DAY 26. ARCHITECTURE

READING 1

compromise (n) an agreement between two sides who have different opinions, in which each side gives up something it had wanted
conservation (n) the protection of plants, animals, and natural areas from the damaging effects of human activity
durable (adj) able to last a long time without being damaged
efficiency (n) the condition or fact of producing the results you want without waste
relevant (adj) related to a subject or to something happening or being discussed
secondhand (adj) not new; having been used in the past by someone else
sector (n) a part of society that can be separated from other parts because of its own special character

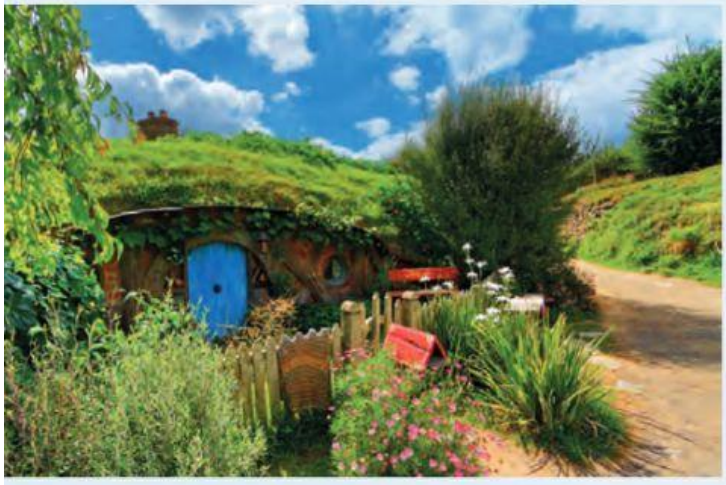
1 Buildings that are tough and last a long time are usually made from _____ materials.
2 The city planning committee may have to make a(n) _____ in order to both save money and use high-quality building materials.
3 It is important for developers to consider the _____ of their plan so that they avoid wasting time, money, or labor.
4 Developers cannot build in certain locations, such as rainforests, due to environmental _____ .
5 If previously used wood is still in good condition, a builder may choose to use it for construction even though it is _____ .
6 Most architects work in the private _____ , which means they work for companies and not for the government.
7 The architect who designed the building does not think people's opinion of its appearance is _____ to its purpose.

We Need More Green Buildings

1 In recent years, there has been a general trend for new buildings to be more environmentally friendly, or more "green." Such a building is sometimes called an *eco-building*. These buildings use energy and water efficiently, which reduces waste and pollution. However, installing features like solar panels and water-recycling systems involves higher construction costs than in a traditional building. Despite these extra costs, green buildings are good for the planet and their benefits are clear.

2 Around the city of Taos, New Mexico, there are many homes, called *Earthship houses*, constructed from recycled bottles, tires, aluminum cans, and other trash. Often the cans, bottles, and tires are filled with soil and then the outsides are covered with natural mud. These homes are designed to use solar power—the energy from the sun—rather than electricity produced from fossil fuels[1]. These recycled-construction designs are just as **relevant** for other types of buildings. In both Uruguay and Sierra Leone, for example, there are recycled-construction schools for local children. The green aspects of this kind of building are relatively inexpensive, and over the life of the building, they should provide a large return on the initial investment[2]. They also function as valuable teaching aids when educating students about the environment.

3 Another example of an eco-building is a private residence in Wales known as the "Hobbit House." Its frame is made of wood and the walls are made of straw, which provides excellent insulation. The roof consists of mud planted with grass, which keeps heat in and has a low impact on the environment. Solar panels provide electricity for lighting and electrical equipment. Water is supplied directly from a nearby river and is also collected from the roof for use in the garden, avoiding the need to waste clean water. Low-impact houses like this one are green because they use **secondhand** materials and do not rely on fossil fuels, but instead use renewable energy sources such as solar or wind power.



4 Critics of these kinds of eco-buildings say that while they may be good for the environment, there are practical problems with their affordability. They are often too costly to become a large-volume method of construction. There are further concerns over their long-term **efficiency**. Not much energy can be realistically generated by solar panels in places that do not have large amounts of sunlight, and not every location has access to a natural water source. However, overall, green buildings are worth it. Yes, in order to finance environmentally friendly construction and produce an affordable building, **compromises** have to be made. These may be that the building will have to be smaller or made of less **durable** materials and with technology that uses more energy. Perhaps these compromises are easier to make for schools, where ideas about **conservation** are useful for education, or for businesses where ecologically aware features are a useful marketing tool, rather than for private homes.

5 The argument for constructing green buildings is clear. The United Nations Environment Programme estimates that the construction **sector** accounts for 30–40% of global energy use. In some areas, such as the Gulf States, the figure is closer to 50–60%. We need to reduce this energy use for the good of the planet. However, it remains to be seen whether we are able to accept the financial and practical compromises of producing and living in environmentally friendly buildings.

[1]**fossil fuels** (n) fuels such as gas, coal, and oil produced in the earth from the remains of plants and animals
[2]**return on investment** (n phr) the benefit to an investor that results from an investment of money

6 Read the article. Write *RC* (recycled-construction building), *HH* (Hobbit House), or *N* (neither type of building) for the architectural features below.

1 a grass roof _____
2 a local water source _____
3 recycled cans and bottles _____
4 gas heating _____
5 a wooden construction _____
6 straw walls _____
7 recycled tires _____
8 natural insulation _____

7 Read the article again. Write *T* (true), *F* (false), or *DNS* (does not say) next to the statements. Then correct the false statements.

_____ 1 Generally, eco-buildings are becoming more popular.
_____ 2 Eco-buildings cost double the price of a traditional building.
_____ 3 Environmentally friendly practices are relevant, no matter what size of building you are constructing.
_____ 4 Some old construction methods can be useful in environmentally friendly construction.
_____ 5 Fossil fuels are examples of renewable types of energy.
_____ 6 Some schools are eco-friendly buildings.
_____ 7 The United Nations Environment Programme produces data about global energy use.

READING BETWEEN THE LINES

8 Work with a partner. Answer the questions.

1 "In recent years there has been a general trend for new buildings to be more environmentally friendly, or more 'green.'" Why do you think this is?
2 The environmental aspects of the recycled-construction school "also function as valuable teaching aids when educating students about the environment." What do you think students learn from the school's environmental aspects?
3 "Not much energy can be realistically generated by solar panels in places that do not have large amounts of sunlight." Why not?
4 How can environmentally friendly aspects of a business be "a useful marketing tool"?

READING 2

PREPARING TO READ

1 You are going to read an essay on form and function in building design. Read the sentences and choose the best definition for the words in bold.

1 The **function** of an architectural drawing is to show what the building design looks like before it is built.
   a complexity or detail
   b a purpose, or the way something works

2 Buildings that have no windows and are box-like with no unique features or decoration can seem very **depressing**.
   a making you feel unhappy and without hope
   b making you feel physically weak and less active

3 When you see a magnificent work of art, such as a painting or a beautiful building, the creativity behind it can be **inspiring**.
   a causing eagerness to learn or do something
   b informative or educational

4 I felt that the people in that city must be pretty **civilized** when I saw the beautiful parks and buildings that they have.
   a having a well-developed way of life and social systems
   b relating to legal issues

5 It **reflects** badly **on** citizens who do not take care of their public parks and buildings.
   a reacts to
   b causes people to think of someone or something in a specified way

6 That architect has a wonderful **reputation** in her field; she is widely admired by many other architects.
   a the general opinion that people have about someone
   b a collection of works

7 He **demonstrated** the new construction technique for the public at the building design convention.
   a criticized or disapproved of something
   b showed how to do something; explained

Building Design: Form vs. Function

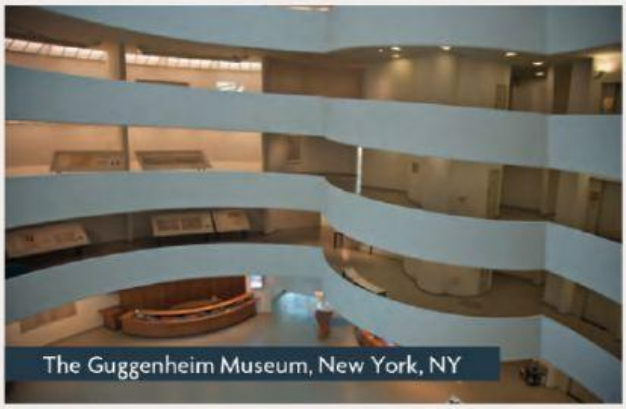
1 At the start of the twentieth century, Louis Sullivan, one of the creators of modern architecture, said that "form follows **function**." The term "functionalism" is used to describe the idea behind architecture that primarily focuses on the purpose of a building. However, many people disagree with this and feel that beauty is a more important factor in architectural design. In the modern world, it seems that most architects try to combine both ideas, aiming to create buildings that are both functional and **inspiring** in their beauty. This is often difficult to achieve, however. Since we create buildings to serve the needs in our lives, the importance of function should always be prioritized over form.

2 Many people believe that architects have a wider responsibility to society than just designing functional buildings. Beautiful, well-constructed buildings are a symbol of a **civilized** society and they **reflect** well **on** a business or the **reputation** of the owner. Ugly public buildings, however, can project a negative image of the organization. People say that living or working in an ugly place creates a **depressing** and uninspiring environment. In contrast, an attractive building can make people feel happier and increase their motivation to work.

3 While this may be true, the reason for creating a building in the first place—its use—is clearly very important. When building an airport terminal, for example, you need to think of the needs of passengers as well as planes. Passengers want to get to their plane as quickly as they can, and planes need to be parked in a way that maximizes their ease of use. As such, many airport terminals have a circular shape with satellite areas. Residential homes need to have enough space for a family, art galleries need wall space to show pictures, and factories need to produce goods as efficiently as possible. Each type of building has a different function, and, therefore, it has a different form.

4 In theory, there seems to be no reason why architecture cannot be both functional and beautiful. Yet in practice, this can cause problems. The Modern International style of the 1920s and 1930s, an example of which is the Guggenheim Museum in New York, was supposed to combine beauty with function. Many consider the museum's white spiral ramp beautiful, but there have been complaints that it is impractical, as it is difficult to stand back to view the art. Also, the ramp is so narrow that it can become overcrowded. The Farnsworth House by Ludwig Mies van der Rohe is another icon of beautiful design that **demonstrates** the idea that "less is more." However, critics have attacked it for a lack of privacy because of the huge glass windows. It also has a leaky flat roof and has been repeatedly flooded. It seems that even these two celebrated designs have problems with functionality.

5 If architects focus only on function, buildings may be cold, ugly, and uninteresting. There is no doubt that a building with a beautiful form is something we can all appreciate. However, functional needs must be addressed before visual ones. This issue of practicality is the most important feature of the buildings we live in, work in, and visit. Therefore, function must outweigh form when an architect plans a building.


The Guggenheim Museum, New York, NY


The Farnsworth House, Plano, IL

WHILE READING

4 Read the essay again. Then complete the summary.

While some architecture values (1)_____ over form, there is an opposing view that the (2)_____ of a building is more important than its functionality. In practice, most (3)_____ strive for a combination of both ideas.

Architects feel that they are expected to design attractive buildings. The appearance of a building can (4)_____ either positively or negatively on its owner. Also, it can have an impact on the users' (5)_____ , which affects motivation.

Still, the first consideration in the design of a (6)_____ should be its purpose. The physical space should allow its (7)_____ to function as efficiently and comfortably as possible.

Although form *and* function is obviously the ideal, it is not always so easy to achieve, as shortcomings in several (8)_____ buildings have shown.

5 Write the number of the original sentences from the text next to the paraphrases below.

Original sentences

1 Beautiful, well-constructed buildings are a symbol of a civilized society.
2 People say that living or working in an ugly place creates a depressing and uninspiring environment.
3 Many people believe that architects have a wider responsibility to society than just designing functional buildings.
4 "Less is more."
5 It seems that even these two celebrated designs have problems with functionality.
6 Each type of building has a different function, and, therefore, it has a different form.

Paraphrases

_____ **a** Unattractive buildings can make people feel unhappy and bored.
_____ **b** Attractive, safe buildings represent a cultured society.
_____ **c** A minimalist design can actually create a more powerful effect.
_____ **d** Every construction has a different purpose, and is therefore designed according to different criteria.
_____ **e** These famous buildings may have won awards, but they still do not always fulfill users' needs.
_____ **f** People who design buildings have a duty to the general public.

ARCHITECTURE AND PLANNING VOCABULARY

3 Complete the definitions with the words from the box. Use a dictionary or the Internet to help you.

amenities	green belt	outskirts	skyscrapers
structural engineer	suburban	urban sprawl	

1 A person who has special training that enables him or her to help build an architectural design is a _____ .
2 _____ are very tall modern buildings in cities.
3 When cities spread out into the countryside, and parking lots or new buildings replace forests and fields, the result is called _____ .
4 A _____ is a section of nature in or near a city that cannot be developed or built on.
5 _____ neighborhoods are not located within a city. They are found on the _____ of a city and usually have houses rather than apartment buildings.
6 Public _____ are facilities that people enjoy living near, such as libraries, swimming pools, and playgrounds.

READING BETWEEN THE LINES

6 Work with a partner. Answer the questions.

1 Why are well-designed buildings advantageous for the owner?

_____

2 Why is a circular or "satellite" shape beneficial for an airport terminal?

_____

3 Why might governments demolish ugly public buildings?

_____

4 What elements of a building could make it depressing?

_____

5 Why could the design of a building increase your motivation?

_____

WRITING

1 Read the text below. Replace the informal words and phrases in bold with the correct academic words and phrases from the box.

approximately calculate can be justified
considerable investment critical and desire to work effectively
fundamentally has a positive impact on there is no real benefit
this supports the accuracy of this notion undoubtedly

Choosing an architect is (1) **basically** about cost for many organizations. (2) **I'm sure that** the initial cost is (3) **really important,** regardless of whether the building is for the private or public sector. Good architecture requires (4) **lots of money**, and institutions have to (5) **work out** whether high costs (6) **are worth it** in the long term. Some people claim that (7) **there's not much point** in providing an attractive working area. However, others would argue that a pleasant working environment (8) **is good for** people's moods and, therefore, their productivity, (9) **etc.** A recent survey in a multinational IT company suggested that (10) **around** 75% of employees took this view. (11) **That's a lot of people!**

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.

2 Read the sentences in bold. Then decide which follow-up sentence sounds more persuasive.

1 **Small homes can be crowded.**
   a This lack of space can cause family tensions.
   b We should live in large houses, so everybody has plenty of space.
2 **Homes should be near stores and schools.**
   a Fuel use can be decreased and costs can be saved if we do not have to drive.
   b Being able to access these amenities without a car is a bonus.
3 **It is better to live in spacious buildings.**
   a Large open rooms allow families to spend more time together, which enhances family unity.
   b People can spend more time together if they have large open rooms.
4 **An apartment without windows is undesirable.**
   a This is because you cannot look outside; you can only look at walls.
   b If you can see outside, you can see the weather, which sometimes lifts your mood.
5 **Ideally, we need homes that are convenient for traveling to work.**
   a Accessibility is an important everyday need, and it will save us valuable time.
   b We often cannot choose to live near our workplace.

3 Which side of an argument would each sentence persuade the reader to agree with? Circle *a*, *b*, or *c*.

a	= The environment is more important.
b	= Minimizing cost is more important.
c	= Both are equally important.

1 The construction company has to make a profit, so it should construct buildings cheaply. a b c
2 Eco-buildings may encourage people to be more environmentally responsible in their day-to-day lives. a b c
3 Environmentally friendly buildings cost less in the long run due to energy savings. a b c
4 Due to the global population increase, we urgently need more buildings; if they are expensive, they may not be built. a b c
5 Cheaply constructed buildings have a shorter lifespan and may need to be destroyed sooner. a b c
6 Government grants may be available for eco-buildings. a b c