

Mount Rushmore

Designed by Russell Søren-Larson

Piece count 55,000

Built by Claire Ashworth

Build hours 92.5

Wonders of Mt Rushmore

Date: October 1927 – October 1941

Size: The carvings measure 18 metres tall and stretch over 5 square kilometres in total, carved at an elevation of 1,745 metres above sea level

Place: Black Hills, south-western South Dakota, USA

Giant representations of Presidents George Washington, Thomas Jefferson, Theodore Roosevelt and Abraham Lincoln were carved into the south-east face of Mount Rushmore by American sculptor Gutzon Borglum, and completed by his son Lincoln Borglum. Gutzon Borglum chose these four Presidents because they symbolised the first 150 years of American history. Washington represents the founding of the American nation; Jefferson, the expansion of the American nation west, across the continent; Roosevelt, domestic progress and global influence; Lincoln, America's preservation and unification through the ordeals of the Civil War. Work was carried out by hundreds of workers, armed with dynamite, jackhammers, chisels, and drills to carve the likeness of four of the most recognisable figures in American public life, into the towering solid granite face of Mount Rushmore. Despite it being considered a "monument to democracy", and one of America's most popular tourist destinations, the carvings on Mount Rushmore did attract dissent from environmentalists and Native American groups who considered the faces a desecration to the mountain. The site continues to elicit negative attention from Native American lobbyists, who view the monument as an insult, and physical embodiment of the colonisation and deprecation of Native America.

Designer notes

Our homage to this American classic is a humorous retelling of the well-known statue. What more can we say, other than this model is an amazing recreation of the amazing statue as if it lived in the LEGO universe. Don't let the simplicity fool you. Pull in close and you just might see a few cool tricks. Most notable is the decision to keep the heads front-facing. In

our opinion, this helped give those areas a contrast which separates them from the less uniform mountain face. – Russell

Builder notes

Impressive in both LEGO form and in real life, behold America's Shrine of Democracy... in brick form. This build was not without its struggles. The main issue was the placement of the heads. Each is on slightly different angles. This meant I had to create a tiled platform on which to slide the heads to a very specific point so I could attach them to the rest of the brickwork. The one main piece that connects the three presidents on the left, it's actually the luxurious hair of Washington, Jefferson and Roosevelt! Abe sits on the right looking on with his impressive (yet tricky) bushy beard.

I tried to stay politically neutral during this build and not choose a favourite but honestly who can say no to that glorious moustache on Teddy? – Claire

Golden Gate Bridge

Designed by: Ryan McNaught

Piece count: 27,268

Built by: Ryan McNaught

Build hours:125

Wonders of Exhibit

Date: 1933 - 1937

Size: Spans 1,280 kilometres, suspended from two cables hung from 227 metre high towers. The roadway sits 81 metres above the mean tide level.

Place: San Francisco, USA

The need for a bridge across the Golden Gate, the strait dividing San Francisco Bay and the Pacific Ocean, had been debated and warranted for at least a century before chief engineer Joseph B. Strauss oversaw the build of architect Irving Morrow's art deco design in 1933. At almost a mile long, the Golden Gate Bridge connects San Francisco in the south to Marin County in the north. It was the longest bridge in the world, before the Verrazano-Narrows Bridge opened in New York City in 1964. Given the opportunity of steady employment during the Great Depression, workers braved treacherous conditions to construct the bridge. Work was open to anyone physically capable of the job, including out-of-work farmers, taxi drivers and clerks, as well as construction workers. Despite being one of the relatively safest work sites of its time, 11 workers died during construction of the Golden Gate Bridge. Another 19 fell, but were caught by a safety net, earning them a place in the self-titled 'Halfway-to-Hell Club'. The bridge is an iconic San Franciscan landmark for its stunning design, iconic "international orange" colour, and seemingly shy personality that causes it to regularly hide behind the city's sea fog.

Designer and builder notes

Having made a big bridge before (a six-metre-long Sydney Harbour Bridge) I knew in advance the challenges of making something so long and self-supporting. What did make this a bit easier was that I wanted to make at least one model in the exhibition out of Duplo, which is the LEGO brick range designed for under five-year-olds. That was not only because it is a really cool product, but because both LEGO and Duplo fit together!

Not many people know that.) So I was able to build it quite quickly while keeping the model strong and robust. So next time kids see Duplo and think, "That's only for little kids" think again! It's awesome and allows you to go big, fast! – *Ryan*

Empire State Building King Kong

Designed by: Russell Søren-Larson

Piece count: 60,000

Built by: Claire Ashworth, Ryan McNaught

Build hours: 79

Wonders of the Empire State Building

Date: Completed in 1931

Size: 103 storeys, 381 m high (443 m, including antennae)

Place: Midtown Manhattan, New York City, USA

The Empire State Building was the result of a booming 1920s American economy, and competition between New York City builders to construct the tallest skyscraper in the city (and the world!). A group of industrialists allied with General Motors hired architect William Lamb to design the world's tallest building, on the site of the original Waldorf-Astoria Hotel. The Empire State Building was an attempt to usurp competitor Chrysler's towering skyscraper, also in midtown Manhattan. It succeeded. Using up to 3,400 workers per day, the Empire State Building was constructed in record time: one year and 45 days. It was built at a rate of four and a half storeys each day. For almost 40 years it remained the world's tallest skyscraper, until the first World Trade Center was completed in 1970. The Empire State Building's record-breaking height made it an instant New York City icon, attracting international attention, and inspiring decades of popular culture. One of its earliest influences was on the 1933 film King Kong. It's most iconic scene shows the film's namesake, a menacing giant gorilla, climb the Empire State Building while clutching the kidnapped heroine, and attacking a swarm of aircraft firing their guns at him.

Designer notes

This is a dream model for anyone who grew up loving creatures. I always loved anything with monsters or mutants. Add in a love and appreciation for architecture as an adult – pure perfection. I remember as a kid travelling to the states and visiting New York City. I still have a cheesy plastic model of the Empire State Building with a huge oversized Kong perched up high. As for the design of this model I worked hard to try and keep the building relatively simplistic and I wanted it to reflect a slight influence of the knick knacks such as mine that people all over the world can relate to. Equally as important I was trying to use

the building as a stage for Kong. I aimed for him to really stand out. During the design process, I talked through the many details that stick out to me as both challenging and fun to explore. First was the balance of detail between Kong and the building. Second was the scale between the building and Kong. I am very happy with the whimsical, almost cartoony scale I landed on. It really allowed for a much more detailed model of Kong. - *Russell*

Builder notes

I would love to say this model was easy, when really, it was very difficult. In order to achieve the required detail, I had to build whole sections of the walls sideways. There are vertical columns at the corners of the building that provided some structure and the sideways panels were inserted in between. While it looks great, it meant that during the entire build the walls wanted to twist and bend, so it was a struggle to keep everything straight! Just to make it extra difficult, the model is built in two halves, but I've cleverly hidden the join. Can you spot it?

The Empire State Building just wouldn't be complete if we didn't have King Kong. It took a lot of work to get his legs to join in to the side panels in a way that was safe and strong enough to have him up so high. - *Claire & Ryan*

Brooklyn Bridge

Designed by: Centuri Chan

Piece count: 18,851

Built by: Centuri Chan

Build hours: 79

Wonders of the Bridge

Date: 1869-83

Size: 486 metre main span, 84 metre high towers hold the bridge's suspension cables

Place: New York City, USA

The Brooklyn Bridge is an iconic feature of New York City's cityscape, seen as a monument to progress and ingenuity. The Bridge was designed by Prussian-born engineer and suspension bridge expert, John A. Roebling. Roebling never saw the bridge under construction; he died from tetanus after a freak accident in which his foot was crushed by a ferry while he was surveying the site for the bridge. His son, Washington A. Roebling took over the project. Washington continued to work as chief engineer of the project, even after being partially paralysed with 'Caisson disease' (today known as 'the bends'), a common side effect of working underwater at the time. He oversaw the work via telescope from his bedside, while his wife Emily took charge of directing construction. The bridge spanned the East River from Brooklyn to Manhattan, which were then separate cities, and the first and third largest cities in America, respectively. It was a innovative project; the first bridge to use steel in its suspension cable, and pioneered the use of explosives inside a pneumatic caisson (a watertight submersed work chamber) to excavate by hand, and construct underwater granite footings for the bridge.

Designer & builder notes

The Brooklyn Bridge was quite a different build to the other models I have made so far. Scale and size were the main considerations when planning this. Even though it was built in micro scale, building the entire length of the bridge from Manhattan to Brooklyn was out of the question.

The final model highlights the central section of the bridge, showcasing the two main towers and the impressive suspension cables that the bridge is known for. I was eager to investigate how I could build the curve of the bridge into the design. In the end, it was the natural flex of the LEGO over a long span that helped me create the slight bow in the road of the bridge. The road was built in sections, each of which is six-studs-long. When connected together, they formed the basis of the road. The main cables are threaded with steel wire to strengthen and support them.

Easter Island Moai

Designed by: Russell Søren-Larson

Piece count: 11,371

Built by: Claire Ashworth

Build hours: 50

Wonders of Easter Island

Date: Earliest Moai statue dated to 700 – 850 CE.

Size: The tallest Moai statues are over 9 metres tall, the average height is 4 metres

Place: Easter Island, Chile

The original inhabitants of Easter Island, the Rapa Nui, quarried and sculpted gigantic stones from the island, producing almost 900 colossal monoliths called Moais. The immense sculptures proved the Rapa Nui to be master craftsmen and ingenious engineers, whose highly original designs are artistically and culturally distinctive from stone statues on other Polynesian islands. It is thought the Rapa Nui first inhabited the island from 800 CE, probably migrating from the Marquesa Polynesian Islands aboard a fleet of wooden outrigger canoes – a distance of over 1,770 kilometres. Archaeological research has shown earlier statues were destroyed in favour of rebuilding the larger, tougher Moai statues that have made the island famous. Despite extensive research and archaeological investigation, it is still uncertain why these ceremonial statues were carved. No written, and very little oral, history exist from this period of the island's past, leaving anthropologists limited information to explain the Rapa Nui's traditions. Many later Moai statues contained burial chambers incorporated into ceremonial pedestals, suggesting the statues represented dead ancestral chiefs as god-like deities. Research into the anthropological and archaeological mysteries of the Rapa Nui Moai statues continues today

Designer notes

Like the David model, the Moai (Easter Island Head) is a fantastically familiar sculpture. The deceptively complex shapes within this statue are undeniable. Almost everyone has a specific expectation when they hear "Eastern Island Head". The trick for us was designing a model that matched the common conception we all have. To achieve this realistic feel, we included a small land mass which adds a setting similar to the world these statues live in today. One really cool concept that we kicked around was to try and create a version of the model that had a cutaway, revealing the lesser known stylised body which is typically buried underground. In the end we decided to create a larger head, which allowed us to sprinkle in a touch of plate to really define the shapes that make up the eyes, nose and mouth. –

Russell

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Claire

Christ the Redeemer

Designed by: Russell Søren-Larson

Piece count: 75,000

Built by: Claire Ashworth

Build hours: 70

Wonders of Christ the Redeemer

Date: 1931

Size: 30 metres tall, with arms outstretched to 28 metres

Place: The summit of Mount Corcovado, Rio de Janeiro, Brazil

After independence from Portugal, Brazil transformed into a republic with a legislated separation of Church and State. This separation, and memories of recent horrors during the First World War, caused Brazilians to fear an advancing tide of godlessness. Harnessing this public fervour, the Catholic Archdiocese of Rio de Janeiro, with the petitioning power of Rio citizens wanting to reaffirm their city's faith, proposed a large Christian statue be built above the (then) capital city. President Epitácio Pessoa granted permission for the towering religious symbol to be constructed on the summit of Mount Corcovado, where it would be visible from everywhere in the city. Brazilian artist Carlos Oswald has been credited with the statue's iconic pose, and collaborated with Brazilian engineer Heitor da Silva Costa and French sculptor Paul Landowski, on the final design of Christ the Redeemer ('Cristo Redentor', in Portuguese), which commenced construction in 1926. The monument was intended to reclaim Rio de Janeiro for Christianity. Today, Christ the Redeemer can be seen from every corner of the city, his outstretched arms continuing to symbolise the deep-rooted Christian faith of this vibrant, colourful, but often troubled city.

Designer notes

Almost everyone is familiar with the Christ the Redeemer statue of Rio de Janeiro. Its simple Art Deco design made it a great candidate for conversion to LEGO. To ensure that we took a new approach to the design, we opted to use several different building techniques. Our favourite trick is how we turned out the direction of the studs on the upper portion of the robes to create a different feeling from the bottom of the statue.

Another cool trick was the use of SNOT built tiles on the lower robes to mimic the folds of the original statue. In contrast to the softness of the fabric, the pedestal relied on some clever technical tricks to help sell the more hard-edged look. – *Russell*

Builder notes

Possibly the most difficult model I've worked on, it really fried my brain. Although it looks like a fairly simple model, it actually uses a lot of sideways building that tested my faith at times! (Pardon the pun!) The robes are built on their sides while the body and base were

built studs-up. This meant they had to fit together perfectly and the fact they went on as well as they did was a miracle! (Another pun that needs pardoning!) The best part of working on this one was theming out the base with all the tourists. I'm particularly proud of my hotdog van, which is apparently a hot favourite at the real Christ the Redeemer in Rio. – *Claire*

Hollywood Sign

Designed by: Ryan McNaught

Piece count: 8,500

Built by: Ryan McNaught

Build hours: 44

Wonders of Hollywood

Date: 1923, refurbished in the 1940s and rebuilt in 1978

Size: Four stories high, 137 metres long

Place: Mt Lee, Hollywood, USA

When the Hollywood sign was originally installed it read 'Hollywoodland', to advertise a housing development of the same name. The sign quickly became a tourist attraction and enduring symbol of the glamorous American film industry. When Prohibitionist Harvey Wilcox opened Hollywood as a real estate subdivision in 1887, he had hopes of creating a sober religious community near Los Angeles. Real estate magnate H.J. Whitley dashed these dreams, transforming Hollywood into a wealthy, glamorous residential area at the turn of the 20th century. Soon after, Hollywood became a magnet for filmmakers, with production companies established as early as 1913, making silent films, then 'talkies' towards the end of World War Two. By 1949 the Hollywood sign had badly deteriorated, so the City of Los Angeles took action to rebuild it, and removed the word 'land'. In 1978 the sign was attacked by vandals who set alight the second 'L'. Termites had already eaten away the supports for the letter 'O', sending it tumbling down the mountain. The iconic sign was in dire need of repair. Hugh Hefner, of Playboy fame, held a lavish celebrity-filled fundraiser for a new sign, which was unveiled in place of the original only months later.

Designer and Builder notes

Okay, I'm happy to admit that this isn't even close to a wonder of the world, it was originally a giant real estate sign after all, but I have wanted to do it for ages, and particularly have some fun with it, so have included some local vandals doing their spray paint thing on the back of the letters. The most fun, however, is a little scene that kind of sums up my sense of humour: Elvis is in fact alive and well and living in a bunker under the Hollywood sign, complete with jumpsuit and a very regular delivery of all the food fantasies that he loved. The build itself wasn't challenging but did use a lot of parts, the mountain is quite large, but is needed to give the letters some context. – *Ryan*

Statue of Liberty

Designed by: Russell Søren-Larson

Piece count: 8,820

Built by: Claire Ashworth

Build hours: 43

Wonders of the Statue

Date: 1875 - 1884, dedicated at Ellis Island in 1886.

Size: 93 metres high, with an 8.8 metre long torch

Place: Made in France, installed on Liberty Island (previously named Bedloe's Island), New York City, USA

The Statue of Liberty was a gift to the United States from France, commemorating their alliance during the American Revolution and timed for the 100th anniversary of the signing of the American Declaration of Independence. Originally proposed by French Historian Edouard de Laboulaye, work was overseen by sculptor Frédéric-Auguste Bartholdi, and funded by French citizens. The statue is made from 300 copper sheets, hammered into shape by hand, and constructed around giant steel supports designed by Alexandre-Gustave Eiffel. In 1884, the colossal statue was presented to the American Minister to France, Levi Morgan, in Paris. Watching over New York Harbour from Liberty Island, the Statue of Liberty welcomed millions of immigrants to the United States as they entered New York Harbour. The engraved sonnet at the foot of the statue, 'The New Colossus' by Emma Lazarus, speaks to the symbolism of freedom and democracy the statue represents, particularly to immigrants seeking a new life in America. It's most famous passage reads; "Give me your tired, your poor/Your huddled masses yearning to breathe free/The wretched refuse of your teeming shore/Send these, the homeless, tempest-tost to me/I lift my lamp beside the golden door!".

Designer notes

In contrast to the whimsical take on Mount Rushmore, we decided to go with a more architectural recreation of Lady Liberty. We can say with confidence that this model is one of the most detailed that we have ever worked on. Notice how we mixed in some greys on the pedestal to add some depth. This model uses too many different building techniques to list. Our favourite has to be the use of cheese slopes to sculpt the huge bricks on the pedestal. Contrast that with the more sculptural take on Lady Liberty and we just produced one heck of a recreation of one of the world's most iconic landmarks. – *Russell*

Designer notes

One of the most well-known icons in the world! I really liked this model for all of the sand green I got to work with. I think there's something special about working on a symbol that is instantly recognisable to almost anyone in the world and one I hope to see in person one

day. The build for Liberty was split into two sections: the base and the body. I tackled the body first so I could get a good sense of scale for the rest of the build. It was actually a quick build for this part as I had so many reference photos to work off. The base, however, took a bit longer. While I still had plenty of photos, I was limited by the parts LEGO produce in the tan and dark tan colours for the details. I had to really think about the look I wanted to achieve and work backwards to see what parts I could use. I'm really happy with how it turned out and think it's pretty close to the real thing. – *Claire*

CN Tower

Designed by: Mitchell Kruik

Piece count: 25,000

Built by: Mitchell Kruik

Build hours: 96

Wonders of CN Tower

Date: 1973-1976

Size: 553 metres tall

Place: Toronto Canada

CN Tower is Toronto's most distinctive city landmark. The tower was built by private company Canadian National (hence the 'CN' in the tower's name), and designed by John Andrews, Webb Zerafa, Menkes Housden, and E.R. Baldwin. More than 1,500 workers worked around the clock to complete the tower within the space of only one year. CN Tower was built using a hexagonal core which supported poured concrete, climbing in height as each section dried. The 44 pieces of antennae that define the tower's height, and telecommunications ability, were installed by helicopter in a tense feat of engineering. Canadian National intended the building to demonstrate the strength of Canadian industry, by constructing the tallest tower in the world. They succeeded. It was the world's tallest tower until 2007, when it was usurped by Dubai's Burj Khalifa building (a title Dubai maintains in 2016). CN Tower is the centre for telecommunications in Toronto. As the city grew with skyscrapers in the 1960's, they overwhelmed communications service signals. CN Tower soared above the surrounding skyscrapers, providing a high point for crystal clear reception. Today it still dominates the city's skyline, and is a must-see Toronto tourist destination.

Designer and Builder notes

Building many different towers in the past, I wondered how different this one could be? Answer: completely! Being such a tall tower, it needs to be made strong enough so it didn't fall over. Happily, the LEGO system works surprisingly well with equilateral triangles, so up to the observatory dome, it was actually very straightforward. The dome is made with many angles using hinged LEGO bricks of all kinds. I found that you can use these hinged bricks around a brick circle core rather convincingly. If you look closely, you may see some tiny little LEGO figures going for an edge walk on top of the main pod. It's amazing to see this model and realise the real thing is about 153 times its size! A truly remarkable tower – and a credit to Canada.

– Mitch