CHAPTER 3

A Journey Through Indian Architecture

The craftsman is not an individual expressing individual whims, but a part of the universe, giving expression to ideals of eternal beauty and unchanging laws, even as do the trees and flowers whose natural and less ordered beauty is no less God-given.

— Ananda Coomaraswamy



A group of temples at Pattadakal, Karnataka

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The Big Questions?

1. *What role has architecture played in the Indian civilisation?*
2. *What are some of the key concepts and developments behind Indian architecture?*
3. *How is the heritage of Indian architecture of relevance today?*

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Fig. 3.1. A large window of carved stone latticework in Ahmedabad's Sidi Saiyyed mosque. It is known as 'Sidi Saiyyed Jāli'.

'Architecture'—the art and techniques of design and construction, which combine functional and aesthetic aspects—is not only an art but also a highly technical field, in which India has excelled for several millennia. As with any other Indian art, these accomplishments have evolved in time and developed great geographical diversity.

Exploring it all—the evolution of forms, their endless diversity and technicalities—cannot be done in a brief chapter. Instead, we will go on a journey, visiting a few representative structures or monuments grouped in a few categories. We hope that you will be tempted to take detours on the way and explore more.

Earlier textbooks of the Middle Stage (Grades 6 to 8) have briefly highlighted quite a few such structures or monuments—those were just teasers! Let us now begin our journey, guided by two illustrations: the map in Fig. 3.3 shows the geographical locations of the structures we will visit, and Fig. 3.2 places them in the river of time.



Fig. 3.2. A timeline of the structures and monuments visited in this chapter

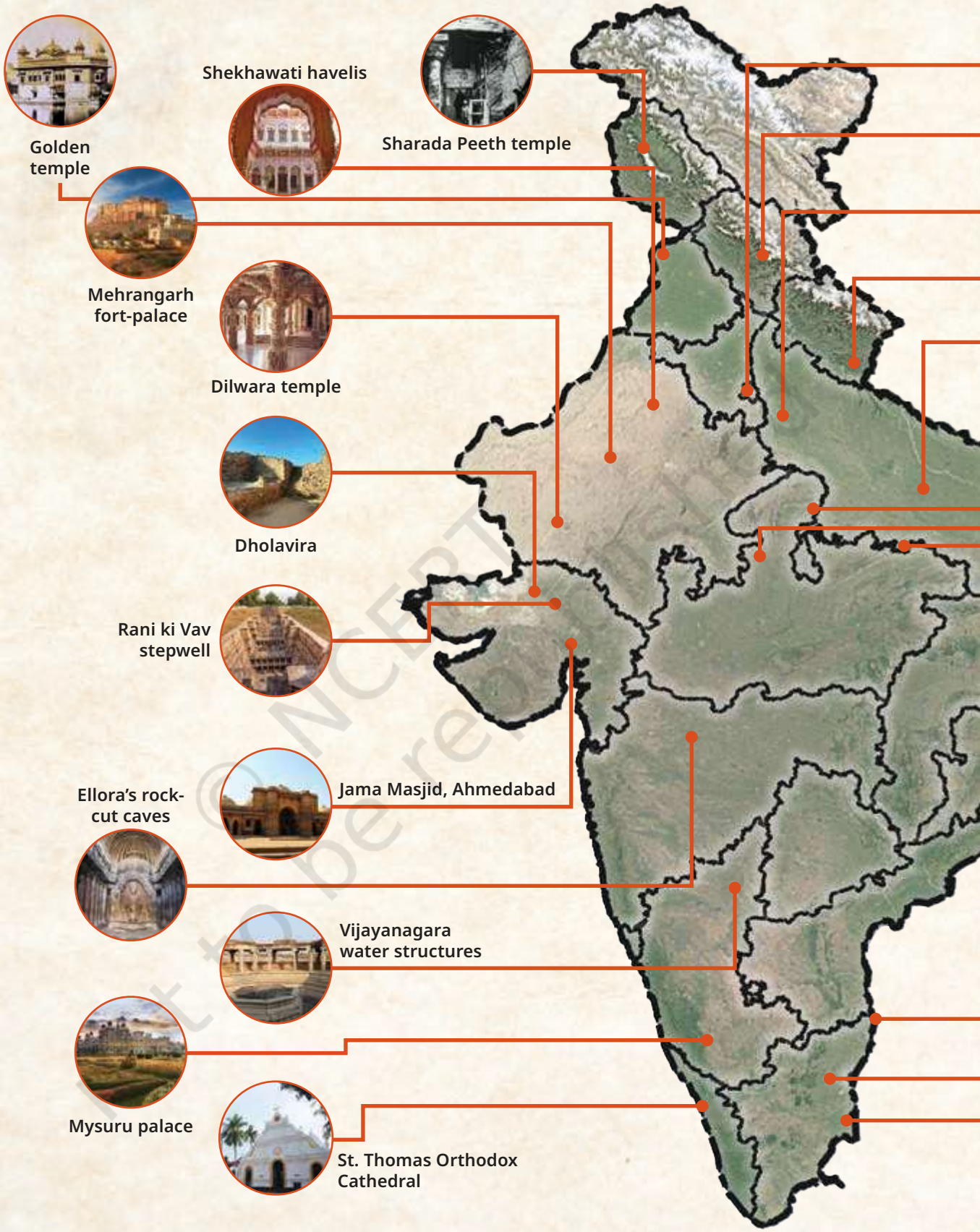


Fig. 3.3. Locations of the structures and monuments visited in this chapter

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Jama Masjid, Delhi


Humayun tomb


Hidimba Devi temple


Taj Mahal


Agra fort


Jageshwar group of temples


Shringaverpur water structures


Orchha fort-palace complex


Sanchi stupas


Bharhut


Bishnupur terracotta temples


Udayagiri-Khandagiri rock-cut caves


Lingaraja temple complex


Madras High Court


Brihadeswara temple


Chettinad houses

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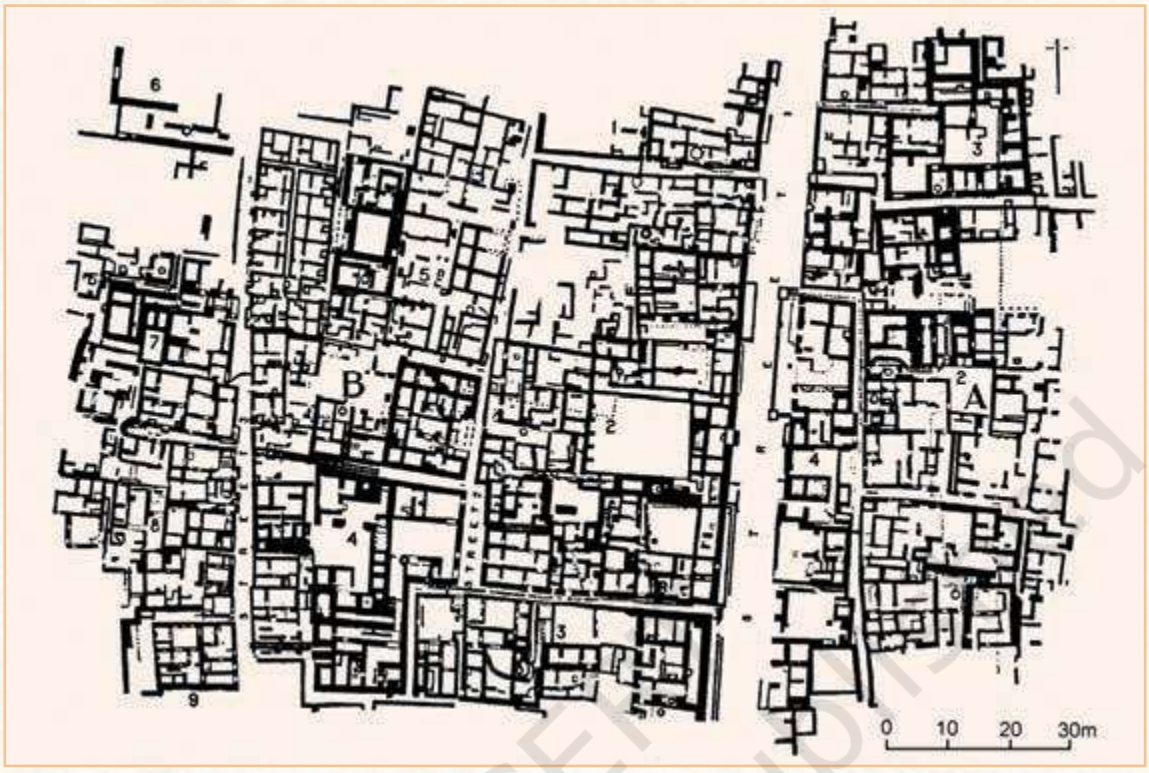


Fig. 3.4. The dense network of streets and lanes in an area of Mohenjo-daro's lower town.

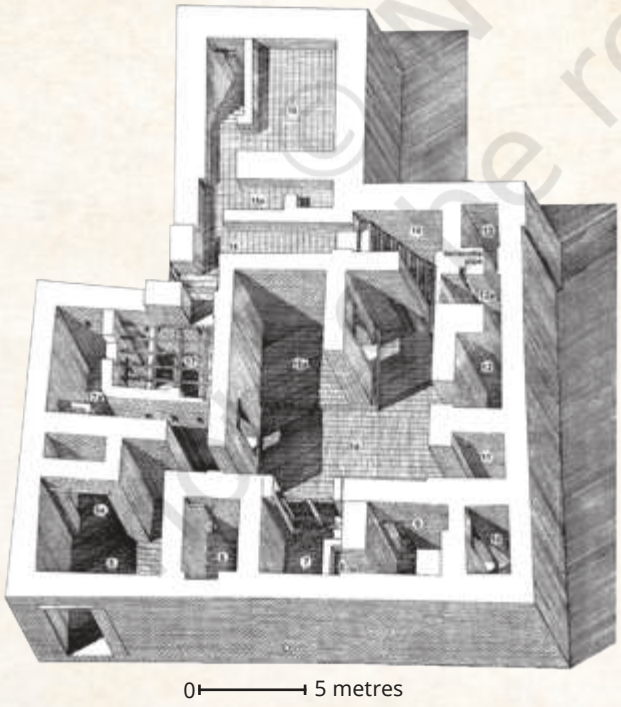


Fig. 3.5. Plan of a large house in Mohenjo-daro

We visited the Indus/Harappan/ Indus-Sarasvati civilisation in Grade 6 (chapter 'The Beginnings of Indian Civilisation'). Harappan architecture represents the earliest known tradition of urban planning and construction in the Indian subcontinent. It is characterised by carefully laid-out cities, standardised urban concepts, and an emphasis on drainage, water management, and civic organisation. Most Harappan cities were constructed with bricks, as they were located in alluvial plains where clay is abundant.



Fig. 3.6. The eastern entrance to Dholavira's Castle area

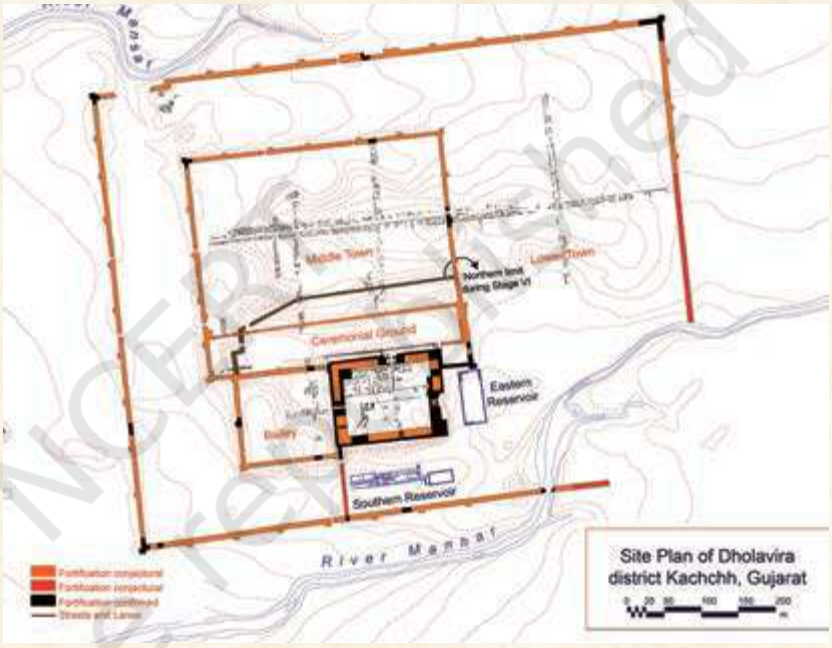


Fig. 3.7. A plan of Dholavira, with different fortified areas, streets and reservoirs.

Mohenjo-daro (in present-day Sindh, Pakistan) was an extensive city. Fig. 3.4 shows a densely inhabited area, with wide streets and narrow lanes roughly oriented to the cardinal directions. Almost every home had a bathing area; used waters were taken out of the city through an efficient network of drains. The plan of a large house (Fig. 3.5) hints that while the servants lived downstairs, the owners probably lived upstairs, where they would be less exposed to the dust and noise from the streets around.

Noted for its precise urban planning (Fig. 3.7), **Dholavira** in the Rann of Kachchh is another large Harappan city. Unlike most others, it made extensive use of stone, as it was locally available. In Fig. 3.6, you can picture yourself entering the city's highest and most fortified area (named 'Castle'). Notice the smooth surface of the blocks of stone and the large sentinel room on the left, where guards would have screened people moving in or out. Two highly polished segments of a stone pillar remain visible in the centre.

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Structural Stupa Architecture

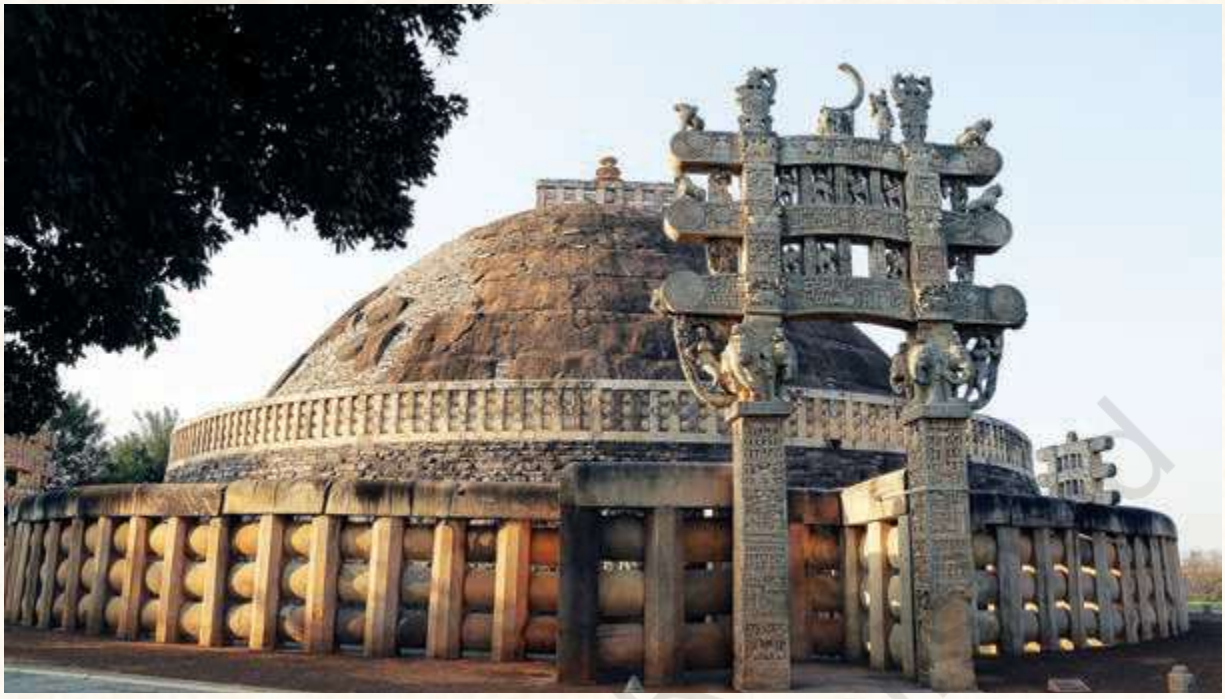


Fig. 3.8. A view of the main stupa at Sanchi, with toraṇas and an enclosure of railings.



Fig. 3.9. A panel at Bharhut depicting people worshipping the stupa there.

From the 4th or 3rd century BCE onward, with the rise of Buddhism several new architectural forms emerged in north India, slowly spreading to other regions. Thousands of stupas (dome-shaped structures housing relics of the Buddha or revered monks) were constructed with bricks or stone. The larger ones became complex ritual centres with railings, gateways, and elaborate panels often narrating episodes in the Buddha's life. At this early stage, the Buddha was represented symbolically—through objects such as footprints, the wheel of dharma, or the stupa itself—rather than in human form.

Originally commissioned or patronised by Aśhoka, the main stupa at **Sanchi** (Figs. 3.8 and 3.10) in Madhya Pradesh represents the earliest phase of monumental religious stone architecture in India. Entering through one of its massive *toraṇas* (ornamental

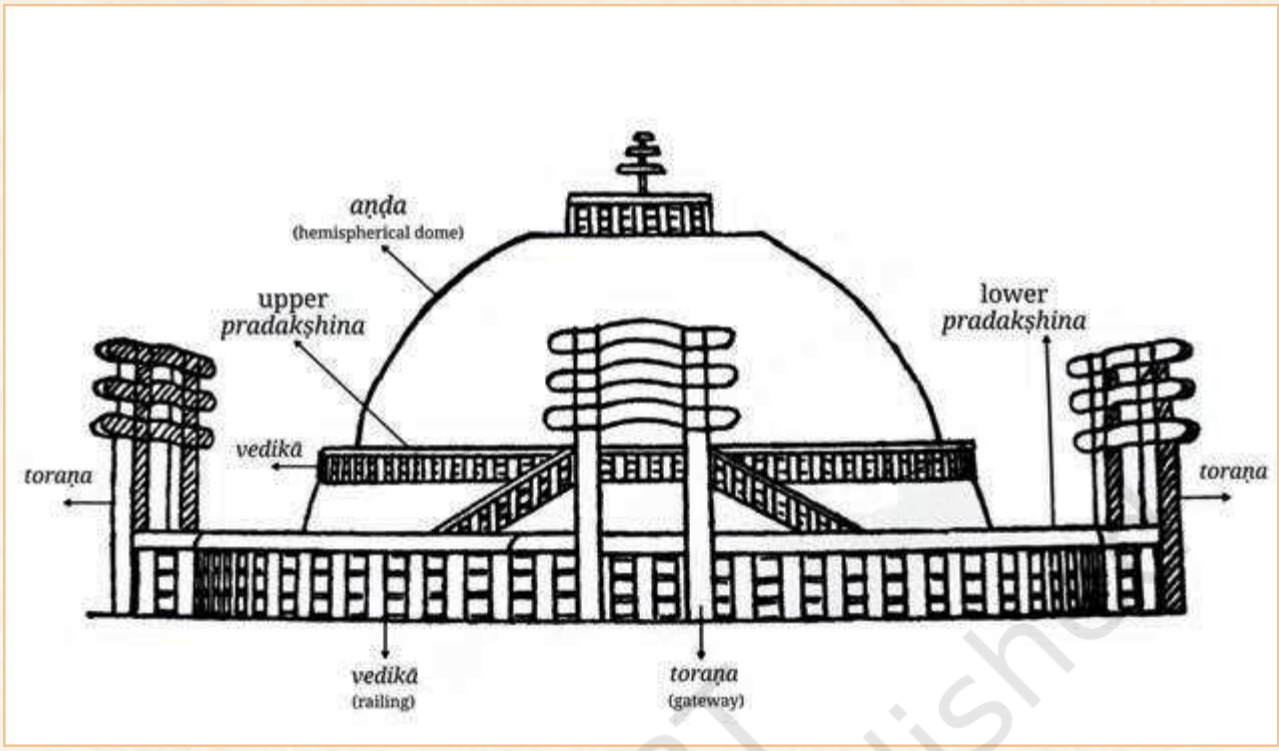


Fig. 3.10. A plan of the Sanchi Stupa

gateways depicting many scenes of urban as well as village life), a worshipper would circumambulate (i.e., walk around) the stupa inside the enclosure of railings (*vedikā*). The worship of stupas is explicitly depicted at **Bharhut** (Fig. 3.9), also in Madhya Pradesh; there, the stupa was similarly enclosed by richly carved stone railings and bore numerous inscriptions recording the names of donors.

Stupas are common in Jainism too. With diverse dimensions and shapes, this form of religious architecture will spread across India and beyond (remember Borobudur in the Grade 7 textbook).

LET'S REMEMBER



You will find several depictions of beautiful panels of the Sanchi Stupa in textbooks of Grade 6 (check out chapter 'India, That Is Bharat') and Grade 7 (chapters 'New Beginnings: Cities and States', 'The Rise of Empires', 'From the Rulers to the Ruled: Types of Government').

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Rock-Cut Architecture

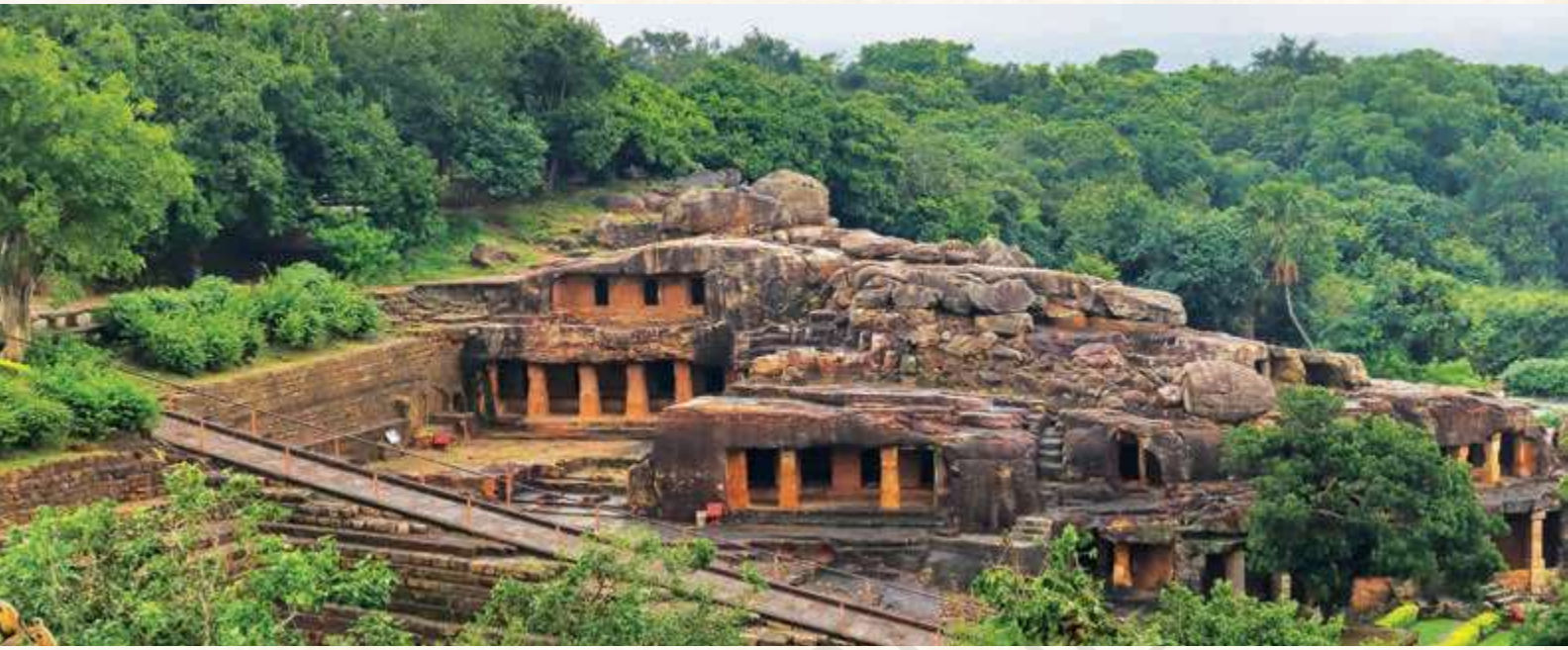


Fig. 3.11. A general view of the Udayagiri-Khandagiri caves



Fig. 3.12. A view of cave no. 10 at Ellora depicting a seated Buddha in the posture of teaching, emerging from a stupa.

Rock-cut architecture developed as an efficient and durable mode of construction for religious communities. By carving directly into the rock, builders created caves for worship, residence or assembly. These complexes often evolved over centuries, reflecting changing religious needs and patronage.

The **Udayagiri–Khandagiri cave complex** (Fig. 3.11) near Bhubaneswar in Odisha, whose carving began in the 2nd century BCE under royal patronage, are among India's first; most of them served as dwellings for Jain monks. One cave shelters Khāravela's famous inscription (see the textbook for Grade 7, chapter 'The Age of Reorganisation').

Maharashtra boasts several magnificent rock-cut cave complexes. Those at **Ajanta** and **Ellora** are renowned for their

massive scale, exquisite craftmanship and the mind-boggling technologies involved in their carving. Many thousands of tonnes of rock had to be chipped away to leave the colossal monolithic **Kailaśha Temple** at Ellora (see the Grade 7 textbook, chapter 'Empires and Kingdoms: 6th to 10th Centuries') and the many Buddhist, Hindu and Jain caves there. Ellora's cave no. 10 (Fig. 3.12) is of enormous proportions; leaning against a stupa is a massive statue of a seated Buddha in a teaching pose. The cave's arched roof imitates beams of timber that existed in some of the urban buildings; in its aisle (Fig. 3.13), that is, the corridor outside the row of pillars, monks would circumambulate the stupa. This custom of *pradakṣhiṇa* (which means 'going around in a clockwise direction') will persist in later classical temples).

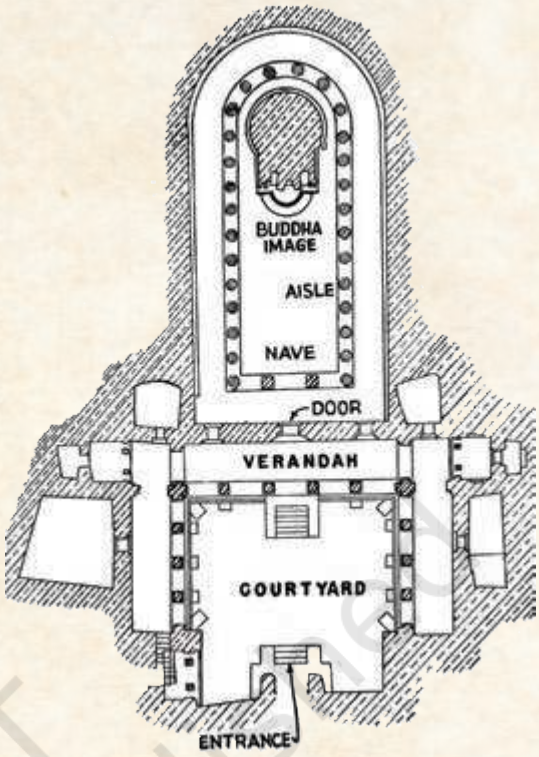


Fig. 3.13. A ground plan of cave no. 10 at Ellora

LET'S EXPLORE



- → Form groups in the class to discuss the following: Imagine you have only hammers and iron chisels. How will you plan the carving of such a huge cave? What challenges might the hillside offer? And once you reach the nave (Fig. 3.13), how will you manage to carve arched beams into its ceiling?
- → In classical temples, what Indian words would we use instead of 'nave'?



LET'S REMEMBER

You will find pictures of the Ellora caves in the Grade 6 textbook (chapter 'India's Cultural Roots'), of the Udayagiri-Khandagiri caves in the Grade 7 textbook (chapters 'The Age of Reorganisation' and 'The Gupta Era: An Age of Tireless Creativity'), and the Ajanta caves in the Grade 6 textbook (chapter 'The Gupta Era: An Age of Tireless Creativity').

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DON'T MISS OUT

→ **Sharada Peetha Temple, Jammu and Kashmir**



Dedicated to Goddess Śhāradā (a form of Sarasvatī), Sharada Peetha was a renowned centre of learning and a key site in the development of the Sharada script. Attracting scholars from different parts of India and the world, it flourished between the 6th and 12th centuries CE, and its legacy earned Kashmir the name *Śhāradā Deśh* (the land of Śhāradā). Though now in ruins, it remains an important part of India's archaeological and cultural heritage.

→ **Hidimba Devi Temple, Himachal Pradesh**



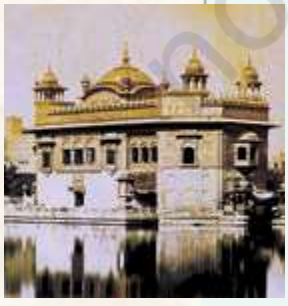
Located in Manali amid the cedar forests of Dhungiri Van Vihar, the Hidimba Devi Temple is one of the oldest religious sites in the Kullu Valley. Built in the 16th century CE, the shrine is dedicated to Hidimbā (Hirama), the wife of Bhīma from the *Mahābhārata*. A nearby temple dedicated to their son, Ghaṭotkacha, further reflects the site's close association with the epic tradition.

→ **Jageshwar Group of Temples, Uttarakhand**



The Jageshwar Group of Temples, located in the Jatāgangā Valley of Uttarakhand's Almora district, is an ancient temple complex associated with the Katyūrī, Chand, and Gurjara–Pratihāra dynasties (8th–18thcenturies). Comprising about 124 stone temples, it is renowned for its *Swayambhu Linga*, known as Nāgeśh Dārūkāvane. The *garbha griha* houses Jāgeśhwara Mahādeva, who is locally revered as Bāla Jägeśhwara ("Child Shiva").

→ **The Golden Temple, Punjab**



The gurudwara is the place of worship of the Sikhs. The Harmandir Sahib or Golden Temple in Punjab is considered to be the holiest of the Sikh Shrines. The temple was founded by Guru Ramdas Sahib the 4th of the 10th Sikh Gurus. The construction of the temple and its sarovar was continued by Guru Arjan Dev, the fifth Guru in 1588.

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Water Structures

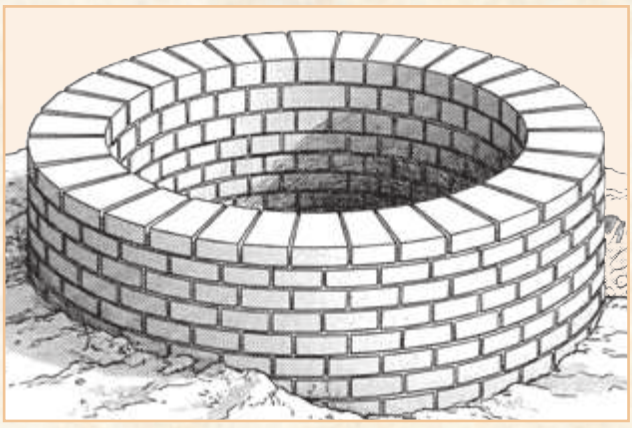


Fig. 3.14. A simplified sketch of a typical Harappan well built with trapezoid-shaped bricks.



Fig. 3.15. One of the tanks at Shringaverpur

For several millennia, India's monsoon-driven climate has led people to develop a great variety of structures for the harvesting, storage and distribution of water. These structures, whether simple (such as a humble village pond) or highly sophisticated (such as the Grand Anicut, see chapter 'The Age of Reorganisation' in the Grade 7 textbook), have been very diverse owing to the different geological, climatic and environmental conditions of the land, from the Himalayan foothills, the Thar Desert, the Gangetic plains, the Western Ghats, to the Deccan plateau or the Northeast.

This tradition goes all the way back to the Harappan civilisation; remember Dholavira's large reservoirs, for instance. Besides, the Harappans invented wells that cannot collapse inward under the pressure of underground infiltration, thanks to their trapezoid-shaped bricks that lock together (Fig. 3.14). In later periods, we find networks of reservoirs in many parts of India. Shringverpur in Uttar Pradesh was known as **Śhringaverapura** in the Rāmayaṇa (which describes it as the place where Rāmā, Sītā and Lakṣhmaṇa crossed the Ganga while starting on their exile). Excavations there brought to light a series of large interconnected reservoirs (Fig. 3.15) fed by a channel from the Ganga during the river's seasonal flooding. The first reservoir or two allowed the

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Fig. 3.16. The Rani ki Vav stepwell

silt suspended in water to settle down—a fairly common design. Yet the precise working of the entire complex remains to be figured out.

Wells have been constructed in many sizes and shapes from bricks, stones, or terracotta ring. In classical times, a tradition of stepwells (*vāvs* or *bāorīs*) developed in Gujarat and Rajasthan, many of them engineering marvels as well as spectacular works of art. The stepwell at **Rani ki Vav** (Fig. 3.16) has multiple pillared levels and hundreds of magnificent statues. Besides harvesting and storing rainwater, stepwells offered a social space where people could sit together, enjoy cooler temperatures and exchange all the news.



Fig. 3.17. A puṣhkariṇī at Vijayanagara

Temples often had water reservoirs or *puṣhkariṇīs* attached to them, which were used for water harvesting as well as water-based rituals. Many of them were also works of art, with numerous stairways built into them (Fig. 3.17).

Many of these traditional water structures suffer today from depleted water sources, maintenance issues, pollution, waste dumping, etc. Environmentalists, locals, and NGOs sometimes join hands to preserve them, but much remains to be done.

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Classical Temple Architecture

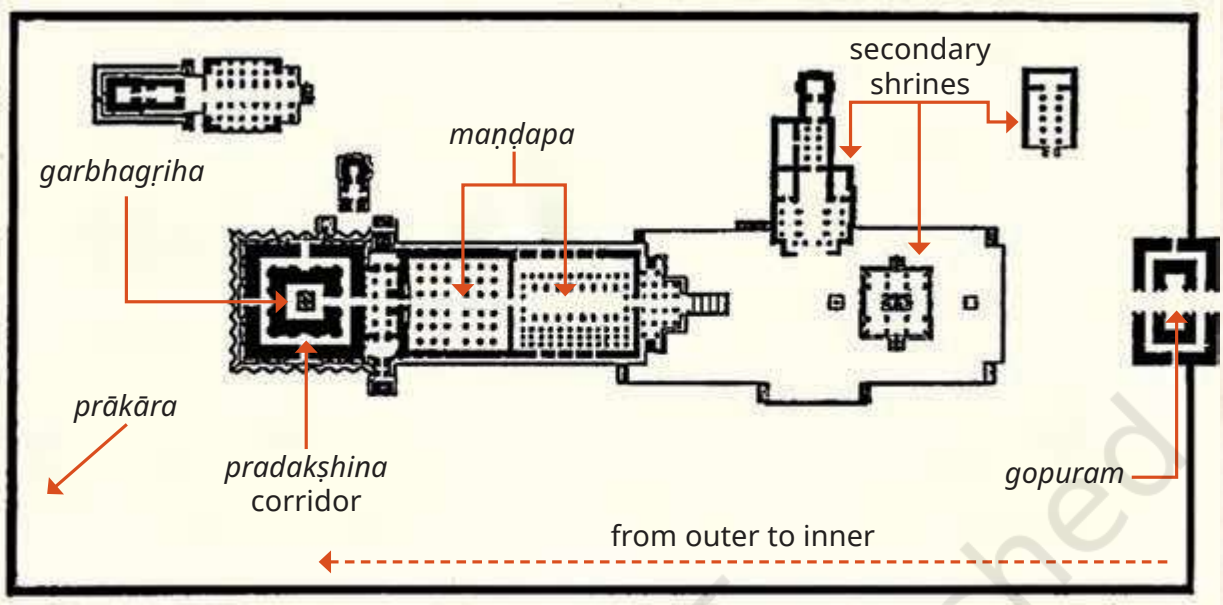


Fig. 3.18. Simplified ground plan of the Bṛihadīśhvara Temple

With antecedents in the stupa and rock-cut types of architecture, temples have been central to India's cultural life for many centuries. Whether Buddhist, Jain or Hindu, temples have been places of worship, but also of learning, literature, art (sculpture, dance, music, painting among others). Besides, they were centres of social intercourse and economic life. Architecturally, they evolved into works of art that celebrate life and encourage bhakti as well as quiet contemplation.

Classical temples emerged during the Gupta era. Many were built thanks to royal patronage, as evidenced by inscriptions, but also by endowments from various donors. Temple construction followed principles and techniques spelt out in treatises of *śhilpaśhāstra*—the discipline of arts and crafts, largely dedicated to architecture and sculpture. A temple's main elements are shown in Fig. 3.18: a ceremonial entrance (*gopuram* in south India; *toraṇa* in some north Indian temples), one or several *maṇḍapas* (pillared halls), and the *garbhagṛiha,* the innermost chamber where the image (*mūrti*) of the deity is kept. Above the *garbhagṛiha* is a tower called *śhikhara* (in north Indian temples) or *vimāna* (in south Indian temples). The main alignment is generally east-west, with the *garbhagṛiha* facing east.

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Temple architecture is also based on certain philosophical concepts. For instance, both horizontally and vertically, a temple is planned as a representation of the human body—that of *Puruṣha* or the cosmic being. Fig. 3.19 shows the vertical equivalence: from the top of the *śhikhara* or *vimāna*, which corresponds to the head, down to the platform on which the temple rests, which corresponds to the feet (*you need not remember the technical terms for the śhikhara's different parts shown in Fig. 3.19*). The temple thus becomes a symbol of our own being and also of the cosmos.

Temple worship can be understood as a journey from the outer world (left behind once one crosses the entrance) to the inner world awaiting the worshipper in the *garbhagṛiha*, mirroring our own spiritual journey.

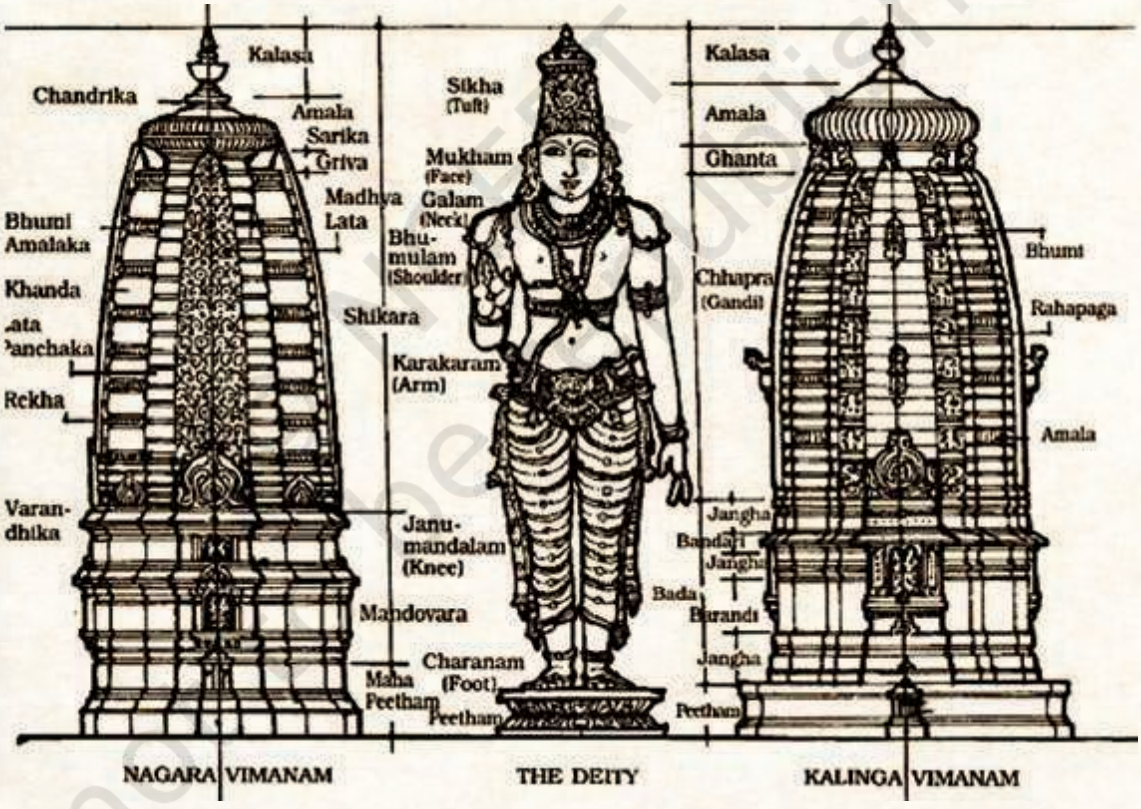


Fig. 3.19. The temple as 'Puruṣha'



LET'S EXPLORE

Looking at Fig. 3.18, can you work out the horizontal equivalence between a temple and the cosmic being?

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Fig. 3.20. The Bṛihadīśhvara Temple at Thanjavur



Fig. 3.21. A panel depicting Mahālakṣhmī, attendants and minor deities

Until the 8th or 9th century, temples were modest in size. From the 10th century onward, in different parts of India they grew in scale and began incorporating multiple shrines, amenities, and enclosures (*prākāras*), culminating in vast complexes. In the grade 7 textbook (chapter 'Turning Tides: 11th and 12th Centuries'), we saw the magnificent **Kandāriyā Mahādeva Temple** of Khajuraho and Cambodia's colossal **Angkor Wat Temple**. In Thanjavur, Tamil Nadu, the imposing **Bṛihadīśhvara Temple** (Fig. 3.20) was built by Rājarāja Chola I around 1010. It is renowned for its vast *maṇḍapas*, a huge *vimāna*, over 60 metres high, and a massive Nandi (sacred bull) statue carved from a single stone, which sits in a pavilion facing the main shrine. The entire

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Fig. 3.22. The Lingarāja Temple complex at Bhubaneswar



Fig. 3.23. A detail of the Lingarāja Temple's śhikhara

structure showcases exquisite craftsmanship, with intricate granite carvings and sculptures adorning its walls (Fig. 3.21).

Both the Bṛihadīśhvara Temple and the **Lingarāja Temple** in Bhubaneswar, Odisha (Fig. 3.22), are dedicated to Śhiva, with several secondary shrines dedicated to goddess Pārvati and other deities. Built in the early 11th century, the Lingarāja Temple has three large *maṇḍapas* used for different purposes. It is built from locally available sandstone and laterite stone and is rich in ornate carvings (Fig. 3.23).

LET'S EXPLORE



India's classical temples come in distinct regional styles. For instance, note the pyramidal shape of Bṛihadīśhvara Temple's *vimāna* and compare with the shapes in Fig. 3.19. Revisit the pictures of the Angkor Wat and Kandāriyā Mahādeva Temples and note the chief differences you can observe.



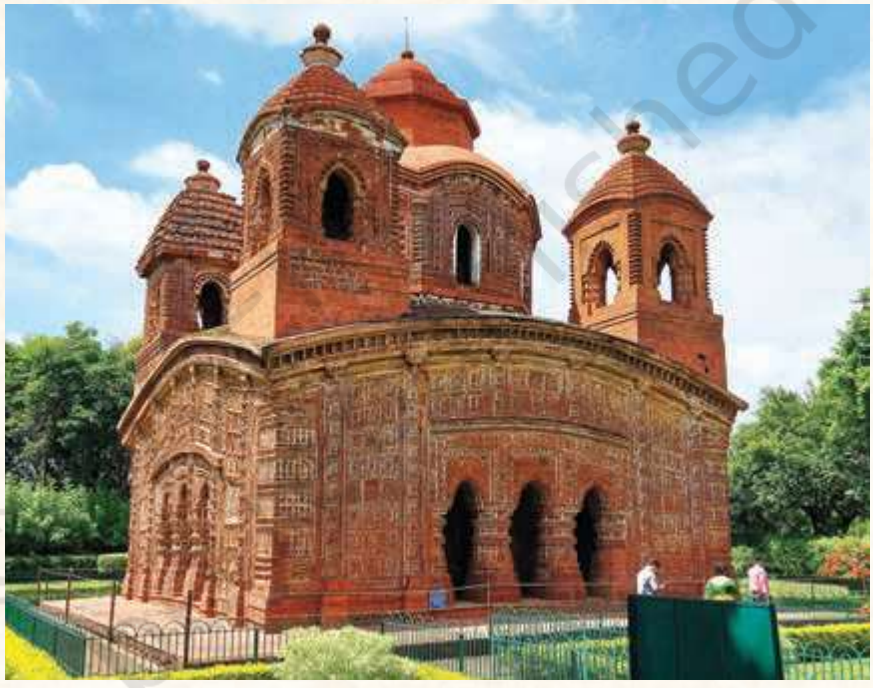
Fig. 3.24. Dilwara Temple at Mount Abu

The **Dilwara Temples** at Mount Abu, Rajasthan, are a group of five exquisitely carved Jain temples built between the 11th and 13th centuries by the Solanki or Chaulukya dynasty. Made of white marble procured from the nearby Aravalli hills, they feature delicate carvings of the Jain *tīrthankaras*, deities, dancers, musicians, and ornamental patterns that cover every surface.

Built in the 17th and 18th centuries, the **terracotta temples of Bishnupur** in West Bengal are of a very different style. They are brick structures with elaborate surface decorations on square panels, many of which depict themes associated with Rādhā, Kṛiṣhṇa or Rāma, as well as, scenes from everyday life. Terracotta panels such as those seen in Fig. 3.27 were first carved by hand and then fired in a kiln in a precise manner.



Fig. 3.25. A pillared hall inside the Dilwara Temple (top),
Fig. 3.26. Terracotta temple at Bishnupur, West Bengal (right).





LET'S EXPLORE

- → Make a list of all the materials we have encountered so far in the carving or construction of structures; make a list of pros and cons for each of them. Did you notice that none of the structures discussed so far use any cement mortar?
- → Observe the pictures of the four temples featured here. What common features and what differences can you notice?
- → Identify a temple in your location. Based on what you have read here, what architectural details can you make out?

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Fig. 3.27. Detail of the temple's facade (front portion), showing intricate terracotta work.

Apart from a large manpower and accomplished sculptors, the architecture of classical temples required highly skilled architects, engineers and craftsmen, as it involved elaborate construction techniques. Recent studies have shown that their planning involved a good deal of mathematics, especially some advanced geometry. All this, of course, is also true of many large sacred structures in other parts of the world, whether Egypt's pyramids and temples, Athens' Parthenon or medieval Europe's **gothic** cathedrals.

Gothic: A European style of architecture prevalent from the 13th to the 18th centuries; key features include pointed arches and large windows decorated with stained glass.

The Architecture of Mosques



Fig. 3.28. The Jama Masjid in Ahmedabad

Mosques are places of worship where followers of Islam gather for prayer. They also serve as centres for religious education, community gatherings, and venues for lectures and discussions. Mosques have a prayer hall oriented towards Mecca (the most sacred site in Islam, located in Saudi Arabia). The larger ones often include one or several domes, and minarets (towers) on either side of the domes, from where the muezzin makes his call to prayer.



Fig. 3.29. A sketch made in 1809 by a British army officer shows the mosque's full-size minarets.

The Friday prayers are especially important in Islam; large mosques where these prayers are held are often called 'Jama Masjid'—*jama* means 'gathering' or 'assembly', while *masjid* means 'mosque'.

The **Jama Masjid in Ahmedabad** (Gujarat) was built by Sultan Ahmed Shah I in the 15th century.

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Architectural developments in Gujarat took on regional flavours, and this structure of yellow sandstone (Fig. 3.28) has a blend of Hindu and Islamic architectural elements. Its facade (front portion) displays elegant arches and the bases of two minarets (their top portions, which were destroyed in earthquakes, can be seen in a sketch in Fig. 3.29).

The presence of intricate stone *jālis* (latticed screens,

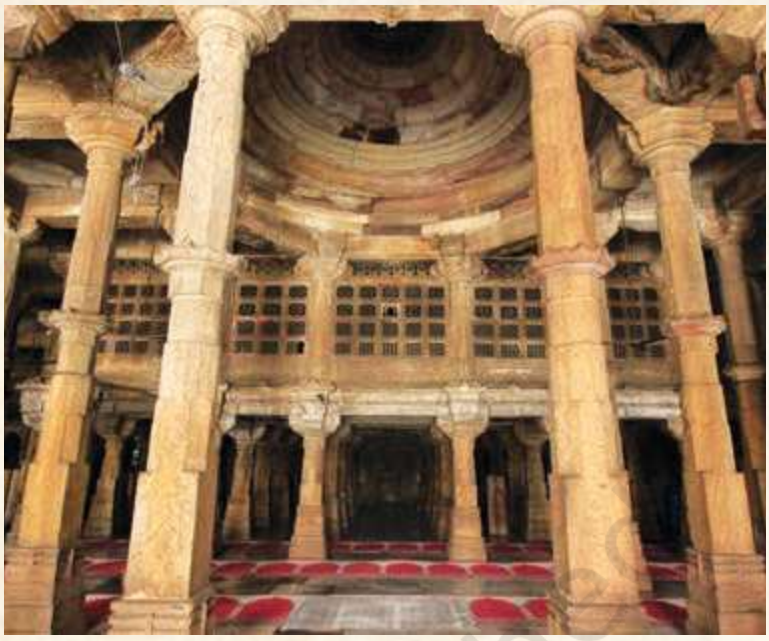


Fig. 3.30. A section of the Jama Masjid's large prayer hall

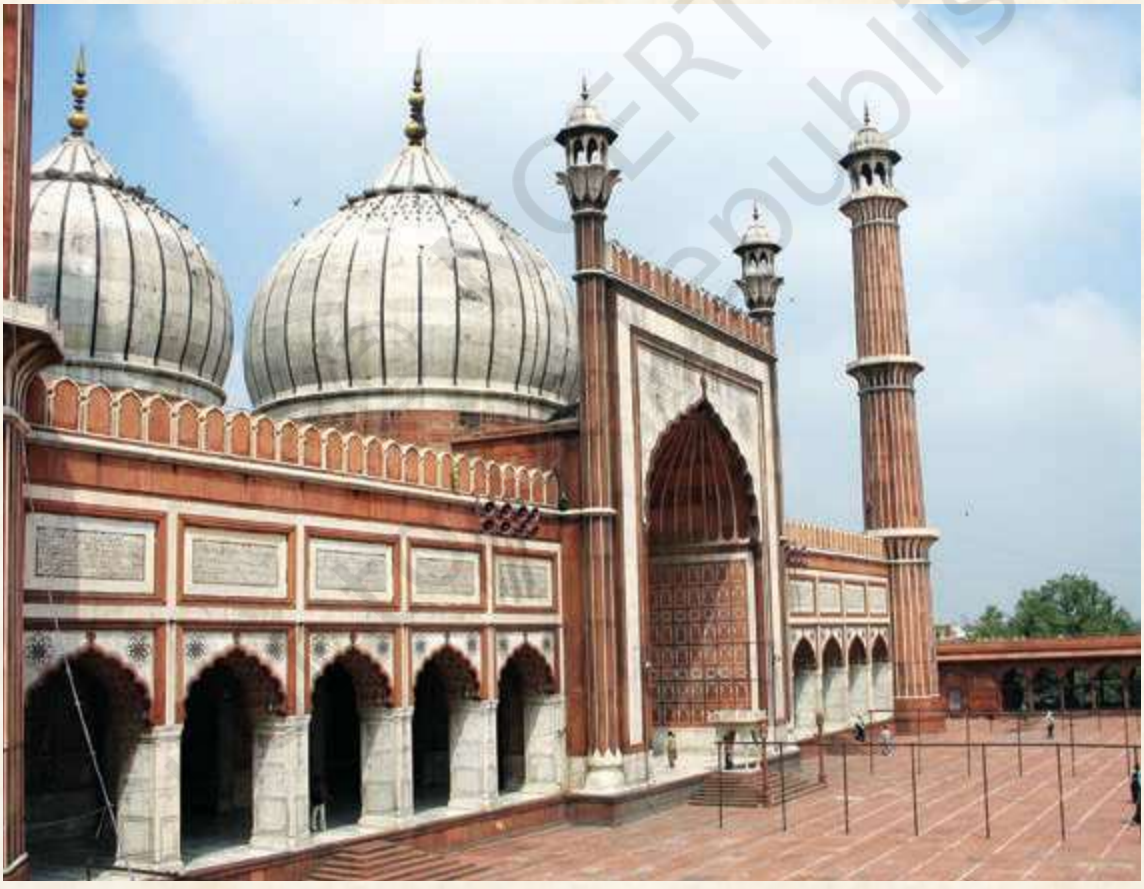


Fig. 3.31. A view of Delhi's Jama Masjid

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see an example in Fig. 3.1), pillars of the same style as found in some temples (but without decorations, Fig. 3.30), and some detailed carvings have led scholars to suggest that the mosque was constructed with the help of local Hindu and Jain artisans, masons and stone carvers. This is not uncommon in what has been called 'Indo-Islamic architecture', which blends Islamic building traditions with Indian craftsmanship. Some of its features are domes, arches (both pointed and **corbelled**), *jālis*, and floral motifs. In Rajasthan, local architectural features such as ornate *jharokhās* (overhanging balconies) and *chhatrīs* (pavilion domes) were often integrated.

Corbelled: Constructed by stacking blocks as in a staircase pattern

The **Jama Masjid in Delhi** (Figs. 3.31 and 3.32) is India's largest mosque. Mughal Emperor Shah Jahan built it in the mid-17th century, after he moved his capital from Agra to Shahjahanabad (now Old Delhi). He had a vision for a grand mosque where the city's Muslims could gather for prayer. About 5,000 workers were pressed into service for its construction.



The mosque is made from red sandstone with white marble decorations, and has three large entrances. Two 40-metre tall minarets stand on either side. The main prayer hall has three large domes and the red-stone courtyard can accommodate up to 25,000 people. The walls and arches are decorated with calligraphy (decorative writing) of verses from the Qur'an.

<< Fig. 3.32. A man praying facing the 'mihrab', i.e., the niche in the wall that points to the direction of Mecca.

Forts and Palaces



Fig. 3.33. A general view of the Mehrangarh Fort, with the Jaswant Thada in the foreground.

As we already saw in a few earlier chapters of 'Tapestry of the Past', forts played an important role in Indian history—that of protecting a kingdom from the onslaught of invaders. They were therefore strategically located near important land or sea routes, and often atop a hill so as to command a view of the plains below. Forts also accommodated the residences of the ruling and military classes, and in some cases even an entire city, depending on their size. Since some forts also sheltered a royal palace, we have clubbed these two categories together.

LET'S REMEMBER



Try to remember where earlier textbooks showed pictures of the forts of Jaisalmer, Kumbhalgarh, Raigad, and Sindhudurg. Can you point to their approximate locations on India's map?

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*Fig. 3.34. One of the facades of the palace inside the Mehrangarh Fort; note the intricate carving and the stone **latticework** around the balconies.*

The construction of the **Mehrangarh Fort** in Rajasthan (Fig. 3.33) began in the mid-15th century; Rajput rulers continued to expand it over the next two centuries or so. Overlooking the city of Jodhpur, this imposing structure is made of massive blocks of locally sourced red sandstone. Within the fort complex, a large palace (Fig. 3.34) has several areas for the royalty, separate quarters for the men and women, living quarters for the staff, and stables and barracks. Today, many parts of the fort have been converted into a museum to preserve and showcase the fort's and Rajasthan's cultural heritage.

Latticework: Open framework with criss-crossing or decorative designs. Here, it is both functional (allowing ventilation) and aesthetic in design.

DON'T MISS OUT



- **Jaswant Thada** in Fig. 3.33 is a more recent building, a memorial to Maharaja Jaswant Singh II built by his son Maharaja Sardar Singh; it has served as the cremation ground for Jodhpur's royal family. Such monuments in the memory of a historical figure are called 'cenotaphs'; they are not tombs, as the deceased person remembered is not buried at the spot.
- Jodhpur is also noted for the blue colour of traditional houses close to the fort. This is due to the application of a solution of copper sulphate mixed with lime on the walls, which is said to repel termites. Other features of Jodhpur include meandering streets, open courtyards, *jāli* windows for ventilation, thick walls and balconies, all of which work together to keep houses cool.

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Fig. 3.35. A view of the Agra Red Fort's ramparts (defensive walls)

The historical **Red Fort at Agra** (not be mistaken for Delhi's Red Fort) was originally made of brick, and had fallen to ruin when Akbar decided to make his capital there and rebuild the fort. It was designed to include palaces and gardens, living quarters, halls for public and private audiences, and living quarters for the maids and other servants. The fort's name comes from the red sandstone (Fig. 3.35) that was mined from Dholpur in Rajasthan, some 60 km away. However, Akbar's grandson, Shah Jahan was fond of marble and replaced many of the sandstone buildings with marble ones, in particular the palaces (Figs. 3.36 and 3.37); he was imprisoned until his death in one of them (Fig. 3.36) by his son, Aurangzeb. He also had three mosques built within the



Fig. 3.36. The marble-built Musamman Burj in Agra's Red Fort, with an octagonal tower on top and the Taj Mahal in the distance.

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Fig. 3.37. Adjoining the Musamman Burj is the Khas Mahal; note the floral patterns inlaid in the marble.

fort complex. Many of those buildings were destroyed by British troops of the East India Company in the 19th century.



DON'T MISS OUT

The Agra Fort had many fountains. Water from the Yamuna was lifted using Persian wheels (see chapter 'Reshaping India's Political Map' in the Grade 8 Part 1 textbook) into overhead tanks on the walls of the fort. From the tanks, water flowing down through terracotta pipes created fountains, which worked as eco-friendly 'air-conditioners', helping to keep the area cool.

The **Orchha Fort-Palace complex** (Fig. 3.38) was built in the mid-16th century by the Bundela Rajput kings on the banks of the river Betwa in Madhya Pradesh. The complex features three main palaces —Raja Mahal, Jahangir Mahal, and Rai Praveen Mahal. The Jahangir Mahal (Fig. 3.39), built to commemorate Emperor Jahangir's visit, showcases a blend of Rajput and Mughal architectural styles. It has ornate chambers, intricate stone carvings, and beautiful courtyards. The complex also includes elegant *chhatrīs* (cenotaphs in the shape of a parasol) on the riverbank, and is connected to the town's famous Ram Raja Temple.

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Fig. 3.38. A view of the Orchha Fort-Palace complex



Fig. 3.39. A view of the Jahangir Mahal palace in the Orchha complex

The **Mysuru Palace**, also known as Amba Vilas Palace (Fig. 3.40), is a magnificent example of Indo-Saracenic architecture (see further below the section under that name). It is the residence of the Wadiyar dynasty, and a symbol of Mysuru's royal heritage. The present structure was built early in the 20th century after the previous wooden palace was destroyed by fire. The palace is renowned for its intricately carved wooden doors, ornate ceiling paintings, stained-glass windows, and the spectacular golden throne (*singhāsana*) displayed during the Dasara festival. The palace is illuminated by nearly 100,000 lights every Sunday evening and during festivals.



Fig. 3.40. A view of the Mysuru Palace

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Tombs and Mausoleums



Fig. 3.41. A general view of Humayun's Tomb complex in Delhi



Fig. 3.42. A closer view of the upper level; note the marble domes, arches and stars.

For religious reasons, in Islam and Christianity the dead are buried. In the Islamic world, mausoleums—grand buildings housing a tomb or a group of them—were often built for prominent rulers, members of the royal household, or for some renowned mystics. They were also a political statement, as they stood as a testament to the greatness of the royalty or their dynasty. This is not a common practice among people of other faiths; in Buddhism, Jainism and Hinduism, the dead are generally cremated; as a result, no tombs of rulers of such faiths exist in India in ancient times. In the medieval era,

cenotaphs appeared, especially in Rajasthan and central India, but they only marked the places where a king or his family member was cremated (we saw an example in Fig. 3.33).

As the few examples below make clear, these monuments' elegant architecture embedded strict concepts of symmetry, which extended to the gardens around. Common features (also found in some of the larger mosques, as we saw) included arches, floral motifs, latticework, and calligraphy of verses from the Qur'an.

The renowned **Humayun's Tomb** (Figs. 3.41 and 3.42) is a significant landmark of Delhi. It was commissioned by Humayun's chief wife, Bega Begum, in 1558, and designed by Persian architects, who brought with them Persian aesthetics that became part of the Mughal architectural tradition. The complex also houses the tombs of several Mughals, including that of Dara Shikoh (whom we met in Part 1 of this textbook).



DON'T MISS OUT

Did you notice the six-pointed star on Humayun's tomb? This geometric symbol is found in several religious traditions. In Judaism, it is known as the 'Star of David', named after David, a king of the Hebrews mentioned in the Bible. In Islam, the same symbol is called the 'Seal of Solomon'; Solomon (Sulaymān), David's son, is regarded in Islam as both a model king and a prophet endowed with divine wisdom. In Hinduism, the six-pointed star appears in tantric symbolism, where it represents the fusion of *puruṣha* or consciousness (the upward-pointing triangle) with *prakṛiti* or *śhakti* (the downward-pointing triangle), that is, the harmony of spirit and matter.

In the mid 17th century, Shah Jahan built the **Taj Mahal** (Figs. 3.43 to 3.45) as a mausoleum for his queen Mumtaz Mahal's tomb. Entirely decorated with marble, the Taj Mahal is an example of the confluence of architectural styles from three cultures: the *charbagh* gardens (i.e., divided into four sections) and the large arched doorways are of Persian inspiration; Arabic calligraphy from the Qur'an and intricate geometric patterns

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Fig. 3.43. The Taj Mahal at Agra

adorn the walls; Indian architecture added *chhatrīs,* lotus flower designs, and marble screens with detailed cutout patterns. The walls feature delicate inlay work where craftsmen embedded colourful semi-precious stones into the marble to create floral designs. The white marble appears to change colours as the sunlight shifts through the day.

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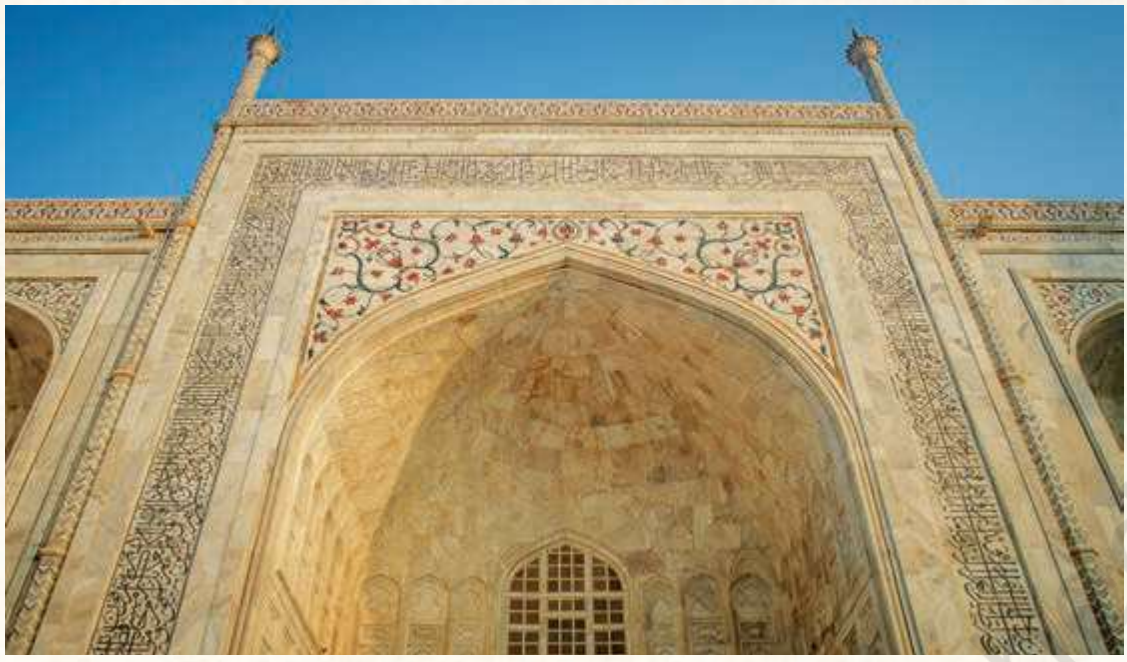


Fig. 3.44. A detail of the upper floor; note the arch, the inlaid marble floral motifs and the calligraphy on both sides.



Fig. 3.45. The tombs of Mumtaz (in the centre) and Shah Jahan (on the left)



DON'T MISS OUT

In the 1970s, the effect of air pollution on the monument began to be noticed. It was caused by local industries using coal and other fossil fuels, which left a yellowish tinge on the marble. Following the recommendations of an expert committee and a PIL in the Supreme Court, a ban was imposed in the mid-1990s to prevent industrial pollution in the area.

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Traditional Houses



Fig. 3.46. The inside of a Shekhawati haveli; notice the arches and extensive decorations.

The design and architecture of houses in India have been as varied as the geography. Many have developed distinct features that stand out. A general design commonly found in traditional houses for the richer classes, both in urban and rural contexts, is based on a central courtyard with the rooms organised around it, whether over one or several storeys. Some archaeologists have remarked that such a design was already in use in some of the larger Harappan houses some 4,500 years ago.



LET'S EXPLORE

What could be the advantages of the above design? (*Hint: Think in terms of privacy, convenience, rainfall and cooling.*)

Havelis (traditional mansions) in Rajasthan's Shekhawati region have a central courtyard and elaborate decorations, including intricate painted frescoes (Fig. 3.46). Those were the homes of the region's nobility and rich merchant class. Partly because they are difficult to maintain nowadays, or are too large for today's families, many havelis have been converted into hotels or museums.



Fig. 3.47. The central courtyard of a Chettinadu house; notice the woodwork, including the decorated pillars.

The **Chettinadu houses** of Tamil Nadu (Fig. 3.47) belong to a community of merchants who traded in rice, spices and gems with Southeast Asia. Materials for the construction were sourced from several parts of the world, including teakwood from Burma and marble from Italy; craftsmen from all over India worked on the frescoes and other artistic elements. As with havelis, some of these houses are almost like palaces. Their artistry apart, they are known for being well adapted to the local climate and environment. The central courtyard served as a place for rituals and community gatherings, as well as for sun-drying *pāpads* and chillies.

Churches in India



Fig. 3.48. The iconic St. Philomena's Cathedral in Mysuru was built in the Gothic style during the colonial period, with the then Maharaja of Mysore, Krishnarajendra Wadiyar, laying the foundation stone.

As we saw in the chapter 'India, a Home to Many', some Christian communities have been living in India for many centuries. According to tradition, the first churches were built in the coastal areas of Kerala. Over time, different types of churches were built, sometimes imitating classic European styles (Fig. 3.48), at other times (especially in Kerala) incorporating local architectural traditions (Figs. 3.49 to 3.51).



Fig. 3.49. The St. Thomas Orthodox church at Mulanthuruthy near Kochi, Kerala, with a stambha (flag post) in front, a feature borrowed from temple architecture.



Fig. 3.50. The Kalloopara church in Travancore, rebuilt in the 18th century, with a sloped tiled roof typical of Kerala architecture.



Fig. 3.51. The interior of the Kalloopara church with oil lamps and a traditional wooden roof.

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Colonial Architecture



Fig. 3.52. A general view of the Madras High Court, completed in 1892. The red sandstone facade features Islamic arches and intricate screens alongside carvings and pillars in Hindu temple style.



Fig. 3.53. A close-up of some of its domes and towers.

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Fig. 3.54. The imposing Victoria Memorial Hall in Kolkata—now a museum. Note the central arch and dome, the balconies and the chhatrīs.

Indo-Saracenic architecture is a distinctive colonial style that flourished in India during the British Raj (mid-19th to early 20th century). It blended Islamic, Hindu, and Gothic elements, featuring domes, pointed arches, minarets, and intricate decorative patterns inspired by Mughal and Rajput traditions (Figs. 3.52 to 3.54).

Before we move on ...



- India's architectural heritage is among the richest and most diverse in the world. Our selection here necessarily leaves out thousands of astonishing monuments of diverse styles.
- There is much thought and spirituality behind those bricks and stones. Classical Buddhist, Jain and Hindu architectures seek to connect the human and the cosmic, or the human and the divine; they aim at expressing beauty and order. And as with Islamic architecture, they involve advanced construction techniques.
- Anyone travelling through India and visiting some of the lesser-known monuments will notice that many are in a state of neglect. Preserving this heritage is indeed very challenging: how to adequately conserve India's thousands of monuments, many of them centuries-old? Government

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bodies are theoretically responsible for this huge task, but in practice, much will be lost unless citizens feel equally responsible and, to begin with, learn to appreciate and admire this labour of our ancestors. If you revisit our Constitution's 'Fundamental Duties', you will now understand the wisdom of one of them: "... to value and preserve the rich heritage of our composite culture".

Questions and activities

1. In Fig. 3.5, calculate the full width of the house; compare with the length of your classroom. How many staircases can you make out? If the house owners lived upstairs, what might the rooms downstairs be used for?
2. Form groups of four or five students and imagine you are artisans with just simple tools. Looking at Fig. 3.8, how would you go about building a dome of bricks? Looking at Fig. 3.12, how would you carve such a ceiling? Discuss and compare the different groups' conclusions.
3. Why should there be so many stairways in Fig. 3.15? And in Fig. 3.17?
4. Which pillars are easier to sculpt in your opinion—those in Fig. 3.25 or 3.27? Justify your answer.
5. What are some common features across the different types of temples you have visited in this chapter? What are some of the differences?
6. In the houses shown in Fig. 3.46 and 3.47, the central courtyard will receive a lot of water during rains. Will this not flood the house?
7. If you had to create a Pan-India Architecture Museum, which ten monuments would you select to represent India's diversity and why?
8. Choose an ancient monument in your region. Identify what type of architecture it belongs to and the markers you used to classify it.
9. Different groups in the class take up examples of different types of architecture in your region. Prepare a small exhibition with brief descriptions. *(Hints: Use different sources to get more information. Request your teacher to invite a scholar or expert from your region to interact with you.)*
10. Highlight the biggest threats to our architectural heritage today and discuss how can we protect it.

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