved around the capital at the top.



## Entablature

The entablature is the wide, horizontal block above the columns. It comprises the lintel, which helps to support the roof; the frieze, which often provided decoration or a series of scenes; and the cornice, which separated the entablature from the pediment.



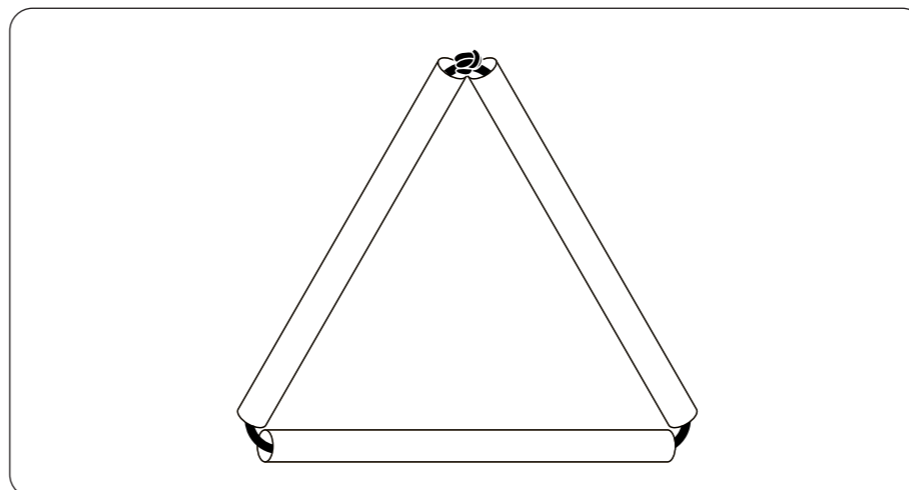
## Pediment

The pediment is the triangular shape that forms the end of the roof slope. It was often decorated with sculptures.

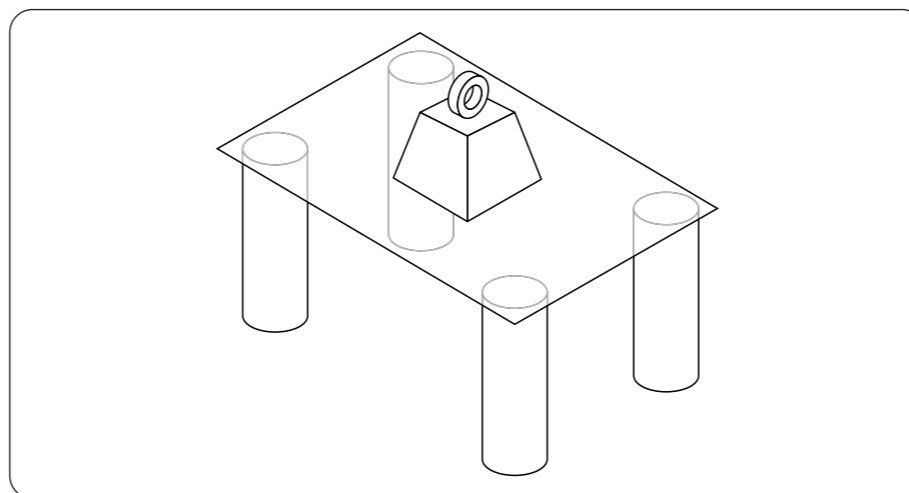


## Support, stiffness and stability

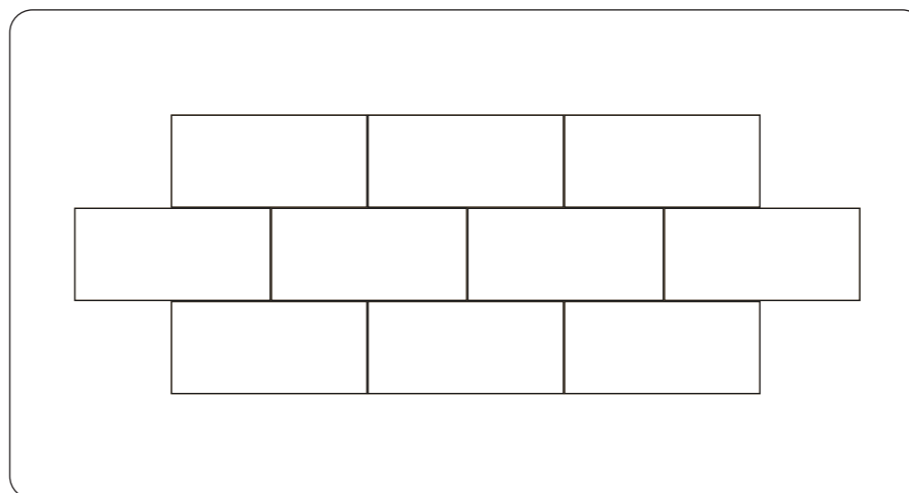
Different features are used to support a framework and increase the strength of a structure. The features below can be seen in different types of architecture.



triangular shapes



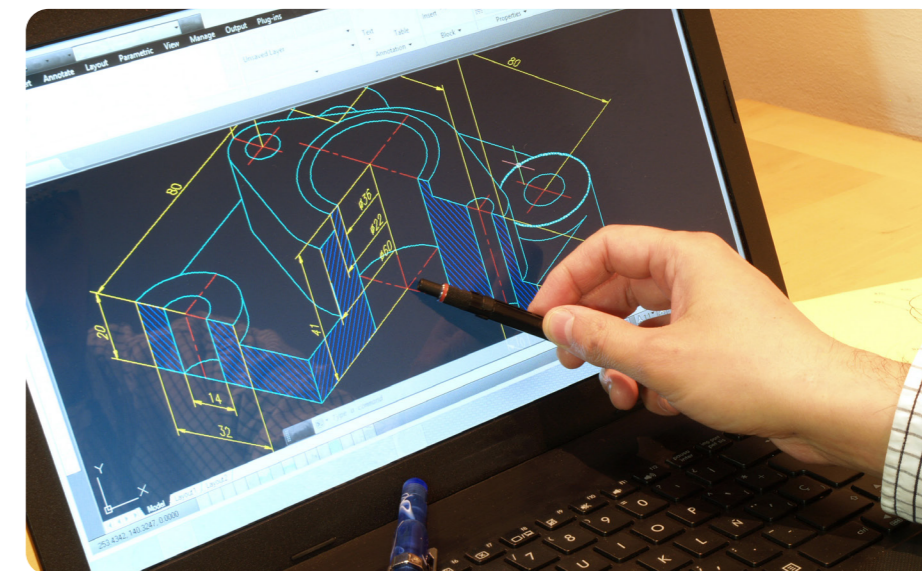
columns



overlapping brickwork patterns

## Computer-aided design

Engineers and architects use computer-aided design software to help design structures and view them from all angles. Computers allow designers to make changes to structures and immediately see the effects.



## Glossary

<b>barrow</b>	A large mound of earth or stones used as an ancient burial ground.
<b>capital</b>	The top part of a column that supports the weight of the entablature.
<b>colonnade</b>	A row of columns set at regular intervals, usually supporting a roof.
<b>concrete</b>	A building material made by mixing cement, sand, small stones and water.
<b>industrial revolution</b>	A period of time when work began to be done more by machines in factories than by hand at home.

