

1 Unit

Brief Introduction to Architecture



Warming Up

1. Work with a partner, make a list of the types of architecture you know.
2. Do you want to become an architect? If so, what kind of qualifications do you need to obtain and what kind of contribution can you make to the society?

TEXT A

What Is Architecture?

Architecture is the art of building in which human requirements and construction materials are related so as to furnish practical use as well as an aesthetic solution, thus differing from the pure utility of engineering construction.

Architecture can be a structure, a residence, a bridge, a church and a group of buildings.



a structure



a residence



a church



a bridge



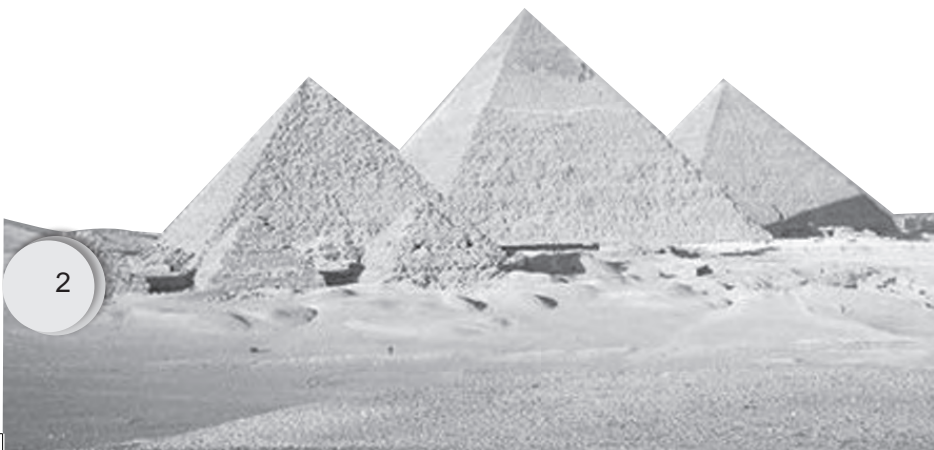
a group of buildings

Architecture as an Art

As an art, architecture is essentially abstract and nonrepresentational and involves the manipulation of the relationships of spaces, volumes, planes, masses, and voids.

Some buildings are so beautiful or interesting that they become famous artworks.

▼ Egyptian Pyramids



▲ Taj Mahal

▼ St. Patrick's Cathedral



Architects use shape, form, color and other art elements and principles to design buildings. Architects design buildings with different styles. You can tell a lot by looking at the building's style!



Ovals, circles and other shapes decorate the ceiling of this dome.

The materials used to make this house create interesting textures.



Lines make patterns on the roof of an Italian cathedral.

▼ This castle in Hungary has many forms.



Time in Architecture

Time is also an important factor in architecture, since a building is usually comprehended in a succession of experiences rather than all at once. In most architecture there is no one vantage point from which the whole structure can be understood. The use of light and shadow, as well as surface decoration, can greatly enhance a structure.

The analysis of building types provides an insight into past cultures and eras. Behind each of the greater styles lies not a casual trend nor a vogue, but a period of serious and urgent experimentation directed toward answering the needs of a specific way of life. Climate, methods of labor, available materials, and economy all impose their

dictates. Each of the greater styles has been aided by the discovery of new construction methods. Once developed, a method survives tenaciously, giving way only when social changes or new building techniques have reduced it. That evolutionary process is exemplified by the history of modern architecture, which developed from the first uses of structural iron and steel in the mid-19th century.

Until the 20th century there were three great developments in architectural construction—the post-and-lintel, or trabeated system; the arch system, either the cohesive type, employing plastic materials hardening into a homogeneous mass, or the thrust type, in which the loads are received and

counterbalanced at definite points; and the modern steel-skeleton system.

Architecture of the Ancient World

In Egyptian architecture, to which some of the earliest extant structures to be called architecture (erected by the Egyptians before 3000) belong, the post-and-lintel system was employed exclusively and produced the earliest stone columnar buildings in history. The architecture of Western Asia from the same era employed the same system; however, arched construction was also known and used. The Chaldaeans and Assyrians, dependent upon clay as their chief material, built vaulted roofs of damp mud bricks that adhered to form a solid shell.

The Evolution of Styles in the Christian Era

The Romans and the early Christians also used the wooden truss for roofing the wide spans of their basilica halls. Byzantine architects experimented with new principles and developed the pendentive, used brilliantly in the 6th century for the Church of Hagia Sophia in Constantinople.

The Romanesque architecture of the early Middle Ages was notable for strong, simple, massive forms and vaults executed in cut stone. In Lombard Romanesque (11th century) the Byzantine concentration of vault thrusts was improved by the device of ribs and of piers to support them. In the 13th century Gothic architecture emerged

in perfected form, as in the Amiens and Chartres Cathedrals.

The birth of Renaissance architecture (15th century) inaugurated a period of several hundred years in Western architecture during which the multiple and complex buildings of the modern world began to emerge, while at the same time no new and compelling structural conceptions appeared. The complex, highly decorated Baroque style was the chief manifestation of the 17th-century architectural aesthetic. The Georgian style was among architecture's notable 18th-century expressions. The first half of the 19th century was given over to the classic revival and the Gothic revival.

New World, New Architecture

The architects of the later 19th century found themselves in a world being reshaped by science, industry, and speed. A new eclecticism arose, such as the architecture based on the École des Beaux-Arts, and what is commonly called Victorian architecture in Britain and the United States. The needs of a new society pressed them, while steel, reinforced concrete, and electricity were among the many new technical means at their disposal.

After more than a half-century of assimilation and experimentation, modern architecture, often called the International style, produced an astonishing variety of daring and original buildings, often steel substructures sheathed in glass. The Bauhaus was a strong influence on

modern architecture. As the line between architecture and engineering became a shadow, 20th-century architecture often approached engineering. More recently, postmodern architecture, which exploits and expands the technical innovations of modernism while often incorporating stylistic elements from other architectural styles or periods, has become an international movement.

VOCABULARY

New Words

aesthetic <i>a.</i> 美学的, 艺术的	adhere <i>v.</i> 粘附, 附着
nonrepresentational <i>a.</i> (美术) 抽象的	inaugurate <i>v.</i> 开始, 创始
texture <i>n.</i> 手感, 质感	manifestation <i>n.</i> 显示, 表明
comprehend <i>v.</i> 理解, 领会	revival <i>n.</i> 复兴, 重新流行
vantage point (观察某物的) 有利位置	eclecticism <i>n.</i> 折中主义
vogue <i>n.</i> 流行, 时尚	assimilation <i>n.</i> 吸收, 同化
tenaciously <i>adv.</i> 难以改变地	

Architectural Terms

void <i>n.</i> 孔隙	vaulted roof 拱形屋顶
dome <i>n.</i> 圆屋顶, 穹顶	wooden truss 木质构架
post and lintel 柱子与横梁	basilica <i>n.</i> 长方形廊柱大厅式建筑
trabeated system 横梁式结构	Byzantine <i>a.</i> 拜占庭式的
arch system 拱券体系	pendentive <i>n.</i> 方墙四角圆穹顶支承拱
cohesive type 粘合性	rib <i>n.</i> 拱肋
homogeneous mass 均质体	pier <i>n.</i> 支墩
thrust type 嵌入式	substructure <i>n.</i> 基础, 下层结构
steel-skeleton system 钢骨体系	sheathe <i>v.</i> 覆盖, 套装
columnar building 带圆柱的建筑	

Proper Names

Taj Mahal 泰姬陵 (位于印度阿格拉市, 国王沙·贾汗在1629年为其妃所建的陵墓)

St. Patrick's Cathedral 圣巴特里克大教堂

Hungary 匈牙利 (欧洲中部国家)

Chaldaean 迦勒底人 (与巴比伦人血缘相近的闪米特人)

Assyrian 亚述人 (古代生活在两河流域上游的民族, 建立了亚述帝国)

Church of Hagia Sophia 圣索菲娅大教堂 (在土耳其伊斯坦布尔市, 原为拜占庭帝国东正教的宫廷教堂, 拜占庭建筑风格的代表作)

Constantinople 君士坦丁堡 (拜占庭帝国首都, 现为土耳其西北部港市伊斯坦布尔)

Romanesque architecture 罗马风建筑 (包含古罗马和拜占庭特色的欧洲建筑风格, 该风格盛行于11世纪和12世纪, 特点为包括厚实的墙、筒拱穹顶及相对不精细的装饰)

Lombard Romanesque 伦巴第罗马式

Gothic architecture 哥特式建筑 (12世纪到15世纪流行于西欧的一种建筑风格, 特征是有尖角的拱门, 肋形拱顶和飞拱)

Amiens 亚眠 (法国北部城市)

Chartres Cathedrals 夏特尔多大教堂 (法国)

Renaissance architecture 文艺复兴时期风格的建筑

Baroque style 巴洛克式风格 (约1550到1700年间盛行于欧洲的一种建筑风格, 强调拉紧的效果, 其特征是有粗的曲线结构、复杂的装饰和无联系部分间的整体平衡)

Georgian style 乔治王朝时期建筑风格

École des Beaux-Arts (兴起于法国的)

装饰艺术风格派

Victorian architecture 维多利亚式建筑

International style 国际风格

Bauhaus (school) 包豪斯建筑学派 (德国建筑研究学派, 或指其风格)

EXERCISES

I. Match the English expressions with their Chinese equivalents.

1. basilica
2. pendentive
3. substructure
4. vaulted roof
5. wooden truss
6. trabeated system
7. Gothic architecture
8. Byzantine style
9. Bauhaus
10. thrust type

- A. 木质构架
- B. 拜占庭风格
- C. 方墙四角圆穹顶支承拱
- D. 拱形屋顶
- E. 长方形廊柱大厅式建筑
- F. 哥特式建筑
- G. 基础; 下层结构
- H. 嵌入式
- I. 包豪斯建筑学派
- J. 横梁式结构

II. Decide whether the following statements are True or False.

1. The use of light and shadow, as well as surface decoration, can enhance a structure.
2. The novel architectural style has nothing to do with the social changes and the discovery and development of new building methods.
3. The Chaldaeans and Assyrians initiated the use of vaulted roofs of damp mud bricks.
4. Romanesque and Gothic architecture dominate the Medieval Age.
5. From Renaissance period and on architecture tended not to be of aesthetic value.
6. In the 20th century, the distinction between architecture and engineering is getting clearer.

III. Choose the best answer to each of the following questions.

1. Which of the following is not mentioned in the text as a form of architecture?
A. A church. B. An avenue. C. A residence. D. A group of buildings.
2. The following are all manipulated by architecture except _____.
A. spaces B. voids C. flows D. masses
3. Which of the following civilizations produced the earliest stone columnar buildings in history?
A. The Chinese civilization. B. The Indian civilization.
C. The Egyptian civilization. D. The Greek civilization.
4. Who experimented and created a new building structure pendentive?
A. Christians. B. Romans. C. Germans. D. Byzantines.
5. Which of the following is a substyle of Baroque style?
A. Georgian style. B. Gothic style.
C. Romanesque style. D. Byzantine style.

IV. Oral task

In next class, you'll be asked to give an oral report based on one of the following questions. Work in teams and search the library or Internet for relevant pictures, facts or stories to support your points.



- ① Why is architecture called “an art”?
- ② What can be achieved by analyzing the building types?
- ③ What are the main features of modern architecture?

TEXT B

What Do Architects Do?

Architects are at the forefront of designing the built environment that will surround us in the 21st century. As professional experts in the field of building design and construction, architects use their unique creative skills to advise individuals, property owners and developers, community groups, local authorities and commercial organisations on the design and construction of new buildings, the reuse of existing buildings and the spaces which surround them in our towns and cities.

The work of architects influences every aspect of our built environment, from the design of energy efficient buildings to the integration of new buildings in sensitive contexts. Because of their ability to design and their extensive knowledge of construction, architects' skills are in demand in all areas of property, construction and design. Architects' expertise is invaluable when we need to conserve old buildings, redevelop parts of our towns and cities, understand the impact of a development on a local community, manage a construction programme or need advice on the use and maintenance of an existing building.

Architects work closely with other

members of the construction industry including engineers, builders, surveyors, local authority planners and building control officers. Much of their time will be spent visiting sites, assessing the feasibility of a project, inspecting building work or managing the construction process. They will also spend time researching old records and drawings, and testing new ideas and construction techniques.

Society looks to architects to define new ways of living and working, to develop innovative ways of using existing buildings and creating new ones. We need architects' understanding of the complex process of design and construction to build socially and ecologically sustainable cities and communities. Architects can be extremely influential as well as being admired for their imagination and creative skills.

An architect draws plans and pictures.

Architects also build 3-D models to show how the building will look and work.

An architect's plans (or blueprints), drawings and models show construction workers how to build it!

Architects use tools like these:



Architects scale, for measuring distances.
Adjustable triangle, for drawing lines and angles.
Compass, for drawing circles and arches.
French curve, for drawing curves.
Circle template, for drawing circles.
Turquoise pencils, for drawing plans.
Computer, for creating plans with design software.

Qualifications

Almost all subjects learnt at school are relevant to architecture, so architectural students should choose the subjects they are strongest in. Although it is not necessary to study art, students should enjoy drawing freehand and making models.

In addition to a good degree, employers are looking for transferable skills—numeracy, interpersonal skills, team working, initiative, decision making and computer literacy. People see these skills as an integral part of architectural education, placing the graduates in a strong position to obtain employment outside the architectural profession in the

wider fields of design and business.

Money and Lifestyle

Although it is possible to achieve substantial wealth as architect—and no doubt some architects pursue this as a primary personal goal—it is very improbable. Instead, most architects earn comfortable or modest livings, enjoying reasonable but limited economic stability and prosperity.

Architects begin their careers as wage earners drawing hourly, monthly, or annual salaries which reflect prevailing marketplace conditions. After several years of apprenticeship and further practice, they may become associates or principal owners of firms, either in partnership with others or as sole proprietors. Generally, larger firms provide larger incomes at all levels when contrasted with smaller firms. Thus partners in bigger, well-established offices tend to earn more than partners in firms whose practices are small. Likewise a newly employed draftsman will probably be paid more by a large firm than by a small one.



Social Status

Social status is an important reason one might choose architecture as a career. An elusive notion at best, it implies the achievement of a certain elevated place

in society's hierarchy of who people are and what they do. Social status is relative, meaningful only in comparison with other professions or vocations. Society assumes that architects are educated and that they are both artistically sensitive and technically knowledgeable. Society does not know exactly how architects operate, but it does know that they often create monumental designs for monumental clients. As a result architects may be well respected or admired by members of a social system who, unfortunately, think less of people they consider lacking in education, less talented, and less acceptable in the company of people of wealth, influence, or so-called

breeding.

Contributing to Culture

Good architects see themselves as more than professional rendering services to fee-paying clients. Architecture is an expression and embodiment of culture, or cultural conditions. The history of architecture and the history of civilization are inseparable. By designing and building, architects know that they may be contributing directly to culture's inventory of ideas and artifacts, no matter how insignificantly. Thus the search for appropriate cultural achievement is an important motivation for architects.

VOCABULARY

New Words

innovative *a.* 革新的, 新颖的

freehand *adv.* 不用绘图仪器地, 徒手地

numeracy *n.* 计算能力

initiative *n.* 主动性, 创造性

apprenticeship *n.* 学徒身份, 学徒年限

proprietor *n.* 所有人, 业主

elusive *a.* 难以表述的

elevated *a.* 高贵的, 抬高的

hierarchy *n.* 等级制度

embodiment *n.* 具体表现, 体现

artifact *n.* 人工制品, 艺术品

Architectural Terms

energy efficient building 节能建筑

surveyor *n.* 测量员, 检查员

local authority planner 地方权威规划部门

building control officer 建筑管理官员

ecologically sustainable cities and communities 生态可持续型城市和社区

circle template 圆形模板

turquoise pencil 绿松石铅笔

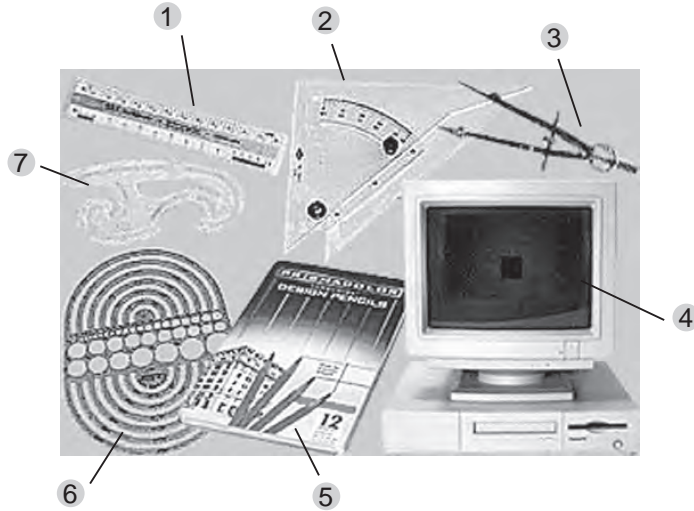
EXERCISES

I. Translate the following English into Chinese and Chinese into English.

- | | |
|------------------------------------|-------|
| 1. energy efficient building | _____ |
| 2. surveyor | _____ |
| 3. ecologically sustainable cities | _____ |
| 4. building control officer | _____ |
| 5. local authority planner | _____ |
| 6. 圆形模板 | _____ |
| 7. 等级制度 | _____ |
| 8. 学徒身份 | _____ |
| 9. 所有人, 业主 | _____ |
| 10. 人工制品, 艺术品 | _____ |

II. Tell the names of the tools used by architects.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____



III. Writing task

Suppose you want to choose architecture as a career. Write an application letter to an architecture company for a position of assistant architect. The letter should include:



- ① your personal information;
- ② the subjects you have learnt in university;
- ③ your potentials for an assistant architect.

TEXT C

The Pritzker Architecture Prize

The Purpose of the Pritzker Architecture Prize

The purpose of the Pritzker Architecture Prize is to honor annually a living architect whose built work demonstrates a combination of those qualities of talent, vision and commitment, which has produced consistent and significant contributions to humanity and the built environment through the art of architecture.

About the Bronze Medallion

The bronze medallion awarded to each laureate of the Pritzker Architecture Prize is based on the designs of Louis H. Sullivan, famed Chicago architect generally acknowledged as the father of the skyscraper.

On one side is the name of the prize where the laureate's name is also inscribed. On the reverse, the three words inscribed are "firmness", "commodity" and "delight." These are the three conditions referred to by Henry Wotton in his 1624 treatise, *The Elements of Architecture*, which was a translation of thoughts originally set down nearly 2,000 years ago by Marcus Vitruvius in his *Ten Books of Architecture* dedicated to the Roman Emperor Augustus. Wotton



who did the translation when he was England's first ambassador to Venice, used the complete quote as: "The end is to build well. Well-building hath three conditions: commodity, firmness and delight."

A Brief History of the Pritzker Architecture Prize

The Pritzker Architecture Prize was established by the Hyatt Foundation in 1979. It has often been described as "architecture's most prestigious award" or "the Nobel of Architecture".

The prize takes its name from the Pritzker family, whose international business interests are headquartered in Chicago. They have long been known for their support of educational, social welfare, scientific, medical and cultural activities. Jay A. Pritzker, who founded the prize with his wife, Cindy, died on January 23, 1999. His eldest son, Thomas J. Pritzker has become president of the Hyatt Foundation.

In 2004, Chicago celebrated the opening of Millennium Park, in which a music pavilion designed by Pritzker Laureate Frank Gehry was dedicated and named for the founder of the prize. It was in the Jay Pritzker Pavilion that the 2005 awarding ceremony took place.

Tom Pritzker explains, “As native Chicagoans, it’s not surprising that our family was keenly aware of architecture, living in the birthplace of the skyscraper, a city filled with buildings designed by architectural legends such as Louis Sullivan, Frank Lloyd Wright, Mies van der Rohe, and many others.” He continues, “In 1967, we acquired an unfinished building which was to become the Hyatt Regency Atlanta. Its soaring atrium was wildly successful and became the signature piece of our hotels around the world. It was immediately apparent that this design had a pronounced effect on the mood of our guests and attitude of our employees. While the architecture of Chicago made us cognizant of the art of architecture, our work with designing and building hotels made us aware of the impact architecture could have on human behavior. So in 1978, when we were approached with the idea of honoring living architects, we were responsive. Mom and Dad believed that a meaningful prize would encourage and stimulate not only a greater public awareness of buildings, but also would inspire greater creativity within the architectural profession.” He went on to add that he was extremely proud to carry on that effort on behalf of his family.

Procedures

Many of the procedures and rewards of the Pritzker Prize are modeled after the Nobel Prize. Laureates of the Pritzker Architecture Prize receive a \$100,000 grant, a formal citation certificate, and since 1987, a bronze medallion. Prior to that year, a limited edition Henry Moore sculpture was presented to each laureate.

Nominations

Nominations are accepted from all nations; from government officials, writers, critics, academicians, fellow architects, architectural societies, or industrialists, virtually anyone who might have an interest in advancing great architecture. The prize is awarded irrespective of nationality, race, creed, or ideology.

Any licensed architect may submit a nomination to the Executive Director for consideration by the jury for the Pritzker Architecture Prize. The nominating procedure is continuous from year to year, closing in November each year. It is sufficient to send an e-mail to the Executive Director with the nominee’s name and contact information. Nominations received after the closing are automatically considered in the following calendar year.

There are well over 500 nominees from more than 47 countries to date. The final selection is made by an international jury with all deliberation and voting in secret. The jury normally undertakes deliberations early in the calendar year and the winner is

announced in the spring.

The Executive Director may also solicit nominations from past laureates, architects,

academics, critics, and professionals involved in cultural endeavors or with special expertise in the field of architecture.

VOCABULARY

New Words

medallion *n.* 大奖章, 大勋章

laureate *n.* 获奖者

commodity *n.* 便利, 有用

hath (古) = has

prestigious *a.* 有威望的, 受尊敬的

dedicate *v.* 为(建筑)举行落成典礼

cognizant *a.* 认识到的

nomination *n.* 提名, 推荐

ideology *n.* 思想(体系)

nominee *n.* 被提名者

solicit *v.* 征集

Architectural Terms

skyscraper *n.* 摩天大楼

pavilion *n.* 亭子, 阁

atrium *n.* 天井, 中庭

Proper Names

the Pritzker Architecture Prize 普利兹克建筑奖

Louis H. Sullivan 路易斯·苏利文 (1856–1924, 美国建筑师, 弗兰克·赖特之师, 芝加哥学派的代表人物之一, 主张“功能决定形式”, 主要作品有芝加哥的会堂大厦、圣路易斯的10层温赖特大厦等)

Henry Wotton 亨利·沃顿 (1568–1639, 英国外交家及诗人)

Marcus Vitruvius 马库斯·维特鲁威 (公元前1世纪, 古罗马建筑师, 所著《建筑十书》在文艺复兴时期、巴洛克及新古典主义时期成为古典建筑的经典)

Augustus 奥古斯都 (63 BC–AD 14, 罗马帝国第一代皇帝)

the Hyatt Foundation 海厄特基金会
Jay A. Pritzker 杰伊·普利兹克 (芝加哥富商, 普利兹克奖的创办者)

Millennium Park 千禧公园 (芝加哥)

Frank Gehry 弗兰克·葛瑞 (普利兹克建筑奖得主)

Frank Lloyd Wright 弗兰克·劳埃德·赖特 (1869–1959, 美国著名建筑师, 他基于自然形式的特殊建筑风格极大地影响了现代建筑业)

Mies van der Rohe 密斯·凡·德·洛 (著名德裔美国建筑师)

Hyatt Regency Atlanta 海厄特行政大厦 (亚特兰大市)

Henry Moore 亨利·穆尔 (1898–1986, 英国雕刻家, 按照自然形体和节奏原则而非几何形体作抽象雕刻, 代表作有石雕《母与子》等)



Answer the following questions according to the text.

1. What is the purpose of the Pritzker Architecture Prize?
2. What is inscribed on both sides of the medal?
3. Who founded the prize?
4. Who can submit a nomination?
5. How is the final selection made?