

DT / GEOGRAPHY · Y4–Y6

# Architecture & the Built Environment

Knowledge Organiser — Y4–Y6

## Key vocabulary

1

### Architecture

The art and science of designing and constructing buildings. A successful building must be functional, structurally sound, and aesthetically considered.

2

### Load-bearing

A structural element that supports the weight of everything above it.

*Example: Walls in old buildings often load-bearing; modern buildings use steel frames instead*

3

### Arch

A curved structure that transfers load outward to its supports (abutments). Allows larger spans without thick walls.

*Example: Roman aqueducts, Gothic cathedral doorways*

4

### Cantilever

A beam or structure fixed at one end and unsupported at the other. Creates overhanging sections.

*Example: Balconies, diving boards, some modern roofs*

5

### Sustainable architecture

Design that minimises environmental impact — through orientation, insulation, renewable energy, rainwater harvesting, and use of sustainable materials.

*Example: Passivhaus standard*



6

**Vernacular architecture**

Traditional building styles that use local materials and reflect local climate and culture.

*Example: Cob cottages in Devon, stone walls in Yorkshire, bamboo houses in SE Asia*

## Architects and their ideas

Buildings that changed how we think

- ZAHA HADID (1950–2016): First woman to win the Pritzker Prize (architecture's Nobel). Fluid, curved forms — rejected straight lines and right angles.
- RENZO PIANO (b.1937): High-tech architecture — the structure and services are exposed as design features. Pompidou Centre, Paris.
- NORMAN FOSTER (b.1935): Modernist, sustainable, glass and steel. The Gherkin (30 St Mary Axe), London.
- FRANK LLOYD WRIGHT (1867–1959): Organic architecture — buildings that relate to their natural surroundings. Fallingwater: built over a waterfall.
- GAUDI (1852–1926): Spanish architect. Organic forms inspired by nature. Sagrada Família, Barcelona (still unfinished).
- KEY QUESTION: What problem was the architect trying to solve? What constraints did they work within? What did they prioritise?

