

Famous Examples & Civilizations

- Egypt – *Pyramids of Giza* (tombs for pharaohs)
- Mesopotamia – *Ziggurats* (temples shaped like steps)
- Greece – *Parthenon* (temple with tall columns)
- Rome – *Colosseum* (arena for shows and games)
- Persia (Iran) – *Persepolis* (royal city with grand columns and carvings)
- China – *Great Wall* (defense structure)
- Maya/Inca/Aztec – *Pyramids and palaces* in Latin America

How They Were Built Without Machines

- People used hand tools, animal power, and human labor.
- Materials were local: stone, mud brick, wood, and clay.
- They invented clever solutions like ramps, pulleys, and scaffolding.

What Is Modern Architecture?

- Modern architecture means the style of buildings built mostly in the last 100 years.
- It's about new ideas, simple shapes, open spaces, and using eco-friendly (green) ideas.
- Architects today try to make buildings that are beautiful, useful, and sometimes surprising.

Famous Examples

- Burj Khalifa (UAE) – tallest skyscraper in the world.
- The Shard (UK) – glass tower that looks like a sharp crystal.
- Sydney Opera House (Australia) – white “sail” shapes on the water.
- Fallingwater (USA) – a house built over a waterfall.
- Heydar Aliyev Center (Azerbaijan) – flowing, wavy shapes with no straight lines.

Useful Vocabulary for Introducing Modern Architecture

- Skyscraper – very tall city building
- Steel / Glass / Concrete – strong modern materials
- Minimalist – very simple design
- Innovation – a new and smart idea
- Open-plan – big rooms without walls
- Green building – designed to protect the environment
- Curved / Asymmetrical / Transparent – fun words for shapes and looks

1. Different Materials, Different Uses

Buildings are made from materials that are:

- Strong (to last)
- Safe (to protect people)
- Available (found nearby)
- Comfortable (for the weather)

2. Climate Changes What We Build With

In Hot and Dry Places:

- It is better to use thick walls made of mud brick or clay
- These materials keep the inside cool.
- Example: Traditional houses in Yazd, Iran use mud bricks and wind towers

In Tropical/Rainy Places:

- It is recommended to use bamboo, palm leaves, or light wood
- Roofs are steep so rain slides off quickly
- Example: Thatched houses in Southeast Asia use palm or grass roofs

Sustainable Buildings (Green Buildings)

These are buildings designed to be good for the environment and save resources like water, energy, and materials.

Key Features:

- Use solar panels to get power from the sun
- Made from recycled or natural materials (like bamboo or reused wood)
- Have green roofs (plants growing on rooftops!)
- Use rainwater collection to water plants or flush toilets
- Designed to stay warm or cool without needing too much electricity

Examples:

- The Edge in Amsterdam – one of the greenest office buildings in the world
- Bosco Verticale (Italy) – a "vertical forest" with trees growing on every floor

Smart Buildings

These buildings use technology and Artificial Intelligence to make life easier, safer, and more energy-efficient.

Key Features:

- Automatic lights that turn off when no one is in the room
- Smart thermostats that change the temperature based on weather or time of day
- Sensors that check air quality, light levels, or motion
- Security cameras and alarms that are connected to phones
- Can be controlled with apps or voice commands

Examples:

- Smart homes with Alexa or Google Assistant
- Airports, museums, and offices with smart doors, lights, and temperature control

Elements in Iranian Architecture

Iranian architecture is beautiful, symbolic, and full of meaning.

1. Tilework (Kāshi Kari)

- Buildings are decorated with blue, turquoise, and gold tiles
- Designs include flowers, stars, and calligraphy (beautiful writing in Persian or Arabic)

2. Iwans

- A large arched entrance or porch

3. Domes (Gonbad)

- Colorful domes are placed over mosques and shrines
- Sometimes decorated inside with mirror mosaics

4. Minarets

- Tall towers beside mosques
- Used to call people to prayer

Famous Examples of Iranian Architecture

- Persepolis – Ancient palace with stone columns and carvings (Achaemenid era)
- Shah Mosque of Isfahan – Blue-tiled domes and arches (Safavid era)
- Golestan Palace – Royal buildings with mirrors and gardens (Qajar era)
- Windcatchers (Badgirs) of Yazd – Towers that cool the air using natural wind