



# Burj Khalifa



The Burj Khalifa, located in Dubai, United Arab Emirates, is the **tallest free-standing structure in the world**.



The weight of the concrete used to construct the building is equal to the weight of **100,000** elephants.



The skyscraper was started in 2004 and finished in 2009, taking more than **22 million hours** of labor to complete.

## Classroom connection:

Ask students to investigate how much material (steel, concrete, aluminum, etc.) was used to build the Burj Khalifa. What innovative engineering techniques were used to build this skyscraper?

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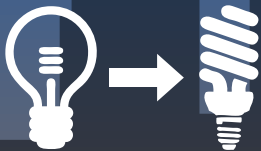
# Empire State Building



The Empire State Building is located in New York City and was **the tallest building in the world from 1931 to 1971.**



**10 million bricks, 57,000 tons of steel and 200,000 cubic feet of Indiana limestone** were used to construct the building in 1930.

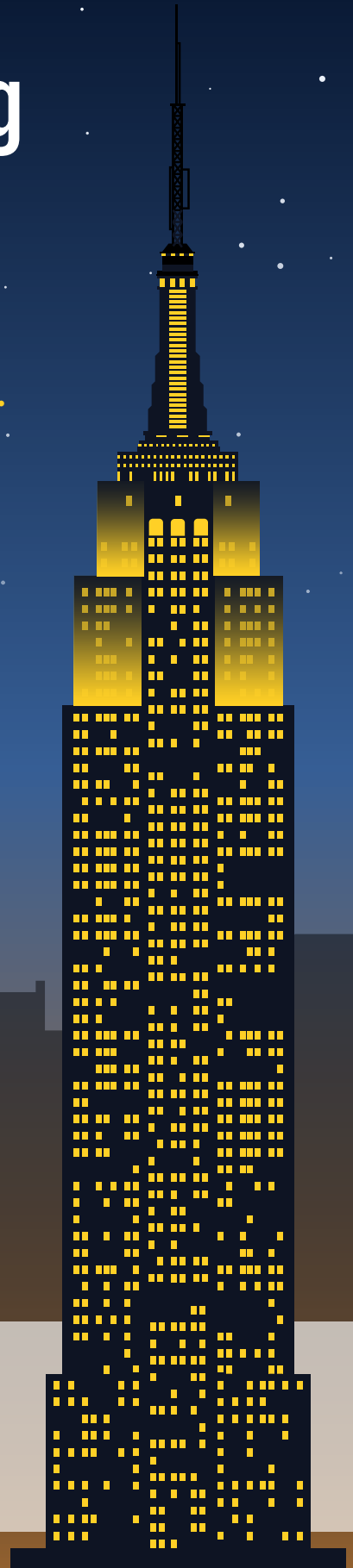


The building underwent energy-efficient upgrades in 2009, **saving \$4.4 million in energy and operational costs** every year.

## Classroom connection:

Ask students to research the history of this iconic building and present their findings to the class.  
Why was it so innovative at the time it was built?

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# Taipei 101



Taipei 101 (Taipei Financial Center), located in Taipei, Taiwan, has **101 stories** and is **1,667 feet tall**.



The building earned the **LEED Platinum certification** for Operations and Maintenance in 2011 for its sustainable features such as glass curtain walls that block solar heat and low-flow water fixtures.

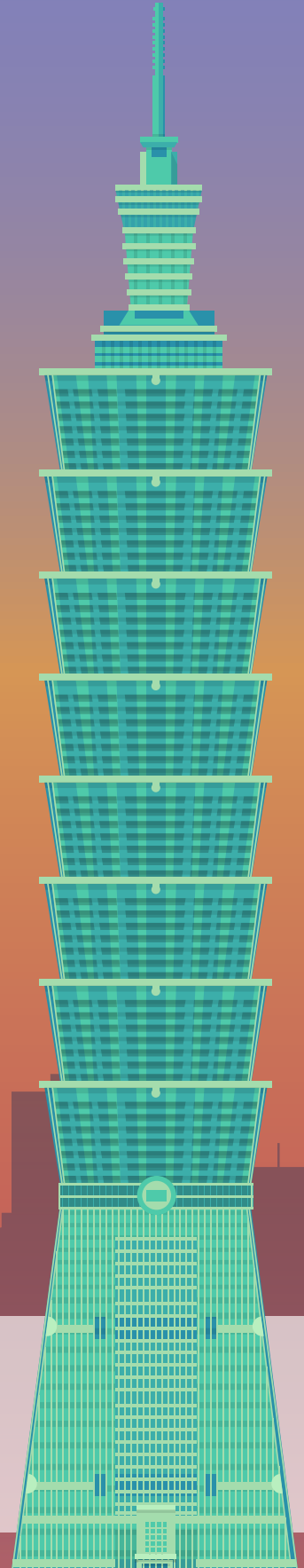


A reflection of Chinese culture, the skyscraper is meant to resemble **a stalk of bamboo or pagoda** with eight-story modules that flare outward.

## Classroom connection:

Ask students to research what qualifications are required for a building to be LEED certified. Why is sustainable infrastructure important?

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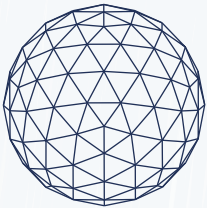
# Fernsehturm



This TV tower in Berlin, Germany, was built **between 1965 and 1969** by the German Democratic Republic.



**The tallest structure in Germany today**, the tower was built to show the strength and efficiency of the socialist system governing East Berlin at the time.



**To build the iconic sphere**, steel frame segments were hoisted to the top of the tower by cranes.

## Classroom connection:

Ask students how they think architecture can be influenced by culture and geography. Why is it important to understand these elements when learning about infrastructure?

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