

面向『十二五』高职高专精品规划教材

国家示范性高职院校重点建设专业精品规划教材（土建大类）

——国家高职高专土建大类高技能应用型人才培养解决方案

# 建筑职业 英语

主 编 / 练长城

ENGLISH FOR  
ARCHITECTURAL  
CAREER



# 建筑职业英语

English for Architectural Career

顾 问 曾乐辉 游普元  
主 编 练长城  
副主编 董虹凌 袁小利 刘 凌



## 内 容 提 要

本书共 8 个单元,每个单元包括 Warming up、Reading 和 Grammar 三个部分。Warming up 部分让学生在学该单元前了解该单元的相关知识。Reading 部分包括 Text A 和 Text B 两个课文,课后附有相应的练习,一般是三个练习题,练习 I 与该课文有关联,练习 II、III 为拓展练习,开阔学生的视野。具体内容包括 Unit 1: 建筑的发展及起源; Unit 2: 世界闻名建筑; Unit 3: 建筑风格; Unit 4: 建筑材料; Unit 5: 建筑结构; Unit 6: 建筑设计原理; Unit 7: 环保建筑; Unit 8: 未来建筑。

本书可作为高等职业技术学院、高等专科学校、成人高等学校以及本科院校的二级职业技术学院的建筑工程类学生的建筑英语课程基础教材,也可作为社会上建筑工程类的培训教材。

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# 前 言

本书是根据高职高专建筑英语课程标准的要求,结合高职院校建筑工程类专业的课程设计和人才培养方案,并面向高职高专建筑工程专业的学生而编写的基础教材。本书充分地考虑到高职高专建筑类学生的特点和学生的实际英语水平,学生通过本书可以学习一些简单的专业知识,了解一些专业词汇,熟悉一些建筑专业英语的表达习惯,学习一些与建筑相关的背景知识。课后的练习与该单元的主题相关,可使学生更好地巩固本单元的内容和知识。每一个单元后都附加了简单的科技英语语法,主要介绍科技英语语法特点、科技英语翻译的基本方法和技巧以及科技英语论文写作的基本知识,为学生以后的专业英语学习和科技英语论文的写作打下牢固的基础。本书建议授课学时为 60 学时,也可根据实际情况调整。本书突出了以下几个方面特点。

(1) 内容丰富,选材广泛。从基础出发,了解建筑的基本知识,主要介绍建筑发展、建筑设计、建筑材料等内容,为学生将来的专业学习提供一些帮助。

(2) 本书不涉及复杂难懂的专业知识,仅是介绍一些建筑成品、建筑理念及对未来建筑设计的构想,使学生从普通英语学习向专业英语学习过渡。

(3) 课后的练习着重考查学生的理解和应用能力,进一步巩固学生所学的知识,提高学生的自学能力。

(4) 每一个单元后的科技英语语法,简单实用,通过对科技英语语法的学习,提高学生对科技英语的理解,使其能读懂简单的科技论文并培养学生的科技英语论文的写作水平,从而提高学生的科研能力。

全书共 8 个单元,其中第 1、3 单元由董虹凌编写;第 2、6、8 单元由练长城编写;第 4、5 单元由袁小利编写;第 7 单元由刘凌编写。

本书部分题材选自相关的著作及网络文献,在此,编者对相关作者及天津大学出版社表示衷心感谢!同时对重庆工程职业技术学院相关系部领导的大力支持表示诚挚的谢意。

本书在各位编者的共同努力下完成了编写。由于时间仓促,加之编者水平有限,书中的疏漏之处在所难免,敬请读者批评指正,以便再版时得以改进和提高。

编者  
2011 年 5 月

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# Unit 1 The Origin and Development of Architecture

## Warming Up

**Task 1: Match the Chinese expressions with their corresponding English equivalents.**

- |              |                     |
|--------------|---------------------|
| ( ) 1. 马赛克   | A. stucco           |
| ( ) 2. 灰泥    | B. acanthus         |
| ( ) 3. 雅典卫城  | C. spiral volute    |
| ( ) 4. 叶形装饰  | D. triumphal arch   |
| ( ) 5. 凯旋门   | E. corinthian order |
| ( ) 6. 螺旋涡形  | F. vaulting         |
| ( ) 7. 飞拱    | G. ribbed vault     |
| ( ) 8. 科林斯柱型 | H. flying buttress  |
| ( ) 9. 拱顶结构  | I. mosaic           |
| ( ) 10. 肋拱   | J. the Acropolis    |

**Task 2: Match the English names with the corresponding pictures.**

- |                          |                        |                                  |
|--------------------------|------------------------|----------------------------------|
| A. primitive man's house | B. Gothic architecture | C. ancient Egyptian architecture |
| D. modern architecture   | E. Roman architecture  | F. Greek architecture            |



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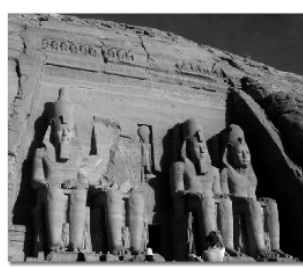
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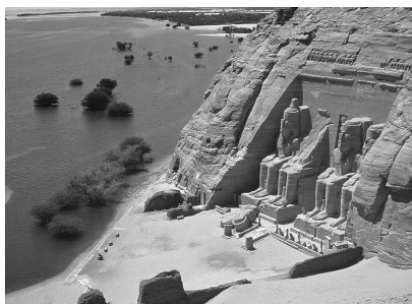
## Reading

### Text A

#### The Origin of Ancient Egyptian Architecture<sup>①</sup>

The history of Western Architecture begins in ancient Egypt. Ancient Egyptian forms represent the beginning of monumental western architecture. Even to the later Greeks and Romans, Egyptian architecture was considered ancient and mysterious. During 30 dynasties which endured 30 centuries, the political, social and economic structure of Egypt was an extremely stable civilization. For 3,000 years, the way of life in Egypt continued mostly unchanged and many of the basic architectural forms remained constant. As a result, people lived with a great sense of security and continuity under the ruling King. The King was the head of the Egyptian state, both in politics and religion, but was also considered the all powerful god. Ancient Egyptian culture was one of the most successful in the history of the world because of its continuity and ability to create so many grand monuments over such a long period of time. It was not until Alexander the Great conquered Egypt in 332BC that the ancient Egyptian way of life ended and Egypt became part of the great Roman Empire.

The Nile River Valley defined the limits of human activity as the valley was protected on the east by the mountains and on the west by the desert. The Nile River was the source of life for ancient Egyptians. Each summer the River swelled with rain and overflowed its banks on the way to the Mediterranean Sea. As the waters receded, the fertility of the soil produced agricultural wealth which gave the Egyptians security and contentment. Because the ancient Egyptians lived in peace with plentiful food ( instead of in war and starvation) , they had the power and strength to build their great monuments. Peaceful times were needed as a pyramid could take up to 40 or 50 years to build.



The Nile River was also a means of transportation and communication which helped maintain a closely connected country. The visual character of the Nile Valley influenced the architects to create an architecture that could stand up against the scale and grandeur of the great Nile River, the steep cliffs and immense desert as well as the ambitious demands of each King or Queen. The cliffs lining the Nile Valley provided a huge amount of stone ( limestone, granite, etc. ). Stone was the building

① <http://wenku.baidu.com/view/8ede8ebfc77da26925c5b01f.html>



material of the royal tombs and temples. The enormous stones were either quarried on site or cut from the cliffs and then moved by boat and for the mummy cases which held the dead King.

On the banks of the Nile, the Egyptians built their cities, temples and tombs. Not much is known of their houses and commercial buildings because they were built from unprotected sun-dried bricks and wood which eventually decomposed. Even with the weathering of time, the temples and tombs remain mostly intact because they were constructed out of massive and permanent stone block. The royal tomb was a monument and final home for the dead King which contained a vault or chamber for his body. The royal temple was a place of worship and was sometimes dedicated to a King or Queen with a special place for their burial.



The other powerful force which influenced Egyptian architecture was the religious belief in life after death. To keep the soul alive, it was necessary to preserve in death all that existed in life. Within the chambers of the tomb were the Pharaoh's possessions and anything else he would need in afterlife — statues of the King, furniture, artwork, jewelry and cooking utensils. Even the King's body was preserved through a special process called mummification. He was then placed in the mummy case and sealed into the royal tomb. If properly buried, the King would live forever to protect the Egyptian people.

As the King was considered God, all power and the living son of Ra (Sun-God), the pyramid form was designed as the King's ladder to heaven. The form represented permanence, stability and power. It also represented geometric perfection. The limestone smoothed the surface to make the pyramid appear more geometrically perfect. Sometimes granite slabs were also used for casings.

During the New Kingdom, great temples were built instead of great tombs. The temples were built to honor the King or to honor the God and past Kings (who were also considered gods). The temple was not a gathering place for worship by common people, but a meeting place between the gods and the King.

## New Words

monumental [ˌmɒnjuˈmentl] *adj.* 纪念碑的, 不朽的  
 dynasty [ˈdaɪnəsti] *n.* 朝代, 王朝  
 endure [ɪnˈdʒʊə] *vi.* 忍耐, 持续  
 civilization [ˌsɪvɪlaɪˈzeɪʃən] *n.* 文明  
 continuity [ˌkɒntɪˈnjuːɪti] *n.* 连续性, 连贯性

define [dɪˈfaɪn] *v.* 定义, 规定, 限定  
 swell [swel] *vi.* 膨胀, 上涨  
 overflow [ˌəʊvəˈfləʊ] *v.* 溢出, 泛滥  
 recede [rɪˈsiːd] *vi.* 后退  
 fertility [fəˈtɪlɪti] *n.* 肥沃  
 pyramid [ˈpɪrəmid] *n.* 金字塔

scale [skeil] *n.* 刻度,规模  
 grandeur ['grændʒə] *n.* 庄严,伟大  
 limestone ['laɪmstəʊn] *n.* 石灰石  
 granite ['grænit] *n.* 花岗岩  
 quarry ['kwɒri] *vi.* 采石,挖出  
 mummy ['mʌmi] *n.* 木乃伊  
 sun-dried ['sʌndraɪd] *adj.* 晒干的  
 decompose [di:kəm'pəʊz] *v.* 分解,使腐烂  
 preserve ['pri:zə:v] *vt.* 保存  
 intact [in'tækt] *adj.* 完整无缺的

vault [vɔ:lt] *n.* 地下室,墓穴  
 worship ['wɜ:ʃɪp] *n.* 崇拜,尊敬  
 utensil [ju:'tensl] *n.* 器具  
 mummification [ˌmʌmifi'keɪʃən] *n.* 木乃伊化  
 geometric [dʒiəu'metrik] *adj.* 几何的,几何学的  
 slab [slæb] *n.* 板,厚平板  
 temple ['templ] *n.* 庙,寺,神殿

## Expressions & Phrases

as a result 因此,结果  
 swell with 充满了……  
 live in peace 生活在安宁和平中  
 stand up against 抵抗,反对,同……对抗

dedicate to 专用于……(献身于……)  
 instead of 代替……,而不是……  
 on site 现场

## Proper Names

Egypt ['i:dʒɪpt] 埃及  
 Alexander [ˌæliɡ'zɑ:ndə] the Great 亚历山大大帝(公元前 356 年 7 月 20 日—前 323 年 6 月 10 日,古代马其顿国王)  
 Roman ['rəʊmən] Empire 古罗马帝国(公元前 27—476 年的罗马奴隶制国家)

The Nile River 尼罗河  
 Mediterranean [ˌmedɪtə'reɪniən] Sea 地中海  
 Pharaoh ['fɛərəʊ] 法老(古埃及君王称号)  
 New Kingdom ['kiŋdəm] 新王国时期(约公元前 1567—前 1085 年,埃及第 18—20 王朝)

## Background Information

### 古埃及建筑及发展史

古埃及建筑在艺术象征、空间设置和功能安排等方面,有着深刻的文化印迹和浓厚的宗教含义,反映了古埃及独特的人文传统和奇异的精神理念。

据史料记载,古埃及位于尼罗河河谷,周围的高山阻挡了外界的骚扰。尼罗河在每年定期泛滥之后,留下了肥沃的耕地,带来一年又一年的丰收。就这样,古埃及光辉灿烂的文明持续了 3 000 年,从而成为四大文明古国之一。它稳定的自然和社会秩序似乎达到了永恒和静态,在其建筑艺术中空间也同样体现了永恒和静态,如正方形、三角形一些稳固的几何形体经常被

用在建筑设计中。从昭塞尔陵墓建筑群到著名的吉萨金字塔,都是因其方形平面而获得最稳定的空间造型,并象征永恒的主题。许多太阳神庙的幽暗,神秘空间的石柱如林并排列密集,光线透过高窗落在巨大的柱子上,光影斑驳,给人神秘的压抑感,同时也表现了古代埃及理性的局限及技术上的限制。神庙内部空间非常狭小和压抑,这种空间感是原始宗教功能的需要,也是一种非常幼稚的宗教空间。

古埃及是世界文明的发源地之一,其建筑史分为3个主要时期。

(1) 古王国时期的建筑以举世闻名的金字塔为代表。古埃及的建筑师们用庞大的规模、简洁沉稳的几何形体、明确的对称轴线和纵深的空间布局来体现金字塔雄伟、庄严、神秘的效果。

(2) 中王国时期的建筑以石窟陵墓为代表。这一时期已采用梁柱结构,能建造较宽敞的内部空间。建于公元前2000年前后的曼都赫特普三世墓是其典型实例。

(3) 新王国时期的建筑以神庙为代表。它主要由围有柱廊的内庭院、接受臣民朝拜的大柱厅和只许法老和僧侣进入的神堂密室3部分组成。其规模最大的是卡纳克和卢克索的阿蒙神庙。



## Notes on Text

1. During 30 dynasties which endured 30 centuries, the political, social and economic structure of Egypt was an extremely stable civilization. 历经30个朝代,跨越了30个世纪,埃及那时是一个政治、社会和经济结构十分稳定的文明社会。

2. It was not until Alexander the Great conquered Egypt in 332BC that the ancient Egyptian way of life ended and Egypt became part of the great Roman Empire. 直到公元前332年,亚历山大大帝征服埃及,埃及成为伟大的罗马帝国的一部分,古代埃及的生活方式才算告一段落。

3. The Nile River Valley defined the limits of human activity as the valley was protected on the east by the mountains and on the west by the desert. 尼罗河谷地东面临山,西接沙漠,人们的活动就局限在河谷内。

4. The visual character of the Nile River Valley influenced the architects to create an architecture that could stand up against the scale and grandeur of the great Nile River, the steep cliffs and immense desert as well as the ambitious demands of each King or Queen. 尼罗河河谷的显著特征影响着建筑师,他们创建的建筑与气势恢宏的尼罗河、陡峭的悬崖和广袤的沙漠相互映衬,此外还要满足历代帝王和王后们的勃勃野心。

5. Not much is known of their houses and commercial buildings because they were built from unprotected sun-dried bricks and wood which eventually decomposed. 他们的住房和商业建筑却销

声匿迹,因为它们是由未经处理的晒干的砖头和木头建成,最后风化腐烂了。

## Exercises

### I. Answer the following questions according to the text.

1. Why did ancient Egyptian architecture play an important role in the history of Western Architecture?
2. Why was ancient Egyptian culture one of the most successful in the history of the world?
3. Why was Nile River so important to ancient Egyptians?
4. What were the powerful forces that influenced Egyptian architecture?
5. What did the form of pyramid represent?

### II. Translate the following sentences into Chinese.

1. The history of Western Architecture begins in ancient Egypt. Ancient Egyptian forms represent the beginning of monumental western architecture.
2. For 3,000 years, the way of life in Egypt continued mostly unchanged and many of the basic architectural forms remained constant.
3. Peaceful times were needed as a pyramid could take up to 40 or 50 years to be built.
4. The royal temple was a place of worship and was sometimes dedicated to a King or Queen with a special place for their burial.
5. The temple was not a gathering place for worship by common people, but a meeting place between the God and the King.

### III. Read the following passage and fill in the blanks with the words given in the box.

based	collected	cultivated	record	stability
survived	understand	supported	peasants	covered

Due to the *scarcity*( 缺乏) of wood, the two *predominant*( 主要的) building materials used in ancient Egypt were sun-baked mud brick and stone, mainly limestone, but also sandstone and granite in considerable quantities. From the old Kingdom onward, stone was generally reserved for tombs and temples, while bricks were used even for royal palaces, *fortresses*( 要塞), the walls of temple *precincts*( 内部) and towns.

Ancient Egyptian houses were made out of mud ①\_\_\_\_\_ from the Nile River. It was placed in molds and left to dry in the hot sun to harden for use in construction.

Many Egyptian towns have disappeared because they were situated near the ②\_\_\_\_\_ area of the Nile Valley and were flooded as the river bed slowly rose during the *millennia*( 一千年), or the mud bricks of which they were built were used by ③\_\_\_\_\_ as fertilizer. Fortunately, the dry, hot climate of Egypt preserved some mud brick structures. Also, many temples and tombs have ④\_\_\_\_\_ because they were built on high ground unaffected by the Nile flood and were constructed of stone.

Thus, our understanding of ancient Egyptian architecture is ⑤\_\_\_\_\_ mainly on religious monuments, *massive*(大量的) structures characterized by thick, sloping walls with few openings, possibly *echoing*(呼应) a method of construction used to obtain ⑥\_\_\_\_\_ in mud walls. Although the use of the arch was developed during the fourth Dynasty, all monumental buildings are *post and lintel*(柱和梁) constructions, with flat roofs constructed of huge stone blocks ⑦\_\_\_\_\_ by the external walls and the closely spaced columns.

Exterior and interior walls, as well as the columns and *piers*(墩), were ⑧\_\_\_\_\_ with *hieroglyphic*(象形文字的) and *pictorial*(形象化的) *frescoes*(壁画) and *carvings*(雕刻品) painted in brilliant colors. Many *motifs*(图案) of Egyptian *ornamentation*(装饰物) are *symbolic*(象征性的), such as the *scarab*(甲虫). Other common motifs include *palm*(棕榈) leaves, the *papyrus*(纸莎草) plant, and the flowers of the lotus. Hieroglyphs were inscribed for decorative purposes as well as to ⑨\_\_\_\_\_ historic events. In addition, these pictorial frescoes and carvings allow us to ⑩\_\_\_\_\_ how the ancient Egyptians lived, wars that were fought and their beliefs. This was especially true when exploring the tombs of ancient Egyptian officials in recent years.

## Text B

### A Brief Introduction to the Evolution of World Architecture<sup>①</sup>

#### Early Architecture

Beginning with the first uses of brick and stone and ending with the completion of the great pyramids and colossal Sphinx, Ancient Egypt was home to some of the most influential architecture in history. The Nile Valley has been home to many of the richest civilizations in art, architecture, and design for at least ten thousand years, and this innovation began with a simple problem: a lack of wood.

The Egyptians were one of the first societies to seize upon the durability of bricks in construction, and their architectural monuments have endured thousands of years to become models of ancient architecture even in modern times. Because of this durability, some of the most famous buildings in history were to come from the Nile Valley in Egypt.

#### Greek and Roman Architecture

As western society began to bloom and develop, architecture took on new life in the designs of the Greeks. One of the most powerful civilizations rising up in Europe, the Greek architects created history with their flair for order, design, and beauty. The first standards of beauty, or the ideal proportions, were also Greek inventions; and every society following would imitate these ideals.

Two Greek architectural orders developed more or less concurrently. The Doric order predominated on the mainland and in the western colonies. The Ionic order originated in the cities on the

① [http://articles.directory.com/Architects\\_Sacramento\\_CA-r1008-Sacramento\\_CA.html#81379](http://articles.directory.com/Architects_Sacramento_CA-r1008-Sacramento_CA.html#81379)



### Renaissance Architecture

The Cultural Revolution in western civilization now called the Renaissance brought a revival of the principles and styles of ancient Greek and Roman architecture. Beginning in Italy in about 1400, it spread to the rest of Europe during the next 150 years. Architecture made perhaps its greatest leaps during that period, the transition from the Middle Ages, the Renaissance. Harmonious form, mathematical proportion and



islands and coasts of Asia Minor.

Rome would be the most major society to follow in Greek footsteps, creating some of the most famous buildings in the history of the world after the Grecian style.

Rome became a powerful, well-organized empire, marked by great engineering works, roads, canals, bridges and aqueducts. Two Roman inventions allowed for greater architectural flexibility: the dome and the groin. The Romans also introduced the commemorative or triumphal arch and the colosseum or stadium.



artistic style combined to leave us such innovations as the stained glass window, the gothic cathedral, the towering spire, and of course the octagonal dome.

### Baroque and Rococo Architecture

After the Renaissance period, the architects of the era started to get bored with the symmetry and same old forms they had been using for the last 200 years.

The most distinct shape of the Baroque style is the use of the oval. It appeared in many churches and was very characteristics of the time.

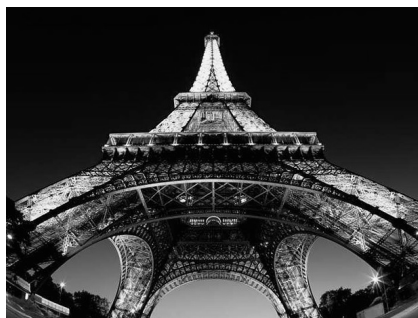
Rococo was the last phase of Baroque in France. It was a light-hearted, decorative style invented to suit the people of Paris. Rococo got its name from *rocaille* which means rocks and shells. One of the main characteristic of the Rococo style was rooms that were meant to have music played in them.

Something that appeared in almost every Rococo

style room was the presence of highly ornate sculpture and lots of gold. It was everywhere, on the window sills, in the walls, in the drapes, over the doors, and a whole lot of other places.

### The Industrial Age

The Industrial Revolution, which began in England in about 1760, brought a flood of new building materials, for example, cast iron, steel, and glass. Late 18th century designers and patrons turned towards the original Greek and Roman prototypes, and selective borrowing from another time and place became fashionable. In the 19th century, English architect Sir Joseph Paxton created the Crystal Palace (1850–1851) in London, a vast exhibition hall which foreshadowed industrialized buildings and the widespread use of cast iron and steel.



### Modern Architecture



At the beginning of the 20th century, some designers refused to work in borrowed styles. Spanish architect Antoni Gaudi was the most original.

American architect Louis Sullivan gave new expressive form to urban commercial buildings.

In Germany, the Bauhaus school brought together architects, painters, and designers from several countries, all determined to formulate goals for the visual arts in the modern age.

Between about 1965 and 1980, architects and critics began to support postmodernism. Although postmodernism is not a cohesive movement based on a distinct set of principles, in general postmodernists value individuality, intimacy, complexity, and occasionally humor.

By the early 1980s, postmodernism had become the dominant trend in American architecture and an important phenomenon in Europe as well.

### New Words

colossal [kə'ləsl] *adj.* 巨大的, 庞大的  
Sphinx ['sfɪŋks] *n.* 狮身人面像  
innovation [ˌɪnəʊ'veɪʃən] *n.* 革新, 创新  
durability [ˌdʒʊərə'bɪləti] *n.* 经久不衰  
bloom [blu:m] *v.* 繁荣

flair [fleɪ] *n.* 才能, 天资  
proportion [prə'pɔ:ʃən] *n.* 比例  
predominate [pri'dɒmineɪt] *v.* 支配, 控制  
canal [kə'næl] *n.* 运河  
aqueduct ['ækwɪdʌkt] *n.* 沟渠

flexibility [ˈfleksəˈbiliti] *n.* 弹性, 机动性  
 groin [ɡroɪn] *n.* 交叉拱  
 commemorative [kəˈmemərətɪv] *adj.* 纪念的  
 colosseum [ˌkɒləˈsiəm] *n.* 古罗马椭圆形剧场  
 Renaissance [rəˈneɪsəns] *n.* 文艺复兴  
 harmonious [hɑːˈmʊnjəs] *adj.* 和谐的  
 cathedral [kəˈθiːdrəl] *n.* 大教堂  
 spire [spaɪə] *n.* 尖顶  
 oval [ˈəʊvəl] *adj.* 椭圆形的; *n.* 椭圆形  
 octagonal [ɒkˈtæɡənəl] *adj.* 八角形的  
 symmetry [ˈsɪmitri] *n.* 对称

rocaille [rɒˈkai] *n.* 类似贝类的装饰  
 ornate [ɔːˈneɪt] *adj.* 华丽的, 装饰的  
 sculpture [ˈskʌlptʃə] *n.* 雕塑  
 sill [sɪl] *n.* 窗台, 基石, 门槛  
 prototype [ˈprəʊtətaɪp] *n.* 原型  
 foreshadow [fɔːˈʃædəʊ] *vt.* 预兆  
 formulate [ˈfɔːmjuleɪt] *vt.* 阐明  
 postmodernism [pəʊstˈmɒdənaɪzəm] *n.* 后现代主义建筑风  
 cohesive [kəʊˈhiːsɪv] *adj.* 凝聚力的  
 principle [ˈprɪnsəpl] *n.* 法则, 原则, 原理  
 phenomenon [fiˈnɒmɪnən] *n.* 现象

## Expressions & Phrases

seize upon 抓住, 利用  
 rise up 兴起  
 allow for 考虑到, 顾及  
 be meant to 打算, 想要做  
 window sill 窗台

cast iron 铸铁  
 take on 呈现, 具有  
 visual arts 视觉艺术  
 get bored with 对...感到厌倦  
 in general 通常, 大体上, 一般而言

## Proper Names

the Doric [ˈdɒrɪk] order 多利克柱式( 古希腊建筑风格之一)  
 the Ionic [aɪˈɒnɪk] order 爱奥尼柱式( 古老的希腊建筑风格)  
 Asia Minor 小亚细亚  
 Gothic [ˈɡɒθɪk] church 哥特式教堂  
 Middle Ages 中世纪  
 Baroque [bəˈrəʊk] 巴洛克式的  
 triumphal arch 凯旋门

Rococo [rəʊˈkəʊkəʊ] 洛可可式的  
 Joseph Paxton [dʒəʊzɪf ˈpækstən] 约瑟夫·帕克斯顿  
 Antoni Gaudi [ænˈtəʊni ˈɡoːdi] 安东尼·高迪  
 Louis Sullivan [ˈluːɪs ˈsʌlɪvən] 路易斯·沙利文  
 Bauhaus [ˈbauhaus] 鲍豪斯建筑学派

## Background Information

### 1. 古希腊建筑的特点

在公元前 7 世纪末, 古希腊的建筑除屋架之外, 均采用石材建造。神庙是古希腊城市最主



要的大型建筑,其典型型式是围廊式。由于石材的力学特性是抗压不抗拉,造成其结构特点是密柱短跨,柱子、额枋和檐部的艺术处理基本上决定了神庙的外立面形式。古希腊建筑艺术的改进主要集中在构件的形式、比例和相互组合上。公元前 6 世纪,这些形式已经相当稳定,有了成套定型的做法,即以后古罗马人所称的“柱式”。

古希腊建筑基本上有 3 种主要柱式。

### (1) 多利克柱式

希腊多利克柱式(Doric order)的特点是比较粗大雄壮,没有柱基,柱身有 20 条凹槽,柱头没有装饰,多利克柱又被称为男性柱。著名的雅典卫城(Athens Acropolis)的帕提农神庙(Parthenon)采用的就是多利克柱式。

### (2) 爱奥尼柱式

希腊爱奥尼柱式(Ionic order)的特点是比较纤细秀美,柱身有 24 条凹槽,柱头有一对向下的涡卷装饰,爱奥尼柱又被称为女性柱。爱奥尼柱由于其优雅高贵的气质,出现在古希腊的大量建筑中,如雅典卫城的胜利女神神庙(Temple of Athena Nike)和伊瑞克提翁神庙(Erechtheum)。

### (3) 科林斯柱式

希腊科林斯柱式(Corinthian order)的比例比爱奥尼柱更为纤细,柱头是用毛茛叶(acanthus)作装饰,形似盛满花草的花篮。相对于爱奥尼柱式,科林斯柱式的装饰性更强,但是在古希腊的应用并不广泛,雅典的宙斯神庙(Temple of Zeus)采用的是科林斯柱式。

## 2. 哥特式建筑的特点

哥特式建筑是以法国为中心发展起来的。在 12 世纪至 15 世纪,法国城市手工业和商业行会相当发达,城市内实行一定程度的民主政体,市民们以极高的热情建造教堂,以此相互争胜来表现自己的城市。另外,当时教堂已不再纯属宗教性建筑物,它已成为城市公共生活的中心,成为市民大会堂、公共礼堂,甚至可用作市场和剧场。在宗教节日时,教堂往往成为热闹的赛会场地。

哥特式建筑的特点是尖塔高耸,在设计中利用十字拱、飞券、修长的立柱,以及新的框架结构以增加支撑顶部的力量,整个建筑以直升线条、雄伟的外观和内部空阔的空间,再结合镶着彩色玻璃的长窗,使教堂内产生一种浓厚的宗教气氛。教堂的平面基本为拉丁十字形,但在其西端门的两侧增加一对高塔。著名的哥特式建筑有巴黎圣母院、意大利米兰大教堂、德国科隆大教堂、英国威斯敏斯特大教堂等。

## Notes on Text

1. The Nile Valley has been home to many of the richest civilizations in art, architecture, and design for at least ten thousand years, and this innovation began with a simple problem: a lack of wood. 尼罗河河谷在至少一万年间,一直都是艺术、建筑、设计这些灿烂文明的摇篮,这方面的创新均源于一个简单的原因:缺少木料。

2. The Egyptians were one of the first societies to seize upon the durability of bricks in