# 21034 London

Set adapted by Daniel Werner and tested by Saqib Shaikh.

Celebrate the architectural diversity of London with this detailed LEGO® brick model. The LEGO Architecture Skyline Collection offers models suitable for display in the home and office, and has been developed for all with an interest in travel, architectural culture, history and design. Each set is scaled to give an accurate representation of the comparative size of each structure, with true-to-life color depiction. This set features the National Gallery, Nelson's Column, London Eye, Big Ben (the Elizabeth Tower) and Tower Bridge, and is finished with a decorative "London" nameplate.

#### London

Originally founded by the Romans over 2,000 years ago, London has grown to become the cultural and economic capital of Britain and one of the world's truly global cities.

Famous for its finance, fashion and arts industries, London is the world's most visited city and also one of its most culturally diverse; more than 300 languages are spoken by its population of over 8.5 million people. Standing on the River Thames, London's skyline reflects both the city's diverse and colorful past and its continued ambition to embrace bold, modern architectural statements.

[ "When a man is tired of London, he is tired of life; for there is in London all that life can afford." ] Samuel Johnson

#### The National Gallery

From the very start, the aim of the National Gallery was to ensure that the widest public possible could enjoy its collection. When Parliament agreed to pay for the construction of a new gallery in 1831, there were lengthy discussions about where the building should be located. Trafalgar Square was eventually chosen, as it was considered to be at the very center of the city and therefore accessible by all classes of London society. Construction began in 1832 and the new gallery was finally completed in 1838. The building has been enlarged and altered many times as the National Gallery's collection grew and today holds over 2,300 works of art. Over six million people visit the Gallery every year to enjoy works by Leonardo da Vinci, Vincent Van Gogh and J.M.W. Turner.

#### Nelson's Column

The 169 ft. (51.6 m) column stands in front of the National Gallery in Trafalgar Square and was erected between 1840 and 1843 to commemorate the British naval hero Admiral Horatio Nelson, who died at the Battle of Trafalgar in 1805. The pedestal upon which the column stands is decorated with four bronze reliefs; each one is 18 ft. (5.5 m) square and cast from captured French guns.

#### **Big Ben**

Big Ben (the Great Bell), officially known as the Elizabeth Tower (formerly known as the Clock Tower and renamed in 2012 in honor of Queen Elizabeth's Diamond Jubilee), has stood at the northeastern corner of the Palace of Westminster for over 150 years. The 316 ft. (96.3 m) neo-gothic styled tower is one of the most recognized and photographed landmarks in London today and an integral part of the city's skyline. The tower's clock mechanism is wound by hand three times a week and is still as accurate today as when it was constructed over 150 years ago.

## London Eye

Opened in 2000 to mark the new millennium, the London Eye is still the world's largest cantilevered observation wheel. With a height of 443 ft. (135 m), this remarkable feat of design and engineering has become the UK's most popular paid attraction, with 3.75 million visitors every year. On a clear day it is possible to see up to 25 miles (40.2 km) in the distance from the top of the wheel.

Originally intended as a temporary structure, the London Eye is now a permanent fixture of the London skyline and an iconic symbol of modern London.

# **Tower Bridge**

It took eight years and 11,000 tons of steel to construct the 213 ft. (65 m) tall Tower Bridge, and when it opened in June 1894 it was regarded as the most sophisticated bridge of its type in the world. The framework was clad in Cornish granite and Portland stone to protect the underlying steelwork, and to give the Bridge a more pleasing appearance. Built with giant moveable roadways that lift up for passing ships, it is still considered an engineering marvel and arguably remains the most recognized bridge in the world.

## Box description:

The front of the box shows selected London landmarks arranged on an elongated base plate. On the far left is the National Gallery with Nelson's Column in front of it. To the right is Big Ben (the Elizabeth Tower). Diagonally behind it on the right is the London Eye observation wheel. On the far right is Tower Bridge and the River Thames. Underneath the base plate are architectural sketches and floor plans.

One of the sides of the box states that the instruction booklet contains details in English about the design and history of the buildings.

The back of the box again shows the same landmarks, but this time each is named and accompanied by a real photograph. There is a short text on the left-hand side: London, Great Britain, Standing on the River Thames, London's skyline reflects both the city's diverse and colourful past and its continued ambition to embrace bold modern architectural statements.

The build is 468 pieces and 99 building steps.

Welcome to text-based instructions from Bricks for the Blind. Before you start building, here are some terms we'll be using:

- In Front of/Front: towards you.
- Behind/Back: away from you.
- Up: towards the ceiling.
- Down: towards the floor.
- Stud: the bump on a LEGO brick. Example: A 2x1 brick has two studs on it.
- Vertically: with the longest side going from front to back
- Horizontally: with the longest side going from left to right.
- Upright: pointing up towards the ceiling.
- Standing upright: The piece is perpendicular to the ground, like a wall.
- Lying flat: The piece is parallel to the ground, like a piece of toast which fell off the table.
- That one/ppp: previously placed piece.
- Plate: piece with studs.
- Tile: smooth piece without studs (unless otherwise specified)
- A jumper plate is a 1x2 plate with a single stud on top, or a 1x3 plate with only two studs on top.

- "Anti-stud" is a term for the portion of a LEGO piece which accepts studs, like the bottom of a plate or brick.

- Symmetrically: a mirror image. Example: If you place a 2x1 brick with technic connector on the front wall at the right, connector to the front, and then place another such piece symmetrically on the back wall, at the right, the technic connector of the second piece should point to the back, since it will be placed symmetrically.

- Centered-vertically: even amount of space in front of and behind piece
- Centered-horizontally: even amount of space left and right of piece.
- Row: studs lined up horizontally (left to right/side to side).
- Column: studs lined up upright or vertically (top to bottom/back to front).

For builders with low vision, or a sighted building partner who may want to follow along with the printed visual instructions that come with each set, PDF versions are always online at [https://www.lego.com/en-us/service/buildinginstructions/21034]. As low vision users may benefit from viewing the instructions on a personal device where they can zoom in on content and use assistive technologies to enhance the visuals.

Sorting the pieces:

To begin a successful build, it helps to sort the pieces into groups, bags or small containers. Have a sighted friend or family member do this in advance following the instructions below. You will see that the pieces should be sorted into groups according to the building steps in the set. Doing this in advance makes locating the pieces easier. See below on how to sort the pieces to correspond to the steps in this set. Number the containers using letters A-Z, numbers or meaningful names. The parts will be collected into a small number of steps in the instructions. Example: Steps 1-3 means collect all the parts used in steps 1, 2 and 3, and put them in one container.

Group 1 contains the pieces for steps 1-10.

Group 2 contains the pieces for steps 11-21. The light gray 2x6 plate from step 15 and the two light gray 1x2 plates from step 17 are in a separate subgroup.

Group 3 contains the pieces for steps 22-25.

Group 4 contains the pieces for steps 26-28. The two white 1x2 jumper plates with a single stud and the white 1x1 tile from step 27 are in a separate subgroup.

Group 5 contains the pieces for step 29.

Group 6 contains the pieces for steps 30-32.

Group 7 contains the pieces for steps 33-35.

Group 8 (2x) contains the pieces for steps 36-48. Make two identical groups, one for each of the two identical pieces.

Group 9 contains the pieces for step 49.

Group 10 contains the pieces for steps 50-55.

Group 11 contains the pieces for steps 56-62.

Group 12 contains the pieces for steps 63-77. The two light gray 1x1 tiles from step 64 as well as the light gray 1x1 tile from step 70 are in a separate subgroup.

Group 13 contains the pieces for steps 78-81.

Group 14 contains the pieces for steps 82-92. The two trans-light blue 1x1 round tiles from step 82 are in a separate subgroup.

Group 15 contains the pieces for steps 93-99. The two dark gray 2x2 plates from step 94 and the pearl gold 1x1 round plate from step 96 are in a separate subgroup.

Building instructions:

Open group 1.

1. Place a black 2x12 plate horizontally in front of you.

2. Locate two black 1x4 plates. Place one of them vertically with its two backmost studs onto the rightmost column of the previous piece, overhanging to the front by two studs. Place the other one horizontally to the left of the backmost stud of the previous piece, so onto the back row of the 2x12 plate.

3. Place a black 1x8 plate horizontally to the left of the previous piece, overhanging by one stud to the left. Place a black 2x6 plate with 1x4 side studs on its long side horizontally, side studs to the front, with its rightmost column under the overhanging two studs of the vertical 1x4 plate at the front right from the previous step 2. The piece should be in front of and flush at the right with the 2x12 plate.

4. Place a black 2x6 plate horizontally to the left of the 2x12 plate, with its back right stud under the overhanging one stud of the 1x8 plate.

5. Place a black 2x12 plate horizontally, to the left of the vertical 1x4 plate at the very right, centered vertically. The piece should fit right into the existing gap at the right and be flush at the left with the 1x8 plate in the back.

6. Place a black 2x6 plate with 1x4 side studs on its long side horizontally, side studs to the front, to the left of the 2x6 plate with 1x4 side studs from step 3, with its back row under the previous piece.

7. Place a black 1x8 plate horizontally to the left of the 1x8 plate in the back from step 3, so in the back row, overhanging by three studs to the left.

8. Place a black 2x6 plate with 1x4 side studs on its long side horizontally, side studs to the front, to the left of the 2x6 plate with 1x4 side studs from step 6, with its back right stud under the 2x12 plate from step 5.

9. Place a black 1x2 plate vertically with its back stud under the third stud from the left of the leftmost 1x8 plate in the back, protruding to the front by one stud.

Set the current piece aside. Steps 10.1-10.5 describe a separate piece.

10.1. Place a black 1x8 plate vertically in front of you.

10.2. Place a black 2x3 plate vertically with its right column onto the three backmost studs of the previous piece, overhanging to the left by one column.

10.3. Place a black 4x8 plate vertically with the three backmost studs of its rightmost column under the left column of the previous piece, flush with the 1x8 plate in the front and back.

10.4. Place a black 2x3 plate vertically onto the back left of the previous piece, flush at the back and left, so symmetrically to the 2x3 plate on the right. Place a black 1x2 plate vertically in between the two backmost rows of the two 2x3 plates. Place a black 1x4 plate vertically in front of the previous piece.

10.5. Locate four black 1x2 plates and two black 1x2 tiles. Place one of the 1x2 plates horizontally to the left of the frontmost stud of the previous piece. Behind, there is a 2x2 gap. Place a 1x2 tile vertically into the left column of said gap and a 1x2 plate vertically to the right, to fill the gap. Repeat symmetrically at the right with the other three pieces.

The piece you just built should be 5x8, oriented vertically, with the front two rows being one plate high and the other six rows being two plates high. Place the two rightmost studs of the second row from the front of the piece you just built under the two overhanging studs at the very left of the piece you set aside.

Open group 2.

11. Place a black 2x12 plate horizontally into the gap in the second and third row from the front, left of the other 2x12 plate. The piece should overhang to the left by one column.

12. Place a black 2x6 plate with 1x4 side studs on its long side horizontally, side studs to the front, with its back row under columns 2 to 7 from the left of the previous piece, so that it sits to the left of a likewise piece.

13. Locate three black 1x2 plates and place them horizontally in the three front row gaps between the 2x6 plates with 1x4 side studs.

14. Place a black 2x6 plate with 1x4 side studs on its long side horizontally, side studs to the front, to the left of the leftmost likewise piece, with its back right stud under the front left stud of a 2x12 plate. Place a black 2x12 plate horizontally to the back of the previous piece, with its front right stud under the back left stud of a 2x12 plate.

15. Place a black 1x8 plate horizontally onto the back row of the previous piece, as far right as possible into the one row wide gap. To the left of the piece there should be seven studs in the back row. Place a light gray 2x6 plate from a separate subgroup of group 2 horizontally to the front of the previous piece, as far right as possible into the two row wide gap in the second and third row from the front.

16. Place a black 2x6 plate with 1x4 side studs on its long side horizontally, side studs to the front, to the left of the leftmost likewise piece, with its back right stud under the front left stud of the previous piece. The piece should be flush at the left with the piece behind it.

17. Place a black 1x4 plate vertically onto the leftmost column of the structure you are building. Place a tan 2x4 plate horizontally to the right of the previous piece into the second and third row from the front. Locate two light gray 1x2 plates from a separate subgroup of group 2 and place them horizontally into the remaining two front row gaps between the 2x6 plates with 1x4 side studs at the left.

Set the current piece aside. Steps 18.1-18.4 describe a separate piece.

18.1. Locate a black 2x2 plate with two side studs, side studs to the front.

18.2. Place a black 2x6 plate horizontally, horizontally centered with its front row onto the back row of the previous piece.

18.3. Place a black 2x2 plate with its back row under the two leftmost studs of the front row of the previous piece. Repeat to the right of the piece with the side studs.

18.4. Place a black 1x2 plate onto the front row of the previous piece. Repeat symmetrically at the left. The piece you are building should now have a level top surface of size 3x6. Place a black 1x2 tile horizontally upright from the front onto the two side studs.

Rotate the piece you just built by 180 degrees so that the 1x2 tile points towards the back. Now place its front row onto the 1x6 wide gap at the back left of the piece you set aside to join the two parts.

19. Place a black 1x4 tile horizontally upright from the front onto the structure you are building, flush at the left, covering the three leftmost side studs. Place a black 1x4 plate! horizontally upright to the right. Place a black 1x2 plate horizontally upright to the right. To the right of it, there should be a single uncovered side stud.

20. Locate three black 1x6 tiles. Place one horizontally upright to the right of the previous piece. Repeat two times. Locate two black 1x4 tiles. Place one horizontally upright to the right of the previous piece. Repeat with the remaining piece which should be flush at the right. The full front of the structure should now be covered with tiles and plates.

21. Place the black 1x8 tile with the inscription London horizontally upright from the front onto the side studs at the front left, not horizontally centered on the four studs, but offset to the right so that the leftmost anti-stud of the tile attaches to the leftmost side stud.

Open group 3.

22. Place a light gray 1x4 tile vertically onto the leftmost column which should also have four rows. Place a light gray 2x6 plate vertically to the right, flush at the front. Place a light gray 2x2 plate to the right, flush at the front. Place a light gray 2x6 plate vertically to the right, flush at the front.

23. Place a black 2x3 plate vertically to the back of the 2x2 plate from the previous step. Behind it, there should be a horizontal gap of size 1x2. Place a light gray 1x4 tile vertically to the right of the second 2x6 plate from the previous step (the right one), flush at the front and back. Locate three light gray 1x2 jumper plates with a single stud. Place one of them vertically to the right, flush at the front. Repeat twice to the right. Place a light gray 1x2 plate vertically behind the leftmost of the three jumper plates you just placed, flush at the back. Place a light gray 2x2 plate to the right. Place a light gray 2x4 plate vertically to the right, flush at the front, so also to the right of the right most of the three jumper plates. Place a light gray 1x1 rounded quarter tile, oriented as if it was the bottom right gray 1x1 rounded quarter tile, oriented as if it was the back. Place a light gray 1x2 tile vertically to the back. Place a light gray 1x2 tile vertically to the back. Place a light gray 1x1 rounded quarter tile, oriented as if it was the back.

24. Make a piece. Locate a white 1x2 brick with 1x2 side studs, and orient it horizontally, side studs to the front. Place a light gray 1x2 tile horizontally upright from the front onto the side studs. Rotate the piece you just built by 180 degrees so that the tile points to the back. Place the piece behind the black 2x3 plate you placed in columns four and five from the left in the beginning of the last step, into the horizontal 1x2 gap that is behind it.

25. The previous piece is the only one that sticks out of an imaginary 6x6 studded square area that includes all rows of columns two to seven from the left. In this step you will cover this whole 6x6 area with plates and tiles, all of which have the color light gray. Start by placing a 2x2 plate in the back left corner of the 6x6 square, so left of the brick from the previous step. Repeat to the right of the brick. Place a 1x2 plate horizontally in between the front rows of the two previous pieces, so in front of the brick. Place two 1x2 tiles vertically, next to each other, to the front of the previous piece. Locate two 2x2 jumper plates with a single stud and place one of them to the left and one to the right. Locate two 1x2 tiles and place one of the two previous pieces. Place a 1x2 jumper plate with a single stud horizontally in front of each of the two previous pieces. Place a 1x2 jumper plate with a single stud horizontally in between the two previous pieces. Place a 1x4 tile horizontally to the front, extending one stud to the left and one to the right in relation to the previous piece. Locate two 1x1 rounded quarter tiles and place one of them, oriented as if it was the bottom left quarter of a circle, to the left. Repeat symmetrically to the right of the 1x4 tile. The whole 6x6 area mentioned at the beginning of this step should now be covered with another layer of plates and tiles.

## Open group 4.

26. In this step the two backmost rows of the previously mentioned 6x6 square, except for the brick, will be covered with another layer of plates and tiles. Locate two light gray 1x2 plates and place one of them horizontally in the back left, so to the left of the brick. Repeat to the right of the brick. Locate two light gray 1x1 tiles and place one of them at the very left of the second row from the back and the other one at the very right. In between the two, there should be four studs. Place a light gray 1x4 tile horizontally onto these four studs.

27. For this step locate the part of the base plate, slightly left of the center, where an area of size 5x6 protrudes to the back. All pieces in this step will be placed in this area and have the color light gray except where noted otherwise. Start by placing a 1x1 tile in the back left corner. Place a 1x2 tile horizontally to the right. Locate two 1x2 jumper plates with a single stud and place them vertically, next to each other, to the right, flush at the back. Place a 1x2 tile horizontally to the front of the two previous pieces. Place a 1x2 plate vertically to the left and back, so in rows two and three from the back. Place a 2x2 corner plate, oriented as if it were the braille letter D (so with the missing stud in the front left) to the left. Place a 1x1 tile into the gap of the previous piece. In front of the previous piece is a vertical 1x2 tile from an earlier step. Place a white 1x2 jumper plate with a single stud from a separate subgroup of group 4, vertically, to the right of that tile. Repeat symmetrically at the right, so to the left of the 1x2 tile from an earlier step in the rightmost column of the 5x6 area. Place a white 1x1 tile from a separate subgroup of group 4 in between the back rows of the previous two pieces.

28. Locate two trans-light blue 1x1 round tiles and place one of them onto each of the white 1x2 jumper plates you just placed at the end of the previous step.

### Open group 5.

29. Most of the area that was not covered in the last steps, will get covered with tiles in this step. Locate forty trans-clear 1x2 tiles. The instructions will start at the rightmost column of the piece you are building and go towards the left column by column. In column 1 from the right place two vertical tiles. Repeat in column 2. In column 3 the two center studs will be left uncovered. Place a tile horizontally in the front row and one in the back. In column 4 where the front and back row are already covered, place a tile vertically in between. In column 5 place a tile horizontally in the front row and in the back. Place a tile vertically in between. In column 6 where the front and back row are already covered, the two center studs will be left uncovered. In column 7 the two center studs will be left uncovered. Place a tile horizontally in the front row and one in the back. In column 8 where the front and back row are already covered, place a tile vertically in between. In columns 9 and 10 place four tiles horizontally. In column 11 the two center studs will be left uncovered. Place a tile horizontally in the front row and one in the back. In column 12 where the front and back row are already covered, place a tile vertically in between. In columns 13 and 14 place four tiles horizontally. In column 15 place a tile horizontally in the front row and in the back. Place a tile vertically in between. In column 16 where the front and back row are already covered, the two center studs will be left uncovered. In column 17 the two center studs will be left uncovered. Place a tile horizontally in the front row and one in the back. In column 18 where the front and back row are already covered, place a tile vertically in between. In column 19 place two vertical tiles. From now on the columns are bigger than four studs. In column 20, the second and third stud from the front will be left uncovered. Place a tile horizontally in the front row. Place a tile vertically into row four and five from the front. In column 21 where the front row is already covered, place two vertical tiles to the back. In column 22 place three vertical tiles. Place the last tile horizontally to the left of the front row of the backmost of the previous three tiles where a matching gap should exist. You should have used all forty tiles now.

Open group 6.

30. Locate seven trans-clear 1x2 plates. Place them vertically into the gaps you left uncovered in the previous step. From the right, these are in columns 3, 6, 7, 11, 16, 17, and 20.

31. Locate two trans-clear 1x2 bricks. Place them vertically onto the rightmost and leftmost of the pieces you placed in the previous step. From the right, these are in columns 3 and 20.

In the next steps you will build the Tower Bridge.

Set the current piece aside. Step 32 needs to be repeated two times!

32.1. Locate a light gray 1x2 bracket with 2x2 side studs extending to the top and orient it side studs to the back.

32.2. Place the back row of a light gray 2x2 plate onto the two studs of the previous piece.

32.3. Place a light gray 1x2 bracket with 2x2 side studs extending to the top, side studs to the front, under the front row of the previous piece.

32.4. Place a light gray 2x2 plate onto the one from step 32.2.

32.5. Locate two light gray 2x2 half cylinders with two hollow studs. Orient one of them vertically upright (one stud above the other), its former bottom towards the back, and attach it from the front onto the 2x2 side studs. Repeat symmetrically at the back.

Make sure that you repeated step 32 two times. These are the piers of the Tower Bridge.

Orient one of the pieces you just built vertically and place it vertically centered onto the 2x2 studs in columns 6 and 7 from the right of the main piece. The half cylinders should point to the front and back. Repeat at the 2x2 studs in columns 16 and 17 from the right.

Set the current piece aside. Steps 33.1-33.5 needs to be repeated two times!

Open group 7.

33.1. Locate a light gray 2x4 plate and orient it horizontally.

33.2. Locate two dark gray 1x2 plates with a bar handle on a short end. Place one of them horizontally, bar handle to the right, onto the two rightmost studs of the front row of the previous piece. Repeat to the back.

33.3. Locate two dark gray 1x4 tiles. Place one of them horizontally to the left of the previous piece, overhanging to the left by two studs. Repeat to the front.

33.4. Make a piece. Locate two light gray 1x2 plates with a pin hole at the bottom and orient them horizontally, pin hole at the left. Connect the two using a light gray technic pin. Place the piece you just built, pin holes still at the left, under the overhanging 2x2 area of the 1x4 tiles at the left.

33.5. Locate two light gray 1I bars with a clip on one end (wrenches). Insert the bar of one of them from the back into the pin hole at the back left. Repeat symmetrically at the front left.

Make sure that you repeated steps 33.1-33.5 two times.

Orient one of the pieces you just built horizontally, bar handles to the right and place it onto the left of the piers on the main piece, so that only the bar handles overhang to the right. The second column from the left should be placed on the vertical trans-clear brick left of the left pier. Repeat symmetrically at the right, so with the bar handles at the left.

34. Locate eight dark gray 1x2 jumper plates with a single stud. These will be placed to cover both piers. Each pier has an area of 2x2 studs in its vertical center. Place a plate vertically with its front row onto the back left stud of this area. Repeat to the right. Repeat to the front of both previous pieces. Repeat for both piers.

35. Locate two dark gray 2x3 tiles with two open clips on a short side. Orient one of them horizontally, clips to the left, and attach its clips from the right onto the bar handles at the right of the left pier. Repeat symmetrically at the right pier.

Set the current piece aside. Steps 36 to 47 need to be repeated two times!

Open group 8. Group 8 exists twice, one for each of the two identical pieces.

36. Locate a tan 1x3 arch and orient it vertically.

37. Locate two tan 1x2 plates. Place one of them horizontally with its right stud under the front row of the previous piece. Repeat at the back.

38. Place a tan 1x3 arch vertically to the left of the arch from step 36.

39. Place a white 1x1 brick with a single side stud, side stud to the left, vertically centered onto the right column.

40. Place a white 1x1 brick with a hole, hole to the left and right, to the left of the previous piece. Locate two tan 1x2 log bricks. Place one of them horizontally in the front row. Repeat in the back row.

41. Place a tan 2x3 plate vertically on top.

42. This is the same as step 39. Place a white 1x1 brick with a single side stud, side stud to the left, vertically centered onto the right column.

43. This is the same as step 40. Place a white 1x1 brick with a hole, hole to the left and right, to the left of the previous piece. Locate two tan 1x2 log bricks. Place one of them horizontally in the front row. Repeat in the back row.

44. Place a tan 1x3 plate vertically onto the right column.

45. Place a tan 1x1 corner panel, walls to the left and front, vertically centered onto the left column.

46. Locate two tan 1x1 plates. Place one of them to the front of the previous piece. Repeat at the back, so behind the corner panel. Place a white 1x1 brick with a single side stud, side stud to the top, its former bottom to the right, vertically centered onto the right column.

47. Locate two white 1x1 plates with a clip on one side. Place one of them, clip to the right, onto the frontmost stud of the right column. Repeat at the back, so behind the 1x1 brick with the side stud.

Make sure that you repeated steps 36 to 47 two times.

48. Orient one of the pieces you just built the same way as when you built it, clips to the right, and place it onto the jumper plates on the right pier. Repeat symmetrically at the left pier, so clips to the left.

Set the current piece aside. Step 49 needs to be repeated two times!

Open group 9.

49.1. Locate a white 1x10 plate and orient it horizontally.

49.2. Place a medium blue 1x2 jumper plate with a single stud horizontally onto the center of the previous piece. Locate two medium blue 1x1 tiles. Place them to the left and to the right of the previous piece. Locate two medium blue 1x2 tiles. Place them horizontally to the left and to the right of the previous two pieces. There should be a single uncovered stud at each end of the 1x10 plate now.

49.3. Place a white 1x1 plate with a vertical tooth, tooth to the front, onto the jumper plate in the center.

49.4. Place a pearl gold 1x1 round plate on top.

Make sure that you repeated step 49 two times. These are the high-level walkways of the Tower Bridge.

Orient one of the pieces you just built the same way as when you built it, tooth to the front, and place it to connect the front rows of the two towers on the main piece, in between two white 1x1 plates with a clip. Repeat symmetrically at the back, so tooth to the back.

Open group 10.

50. Locate eight tan 1x1 plates with a vertical! tooth. Place one of them, tooth to the front, onto the front left 1x1 plate with a clip at the left tower. Repeat to the right. Repeat symmetrically at the back of the tower using two pieces. Repeat at the right tower using the remaining four pieces. This step includes a photo of the high-level walkways of the Tower Bridge together with the description: The high-level walkways were designed so that the public could still cross the bridge when it was raised.

51. Locate four tan 1x2 jumper plates with a single stud. Place one vertically onto the two backmost studs of the left column of the left tower. Repeat to the right, but offset one row to the front, so that the tile covers the frontmost stud of the right column as well as the gap behind it. Repeat at the right tower. Locate four tan 1x1 tiles. Place one onto the front left stud of the left tower. Place one onto the back right stud of the left tower. Repeat at the right tower using the remaining two pieces.

52. Locate four dark gray 1x2 plates with 1x2 side studs extending to the top. Place one horizontally, side studs to the front, onto the front half of the left tower. Note that only the right stud will attach to the right jumper plate and the left stud won't attach to anything. Repeat symmetrically to the back, so side studs to the back and only the left stud attached. Repeat at the right tower using the remaining two pieces.

53. Locate four light gray 1x2 plates with 1x2 side studs extending to the bottom. Place one vertically, side studs to the left, onto the left column of the left tower. Repeat symmetrically to the right, so side studs to the right. Repeat at the right tower using the remaining two pieces.

54. Locate four tan 1x2 plates with 3 teeth on a long side. Place one vertically upright, teeth to the top, its former underside to the right, from the left onto the left side studs of the left tower. Repeat symmetrically at the right side of the left tower. Repeat at the right tower using the remaining two pieces. This step includes a photo of the Tower Bridge, with the road in the middle split in half and lifted halfway up together with the description: The bridge's lifting mechanism was originally powered by steam, but is now driven by oil and electricity.

55. Locate eight tan 1x1 plates with a horizontal tooth. Place one upright, tooth to the top, its former underside to the back, from the front onto the left of the front side studs of the left tower. Repeat to the right. Repeat symmetrically at the back using two pieces. Repeat at the right tower using the remaining four pieces.

Open group 11.

56. Make a piece two times. Locate a dark gray 2x2x2 quadruple slope (four-sided-pyramid) with a stud on top and place a pearl gold 1x1 round plate on top. Repeat to make two pieces. Place one of the pieces you just built onto the left tower. Repeat at the right tower.

57. Make a piece four times. Locate a medium blue 7I soft axle and insert one end into the hole of a medium blue bar holder with a handle. Repeat to make four pieces. Clip the end without the handle of one of the pieces you just built into the front left wrench which sticks out to the front, four columns to the left of the left tower. Rotate the wrench so that the piece you clip extends to the top. The other end will be attached in the next step. Repeat at the back. Repeat at the wrenches to the right of the right tower using the remaining two pieces.

58. Attach the handle of the front left of the pieces you just attached to the front one of the clips at the upper left of the left tower. To do so, rotate the soft axle and bar holder until the handle is oriented vertically which should then allow to clip the handle into the clip. Repeat at the back. Repeat with the two handles at the right tower. This finishes the Tower Bridge but this step also includes the first piece of the National Gallery at the back left! Locate the studded 1x6 row at the back left of the base plate. Place a white 1x2 brick with 1x2 side studs horizontally, side studs to the back, horizontally centered onto this row, immediately above a similar piece that has a tile attached to its side studs.

59. Locate six white 1x2 plates. Make three stacks of two plates each. Place one of the stacks horizontally onto the previous piece. Place one horizontally to the left and one to the right.

60. Locate two white 1x2 bricks with 1x2 side studs and place one of them horizontally, side studs to the front!, onto the leftmost stack and one onto the rightmost stack. The six studs in this row should now have the same height again. The side studs of the bricks at the right and left should point to the front and the side studs of the center brick should point to the back.

61. Make a piece. Locate a tan 2x4 plate and orient it horizontally. Locate four white 1x2 grille tiles. Place them vertically onto the four columns of the previous piece. Orient the piece you just built horizontally upright, its former underside to the back, and attach its top row from the front, horizontally centered, onto the side studs of the pieces from the previous step. The rightmost and leftmost side stud will remain uncovered.

62. Locate two white 1x2 grille tiles. Place them vertically upright, their former underside to the back, to the right and to the left of the previous piece, flush at the top. This finishes the National Gallery base building. Next you will build its roof and dome.

Set the current piece aside. Steps 63.1-63.4 describe a separate piece, the roof of the National Gallery.

Open group 12.

63.1. Locate a light gray 2x4 plate and orient it horizontally.

63.2. Locate two white 1x2 plates and place them horizontally next to each other onto the back row of the previous piece.

63.3. Place a white 1x1 tile onto the leftmost stud of the back row. Place a white 1x2 jumper plate with a single stud horizontally to the right. Place a white 1x1 tile to the right.

63.4. Locate two white 1x2 grille slopes. Place one of them horizontally, slope to the left, onto the left half of the front row. Repeat symmetrically to the right, so slope to the right.

Place the piece you just built, oriented as when you built it, with its back row centered horizontally onto the 1x6 studs on top of the base of the National Gallery, overhanging one row to the front. This step includes a photo of the National Gallery with a fountain in front together with the description: The National Gallery stands on the former site of the Kings Mews, the building where the King's horses were stabled.

64. Locate two light gray 1x1 tiles from a separate subgroup of group 12. Place one to the left and one to the right of the previous piece.

65. Place a white 2x3 tile vertically upright, its former underside to the front, from the back with its bottom row onto the side studs at the back of the National Gallery, extending to the top. This step includes a photo of the National Gallery together with the description: Several new rooms and the impressive dome were added to the building in 1876.

66. In this step, you'll build the dome of the National Gallery. Make a piece. Locate a white 2x2 round tile with a single hollow stud. Insert a light gray 3I (not 4I!) bar vertically upright, from the top into the hollow stud of the previous piece. Slide a flat silver 2x2 round dome brick from the top onto the previous piece, as far down as possible. Slide a white 1x1 round plate with a hollow stud, upside down, from the top onto the bar, as far down as possible. Place the piece you just built centered onto the single stud at the top of the National Gallery.

You successfully built the National Gallery. Next you'll build the London Eye observation wheel.

67. Make a piece. Locate a white 1x2 plate with a pin hole on top and orient it horizontally, pin hole at the right. Insert a black technic pin vertically from the front into the pin hole. Locate another white 1x2 plate with a pin hole on top, orient it horizontally, pin hole to the right, and plug its pin hole from the front onto the previous piece. Place a white 1x1 plate onto the stud of the previous piece. Insert a white 4l bar vertically from the back into the back of the technic pin inside the pin hole until it is flush at the front. Orient the piece you just built so that the bar that's sticking out of the technic pin points to the back. Locate the spot where the observation wheel will be placed which is to the left and back of the tower bridge. There, an area of 5x6 is protruding backwards from the back, onto the 2x2 studs in those rows, second and third column from the left of the area.

68. Place a white 1x1 plate onto the single stud to the left of the previous piece. Place a white 1x2 plate horizontally onto the two jumper plate studs at the back right of the observation wheel area.

69. Make a piece. Locate a white 1x2 plate with a pin hole on top and orient it horizontally, pin hole at the right. Insert a black technic pin vertically from the front into the pin hole. Repeat to make another piece, but with the pin hole at the left. Place the piece with the pin hole at the right, horizontally, pin pointing to the front, onto the 1x2 plate you placed in the back right of the area just before. Place the piece with the pin hole at the left, horizontally, pin pointing to the front, onto the left, horizontally, pin pointing to the front, onto the two leftmost studs in the second row from the back.

70. Place a light gray 1x2 tile vertically with its back stud onto the stud of the previous piece and the stud in front of it. Place a light gray 1x1 tile from a separate bag of group 12 onto the single stud of the right plate with the pin hole, at the back right.

71. Locate two white technic arms. They have a pin hole on one side and two 1/3-size pin holes at the other. In the observation wheel there are two technic pins sticking out to the front, one at the left and one at the right. Orient one of the technic arms vertically upright, pin hole at the bottom, front-back-aligned, with the top of the arm extending slightly to the front. Like this slide the pin hole from the front onto the left of the technic pins. Repeat at the right technic pin. When attached, the top of the arms should still extend slightly forward in relation to the bottom. If not, reattach them rotated by 180 degrees, so they do.

72. Rotate the two previous pieces left and right until their top 1/3-size pin holes overlap. Insert a blue half-size technic pin, vertically, its longer side at the back, from the front into the two overlapping pin holes to connect the two technic arms.

73. Make a piece. Locate a white 2x2 round tile with a single stud and orient it upside down. Insert a white 4I bar vertically upright from the top, centered, into the anti stud of the previous piece. Orient the piece you just built so that the bar points towards the back. Like this, insert it from the front into the blue technic pin that was used to connect the two technic arms, as far back as possible.

74. Locate a white 2x2 round tile with a single stud and orient it upright, stud to the back. Like this, slide it from the back onto the previous piece, as far forward as possible, making sure that the bar stays in place. Afterwards, the bar should be secured to the top of the two technic arms and be flush at the front while sticking out towards the back.

You built the base of the observation wheel. Set the current piece aside. Steps 75-79 describe a separate piece, the actual observation wheel.

75. Locate a white angled technic axle connector with a pin hole in the center and orient it horizontally, pin hole front-back-aligned.

76. Insert a black technic pin vertically from the front into the pin hole at the center of the previous piece.

77. Locate another white angled technic axle connector with a pin hole in the center and, oriented as the one before, slide it from the front onto the previous piece.

Set the current piece aside. Steps 78.1-78.5 describe a separate piece and need to be repeated two times.

Open group 13.

78.1. Locate a trans-clear 1x2 plate and orient it vertically.

78.2. Locate two white 1x1 tiles with a clip on top. Orient the clips so that the arms are to the front and back and place both of them onto the previous piece.

78.3. Turn the piece upside down, keeping its vertical orientation.

78.4. Locate two white 24I hoses, orient them horizontally and place one behind the other with the distance being the distance between the two clips of the piece you just built. Clip the piece you turned upside down in the previous step from the top onto the far right of the two hoses, leaving about two studs of space to the right.

78.5. Repeat steps 78.1-78.3 seven more times. Clip these to the hoses in the same way as you did in the previous step. In the end the pieces should be distributed evenly along the length of the hose, with the rightmost and leftmost pieces leaving the same amount of space to the right and left as to the other pieces.

Make sure that you repeated steps 78.1-78.5 two times.

Now you'll connect the two pieces you just built using the double connector you built before. Turn the pieces you just built right side up, so that the clips and hoses are at the top and orient them horizontally. The double connector should be oriented horizontally as well with its left and right angled slightly upwards. Insert the right side of the two hoses of one of the pieces you just built from the left into the left side of the double connector. Repeat symmetrically with the other piece at the right side of the double connector.

79. Locate two light gray technic pins. Orient them horizontally and slide one of them onto each of the two left ends of the hoses. Bend the left and right ends of the piece you are building upwards to form a circle. At the top where both ends meet, insert the two hose ends of the former right side from the right into the two technic pins. This step includes a photo of the top of the London Eye observation wheel together with the description: The London Eye has 32 capsules, one for each of the 32 London boroughs.

You finished building the actual observation wheel and will attach it to the base in the next step. Keep its orientation with the pin connectors at the bottom.

80. Locate the lower white bar sticking out to the back at the base of the observation wheel. To attach the wheel, push this bar towards the front so that it begins to stick out to the front of the observation wheel base. Insert the bar sticking out to the front from the back into the technic pin inside the center of the double connector at the bottom of the actual observation wheel.

81. Keep pushing the bar towards the front until it is fully inserted, flush at the back and front, attaching the actual observation wheel to its base. This step includes a photo of the London Eye observation wheel next to the River Thames together with the description: The London Eye can carry up to 800 people on each rotation.

You successfully built the London Eye. Next you'll build the Big Ben (the Elizabeth Tower) to the left of the Tower Bridge.

Open group 14.

82. The Elizabeth Tower will be built in between the National Gallery at the left and the Tower Bridge at the right, in the studded area roughly sized 4x5. At the left front of this area next to each other there are three jumper plate studs. Place an olive green 1x1 round tile onto each of the three studs. Place a tan 2x2 plate to the right of the rightmost round tile. Place a tan 2x3 plate horizontally to the back, extending one column to the left. Place a tan 2x2 plate to the left. Locate two trans-light blue 1x1 round tiles from a separate subgroup of group 14. Place them onto the two 2x2 jumper plate studs in front of the National Gallery to the left, one at the right and one at the left. In front of them in the center there is another jumper plate stud which will remain uncovered.

83. Back to the right where the Elizabeth Tower is being built. Locate five tan 1x2 log bricks. Place them vertically, side by side onto the five columns in the third and fourth row from the front.

84. Locate two tan 1x2 grille bricks. Place one horizontally, vertical grilles to the front, in front of the two rightmost of the previous pieces. Repeat to the front.

85. Place a tan 2x4 plate vertically onto the two rightmost columns. Place a tan 2x3 plate horizontally to the left of the two backmost rows of the previous piece.

86. Locate five tan 1x2 log bricks. Place them the same way as in step 83, vertically, side by side onto the five columns in the third and fourth row from the front.

87. Locate two tan 1x2 grille bricks. Place them the same way as in step 84, one horizontally, vertical grilles to the front, in front of the two rightmost of the previous pieces and another in front.

88. Place a dark gray 1x2 triple slope horizontally, slopes to the left, back, and right, onto the two rightmost studs of the backmost row.

89. Place a dark gray 1x2 double slope horizontally, slopes to the left and right, in front of the previous piece.

90. Place a dark gray 1x2 double slope which also has an inverted slope vertically, inverted slope to the right, to the left of the previous two slopes. The inverted slope part at the right should match the positive slopes at the left of the previously placed pieces. Place a tan 2x2 plate to the left.

91. Locate two tan 1x2 log bricks. Place them vertically side by side onto the previous piece.

92. Locate four dark gray minifigure space guns. Orient them vertically upright so that their anti-stud points to the bottom. Place one, handle to the right, onto the front right stud of the two previous pieces. Repeat to the left, handle to the front. Repeat to the back, handle to the left. Repeat to the right, handle to the back.

Open group 15.

93. Make a piece. Locate a tan 2x2 plate. Place two tan 1x2 grille bricks horizontally in front and behind each other onto the previous piece, vertical grilles to the outsides. Place a tan 2x2 plate on top. Again, place two tan 1x2 grille bricks horizontally in front and behind each other onto the previous piece, vertical grilles to the outsides. Again, place a tan 2x2 plate on top.

Place the piece you just built onto the 2x2 area at the front right of the Elizabeth Tower, above the grille bricks that were placed earlier. Also, rotate the handles of the space guns you placed in step 92 as far as possible in counter-clockwise direction until they touch the piece next to them.

94. Make a piece. Locate a dark gray 2x2 plate from a separate subgroup of group 15. Place a tan 2x2 plate on top. Place a tan 2x2 brick with a clock on one side, clock to the front, on top. Place a tan 2x2 plate on top. Place a dark gray 2x2 plate from a separate subgroup of group 15 on top. This step includes a photo of the clock of the Elizabeth Tower together with the description: Under each clock dial there is a Latin inscription carved in stone that means "O Lord, keep safe our Queen Victoria the First."

Place the piece you just built, clock to the front, onto the 2x2 area at the front right of the Elizabeth Tower, above the grille bricks that were placed earlier.

95. Place a dark gray 2x2x2 quadruple slope (four-sided-pyramid) with a stud on top on top of the previous piece.

96. Make a piece. Place a dark gray 1x1 cone on top of a pearl gold 1x1 round plate from a separate subgroup of group 15. Place the piece you just built on top the quadruple slope from the previous step.

You successfully built the Big Ben (the Elizabeth Tower). Next you'll build Nelson's Column to the left of the Elizabeth Tower and in front of the National Gallery.

97. Make a piece. Locate a white 3x3 cross plate and orient it like a plus sign. Place a white 1x1 plate onto the center. Locate four white 1x1 tiles with a clip on top. Place a clip, arms to the left and right, onto the front stud of the cross. Repeat at the back. Place a clip, arms to the back and front, onto the left stud of the cross. Repeat at the right. Orient the piece you just built diagonally like the multiplication sign and place it centered onto the single jumper plate stud in front of the National Gallery. This step includes a photo of a bronze lion together with the description: The four bronze lions at the base were added to Nelson's Column in 1867.

98. Make a piece. Stack three white 1x1 plates. Place a white 1x1 round plate with a hollow stud on top. Insert a white 4I bar vertically upright from the top into the hollow stud of the previous piece. Stack a white 1x1 plate onto a white 1x1 round plate with a hollow stud, then slide them from the top onto the bar. Place a white minifigure trophy on top. Place the piece you just built onto the center of the cross you placed in the previous step. This step includes a photo of Nelson's Column together with the description: While the column is built in granite, the statue of Nelson is made from sandstone.

99. Make a piece. Locate a white 1x2 jumper plate with a single stud and orient it vertically. Insert a light gray blade with a bar on one end, vertically upright, bar at the bottom, from the top into the hollow stud of the previous piece. Place the piece you just built diagonally onto the front stud at the base in between the two towers of the Tower Bridge. Make space for the piece by rotating the movable road pieces upwards as if the bridge was opened and a sailboat was currently crossing.

You have successfully built the London Skyline!

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