

Y8 DTE

KNOWLEDGE

ORGANISER

HT1 - MODEL CAR PROJECT

7th Century: Early Islamic architecture, simple mosque designs like Quba Mosque.

8th-10th Centuries: Umayyad and Abbasid Caliphates, Great Mosque of Damascus and Samarra.

10th-12th Centuries: Islamic Golden Age, Alhambra, Great Mosque of Cordoba.

12th-14th Centuries: Seljuk and Mamluk periods, madrasas, caravanserais, Seljuk Kumbet, Sultan Qalawun Complex.

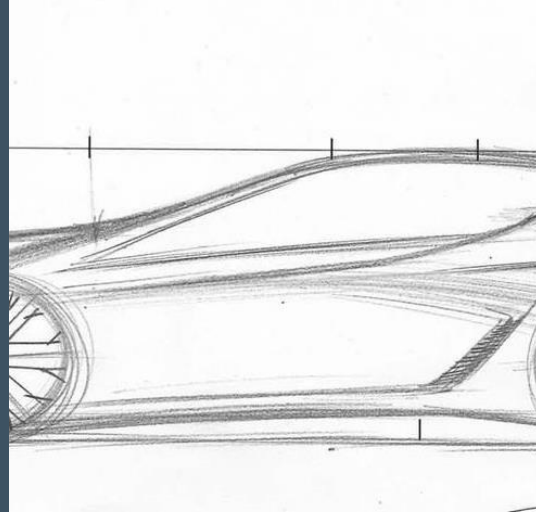
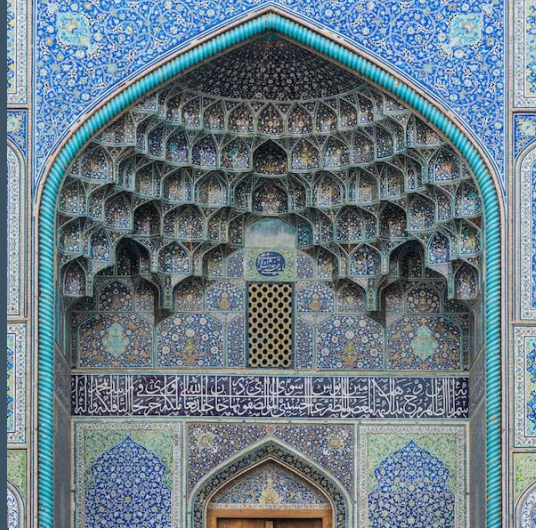
13th-15th Centuries: Timurid dynasty, Gur-e-Amir mausoleum, Bibi-Khanym Mosque.

15th-17th Centuries: Ottoman Empire, Blue Mosque, Taj Mahal.

18th-19th Centuries: Qajar period, Golestan Palace.

20th Century: Modern Islamic architecture, Grand Mosque in Riyadh, Hassan II Mosque.

21st Century: Contemporary Islamic architecture, innovative designs like King Abdulaziz Center, Qatar National Library.



KEY WORDS

Motors, Pulley, Gears, Mechanical advantage, tension, Stress & Strain, function, Aesthetics, architecture, 2 perspective, orthographic drawings, 2D design, 3D design, Design strategies, iterative design, Sketching, modelling, testing, design fixation, final model, Design principles

ISLAMIC ARCHITECTURE

- **Definition:** Islamic architecture refers to the architectural styles and designs associated with Islam, characterized by specific elements influenced by Islamic culture and religion.
- **Geographical Spread:** Islamic architecture has a global presence, with significant examples in the Middle East, North Africa, South Asia, and even parts of Europe.
- **Islamic Calligraphy:** Incorporation of Arabic calligraphy as decorative elements, often featuring Quranic verses or religious inscriptions.
- **Geometric Patterns:** Extensive use of geometric patterns, such as star motifs, arabesques, and intricate tile work.
- **Minarets:** Towers, often slender, used for the call to prayer (Adhan), are a common feature of Islamic architecture.
- **Domes:** Prominent domes, sometimes adorned with intricate patterns, are seen in mosques and other Islamic structures.
- **Courtyards:** Many Islamic buildings include central courtyards, which are often open-air and serve as communal gathering spaces.
- **Iwan:** A vaulted hall or space with one open side, frequently found in mosques and palaces.
- **Horseshoe Arches:** Distinctive horseshoe-shaped arches are prevalent in Islamic architectural designs.
- **Types of Structures:**
 - **Mosques:** Houses of worship for Muslims, typically characterized by large prayer halls, minarets, and decorative elements.
 - **Palaces:** Elaborate residences for rulers and nobility, showcasing opulent designs and gardens.
 - **Madrasas:** Educational institutions, often with a central courtyard and intricate tile work.
- **Maqsuras:** Enclosures within mosques to protect the ruler during prayer.
- **Tombs and Mausoleums:** Structures to honour and house the remains of religious figures or important individuals.
- **Bazaars:** Traditional markets with covered walkways and arched entrances.
- **Materials:** Islamic architecture employs various materials, including brick, stone, wood, and, notably, decorative tiles like mosaic and ceramic.
- **Influences:** Islamic architecture draws on diverse sources, including pre-Islamic Arabian architecture, Byzantine, Persian, and Roman influences, adapting them to Islamic principles.
- **Historical Periods:** Islamic architecture spans over a millennium, with distinct styles evolving over time, including Umayyad, Abbasid, Mamluk, Ottoman, and more.
- **Continued Influence:** Islamic architectural principles and decorative elements continue to influence contemporary architecture and design worldwide.
- **Religious Significance:** Mosques are the primary religious structures in Islamic architecture, designed to facilitate communal worship and promote a sense of unity among Muslims.
- **Cultural Diversity:** Islamic architecture varies across regions, reflecting cultural, historical, and local influences. Examples include the Mughal architecture of India, the Moorish architecture of Spain, and the Persian architecture of Iran.
- **UNESCO World Heritage:** Many Islamic architectural sites, such as the Taj Mahal and Alhambra, are recognized as UNESCO World Heritage Sites, preserving their cultural and historical significance.
- **Symbolism:** Islamic architecture often embodies spiritual and cultural symbolism, fostering a sense of identity and community among Muslims.