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# ZOOM

in on america

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One World Trade Center, left, 4 World Trade Center, and 3 World Trade Center, second from right, next to the September 11 Memorial and Museum in New York. June 8, 2018. Photo © AP Images.

In this issue: The Unyielding Spirit of America

Zoom in on America

## One World Trade Center

One World Trade Center is a new landmark adorning the characteristic skyline of New York's Lower Manhattan. Its height, 1,776 feet, is a symbolic reference to the year the United States declared independence from the British Empire on July 4, 1776. Filling the void of the Twin Towers, it is also a symbol of the future and hope, and the unyielding spirit of America.

One World Trade Center was developed by the Port Authority of New York and New Jersey, owner of the 16-acre World Trade Center site. The Port Authority of NY and NJ is a joint venture established in 1921 between the United States, New York and New Jersey in order to manage the regional transportation infrastructure within the geographical jurisdiction of the Port of New York and New Jersey.

The tallest skyscraper in New York (104 stories), One World Trade Center was designed by architect David Childs, an American architect and chairman emeritus of the architectural firm Skidmore, Owings & Merrill, whose major projects include the 1201 Pennsylvania Avenue skyscraper, the Washington DC Four Seasons Hotel, the National Geographic headquarters, all in Washington, DC and the 450 Lexington Avenue building and Bertelsmann Tower in New York City. He also designed the Embassy of the United States in Ottawa, and the Changi International Terminal in Singapore.

The architectural design of 1WTC is characterized by simplicity and clarity of form. The tower rises from a 186 foot

tall podium. Above the podium, the tower's square edges are chamfered back, transforming the square into eight tall isosceles triangles. At its middle, the tower forms an equilateral octagon in plan and then culminates in a stainless steel parapet whose plan is a square, rotated 45 degrees from the base.

Safety was one of the primary architectural priorities in the design of One World Trade Center. Environmental concerns such as minimizing waste and pollution, conserving water, and improving air quality, were also vital factors. The floors are nine-feet high from floor to ceiling. Clear glass windows offer breathtaking views of the panorama of New York City. There are 3 observation floors (on floors 100,101 and102).

Accessibility within One WTC was also a critical part of its design. There are 71 elevators and 11 escalators connecting visitors to the lobby, retail area and observation deck.

The One WTC skyscraper was designed to be the safest commercial structure in the world. It is the primary commercial business address in New York. Almost 70% of its space houses businesses, including the headquarters of Condé Nast, global digital gaming company High 5 Games, Tech advertising firm xAd, financial services company Moody's, and the U.S. General Services Administration.



*Fireworks near the One World Trade Center tower, center, during the Jersey City Fourth of July celebration, Wednesday, July 4, 2018, in Jersey City, N.J. Photo © AP Images.*

## A Short Timeline of the World Trade Center Redevelopment and Construction of One WTC Tower

In December 2001, a plan was approved to restore Port Authority Trans-Hudson (PATH) rapid-transit rail service, which was disrupted by the September 11th terrorist attacks. The Port Authority began work on the temporary WTC PATH station.

In February 2003, architectural firm Studio Daniel Libeskind, headed by Polish-born Daniel Libeskind, was selected to develop the master plan and concept of the WTC site.

On December 19, 2003, the design concept for the WTC site's 1,776-foot One WTC was unveiled.

In December 2004, the final design of the WTC Memorial and Museum was unveiled.

On April 28, 2006 construction on One WTC officially began, as well as preliminary construction on the WTC Memorial.

On May 23, 2006, 7 WTC, a skyscraper that is part of the World Trade Center complex, opened.

On December 19, 2006, the first steel columns for One WTC were placed.

In March and April 2009, slurry wall panels along West Street were excavated and a reinforcing steel cage was placed inside the slurry wall.

In December 2010, construction of One WTC reached the 52nd floor. The speed of construction was one floor per week.

On September 11, 2011, the Memorial Plaza at the National September 11th Memorial opened for the first time during a ceremony at the World Trade Center site.

In April 2012, One WTC surpassed the Empire State Building and reclaimed the title of the tallest structure in New York.

On May 10, 2013, One WTC became the tallest building in the western hemisphere and third tallest in the world.

On October 24, 2013, the first part of the WTC Transportation Hub opened.

On November 13, 2013, 4WTC opened as the first tower completed on the WTC site.

On November 3, 2014, One WTC officially opened, with anchor tenant Condé Nast moving in.

On May 29, 2015, One World Observatory opened to the general public.

In October 2016, One World Trade Center received LEED Gold Certification (LEED - Leadership in Energy and Environmental Design, is a green building rating system.)

During the redevelopment work on the World Trade Center site, work also continued on the Transportation Hub.

*Based on Timeline of the Rebuilding Effort, <https://www.panynj.gov/wtcprogress/timeline-rebuilding-effort.html>*



*National Flags of Honor and Flags of Heroes in commemoration of the victims of September 11 attacks in Battery Park NYC.*



*2011 - the construction of One World Trade Center Tower is under way  
Photos Bozena Pilat*

## The Original WTC and the Twin Towers

The idea of building a trade center came about in the late 1950s as part of a trend to draw businesses away from Midtown and encourage them to relocate in Lower Manhattan. David Rockefeller and other New York business leaders thought a "World Trade and Financial Center" on the East River waterfront, below the Brooklyn Bridge, would be a way to revitalize downtown. The Port of New York Authority, which was created in 1921, became interested in the idea.

In the early 1960s, the concept received backing from the governors of New York and New Jersey. However, small businesses which were already located in the area protested, as the prospect of building a trade center meant that they would be forced to move. They filed a lawsuit to stop the project, and a legal battle ensued for many years. Ultimately, judges ruled in favor of the Port Authority. Protests were also carried out along Greenwich Street's Radio Row. New York City's Radio Row, which existed from 1921 to 1966 on the Lower West Side of Manhattan, was torn down to make room for the World Trade Center. In 1964 New York Governor Nelson Rockefeller promised office space for lease in the Trade Center those businesses which had been displaced.

Finally, construction of the trade center could begin. Japanese-American architect Minoru Yamasaki, who had worked previously on the design of the Empire State Building, was appointed as chief designer.

Yamasaki's project of the Trade Center included two 110-story towers. Questions were raised about the safety

of the towers in the case of an explosion or airplane crash. Some critics, who opposed the very nature of high-rise buildings, protested the form of the skyscrapers.

Excavation work for the WTC began in August, 1966. For the first time, the "slurry wall" method (see p. 5) was used in the United States. Two years later, on August 6, 1968, the first steel beams were put in place. On December 23, 1970, the north tower was topped off at 1,368 feet (417 m). On July 19, 1971, the south tower was topped off at 1,362 feet (415 m). The World Trade Center opened officially on April 4, 1973, although various, related construction projects were carried on until the following year.

Throughout the 70s and 80s, several important developments took place. In January 1974, the U.S. Customs Service moved into Six World Trade Center. In March, 1977 the first tenant moved into Five World Trade Center (Northeast Plaza Building). In May 1979, the 360-foot spire atop One World Trade Center was completed, and in July 1981, the Vista International Hotel opened. In May 1987 Seven World Trade Center opened.

In total, the World Trade Center comprised a complex of seven buildings: the Twin Towers: 1 WTC and 2 WTC, the Vista Hotel, later renamed the New York Marriott World Trade Center Hotel (3 WTC), 4 WTC, 5 WTC, 6 WTC, and 7 WTC. The total cost of construction of the Trade Center was \$900,000,000.



*The Vista Hotel is dwarfed by the Twin Towers of the World Trade Center in New York City on March 21, 1983. The north tower, 1 WTC, is at left and the south tower, 2 WTC is at right. Photo © AP Images.*

## Lifesaving Slurry

The construction of the original World Trade Center was a challenging undertaking. One of the biggest problems was dewatering the ground. Proximity of the Hudson River meant that the foundations could easily fill with water.

An innovative method called a slurry wall was proposed to overcome the problem. The slurry wall - a concrete structure which surrounded the World Trade Center, was 3-feet-thick (91 centimeters). Its main function was to keep the WTC basement levels from being flooded by the Hudson River.

When the towers collapsed following the September 11 attacks, the slurry wall did not break, despite enormous pressure. This prevented the 70-foot-deep foundation from filling with groundwater. It was a fortunate coincidence for the whole metro system in New York City. The PATH tubes that ran below WTC were not submerged. Had the slurry wall broken, the tube system may have been flooded and conceivably, there might have been a much greater loss of life.

The man who supervised construction of the slurry wall was hailed a hero. His name was Arturo Lamberto Ros-

si de Cervia. He was an Italian-born engineer holding a doctorate degree when he came to build the Twin Towers (*New York Times* "Looking to a Wall That Limited the Devastation at the World Trade Center" <https://www.nytimes.com/2013/09/12/nyregion/looking-to-a-wall-that-limited-the-world-trade-centers-devastation.html>).

Slurry is a mixture of water and bentonite clay. It is pumped into trenches dug deep into the ground, to bedrock. The mixture is pumped into the trench to keep the sides from closing up until a big cage of steel rebar is placed into the trench, which is then filled with concrete. The concrete displaces the slurry and hardens into a wall, which then allows excavation.

The slurry wall of the Twin Towers withstood the towers' collapse and enabled excavation of the trade center site and thus became a symbol of resilience.

In 2002, architect Daniel Libeskind proposed preservation of the wall and composed it as part of the Memorial Museum.



*A portion of the World Trade Center slurry wall, left, and the symbolic last beam, are displayed at the National September 11 Memorial Museum, Wednesday, May 14, 2014, in New York. Photo © AP Images.*

## Philippe Petit's "Artistic Crime of the Century"

As the world was watching the ascent of the large-scale project named the Twin Towers, one man watched it more closely than others. This man was Philippe Petit and the reason why he was so interested in the towers was his occupation and passion – high-wire-walking. When he first read about the project, he conceived the idea that he would walk between the towers on a tight-wire upon their completion.

Petit decided not to apply for official approval for his stunt, assuming it would not be granted. Rather, he confided in his friends Jean-Francois and Jean-Louis, the only people aware of his plan, and they agreed to help him.

Born in Nemours, Seine-et-Marne, in France on August 13, 1949, Petit was 18 when the construction on the Twin Towers started. In preparation for his great feat, Petit had walked for 42 meters (the distance between the towers), at 417 meters above ground, holding a 25-kilogram balancing pole.

Petit faced many challenges and obstacles in realizing his goal, including the potential swaying of the towers due to wind, the effects of wind and weather on the wire at that height, how to sling an over 60 meter steel cable across the gap between the towers, and how to gain entry to the building.

Petit had to practice in similar conditions before attempting the feat of his life. In 1971, he performed a high-wire

walk between the towers of the cathedral of Notre Dame de Paris and in 1973, he walked a wire between the two pylons of the Sydney Harbour Bridge, in Australia.

When the big day arrived, Petit and his crew entered the Twin Towers building pretending they were workers. They had to take their heavy equipment in an elevator, all the way up to the 110th floor and carry it up the stairs on the last leg of the journey to the roof.

On the dawn of August 7, 1974, the crew first shot across a fishing line, which was attached to larger ropes, and finally to the 450-pound steel cable. However, the cable sank too fast and they had to pull it up manually for hours. Finally, at about 7:00 a.m., once all the arrangements were in place, New Yorkers were treated to the delight and spectacle of a man walking on a rope between the Twin Towers, a quarter mile above their heads!

Philippe Petit spent 45 minutes walking along the rope, dancing, lying down and kneeling to salute the observers below. Then growing tired of his walk, he stepped off from the cable, onto the roof and was immediately arrested by police officers who were waiting for him. He was later tried in court, but received only a minor penalty. His punishment was to perform for children in Central Park during a free aerial show.



*French tightrope walker Philippe Petit, 24, looks back at the photographer as he rests between walks across a cable stretched between New York's World Trade Center towers high above the city on Wednesday, August 7, 1974. Photo © AP Images.*

# ACTIVITY PAGE

September 2018  
TRIVIA QUESTION

What is the height (in feet)  
of One World Trade  
Center?

Send the answer  
(with your home address) to:  
KrakowAIRC@state.gov

The 3rd, 8th and 13th  
correct answer will be  
awarded with a book prize

Deadline: October 15, 2018

July-August 2018

The answer to the Trivia  
Question was: 1,000.

The winners are:  
Zofia from Skarzysko-  
Kamienna, Pawel from  
Rymanow and Maciej from  
Fasty

CONGRATULATIONS!!!  
The prize will be sent to you  
by mail.



Zoom is online at  
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**Exercise 1.** Reading. Read the text below and circle the definite and indefinite articles.

The so called **Colonial** style of the mid-17th c. reveals English, Dutch and Spanish influences. The English colonists were fond of building their homes in rows and subscribed to the requirements of the renaissance symmetry. The Dutch characteristic was a gambrel roof, while the Spanish preferred flat roofs and used the locally known adobe in the construction of homes. The 18th and 19th century witnessed three prevalent styles, which have been termed **Early National**, **Romantic**, and **Victorian**. The Early National style includes the **Federalist** style which made frequent use of small windows above the doors, called fanlights, and followed a 16th century Italian architect Andrea Palladio, especially in his classic design of windows. The **Greek Revival** style also falls in the Early National, and, as the name suggests, is reminiscent of Greek classicist architecture with its fondness of columns and temple fronts. The Romantic period, popular in the second half of the 19th century consists of **Gothic Revival** style, characterized by pointed arches, finials, and battlements, and the **Italianate**, with tall windows and very decorative cornices. The **Victorian** style, also popular in the second half of the 19th century, cherished round shapes, gables, and rich, impressive masonry. The turn of the 20th century introduced the **Prairie** type as well as **International**, **Art Moderne** and **Art Deco** styles with their futuristic and geometric designs, and simple and elegant facades. A very interesting period was the years around 1910 - 1945 which brought about the revival of many older historical periods. These **Revival** styles included: the **Colonial**, **Dutch**, **Tudor**, **Neoclassical**, **Spanish**, **Mission**, **Beaux Arts** and **Italian Renaissance**. The post-war period got rid of ornaments and stylistic forms. It valued functionality and ignored history. The **Modern** style, as it was called, was followed by the **Postmodern**, which we witness nowadays. As a reaction to modern, it returns to history, but mixes historical styles in its own combinations. Eclecticism and simplification are characteristics of this style.

**Exercise 2.** Speaking. Architecture. Read the above text about architectural styles in the United States again. Choose 2-3 styles from different historic times and prepare to make a short characteristics of each of them.

Then work with another student. Tell him or her about your selected styles and listen to their presentation.

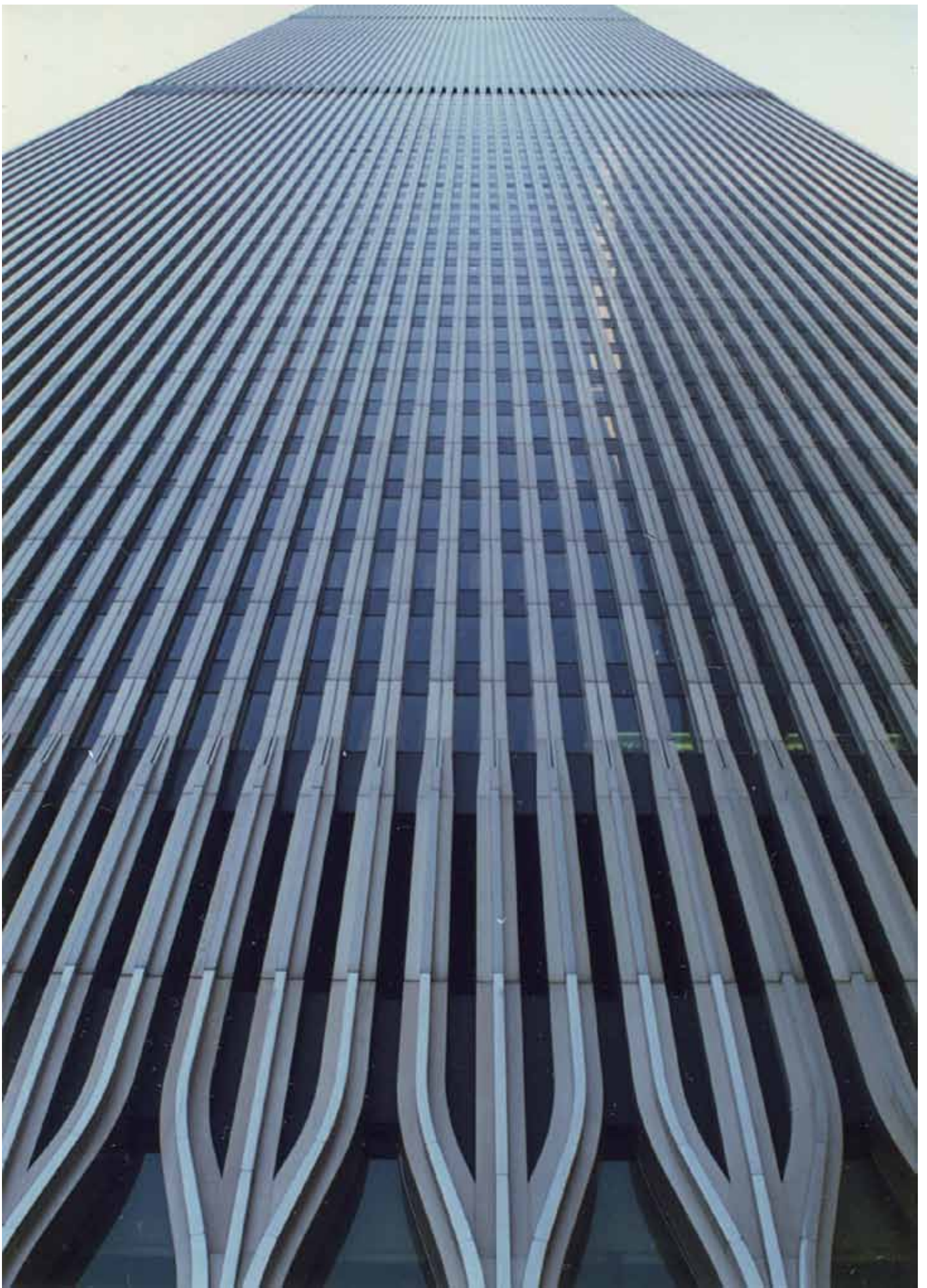
Then talk with your partner about your favorite style in architecture. Describe the buildings you have seen and whose architecture you like. What is your list of buildings all over the world that you would like to see one day?

**Exercise 3.** Writing. Write a paragraph about the architecture of your home. What are the advantages and disadvantages of living in this building?

Now write another paragraph about your dream house. What do you envision it to be? Think of the outside of this house and its surroundings. And what about interior decoration? Include a sentence or two about the way you would like to have it decorated.

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*Old World Trade Center tower in the 1990s.*