

## MAJOR SUBWAYS OF EUROPE

### Words

Write the letter of each definition with the word it defines. If you don't know the definition, use the context of the reading passage to help you. Look for the words in bold as you read the passage.

### PARAGRAPHS 1-2

Words	Definitions
<b>1</b> ..... intrinsic	<b>A</b> n., the main or most important feature
<b>2</b> ..... underground	<b>B</b> v., to fill so much as to make movement difficult
<b>3</b> ..... centerpiece <sup>1</sup>	<b>C</b> adj., basic
<b>4</b> ..... pedestrian	<b>D</b> n., a person traveling <sup>2</sup> on foot
<b>5</b> ..... clog	<b>E</b> adj., below the ground

### PARAGRAPH 2

Words	Definitions
<b>6</b> ..... disruptive	<b>F</b> adj., stopping the usual course of activity
<b>7</b> ..... release	<b>G</b> n., the working of something; being used
<b>8</b> ..... vent	<b>H</b> v., to let something out
<b>9</b> ..... operation	<b>I</b> n., an opening to let air, steam, or smoke out

### PARAGRAPH 3

Words	Definitions
<b>10</b> ..... destruction	<b>J</b> n., the act of ruining something
<b>11</b> ..... expand	<b>K</b> n., something that serves as protection
<b>12</b> ..... shield	<b>L</b> v., to make bigger
<b>13</b> ..... surface	<b>M</b> n., the outer part or top of something

<sup>1</sup>BrE: centrepiece

<sup>2</sup>BrE: travelling

## PARAGRAPHS 4-6

Words	Definitions
<b>14</b> ..... rival	<b>N</b> n., the style of a building
<b>15</b> ..... architecture	<b>O</b> v., to make an object or place beautiful
<b>16</b> ..... decorate	<b>P</b> n., central office for a military commander
<b>17</b> ..... showcase	<b>Q</b> v., to compete with
<b>18</b> ..... utilize <sup>1</sup>	<b>R</b> n., a setting in which to present something
<b>19</b> ..... headquarters	<b>S</b> v., to use
<b>20</b> ..... spring up	<b>T</b> v., to appear

## Reading

## Major Subways of Europe

- (1) Public transportation<sup>2</sup> is an **intrinsic** part of every modern city. Many big cities have an **underground** rail system as their **center-piece**. Three of the biggest and busiest underground rail systems in Europe are in London, Paris, and Moscow. The character of each city imprints its railways.
- (2) The first of these subways was London's **Underground**, which opened in 1863. By that time, horses and **pedestrians** had so **clogged** the streets of London that city government ruled that no railroads could enter the city except underground. The method used for laying the first underground tracks is called "cut and cover," meaning the streets were dug up, the track was laid, a tunnel was built, and then everything was buried. Although the method was **disruptive**, it worked. Steam engines chugged under London, **releasing** steam through **vents** along the city streets. In its initial day of **operation**, the London **Underground** carried 30,000 passengers.
- (3) This cut-and-cover method caused massive disruptions in the city and required the **destruction** of the structures above the tunnel. A better means of **expanding** the original **Underground** was needed, and builders did not have to look far to find it. In 1825, a pedestrian tunnel was built under the Thames River. The construction of this tunnel—the first underwater tunnel ever built—was made possible by engineer Marc Brunel. He had devised a way of supporting the tunnel while the workers dug, called the **Brunel Shield**. Two young

<sup>1</sup>BrE: utilise

<sup>2</sup>BrE: transport

engineers improved the Brunel Shield for use in expanding the London Underground. The new Harlow-Greathead Shield carved a circular tube more than seven feet in diameter, which is why the London Underground is called the Tube. By then, the tunnels could be deeper than the original ones because electric train engines had become available. These trains did not have to be close to the **surface** to release steam. The shield could be used to dig deeper tunnels without destroying the surface structures above them.

- (4) Paris started designing an underground rail service to **rival** London's. The first part of its system was not opened until the World's Fair and Olympics were held in that city in 1900. The Paris Metro is shorter than London's, but it carries more passengers every day, second in Europe only to Moscow. Whereas London's Underground is known for its engineering, Paris's Metro is known for its beauty. The stations and entrances are examples of art nouveau **architecture**, and they are **decorated** with mosaics, sculptures, paintings, and innovative doors and walls.
- (5) The Moscow Metro opened in 1935. It was based on the design of the London Tube, except much of the track is above ground. When Stalin came to power, he used the stations as **showcases** of Russian art, culture, and engineering. The underground Moscow stations are filled with statuary, painting, and mosaics.
- (6) Underground railways are not only for transportation. During World War II, all three underground systems were **utilized** as bomb shelters for the populace. The Moscow subway was even used as a military **headquarters**. Stores and malls have **sprung up** by stations, something that is especially convenient in cold climates.
- (7) All three systems are continuing to expand, providing service to more riders in more distant locales. This is all part of an effort to decrease greenhouse gases emitted from personal vehicles.

Answer the questions about **Major Subways of Europe**.

#### Questions 1–4

Do the following describe the subway system in London, Paris, or Moscow?

Write the correct letter, **A**, **B**, or **C**.

- A** London
- B** Paris
- C** Moscow

..... 1 It was used as a military headquarters during World War II.  
 ..... 2 It has a large percentage of its track above the ground.

..... 3 It was originally built for the operation of steam trains.

..... 4 It is famous for its beautiful architecture.

### Questions 5-7

Choose the correct letter, **A**, **B**, **C**, or **D**.

5 The Paris Metro stations are decorated with

- A pictures of the Olympics.
- B different kinds of artwork.
- C photographs of the World's Fair.
- D examples of engineering.

6 The London Underground was first built because

- A the underwater pedestrian tunnel had been damaged.
- B a new method for digging tunnels had been developed.
- C the city streets were too clogged for trains on the surface.
- D the city wanted to rival the transportation system in Paris.

7 The introduction of electric train engines allowed for

- A deeper tunnels.
- B more pedestrians.
- C innovative doors and walls.
- D more art showcases in the stations.

### Word Families

#### A

Complete each sentence with the correct word from the word family chart. Make nouns plural where necessary. Use the correct form of verbs.

<b>noun</b>	<b>noun</b>	<b>adjective</b>	<b>adverb</b>
architect	architecture	architectural	architecturally

1 Its art nouveau decorative features make Paris ..... significant.

2 The ..... of the stations is an important part of subway system design.

3 The ..... is working on a plan for a new train station.

4 From an ..... point of view, it's a very interesting building.

<b>noun</b>	<b>noun</b>	<b>verb</b>	<b>adjective</b>
decoration	decorator	decorate	decorative

5 People enjoy looking at the ..... in the station while they wait for the train to arrive.

6 That column is there for ..... purposes only; it has no real use.

7 The ..... planned the art for the station very carefully.

8 Sometimes they ..... the trains for the holidays.

<b>noun</b>	<b>verb</b>	<b>adjective</b>
destruction	destroy	destructive

9 It was necessary to ..... some buildings in order to dig the subway tunnels.

10 The ..... of buildings was part of the process of creating the subway system.

11 Digging deeper tunnels makes subway construction less ..... to buildings and roads on the surface.

<b>noun</b>	<b>verb</b>	<b>adjective</b>
disruption	disrupt	disruptive

12 The process of building a subway can be ....., but the end result is well worth it.

13 Building a subway system can cause a lot of ..... to traffic on the streets.

14 They try to ..... traffic as little as possible during subway construction.

<b>noun</b>	<b>verb</b>	<b>adjective</b>
expansion	expand	expandable

15 The ..... of the subway system cost a great deal of money.

**16** By the time they were ready to ..... the subway system, a new method for digging tunnels had been developed.

**17** The subway system was designed to be .....

<b>noun</b>	<b>noun</b>	<b>verb</b>
operation	operator	operate

**18** Modern subway systems use computers to ..... the trains.

**19** The ..... of the Paris Metro began in 1900.

**20** A subway train ..... needs special training for the job.

### Word Families

#### B

Choose the correct word family member from the list below to complete each blank.

<b>1</b> Architecture	Architects	Architectural
<b>2</b> decorates	decorations	decorative
<b>3</b> destruction	destroy	destructive
<b>4</b> disruption	disrupts	disruptive
<b>5</b> expansion	expand	expandable
<b>6</b> operation	operator	operate

The planning and construction of a subway system requires a great deal of time and effort. In addition to planning the routes, digging the tunnels, and laying the tracks, the stations have to be built. **1** ..... are hired to plan the stations. Often, the station plan includes **2** ..... features such as murals showing local scenes, or a station may be used as a showcase for the work of important local artists. Building a new

subway system may require the 3..... of buildings on the surface, but attempts are made to cause as little 4..... as possible. The 5..... of an already-existing subway system can also be quite disruptive. Everyone looks forward to the day when the construction is over and the subway begins to 6..... . Often businesses spring up in and around a new subway station, contributing to the life of the neighborhood.

### Paraphrases

Read the sentence from the reading passage. Then, choose the sentence that has the same meaning.

- 1 *By that time, horses and pedestrians had so clogged the streets of London that the city government ruled that no railroads could enter the city except underground.* (paragraph 2)
  - A By then, London's streets were so dirty that no one wanted to use them.
  - B By then, London's streets were filled with traffic, so the government banned aboveground trains from the city.
  - C By then, the lack of traffic rules made it difficult to control the people, horses, and trains using London's streets.
  
- 2 *The stations and entrances are examples of Art Nouveau architecture, and they are decorated with mosaics, sculptures, paintings, and innovative doors and walls.* (paragraph 4)
  - A The stations represent a certain building style and are beautified with art.
  - B Many artists have used the beauty of the stations as inspiration for their artwork.
  - C The stations were designed to have space for art exhibits.

## Word Skill

### COMPOUND WORDS

When two or more words join to form a new word, that word is called a compound word. Often, the meaning of the compound word is related to the meanings of the two separate words.

underground = under + ground

Meaning: below the surface of the ground

Read the sentences. Write a definition for each underlined word.

1 They built an underwater tunnel for pedestrians below the Thames River.

*underwater:* .....

2 Before they could paint the mural in the station, they had to cover the wall with an undercoat of special paint.

*undercoat:* .....

3 Instead of a bridge, they built an underpass so that cars could cross the tracks from below.

*underpass:* .....

## Listening



Listen to the conversation. Complete the outline below.  
Write **NO MORE THAN ONE WORD** for each answer.

### The London Underground: (1863)

Steam engines were used, so

- it had to be close to the **1**.....
- it had **2**..... so engines could release steam.

Electric engines were introduced, so

- tunnels could be deeper.
- a **3**..... was used to support the tunnel.
- digging the deeper tunnels did not **4**..... streets and buildings.

## Writing (Task 1)

**The chart<sup>1</sup> below shows information about subway systems in three major European cities.**

**Summarize<sup>2</sup> the information by selecting and reporting the main information and making comparisons.**

Write at least 150 words.

**Size of Subway Systems**

	Total track length (both underground and on the surface)	Number of stations in operation	Number of daily passengers
London Underground	408 km	275	3 million
Paris Metro	214 km	300	4.5 million
Moscow Metro	300 km	182	6.5 million

## Speaking

*Talk about the following topics.*

Are there any subway or train stations or other buildings in your city that have especially beautiful architecture? Describe them.

Are there any public spaces in your city that are used to showcase the work of local or national artists? Do you think it is a good idea to use public spaces in this way? Why or why not?

<sup>1</sup>BrE: table

<sup>2</sup>BrE: summarise