10234 Sydney Opera House P41

- **P41 is the unique code of lighting set, we use this to accurately identify the product you purchased and the corresponding manuals and services you need to obtain. Please make sure your product code is the same as the label on the back of the box shown "10234 P41".**

- **Installation requires a lot of patience and great observation that your LEGO bricks will come alive when you get this finished. The bricks with lighting as below, so make sure you're ready and let's get started.**

Strategies for the Installation

This instruction divides three sections to complete the installation of the lighting set.

Section A：**Check the type and quantity of components.**

The quantity and type of components of each products are different and it needs to be carefully checked to make sure there do have enough material. The type of components is indicated by the label on the bag.

Section B：**Test that each components is working properly.**

Each components is made individually so it is necessary to test that each components is working properly to avoid the situation that the lighting does not work .

Section C：**laying out components following the instruction.**

Our material is very small but not fragile, just be reminded that don't to pull the wires too hard. For different people, there may be some installation steps that you can't understand. Please look at the previous and later installation step

Section A：Check the type and quantity of components.

There are 6 bags in this set. The name and quantities of specific components are as shown , please check carefully.

| Label	Content	Quantity
Expansion Board	6 Socket Expansion Board	1
	12 Socket Expansion Board	3
USB Power Cable	USB Power Cable-30CM	1
Connecting Cables-30CM	Connecting Cables-30CM	7
Bit Lights-30CM-Warm White	Bit Lights-30CM-Warm White	28
Multi-Colour Strips	Multi-Colour Strips	4
Parts package		

Please contact us immediately if there have any missing components.

Section B: Test that each components is working properly.

  We need a structure to test all lights, so take out the bag with label "USB Power Cord"and "Expansion Boards"as follows.

  It is worth reminding that our products are all customized. They have a unique way of connecting. The white plug on wire and the socket of the expansion board need to be connected together to transmit power.
 Note that on one side of the white plug you can see two very small golden wires that should be connected to the two golden needles in socket of the expansion board.shown as blow.

All our connections between plug and socket are all the same as shown above. So for any such structure with plug and socket, please pay attention to the golden wire of the plug and the golden needle of the socket, they must be touched together.

The connection method between the USB Power Cord and Expansion Boards is as follows:
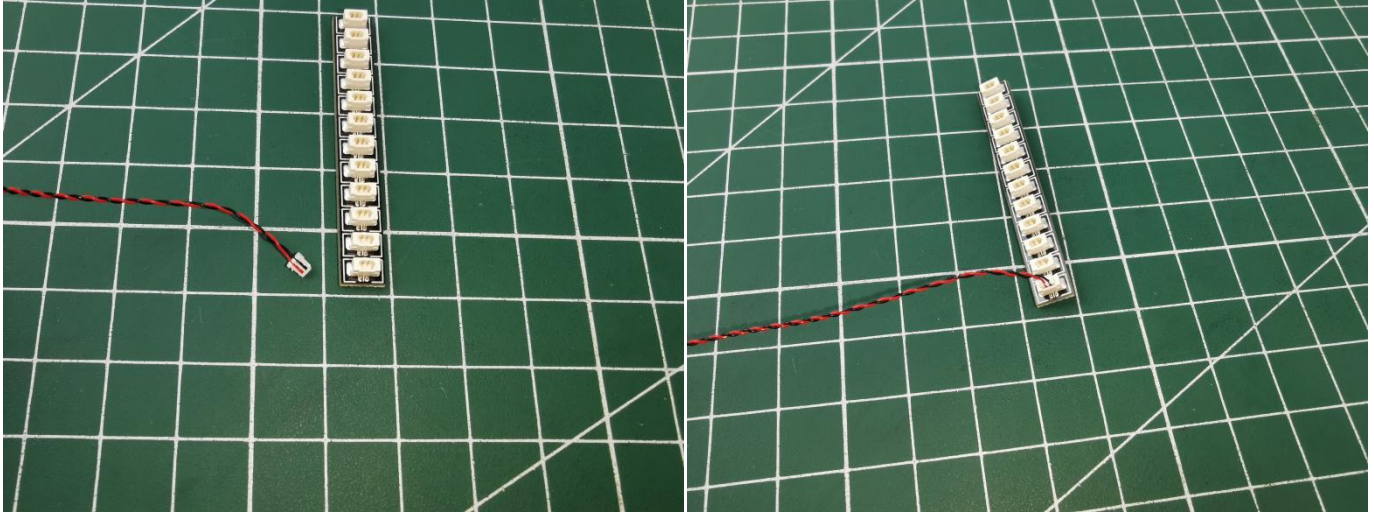
The USB Power Cord can be powered by phone chargers, power banks,etc.

USB connectors to connect devices

Power Bank

Phone Charger

USB Socket

With USB to interface
AA battery box

With USB to interface
AAA battery box

USB Power Cable
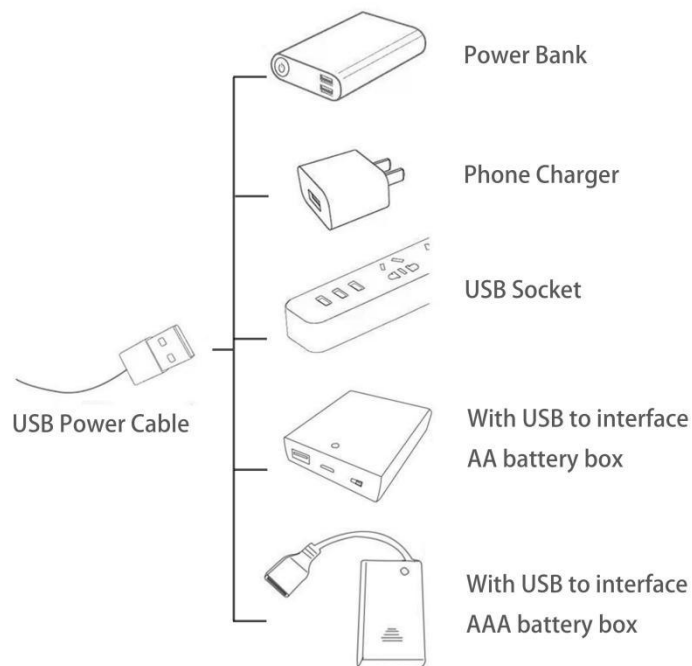
This instruction will use the power bank as power supply . The test structure is shown as follow. All lamp in this set will be tested by this structure.

when we test "Bit Lights-30CM-Warm White" particles,Take out the bag labelled "Bit Lights-30CM-Warm White".Take out one of the light and connect it to the socket. Turn on the power bank, the light will turn on normally as shown below.
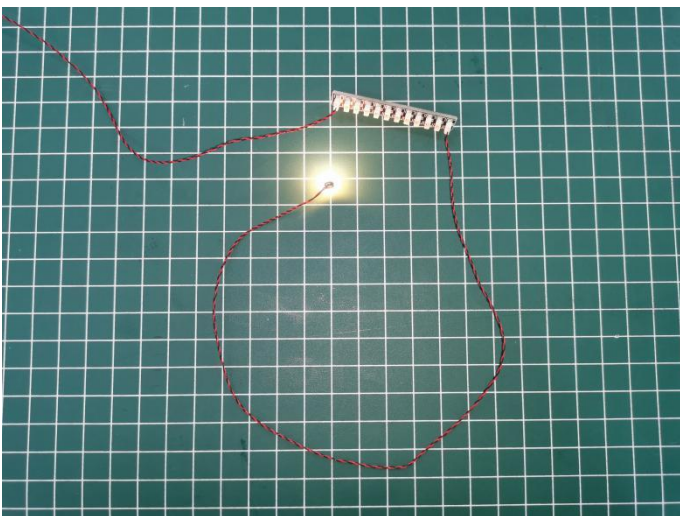
Test each lamp according to this method. It should be noted that after the test, the lamp must be returned to the corresponding bag to avoid confusion of types.

The components needs to be tested in this set is 27*Bit Lights-30CM-Warm White,4*Multi-Colour Strips.

Please contact us immediately if any components don't work.

Section C：laying out components following the instruction.

1
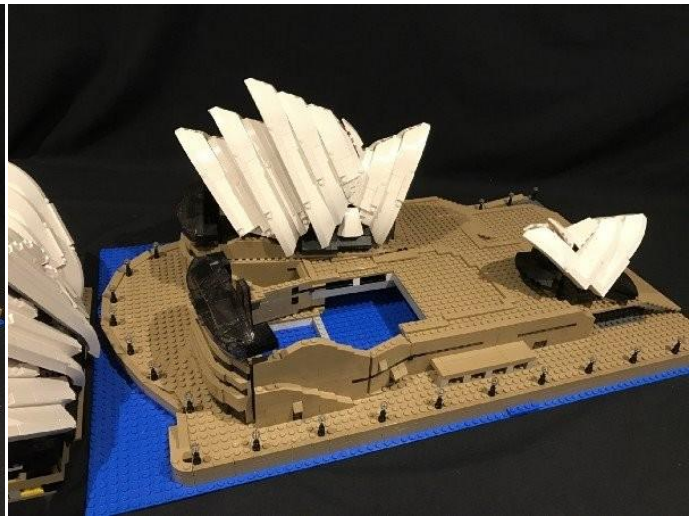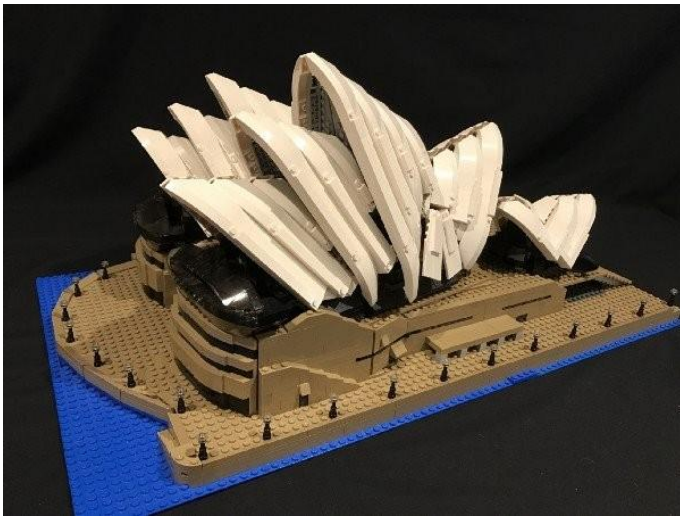
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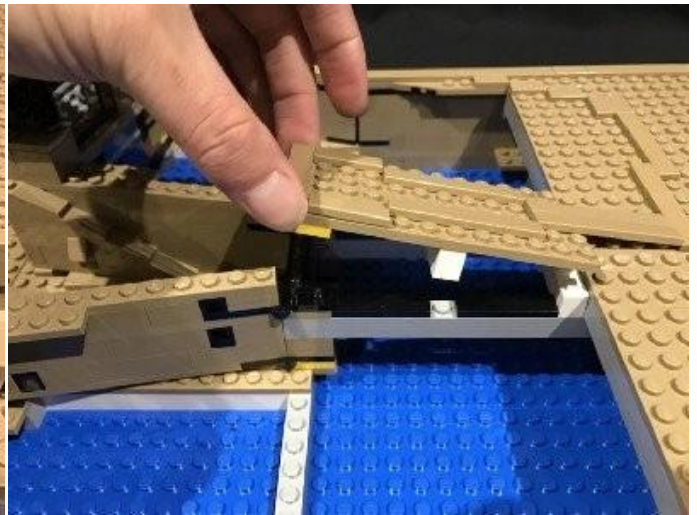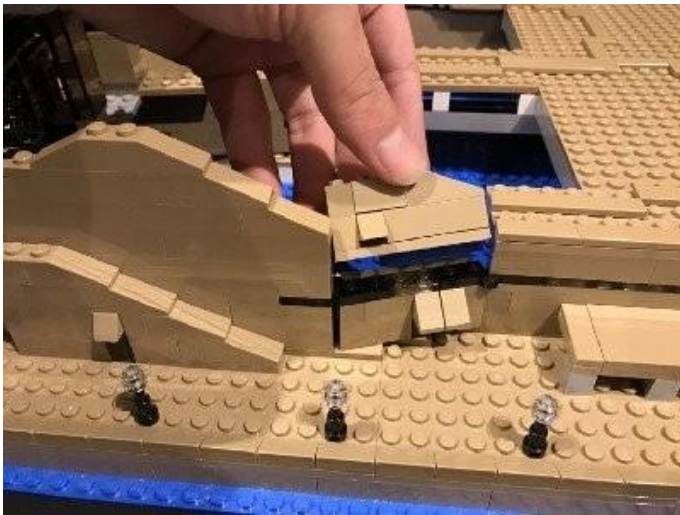
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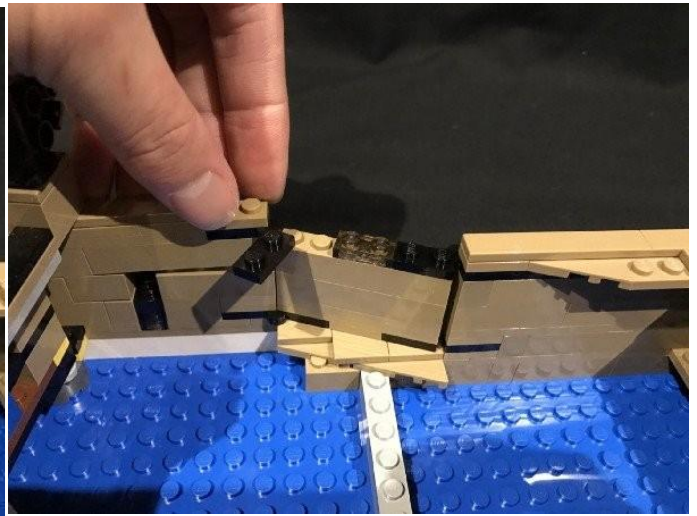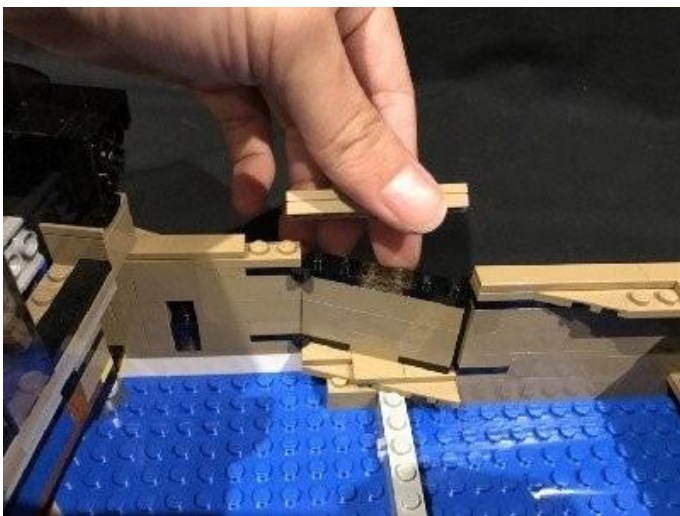
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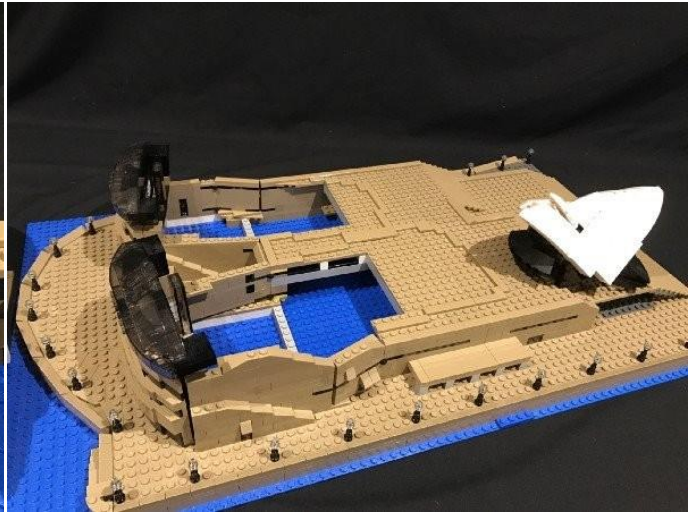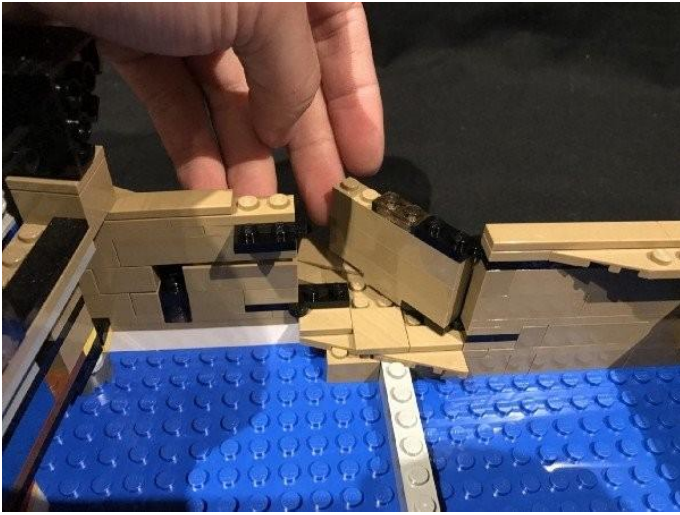
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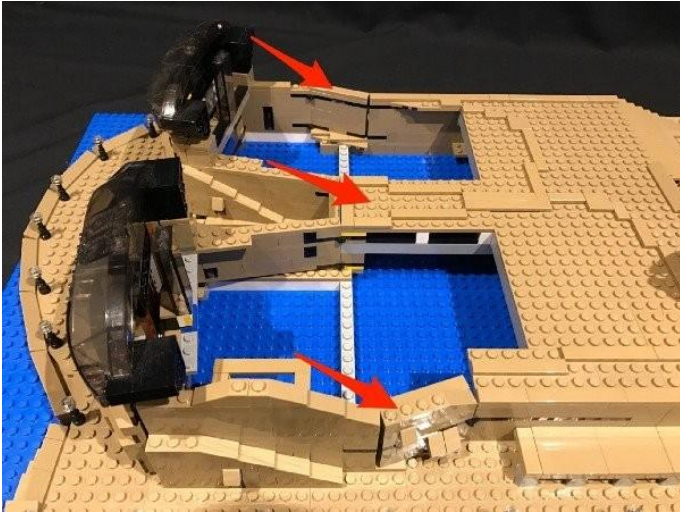
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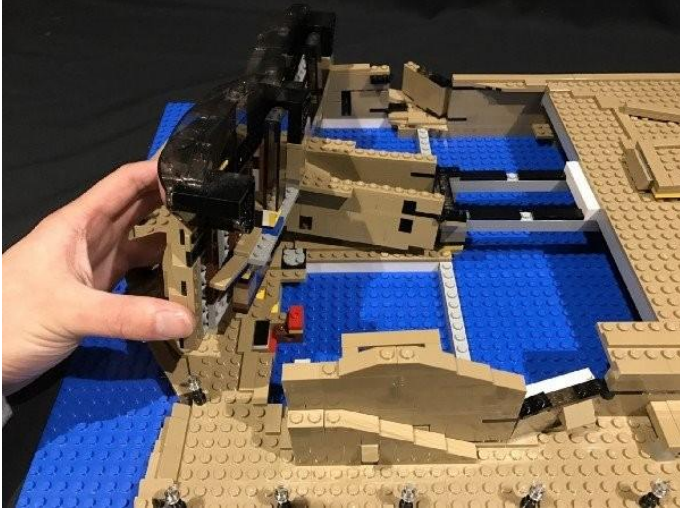
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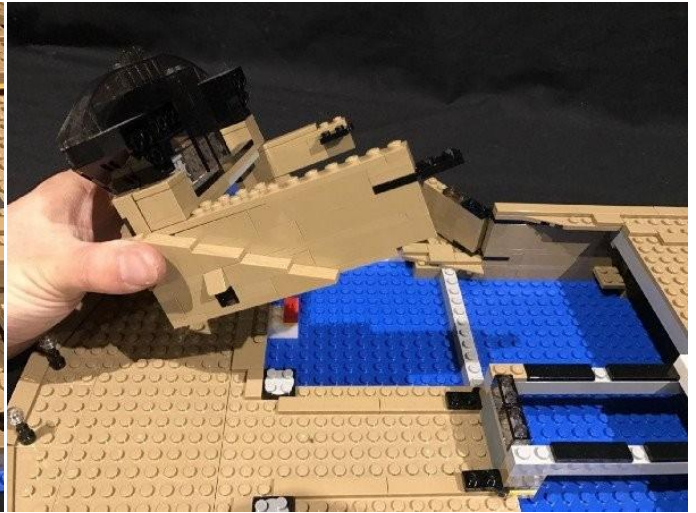
8.Your opera house should look similar to below.
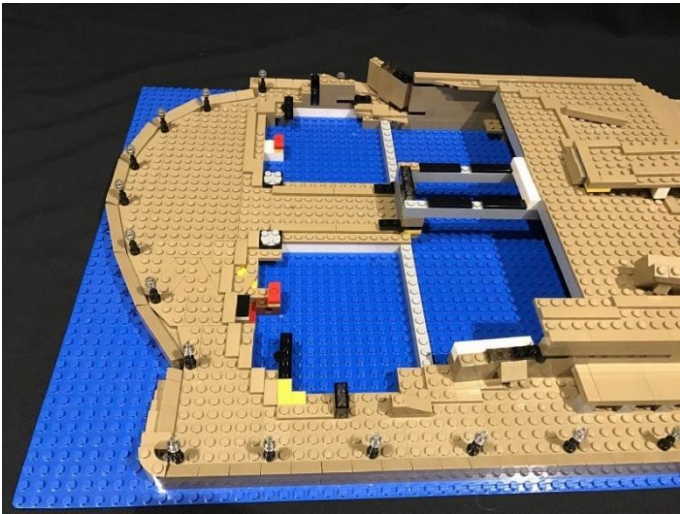
9.Turn your set around so that you are facing the front and then remove the 12x pictured lamp posts.
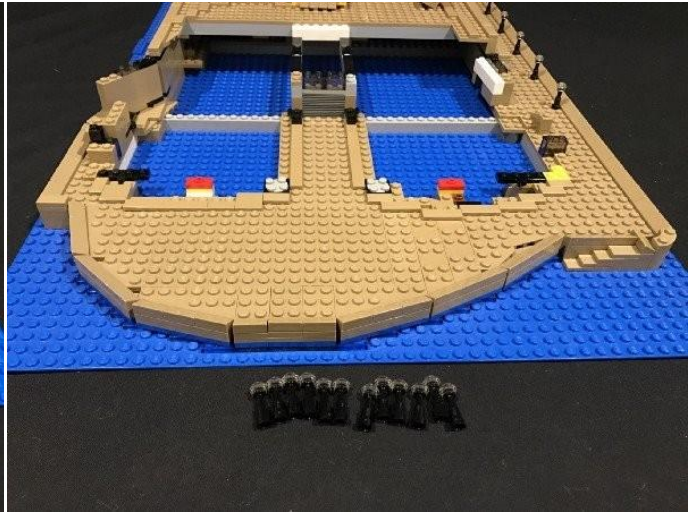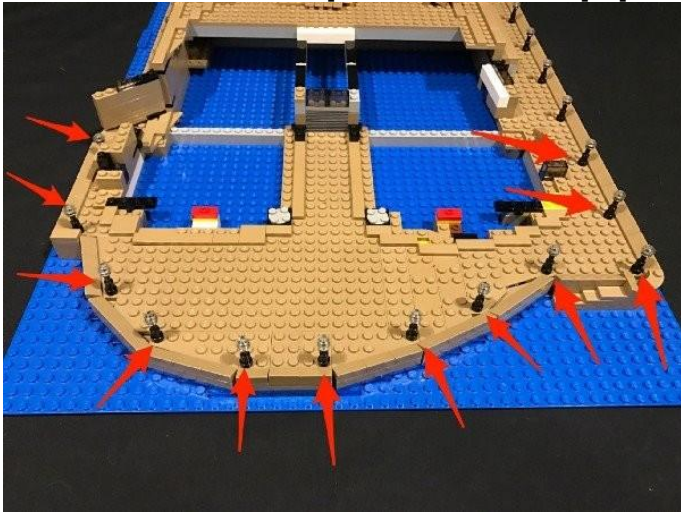
10. Disconnect the trans-clear round plates from all of the lamp posts.
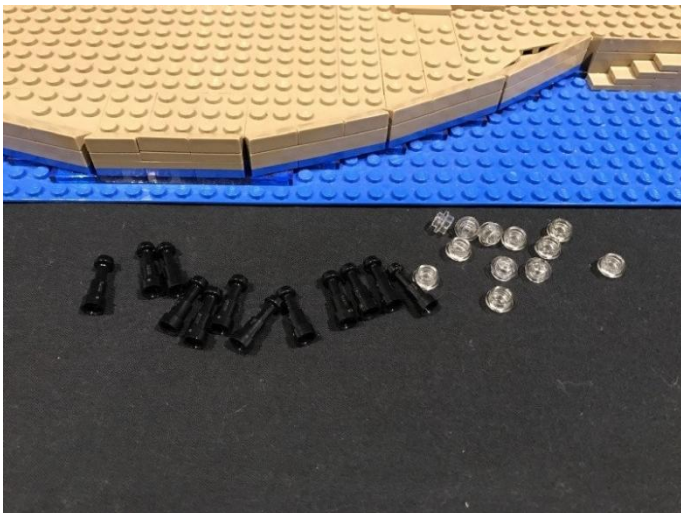
11. Take a White 30cm Dot Light and place it directly over the top of one of the lamp posts. Secure the light in place by reconnecting a trans- clear round plate over the top.
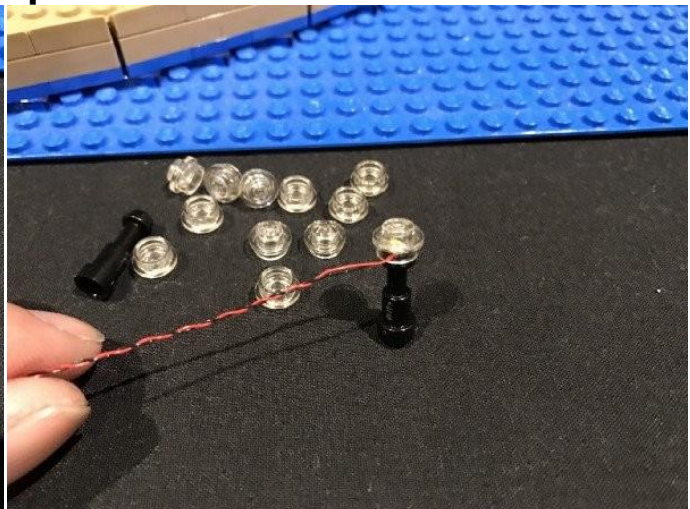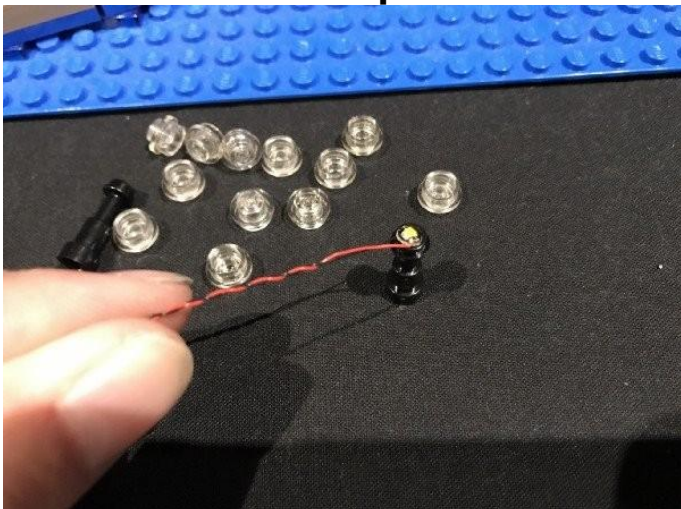
12. Push the cable down so that it is facing directly down.
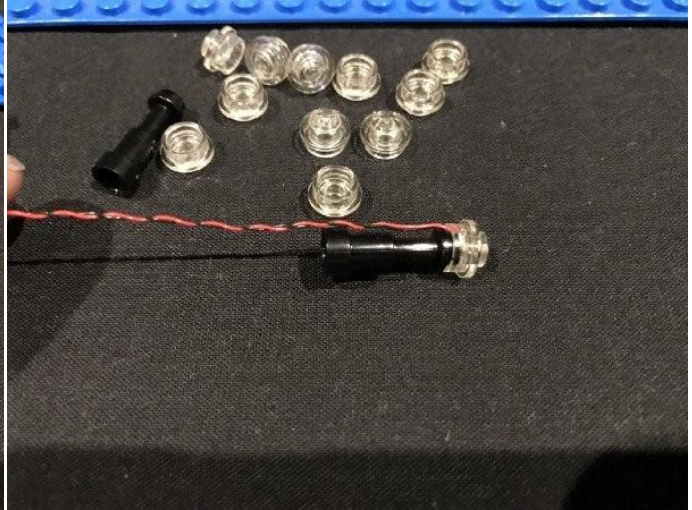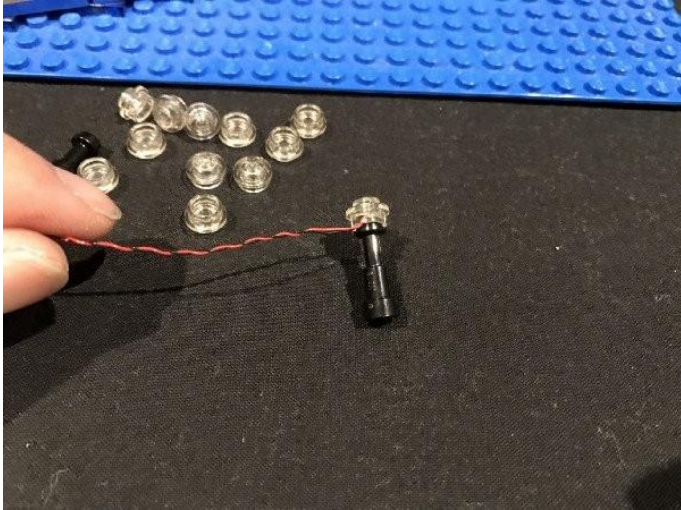
13. Repeat this step to install another 11x White 30cm Dot Lights to the remaining 11 lamp posts.
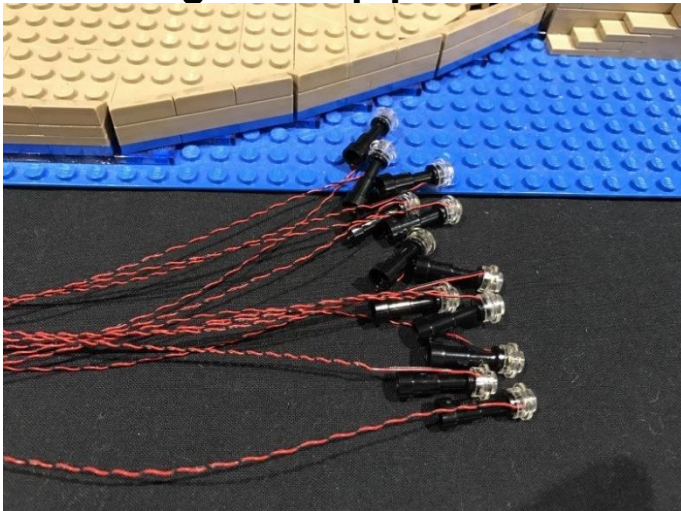
14. Reconnect three of the wired lamp posts to the right side of the set. Ensure the cables are facing the outside as per below.
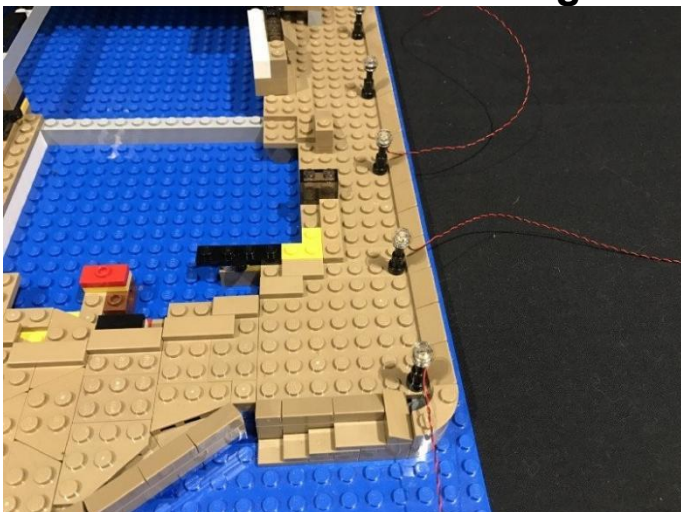
15. Starting with the top lamp posts, hide the lamp post cable underneath the following tile next to it. Ensure the cable is laid in between studs before reconnecting the tile over the top.
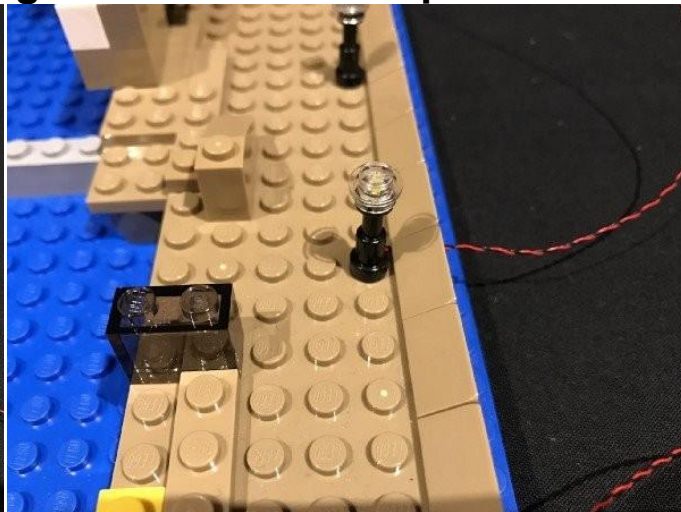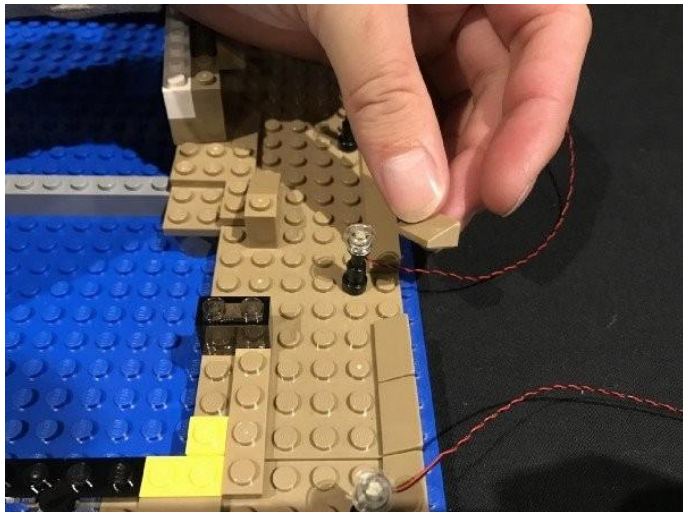
16. Remove the entire plate the lamp post is connected to and then bring the cable underneath before reconnecting the plate.
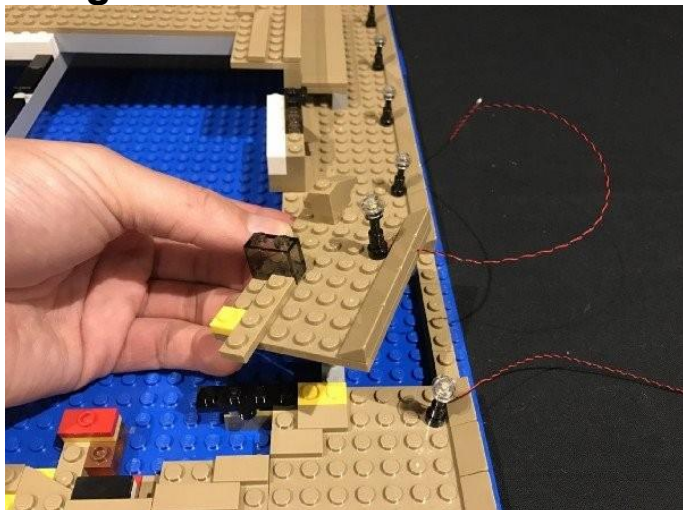
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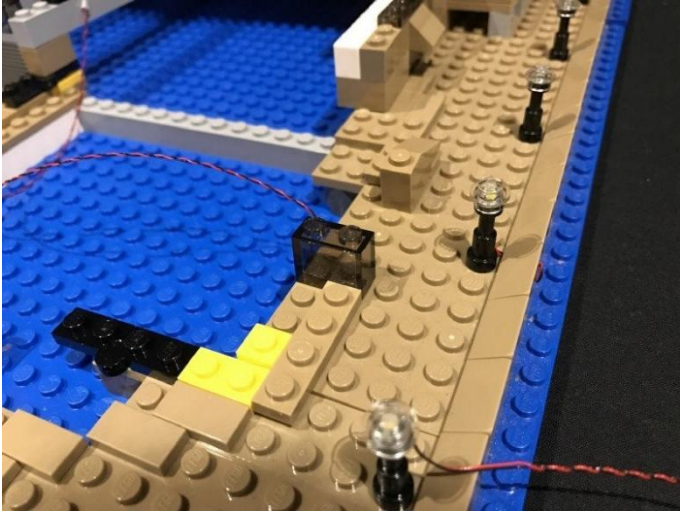
18. Repeat this step for the other 2 wired lamp posts.
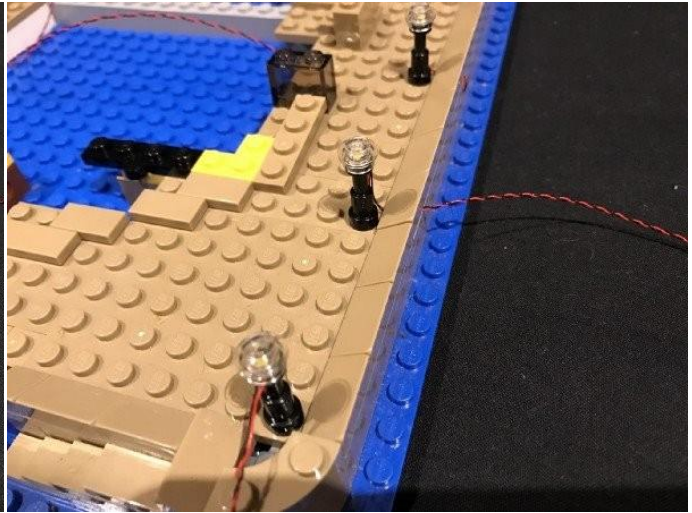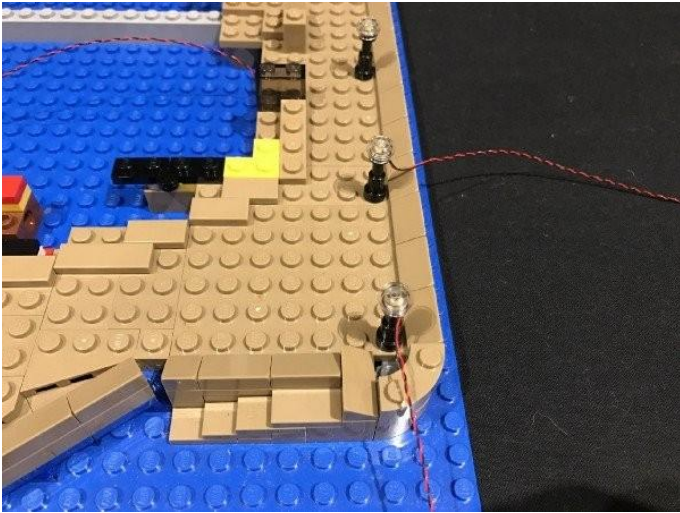
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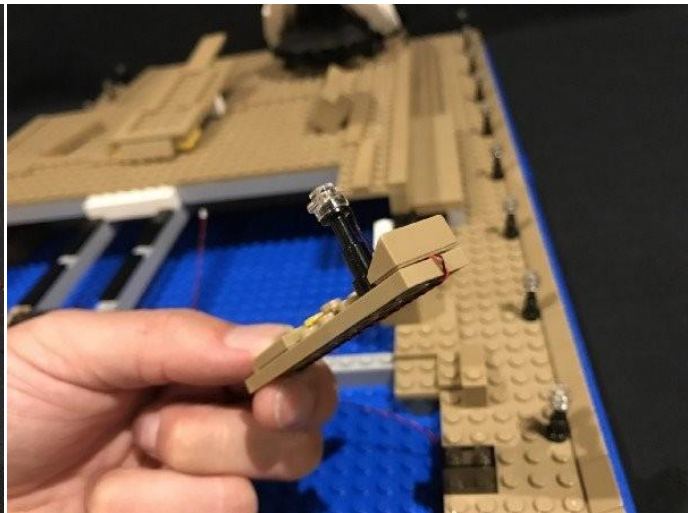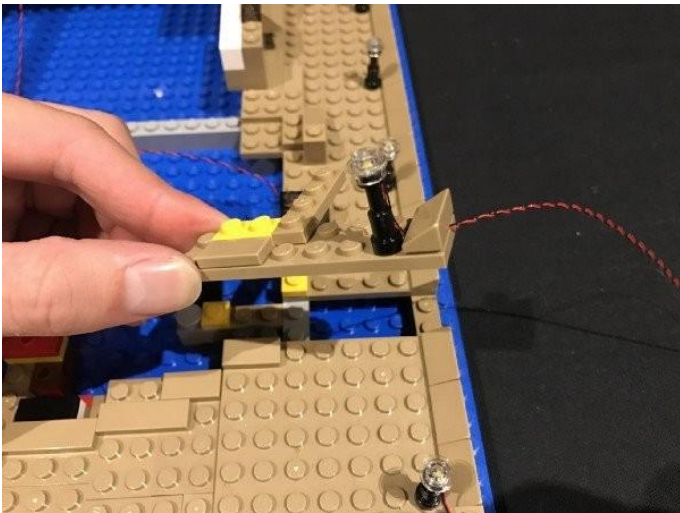
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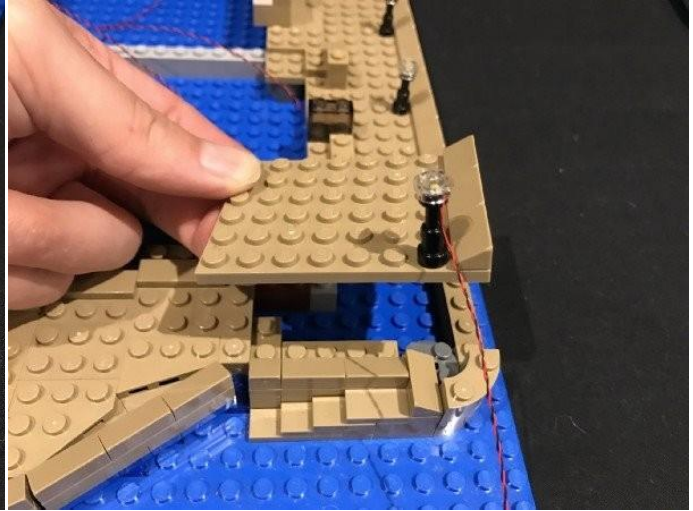
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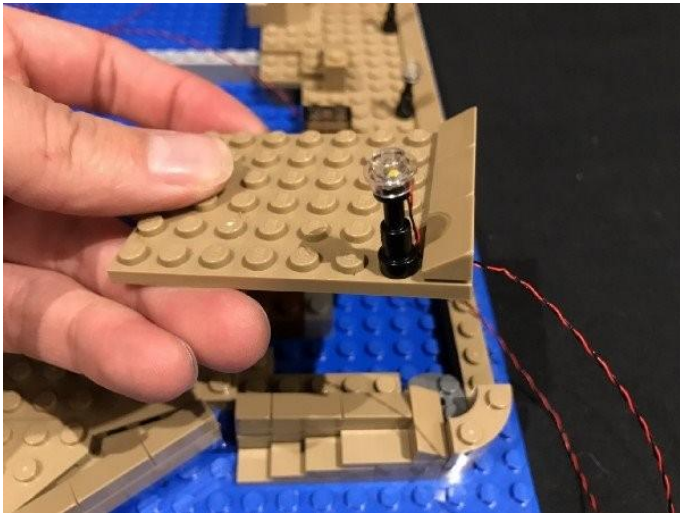
22. Reconnect the remaining 9 wired lamp posts to the set, ensuring the cables are facing toward the outside.
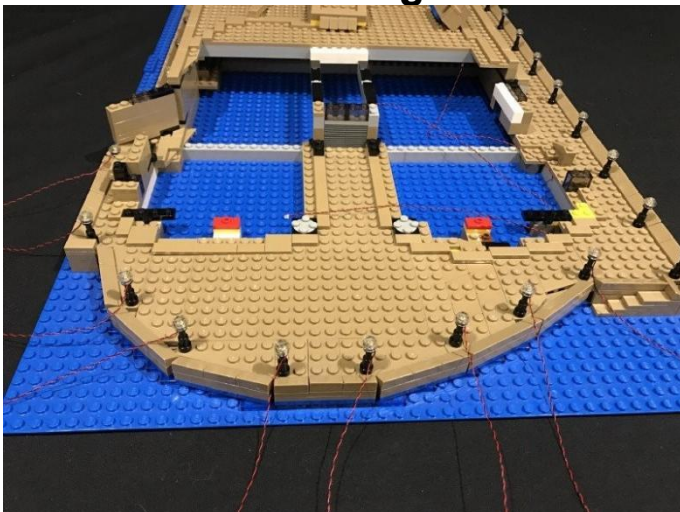
23. Starting with the next 2 lamp posts on the right, loop them underneath the plates below. Note: for these 2, we do not need to lay the cable underneath the tiles on the outside before doing so. We do however require to remove extra plates in order to lay the cable all the way underneath to allow us to later connect them to an expansion board.

24

25. To allow us to lay the remaining lamp post cables, remove the following sections.
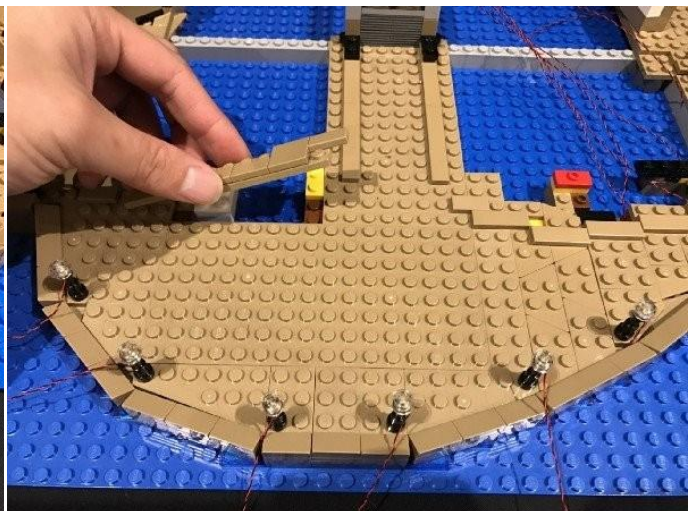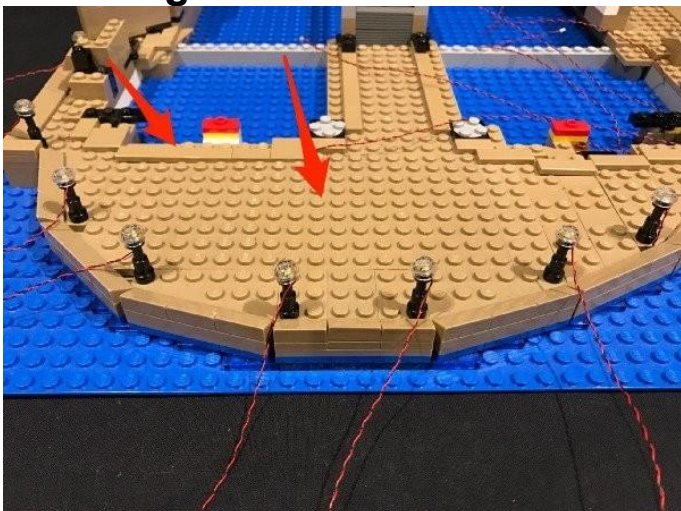
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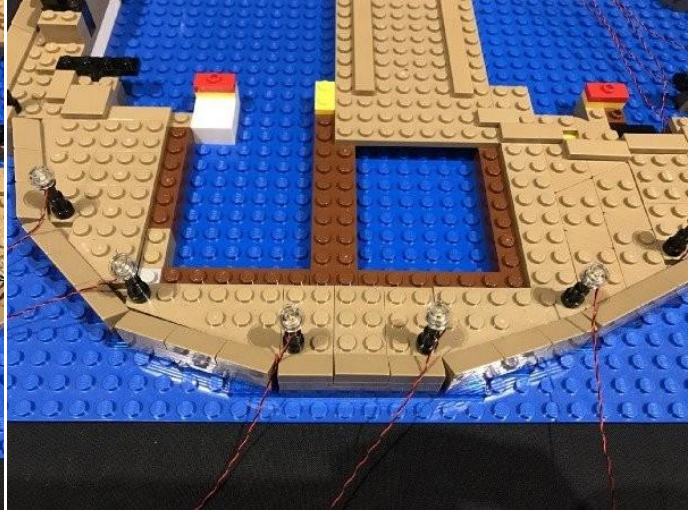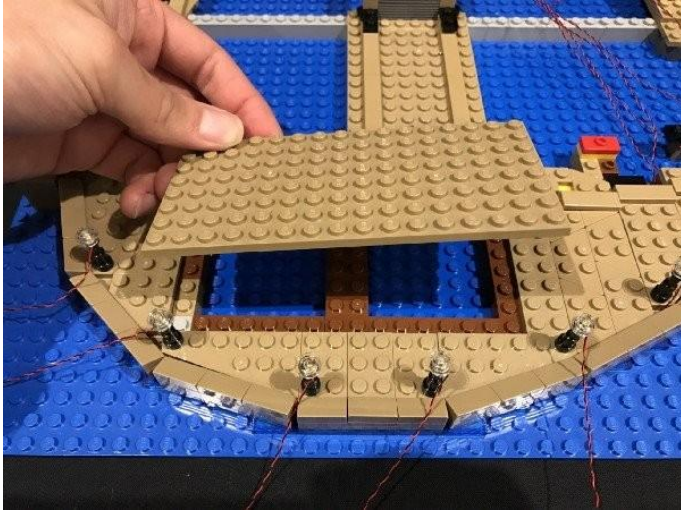
27. The cable for the next lamp post on the right also does not require to be laid underneath the tile in front. Simply lift the plate it is connected to and lay the cable underneath as per below.
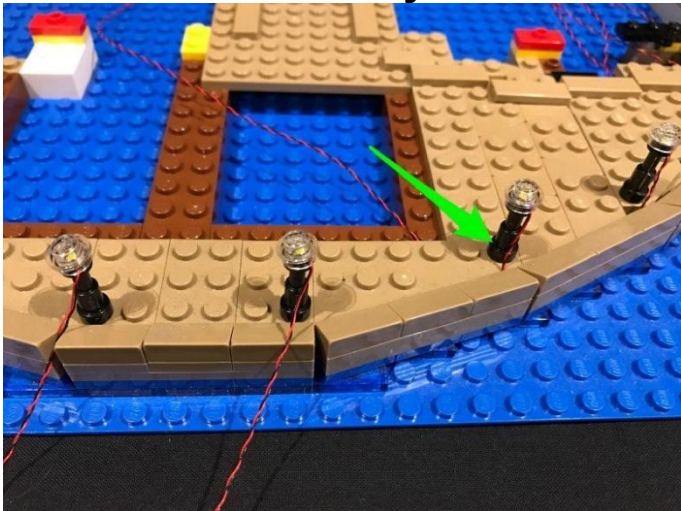
28. For the next 2 lamp posts cables along, lay them underneath tiles before looping/laying them underneath the plates they are connected to.
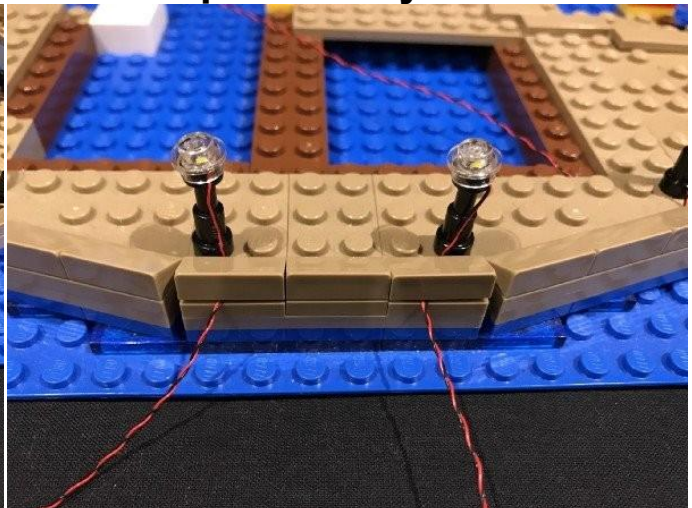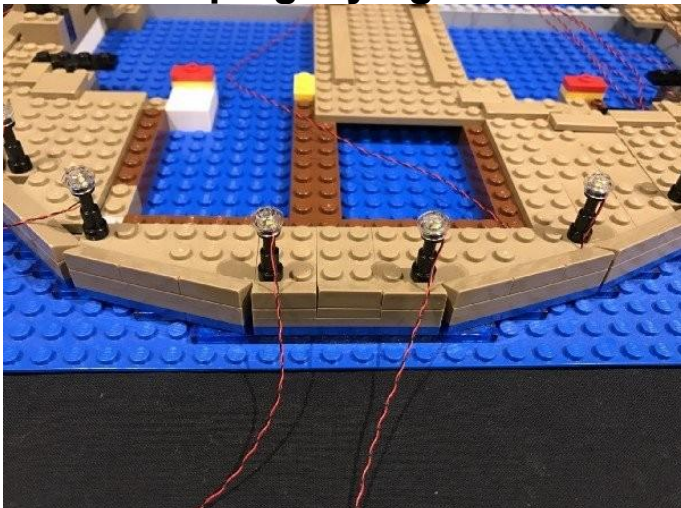
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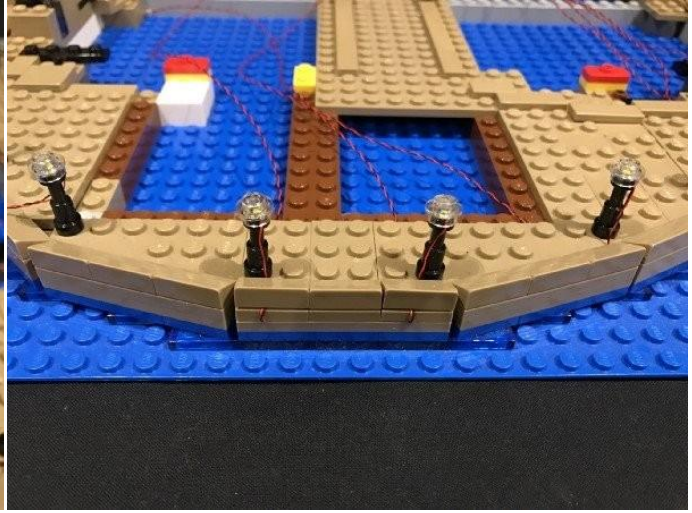
30. For the next 2 lamp post cables, simply lay them underneath plates.
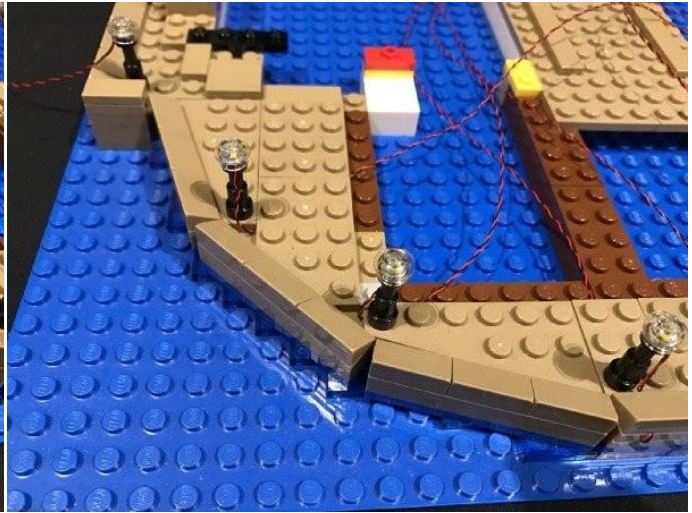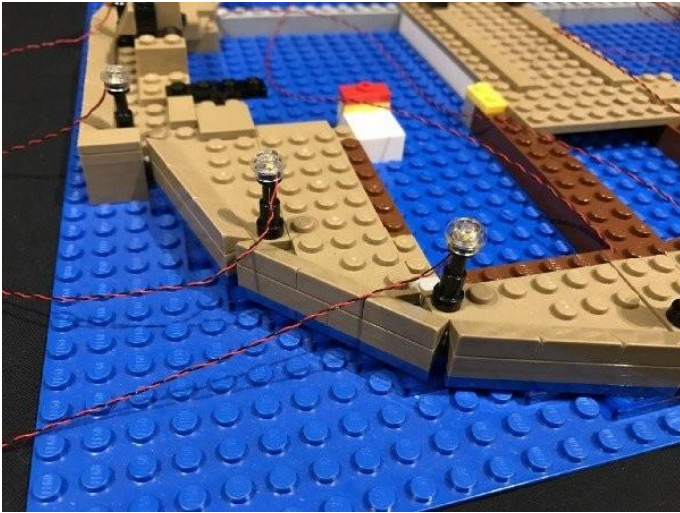
31. Lay the remaining 2 lamp post cables underneath tiles before laying them underneath the plates they are connected to.
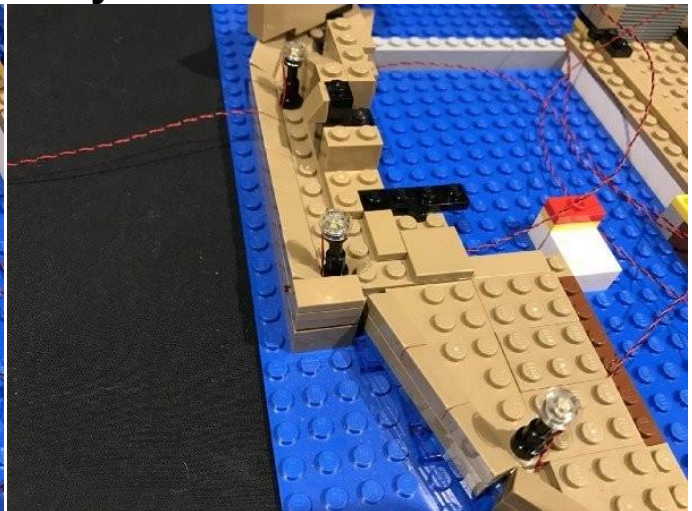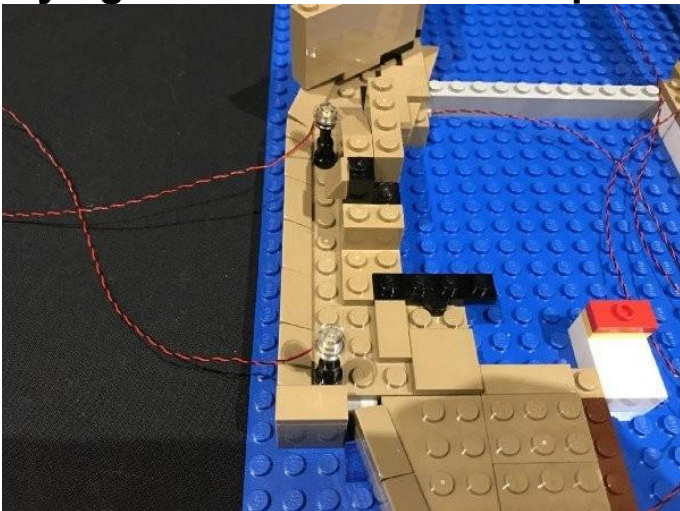
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33. Your set should now look similar to the below:
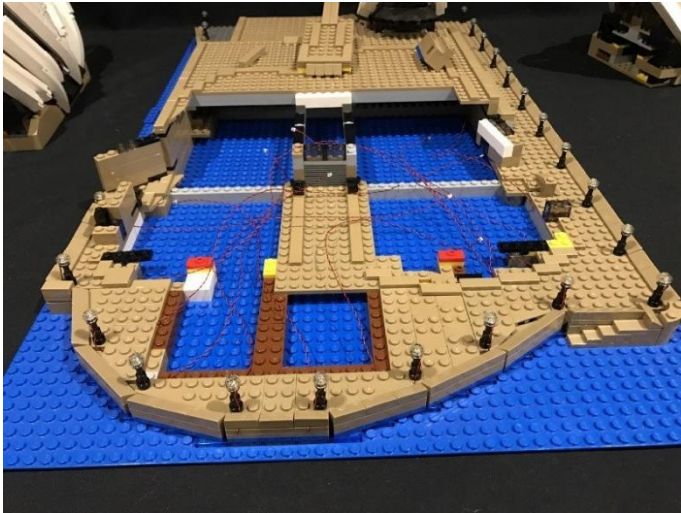
34. Take the following Pieces that were provided in this light kit. These will make up one of the spot lights we are installing to each side.
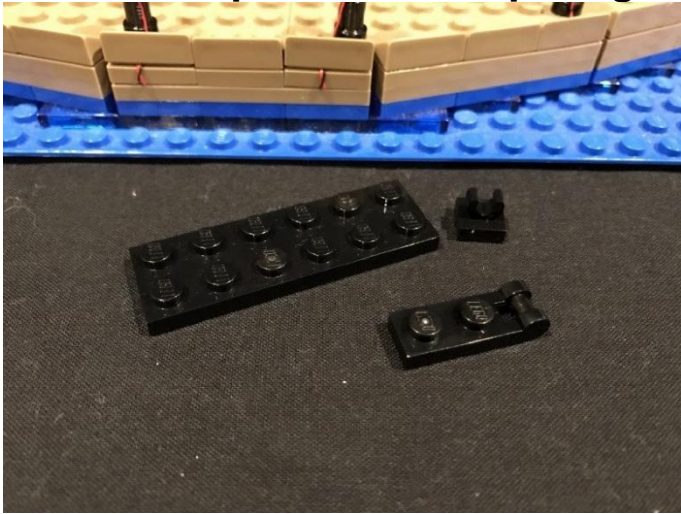
35. Assemble them as per below and then take a Multi-Coloured Strip Light and stick it to the base of the 2x6 plate using the adhesive backing.
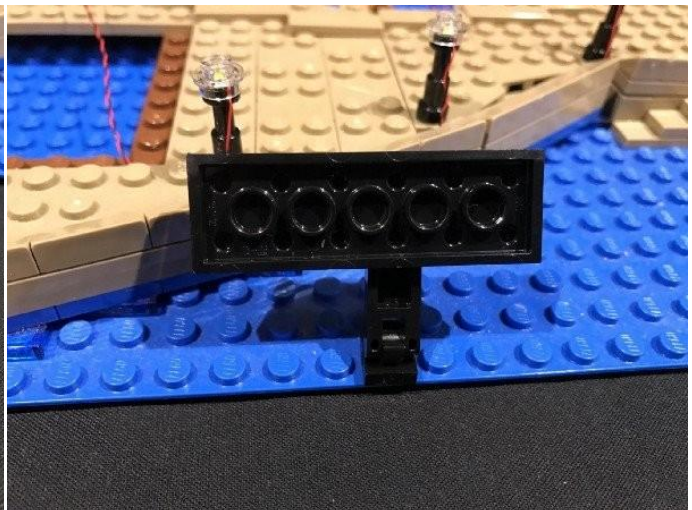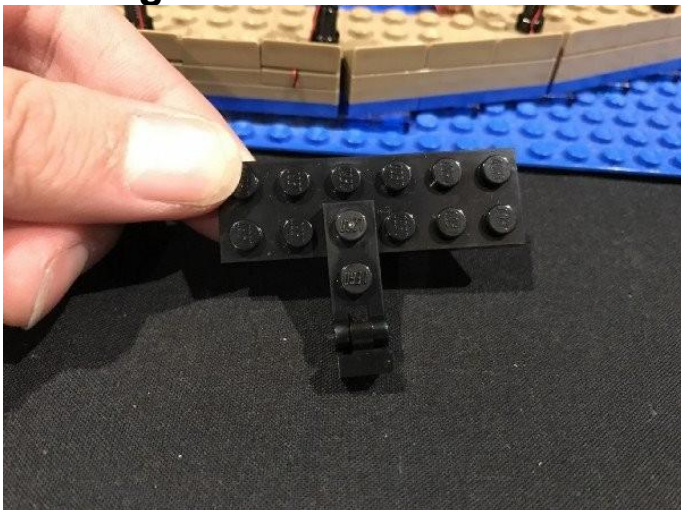
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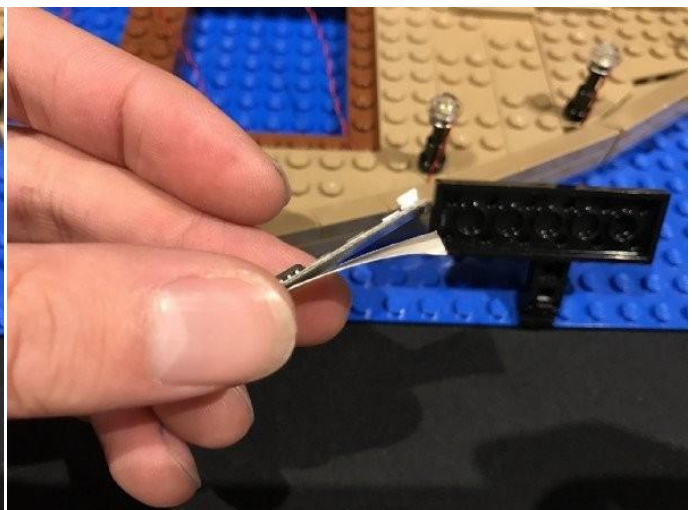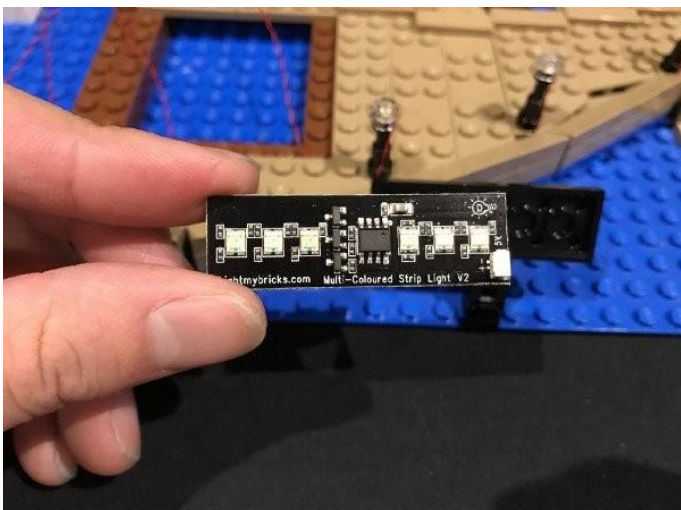
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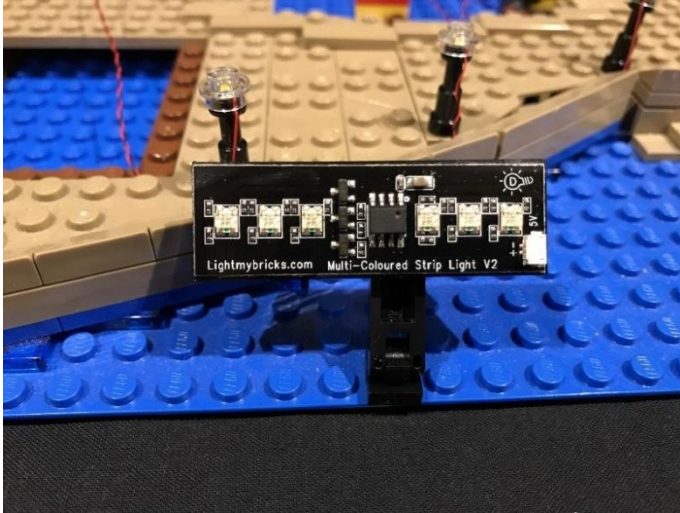
38. Take a 30cm Connecting Cable and connect it to the port on the strip light and then connect the spot light to the following position on the set. Ensure the spot light is facing the correct way and then angle it up as per below:
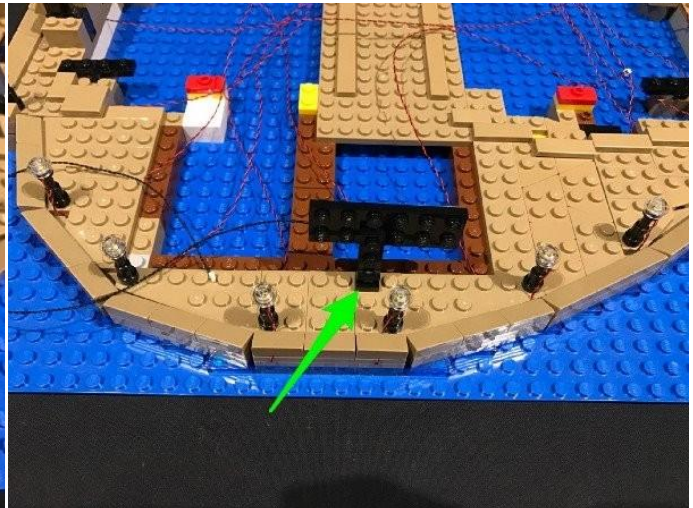
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40. Take the connecting cable from the strip light and then loop it around the base of the spot light and then pull it up around as per below
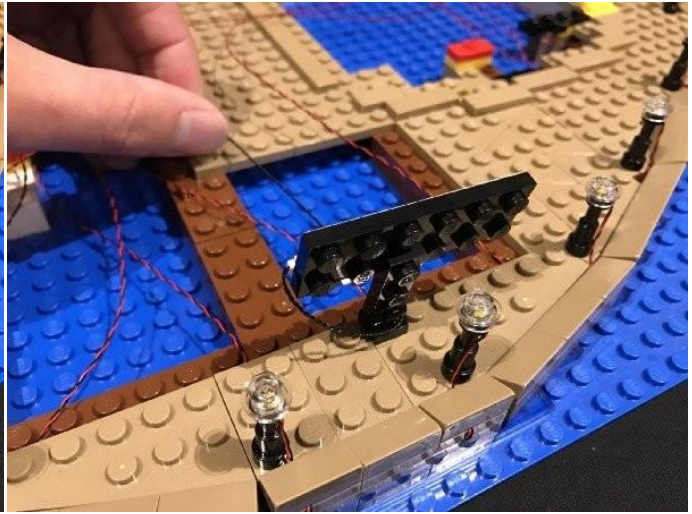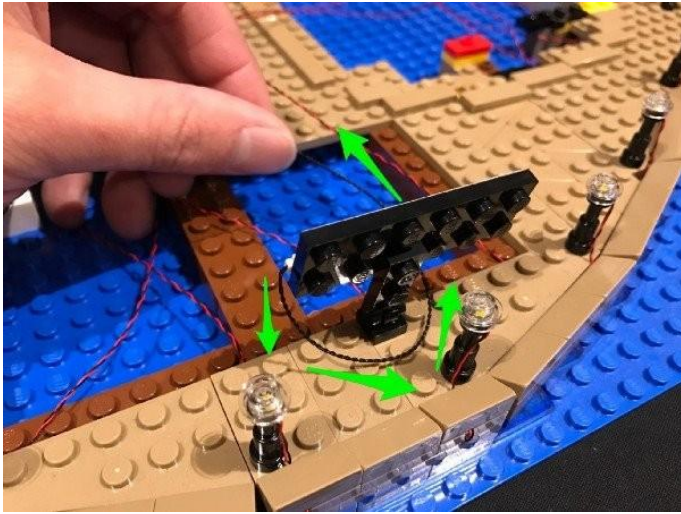
41

42. Take the following 2 lamp post cables fro the right side and then lay them underneath the following plate by disconnecting and reconnecting it over the cables.
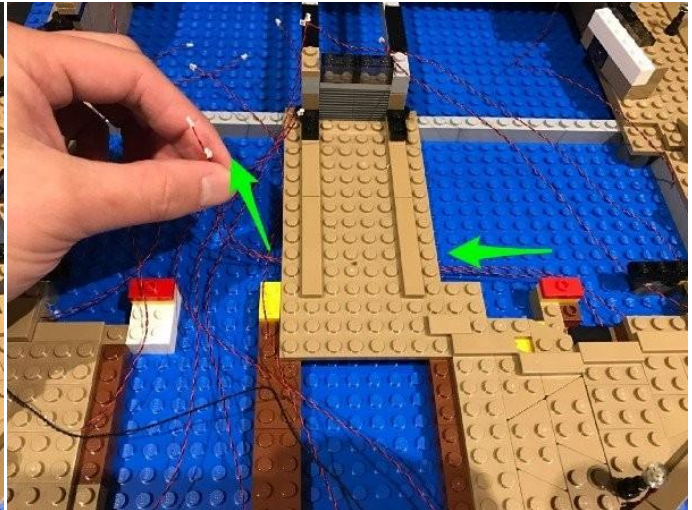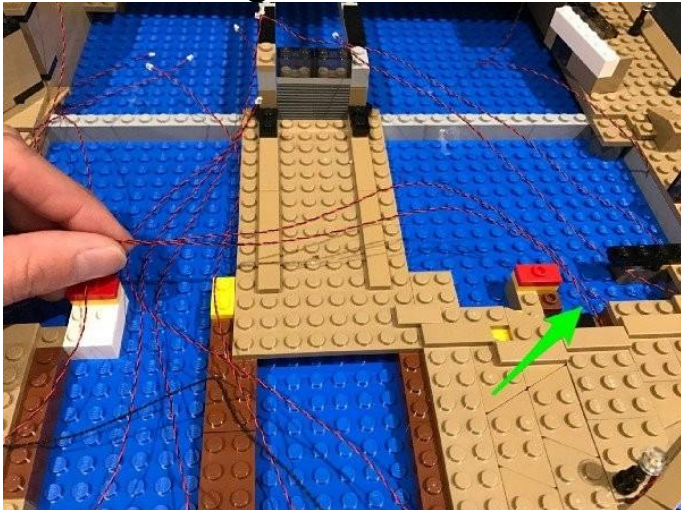
43. Take a 12-port Expansion Board and then take 2x 30cm Connecting Cables and connect one to each port on the far sides.
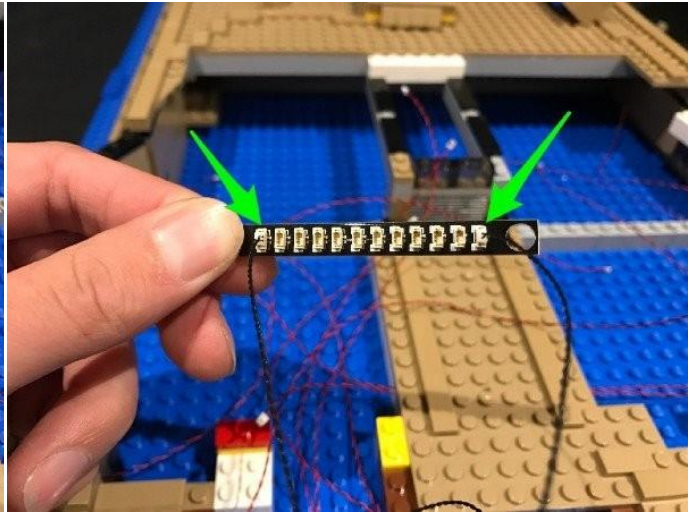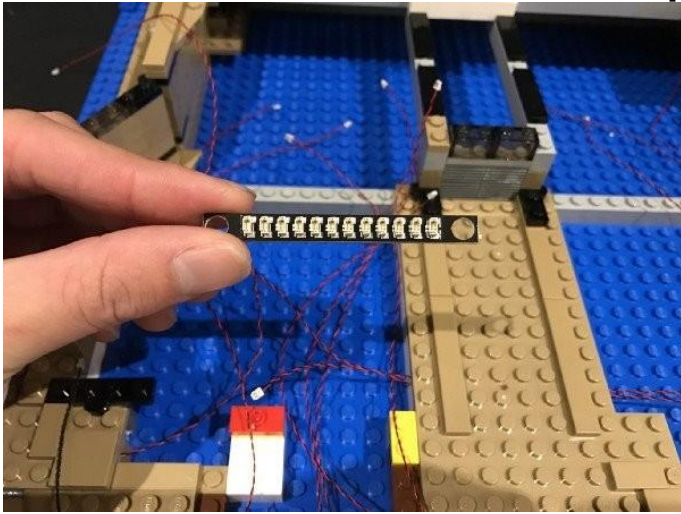
44. Take all the lamp post cables laid on the left side of the set as well as the 30cm cable from the spot light (there should be 10 in total) and connect them to the 12-port expansion board.
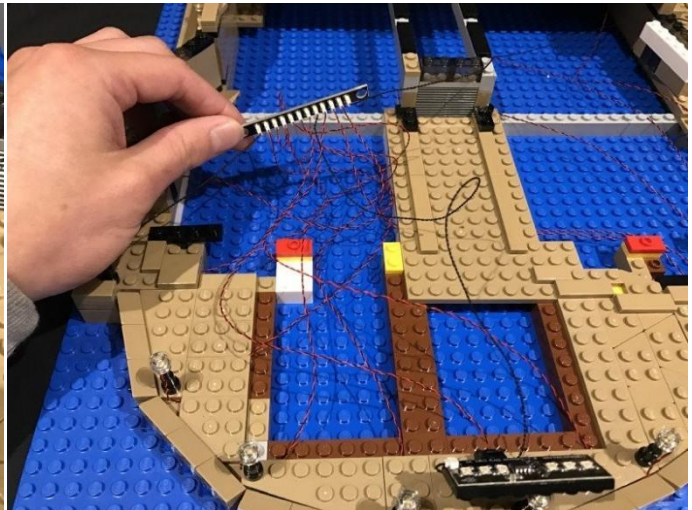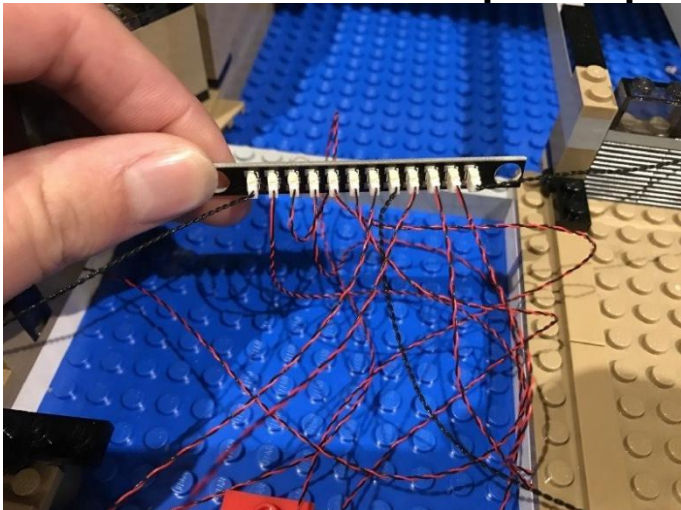
45. Take the other end of the 30cm connecting cable closest to the top of the expansion board and thread it underneath the following section and then connect it to another 12-port Expansion Board.
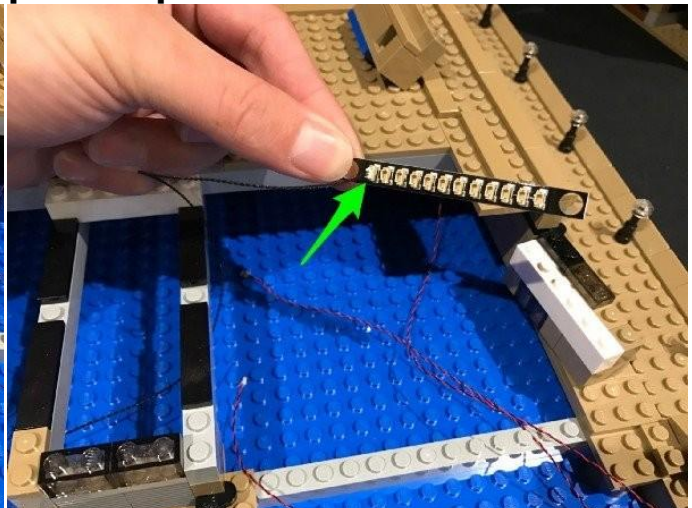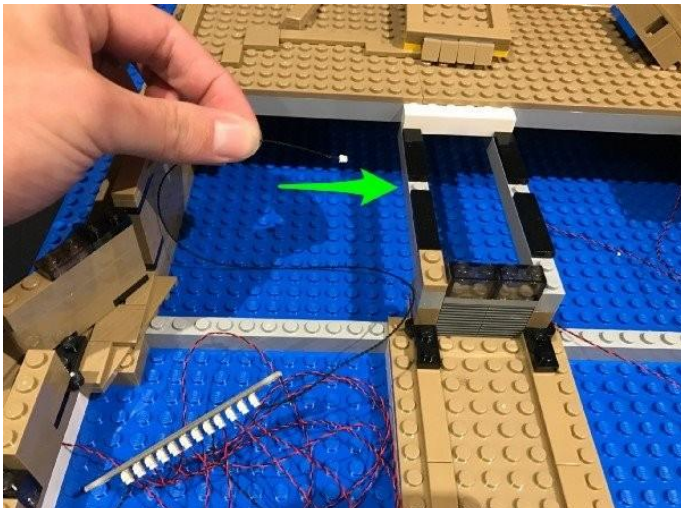
46. Connect the remaining 3 lamp post cables on the right side of the set to the next available ports on the expansion board.
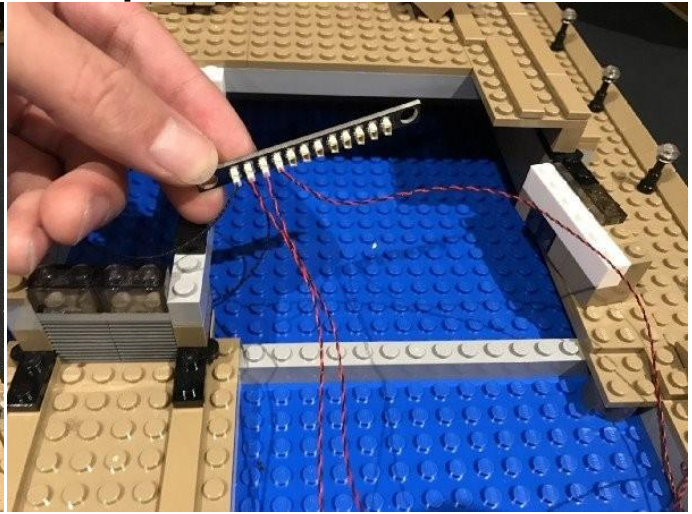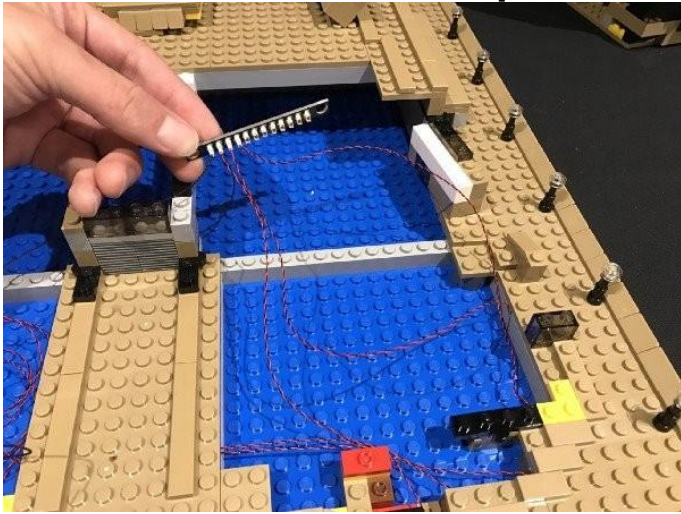
47. Neaten up all the cables on the left side by gathering them together and tucking them in before reconnecting the plates and sections we removed earlier. Before reconnecting them, ensure the cables are laid in between studs. Do not forcefully reconnect the plates over the top of cables.
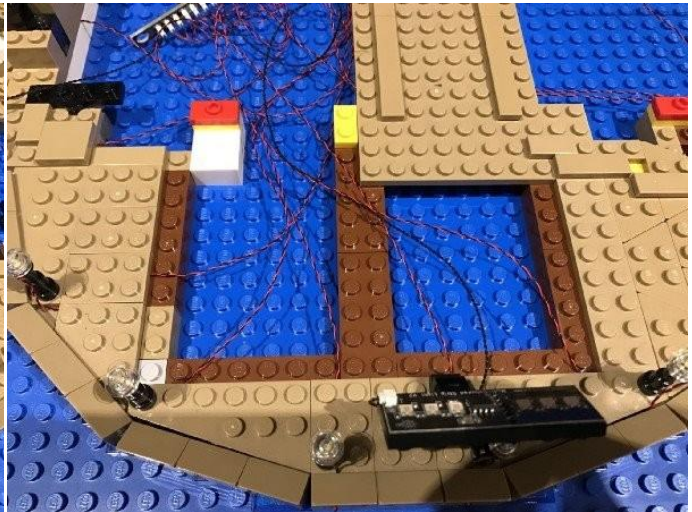
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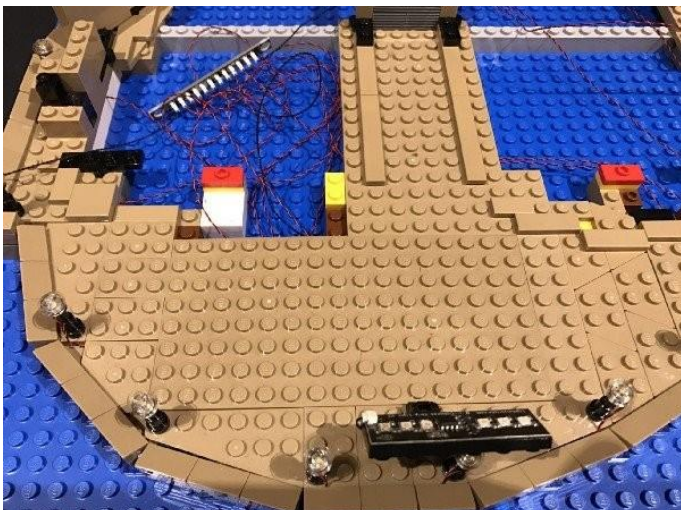
49. Take this time to test all the lights we have installed so far and to ensure everything is properly connected. To do so, take the 30cm USB Cable and connect it to a spare port on the 12-port expansion board on the right side. Connect the USB plug to your USB power bank and ensure all lights are working OK.
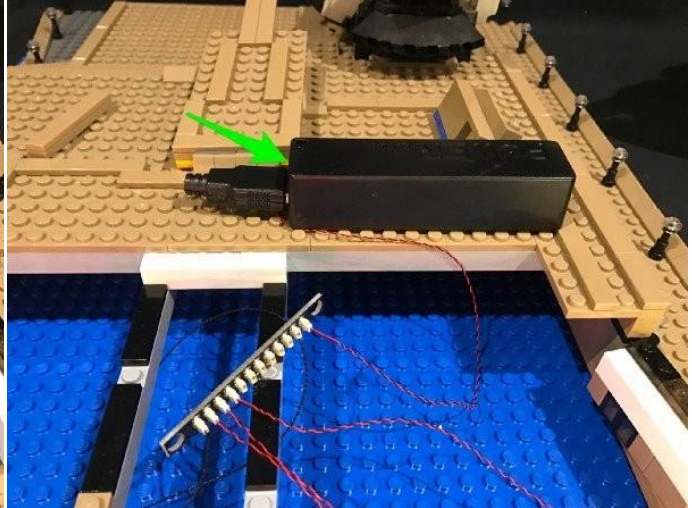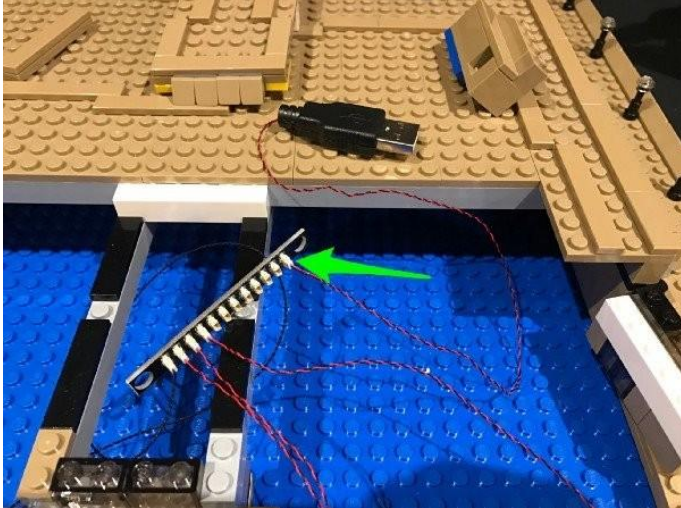
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51. Turn the set around to the right side (as per below)and then remove the following sections by following the example images.

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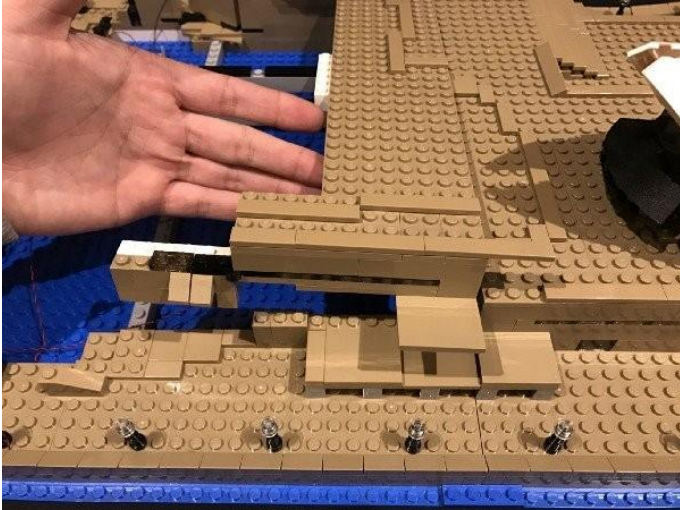
53. place hand underneath the above section and then carefully remove.
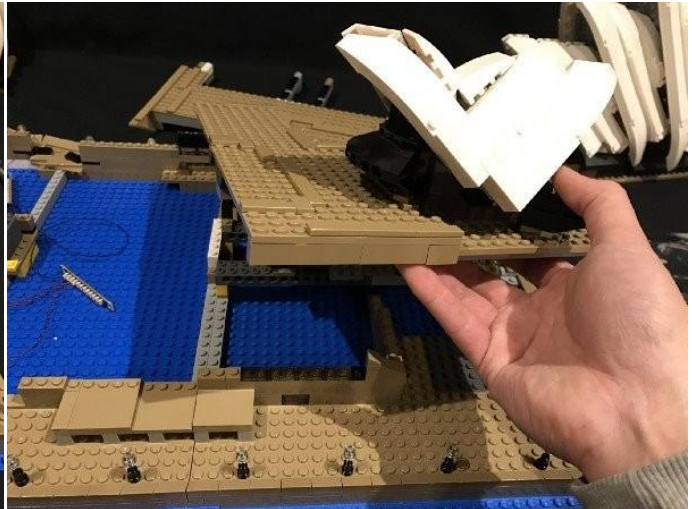
54. Remove the remaining 8 lamp posts from this side of the set and then remove the trans-clear round plates from them

55. Following the same method we used for previous lamp posts, install another 8x White 30cm Dot Lights to these lamp posts.
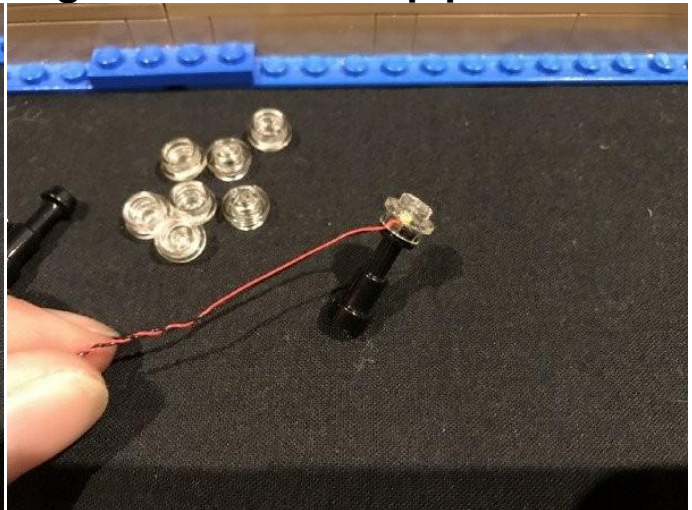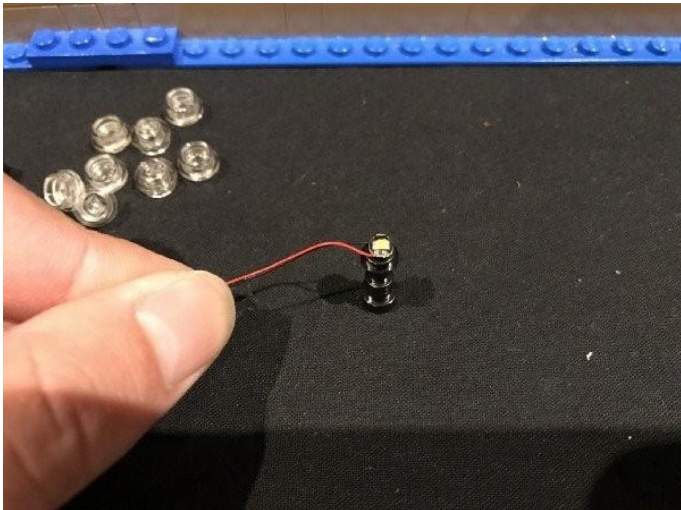
56
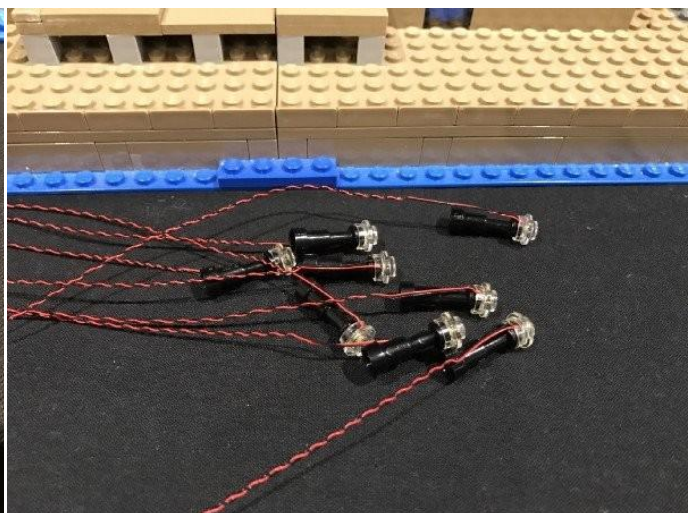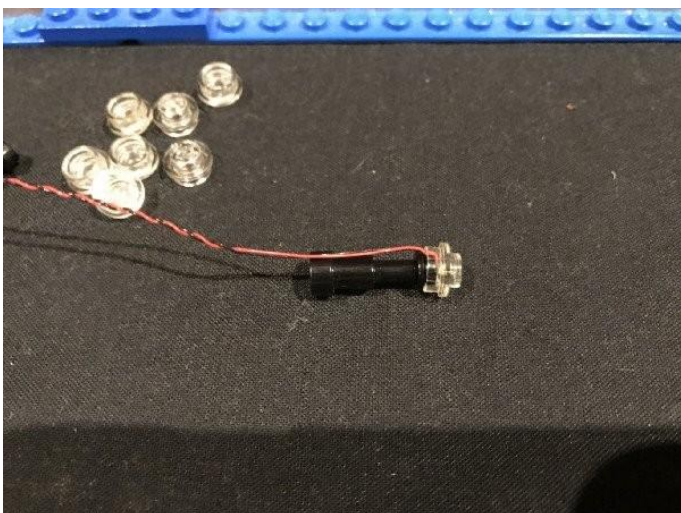
57. Reconnect the 8 wired lamp posts to the set ensuring the cables are facing toward the outside.

58. Take the first four lamp posts on the left and then lay each cable underneath the tiles directly in front of them.
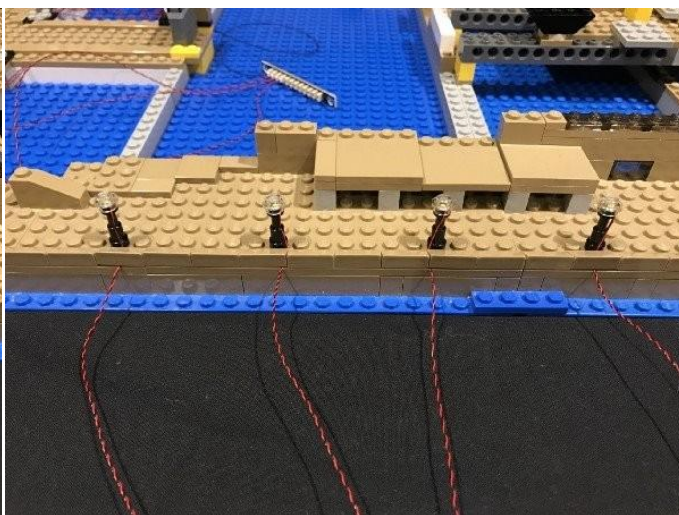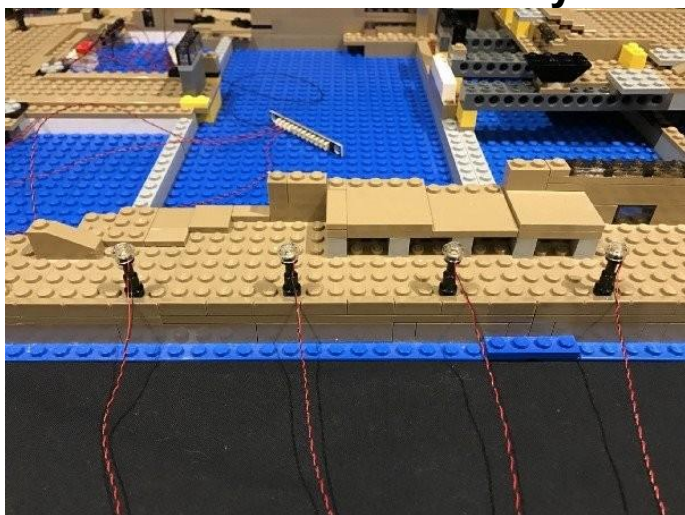
59. Remove the plates under the first three lamp posts and then tuck the cables underneath before reconnecting the plates.
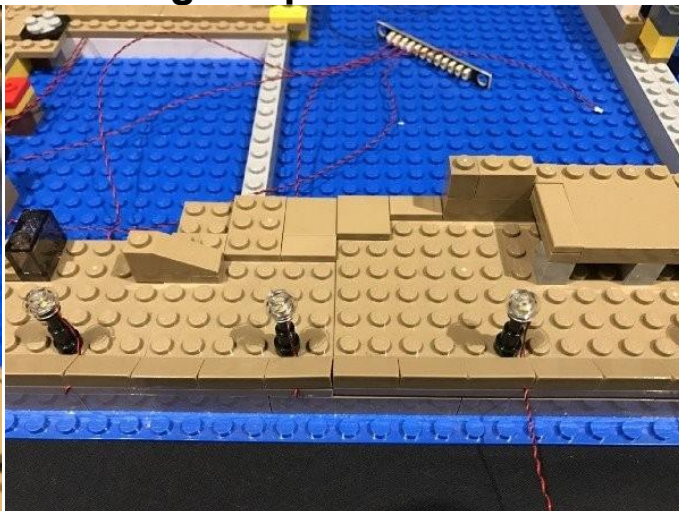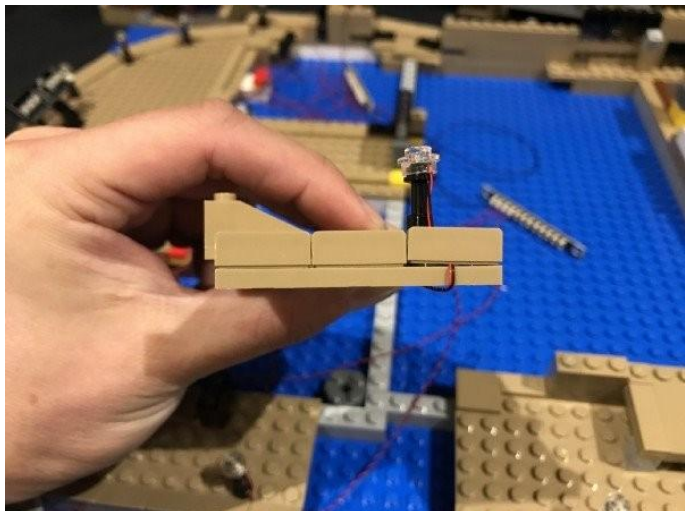
60
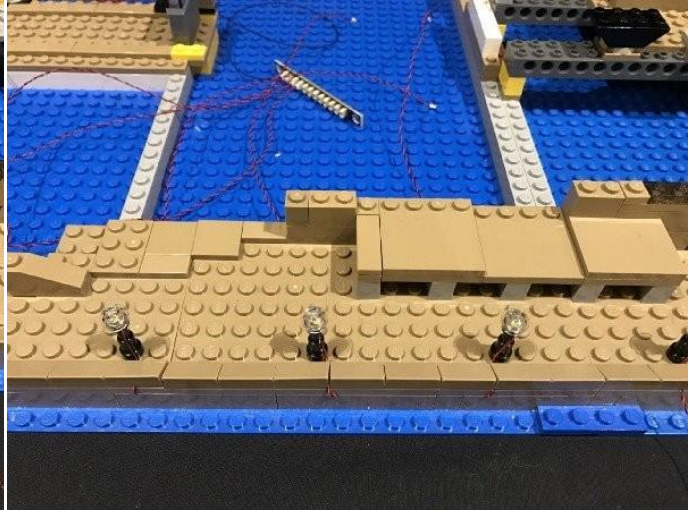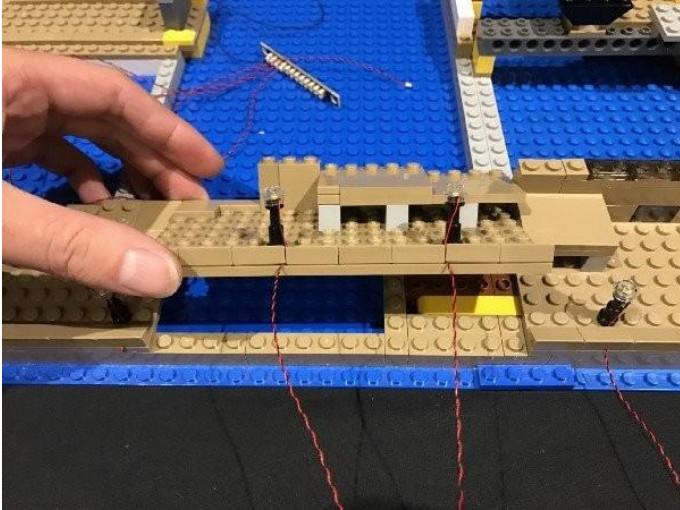
61. **Remove the following tile between the third and fourth lamp posts we just secured cabling for.**
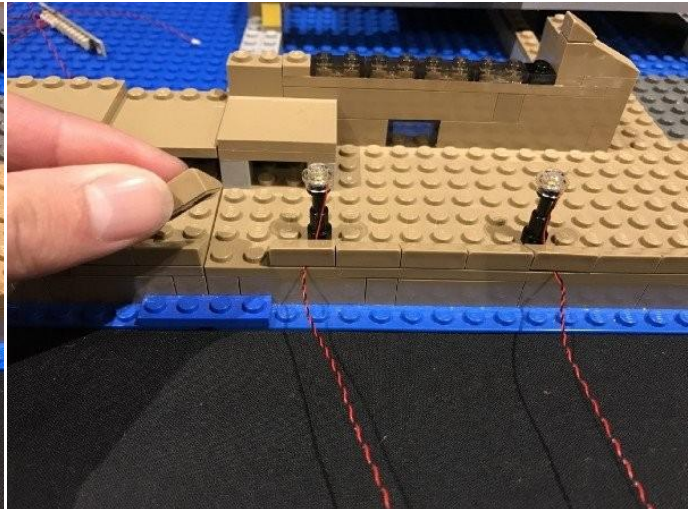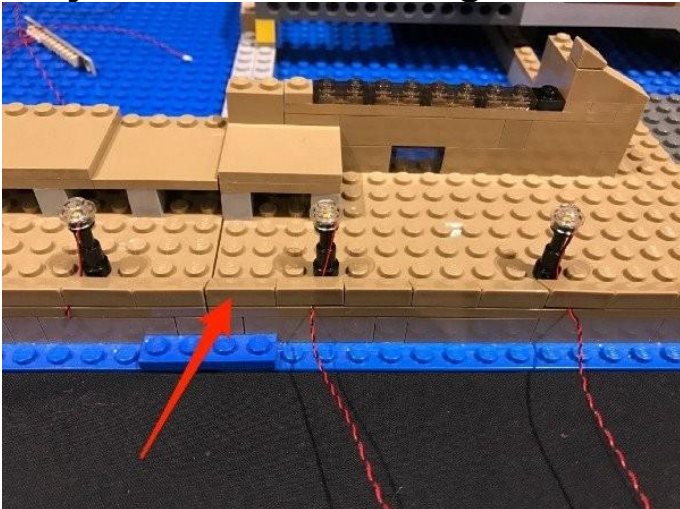
62. **Using the following provided pieces, assemble them together to make another spot light this time, connected to the 1x6 plate.**
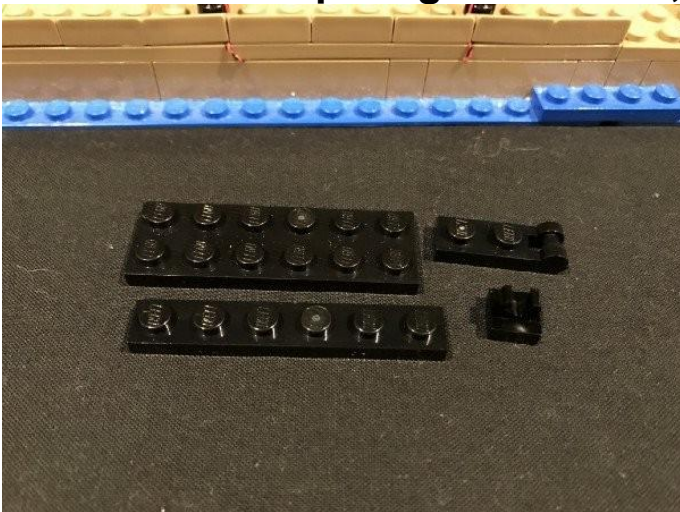
**63.**Take another Multi-Coloured Strip Light and stick it to the base of the 2x6 plate.
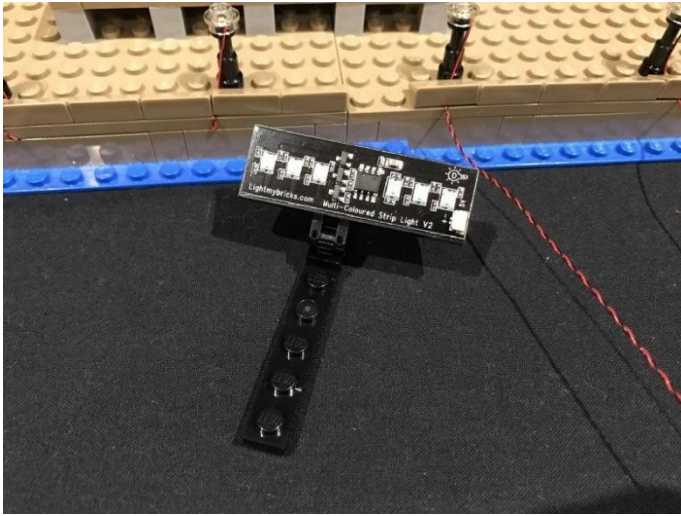
**64.**Take a 30cm Connecting Cable and connect it to the port on the strip light. Connect the spot light to the following position on the set.
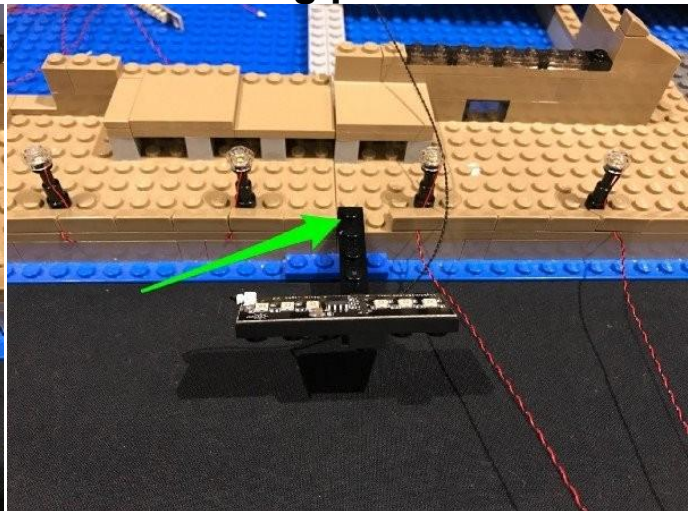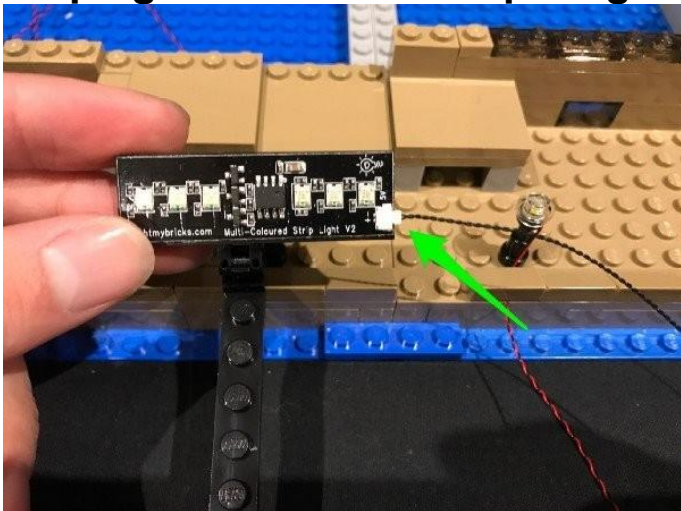
65. Loop the cable behind and then pull the cable in towards the set as per below.
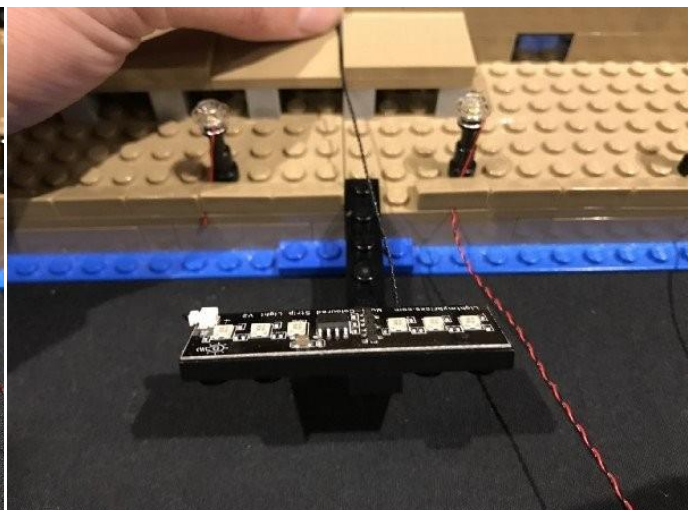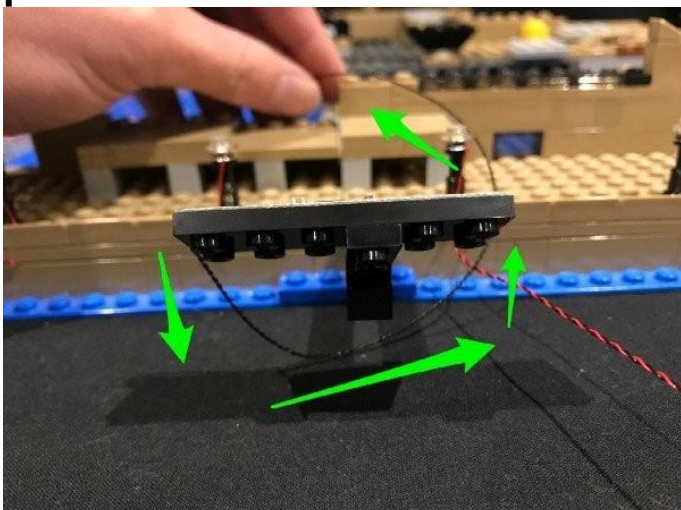
66. Continue to secure the cables for the next two lamp posts along the sides as well as the spot light cable by laying them underneath tiles and then laying them underneath the plates below.
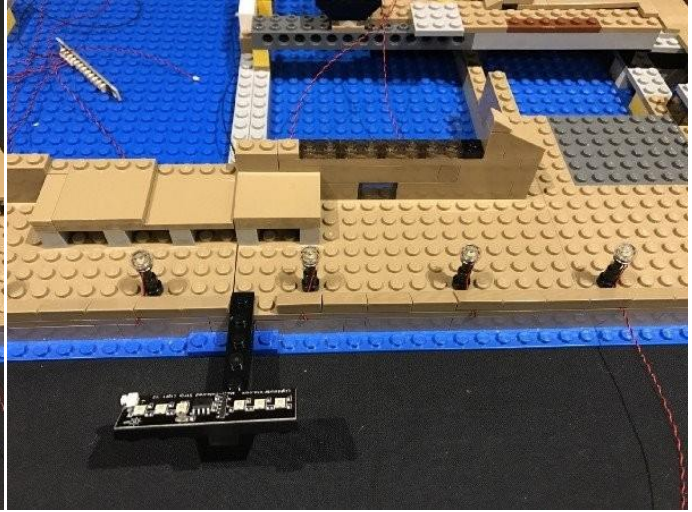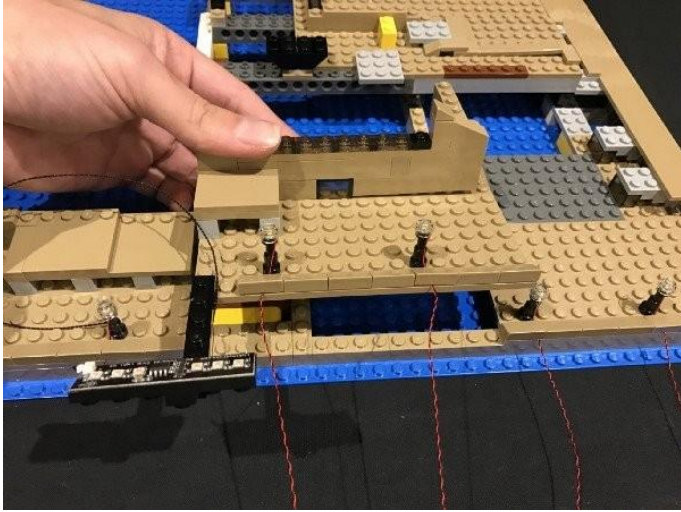
67
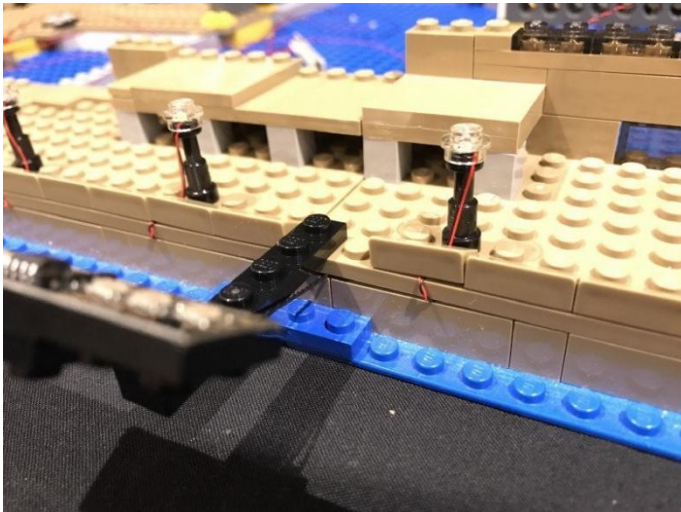
68. Reconnect the spot light base (1x6 plate) as per below and then set the angle of the spot light so that it is pointing up toward the left (eventually at the opera house)
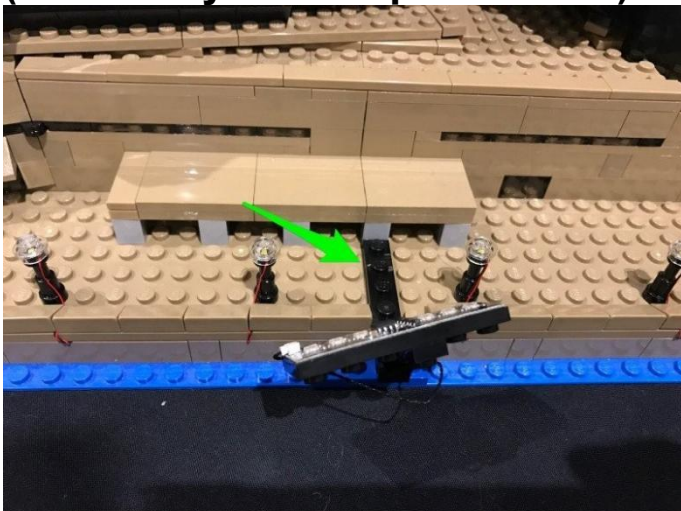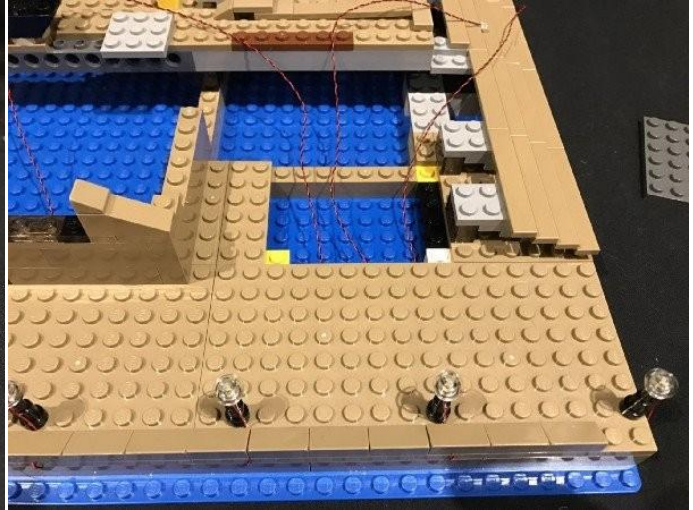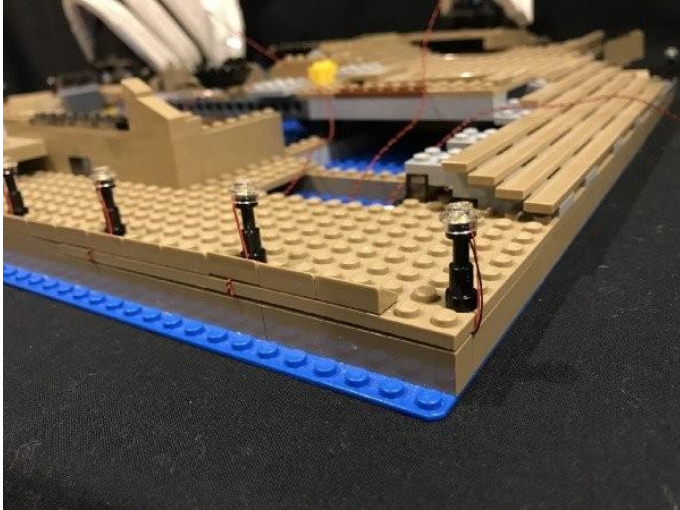
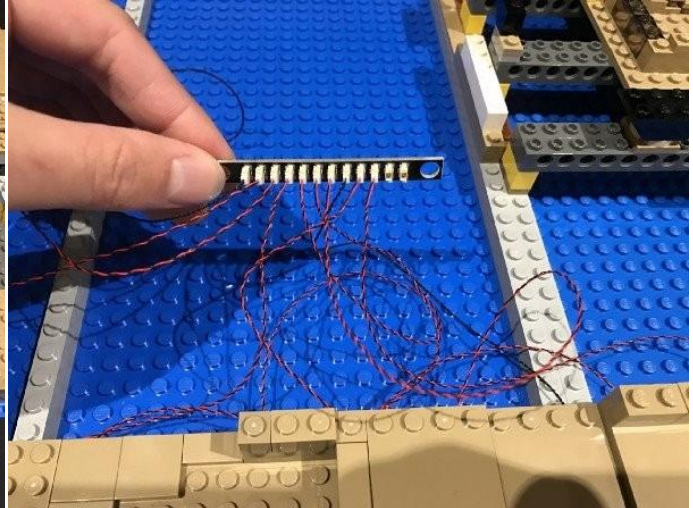**69.** Remove the following plate to allow us to then lay the cables for the remaining three lamp posts.
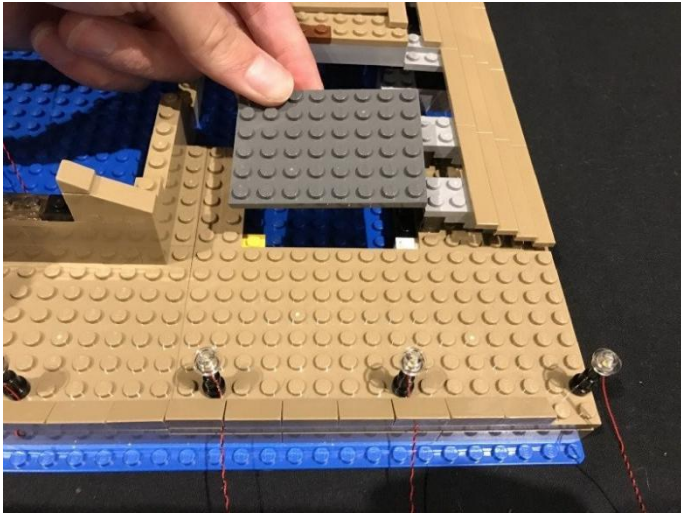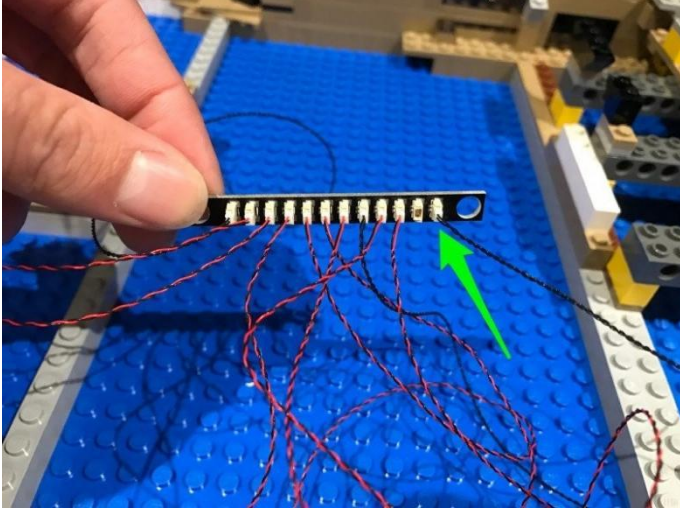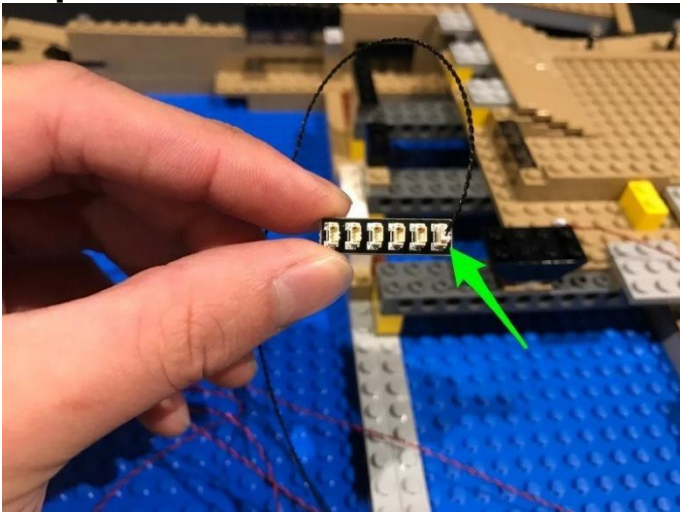

70
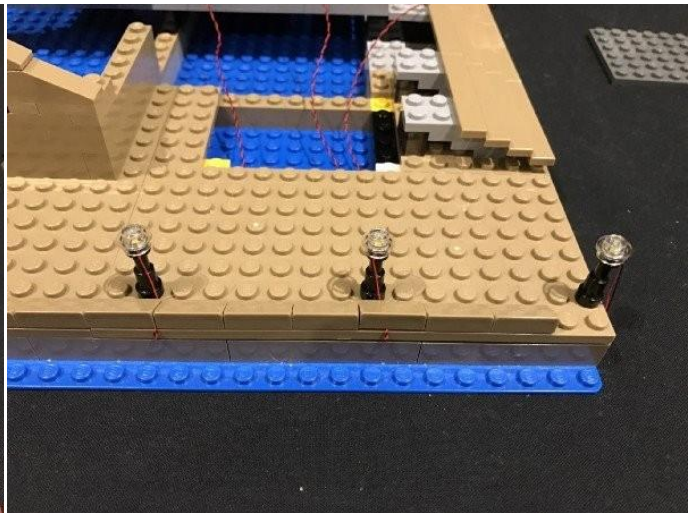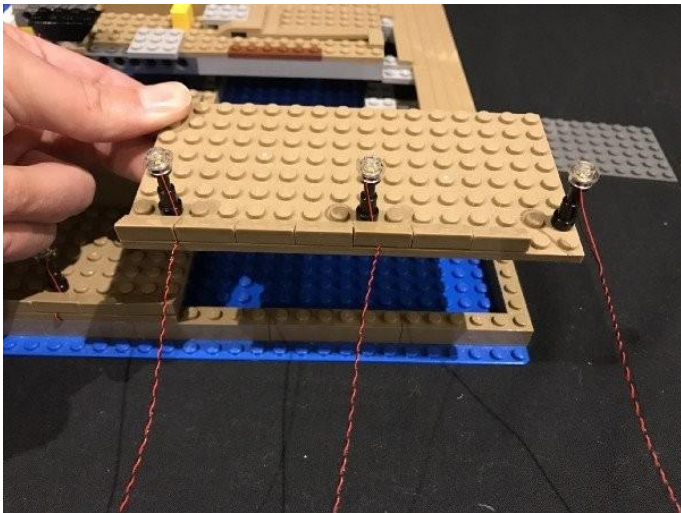
71

72. Take the first six cables we laid on the left and then connect them to the 12-port expansion board we used in step 18.
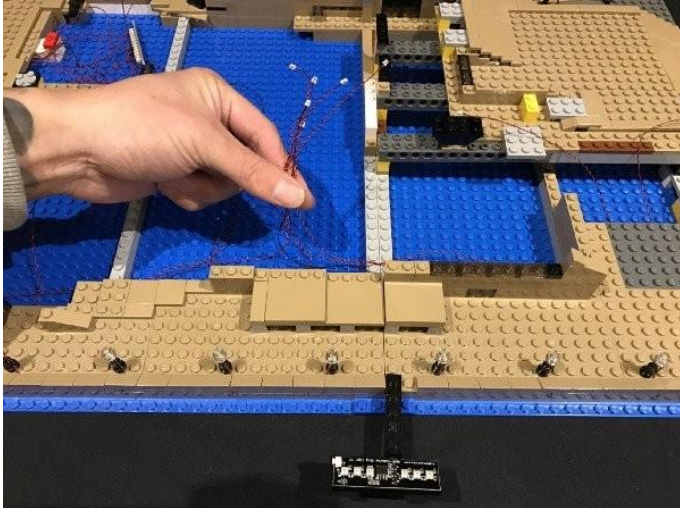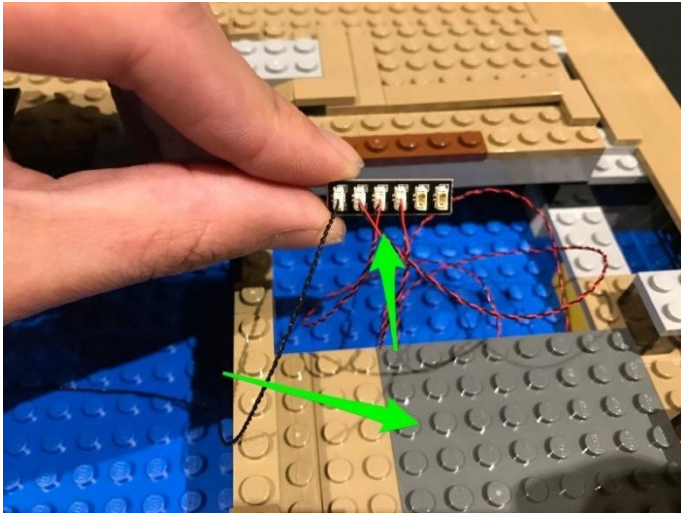
73. Take another 30cm connecting cable and connect it to one of the remaining ports on the expansion board.


74. Connect the other end of the 30cm connecting cable to a 6-Port Expansion Board.

75. Take the remaining three lamp post cables on the right and connect them to the 6-port expansion board. Reconnect the grey plate we removed earlier.


76. Take this time to test all the lights we have installed so far and to ensure everything is properly connected. To do so, take the 30cm USB Cable and connect it to a spare port on the 6-port expansion board. Connect the other end to your USB power bank and ensure all lights are working OK.
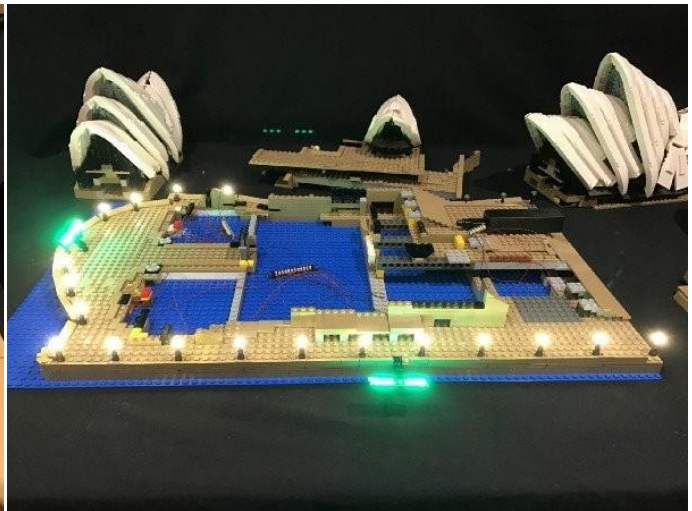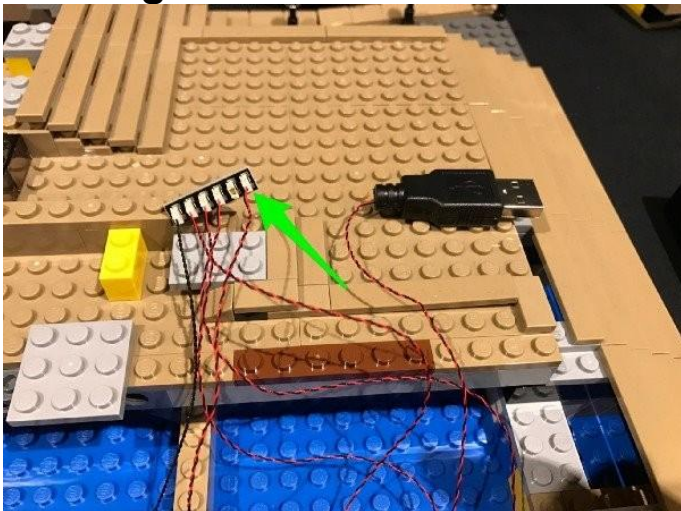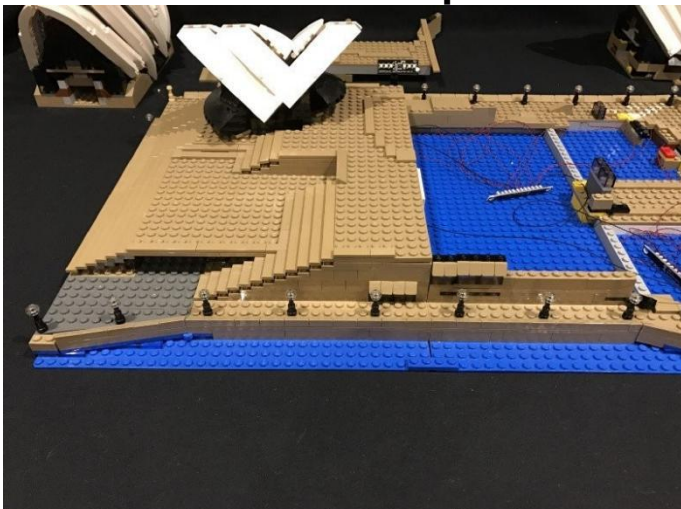
77. Tuck in the cables from the 6-port expansion board underneath and then reconnect sections above which we removed earlier.
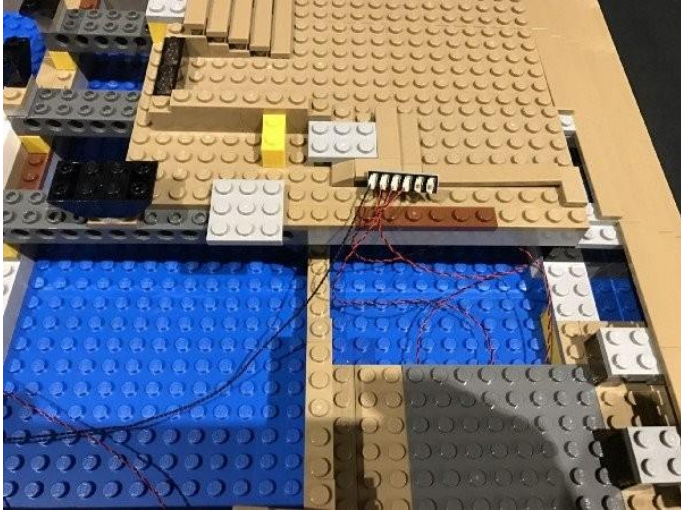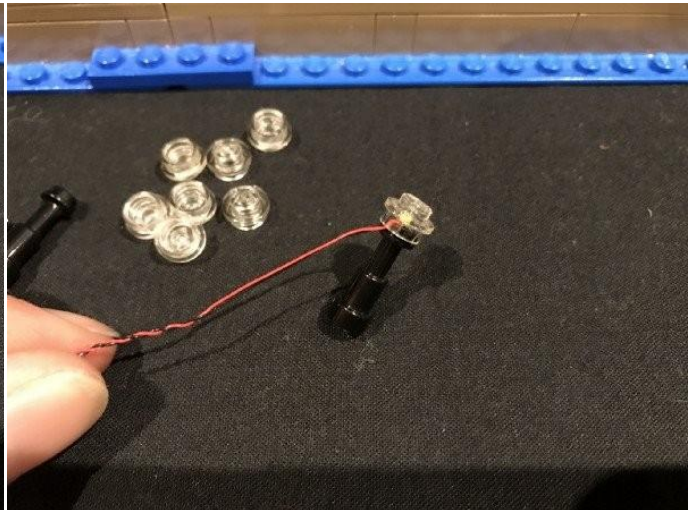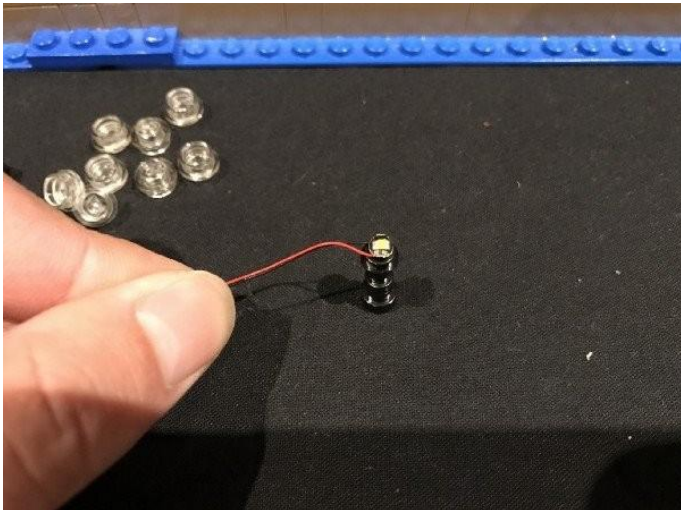

78
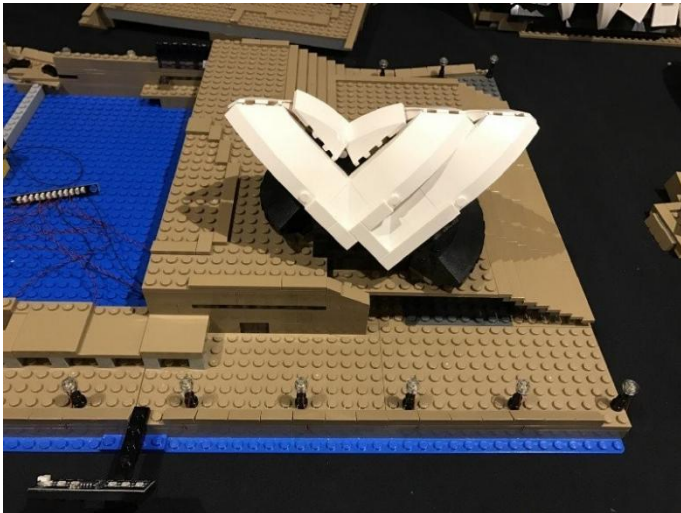
79. Turn the set around so we are facing the opposite side and then remove the eight lamp posts we are yet to install lights for. Disconnect the trans-clear round plates from them.
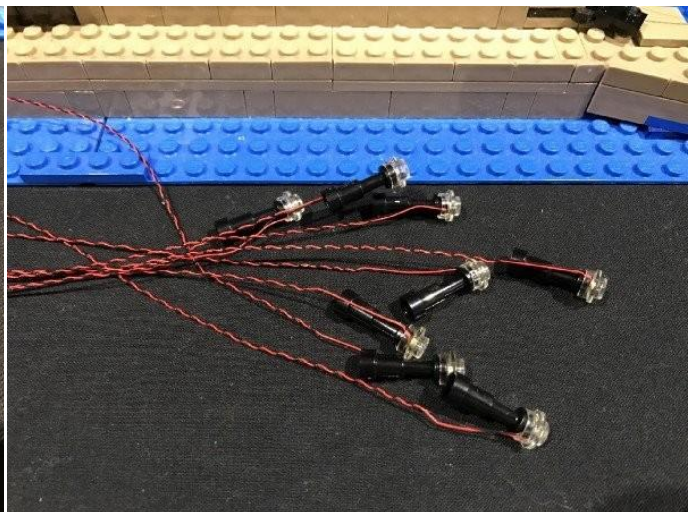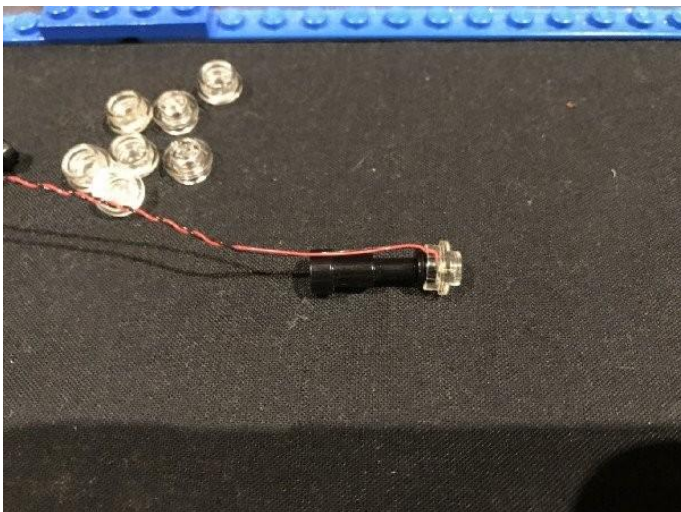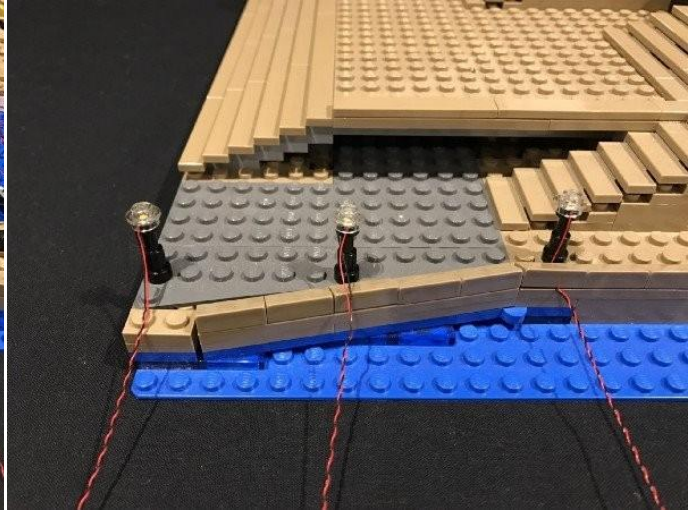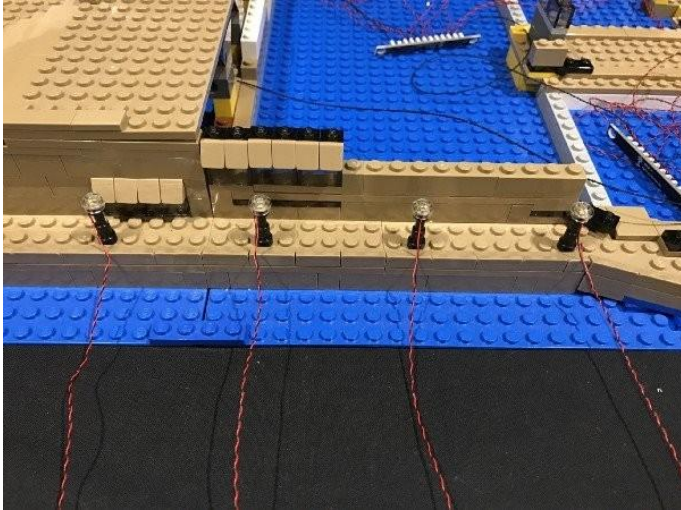
80

81. Install the remaining 8x White 30cm Dot Lights to the lamp posts and then reconnect them to the set ensuring the cables are facing toward the outside.
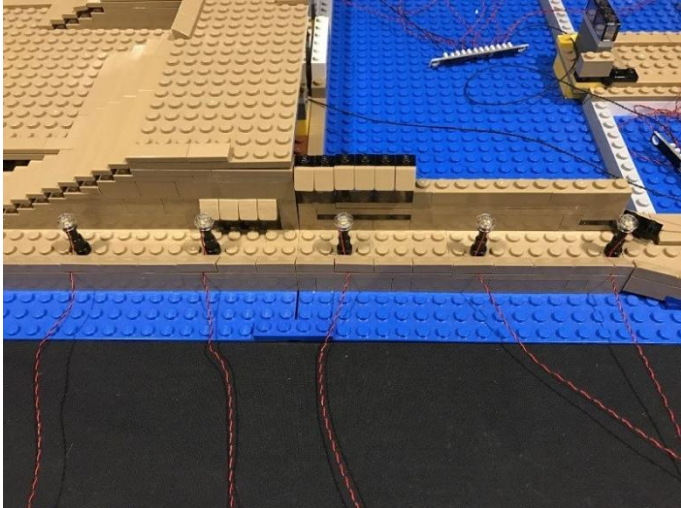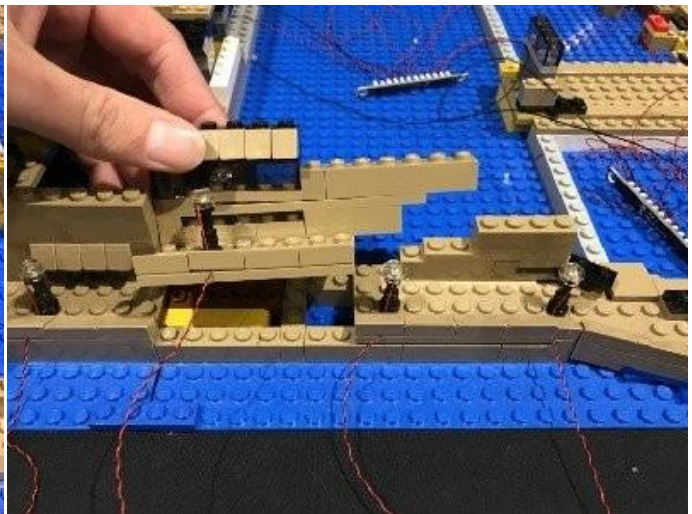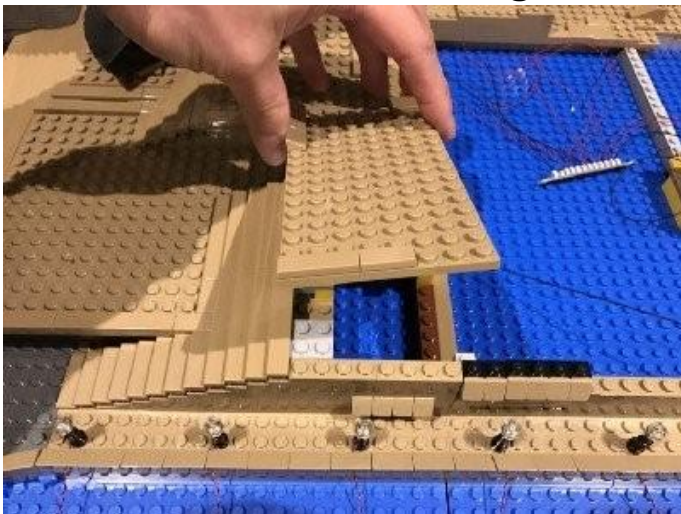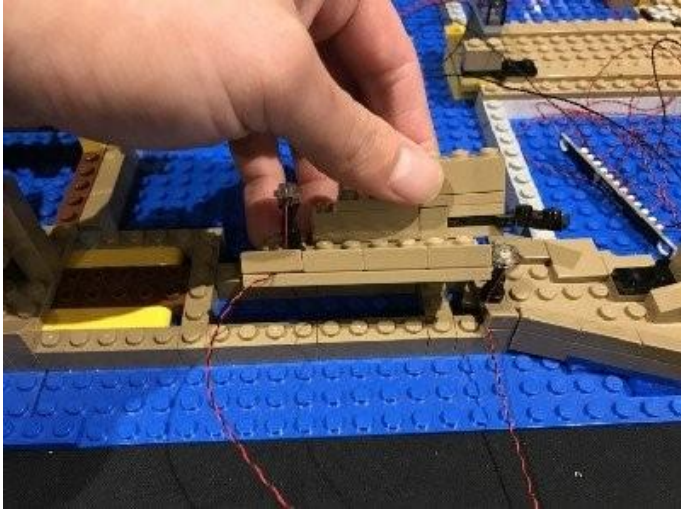

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84. Lay the cables for the five lamp posts toward the right underneath the tiles directly in front of them.
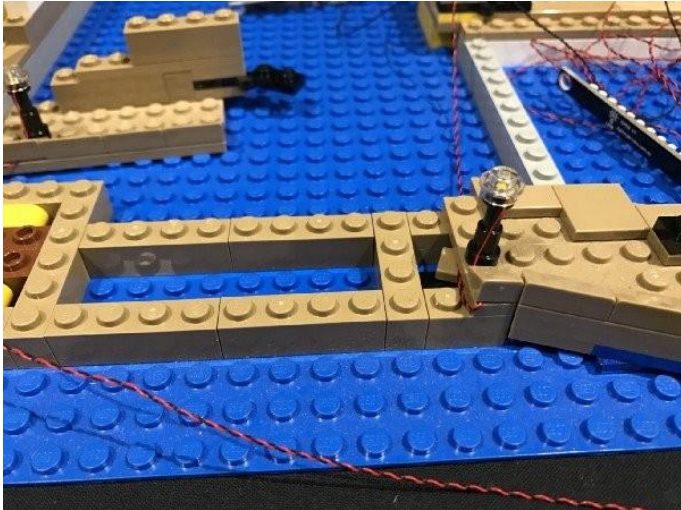

85. Remove the following sections.

86

87. **First lay the lamp post cable on the right underneath the plate it is connected to, then lay the lamp post cable on the left underneath it's plate before reconnecting it. Ensure you carefully lay the cables in between studs underneath.**
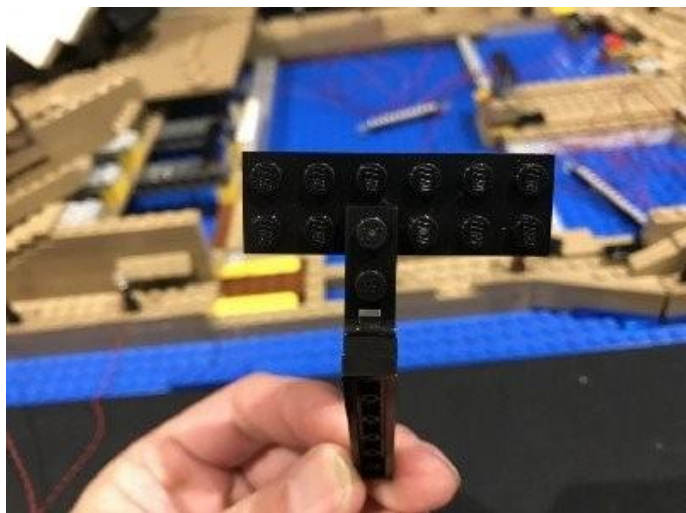

88. **Remove the following tile in between the two lamp posts we just connected as this is where we will be installing another spot light.**
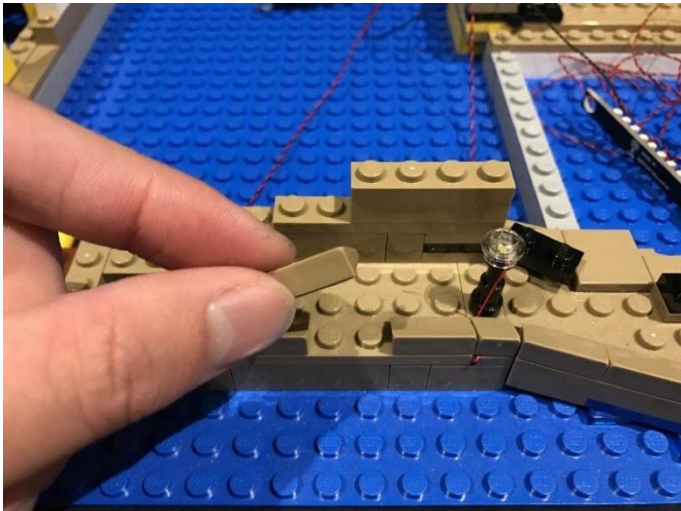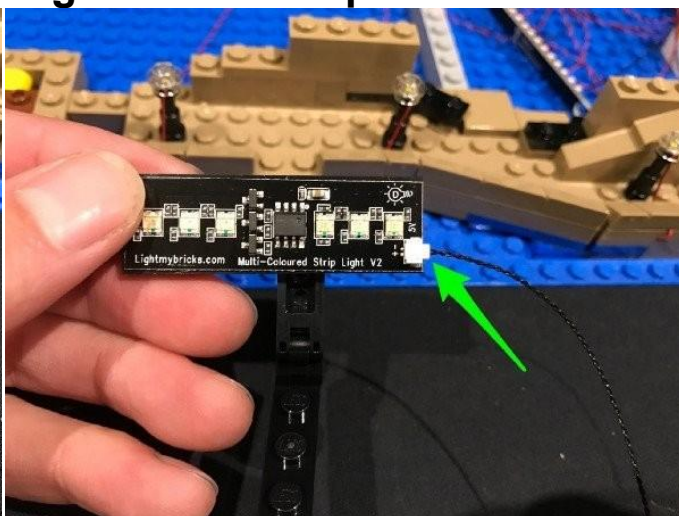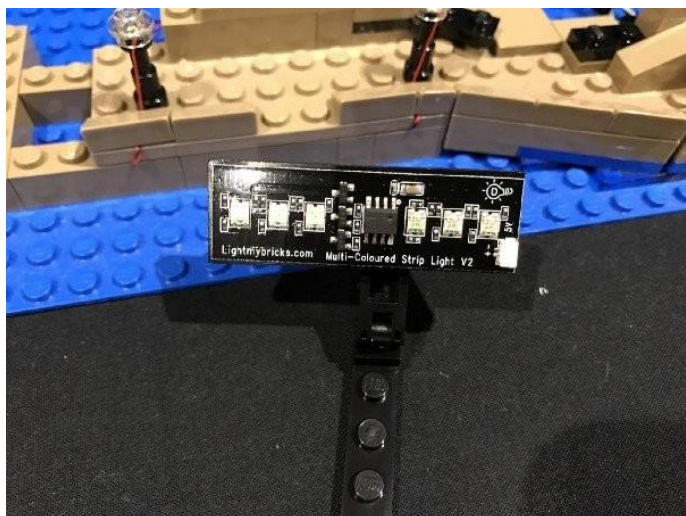
89. Locate the following provided   pieces and assemble them as below to make another spot light.
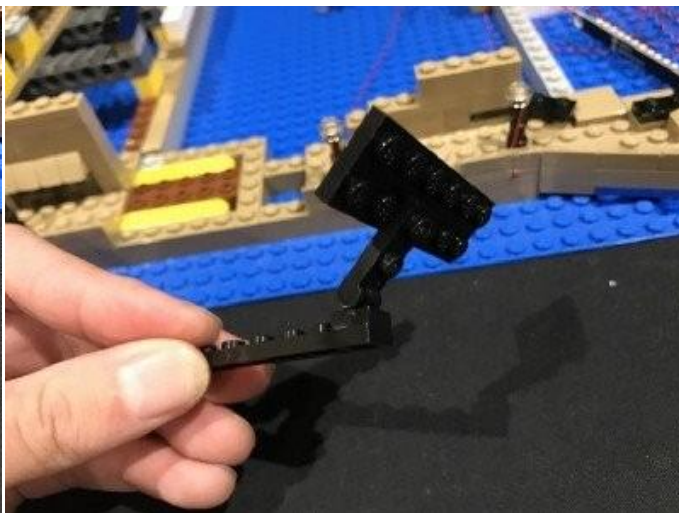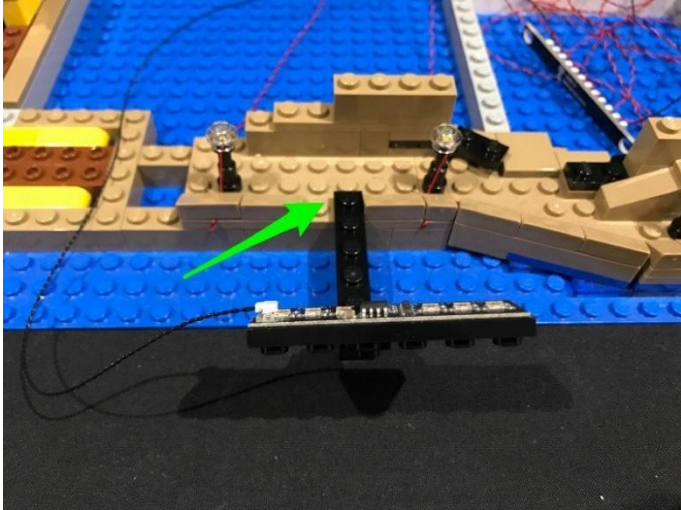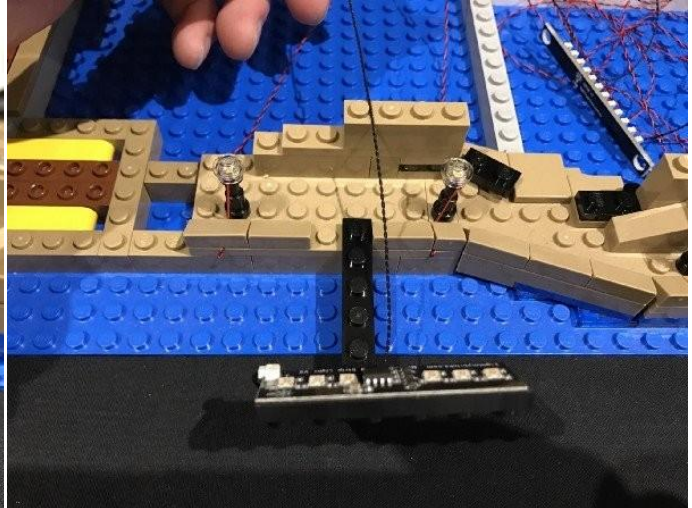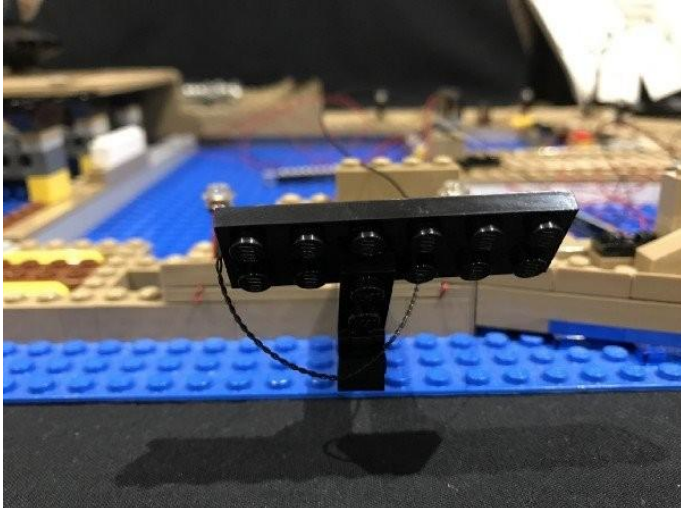
90

91. Stick another Multi-Coloured Strip Light to the base of the 2x6 plate and then connect a 30cm Connecting Cable to the port.
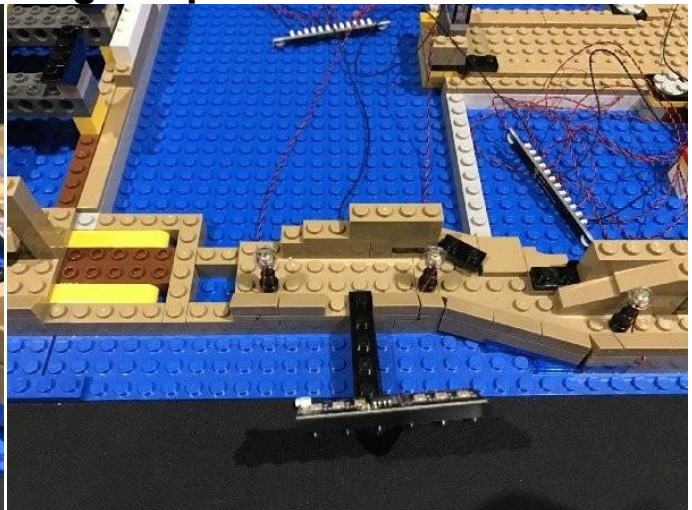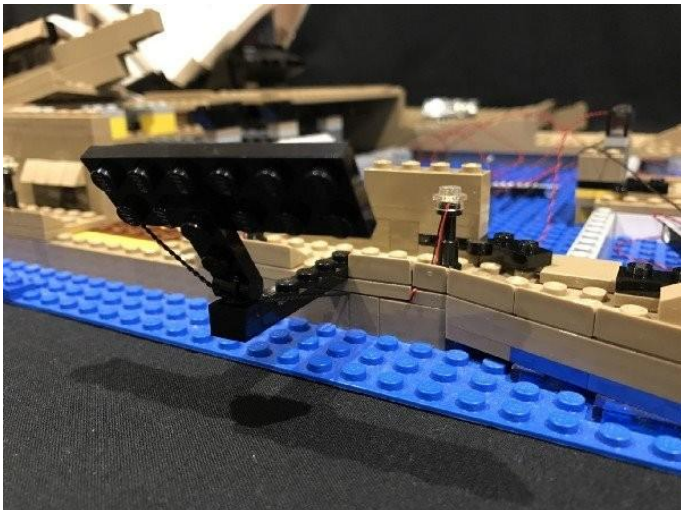
# 92. Reconnect the spot light to the following position.

93. Loop the 30cm connecting cable around the spot light and then pull toward the inside of the set as per below.


94. Disconnect the plate underneath again and then lay the spot light cable underneath before reconnecting the plate.

95. Move on to the next lamp post toward the left and lay cable for the lamp post underneath the plate before reconnecting.
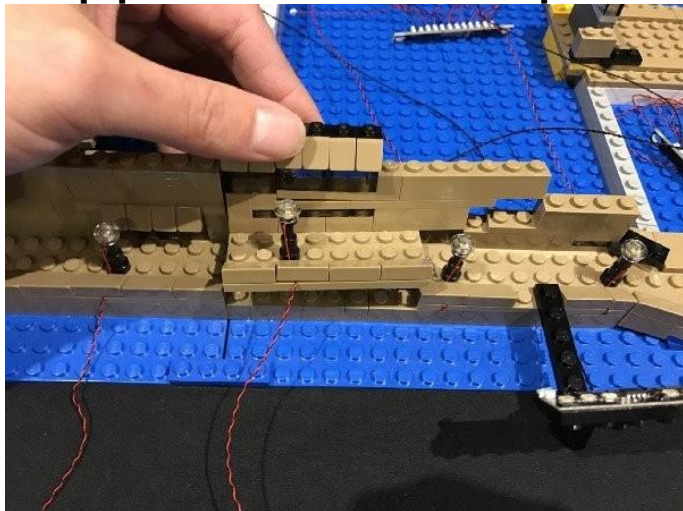

96. Locate the other end of the 30cm Connecting Cable we connected to the very first 12-port Expansion board we used and then connect it to the last remaining 12-port Expansion Board.
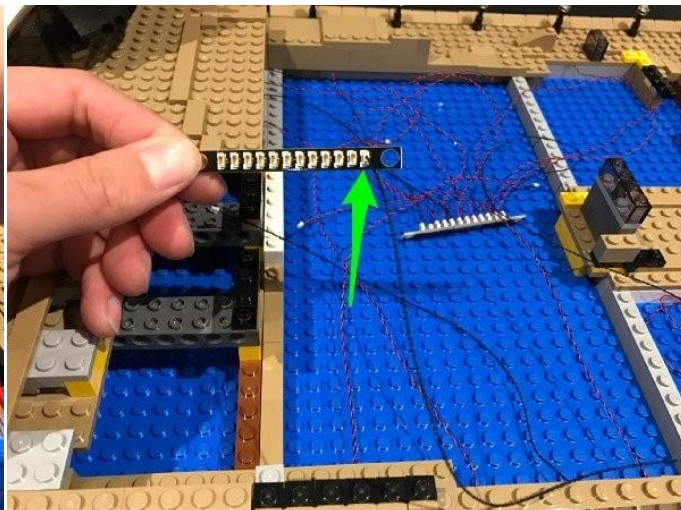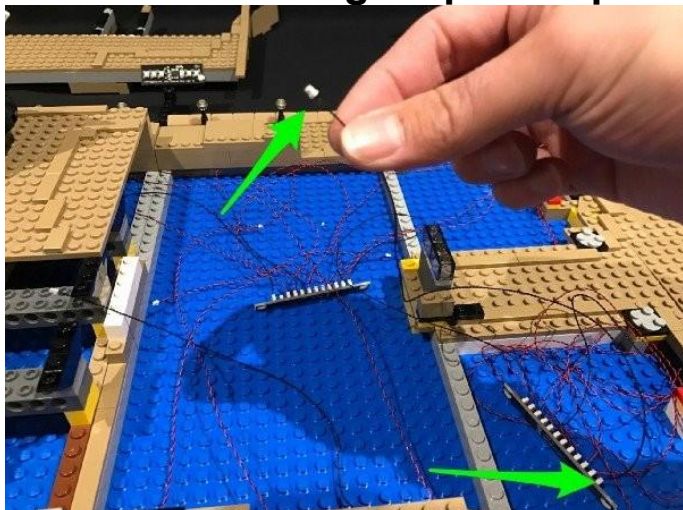

97. Connect the three lamp cables we have secured down, as well as the spot light cable to the expansion board.
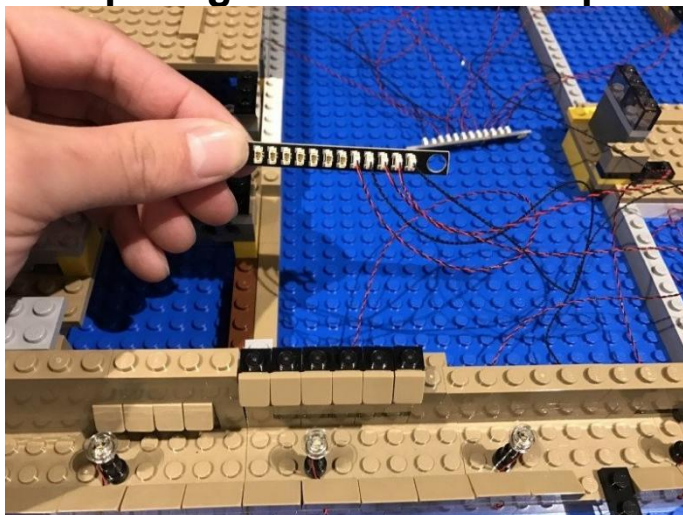
98. Take this time to test all the lights we have installed so far and to ensure everything is properly connected. To do so, take the 30cm USB Cable and connect it to a spare port on the 12-port expansion board. Connect the other end to your USB power bank and ensure all lights are working OK.
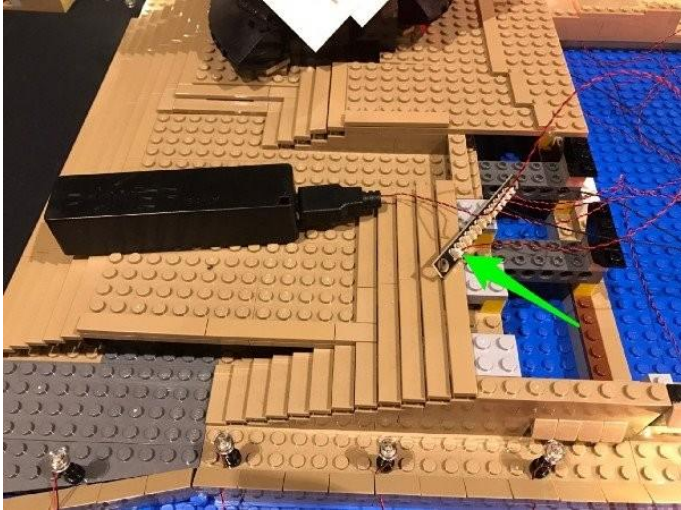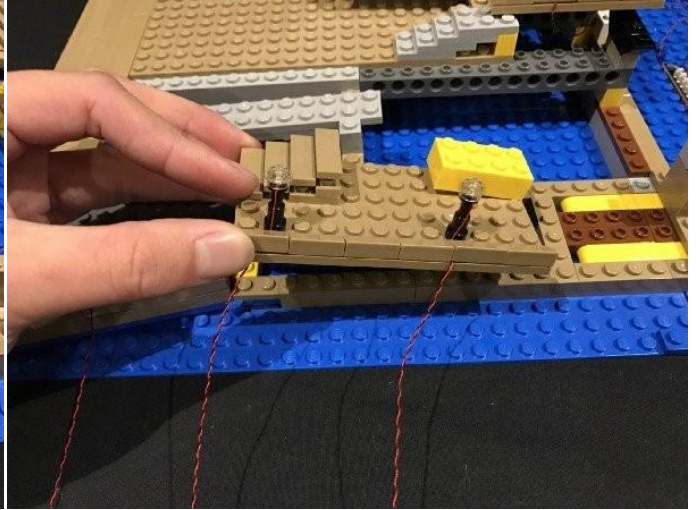

99. We will now move onto connecting the rest of the lamp posts as well as the final spot light. In order to do so, we will need to remove sections to lay the cables underneath. Follow the below example images to remove sections.
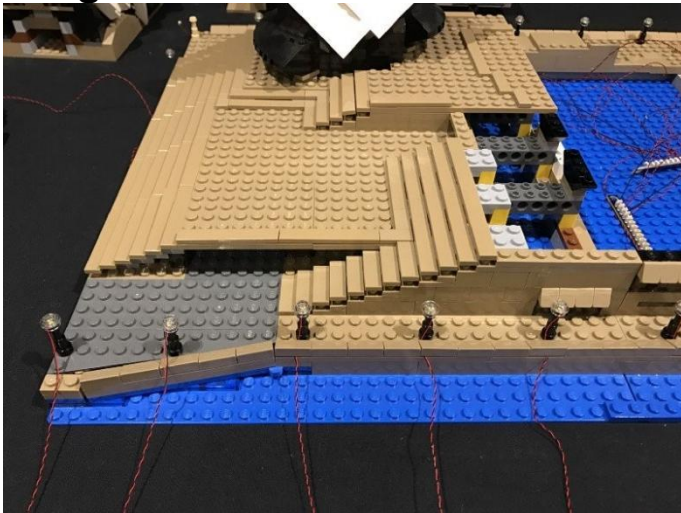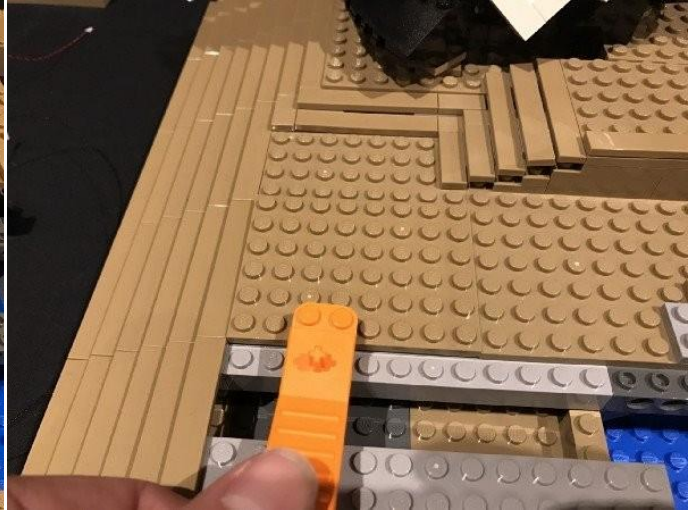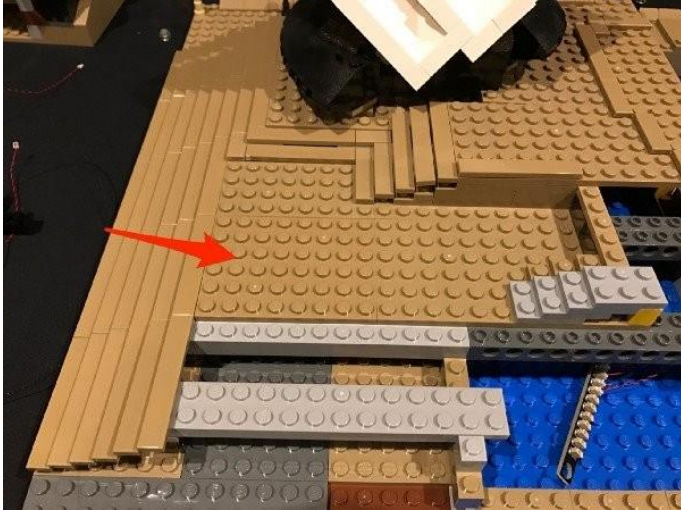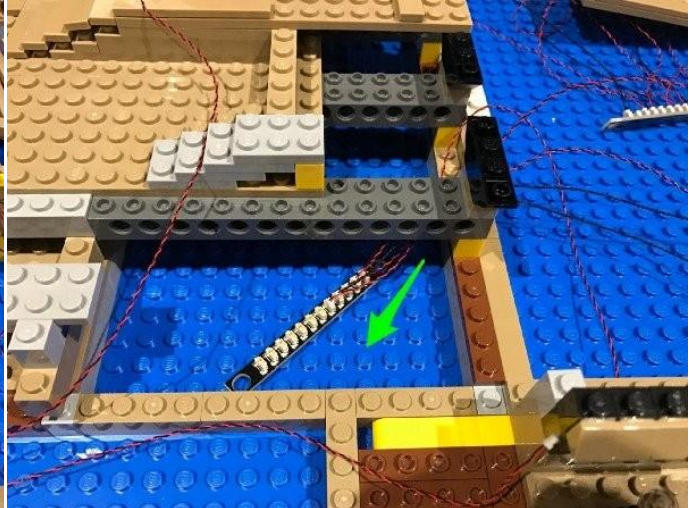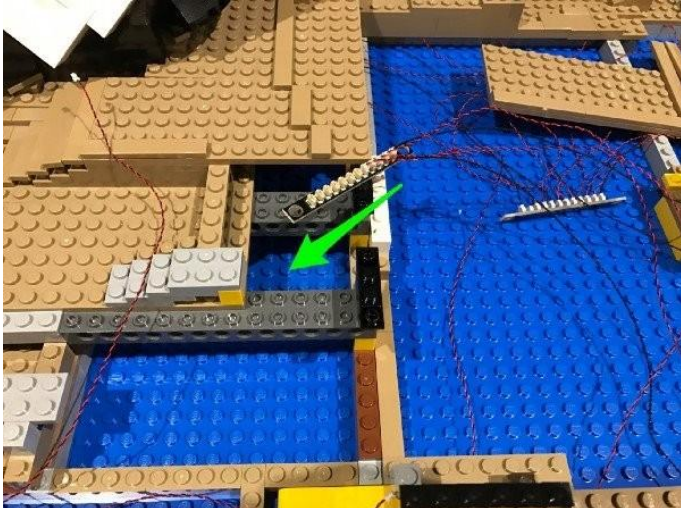
100
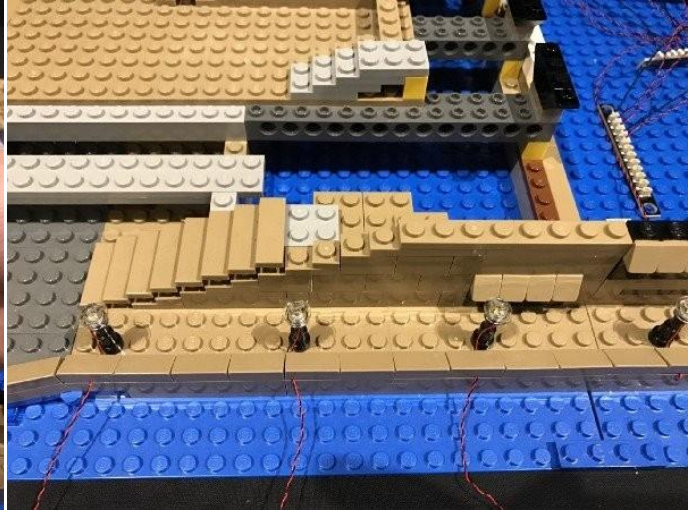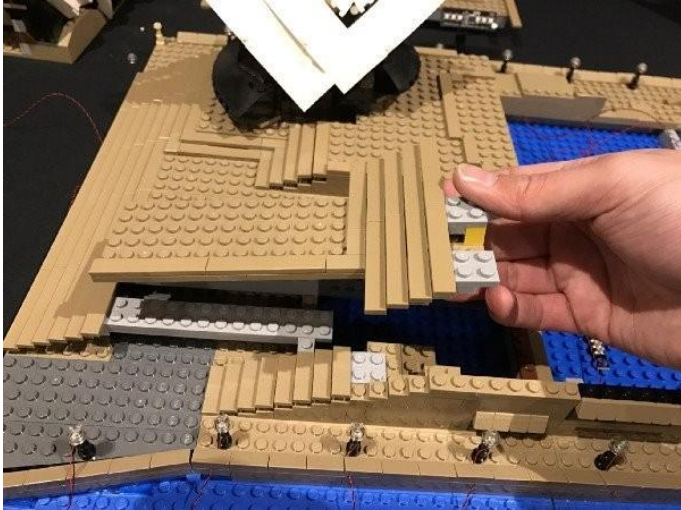
101

102

103

104. Take the 12-port Expansion Board closest to you and then bring it across to the left by threading underneath the following section.
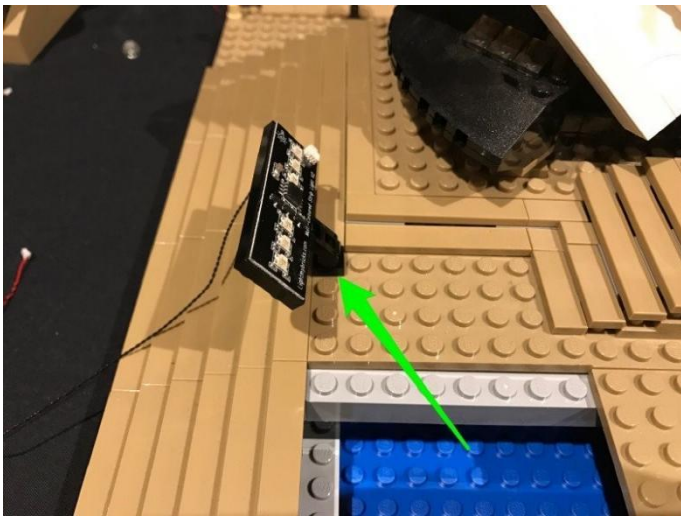

105. Locate the remaining provided pieces and then assemble them as per below to make up a spot light.

106.Stick another Multi-Coloured Strip Light to the base of the 2x6 plate and then connect a 30cm connecting cable to the port.
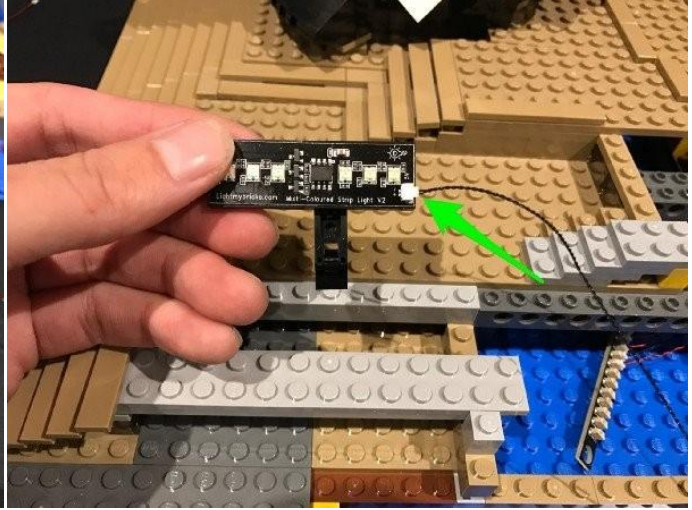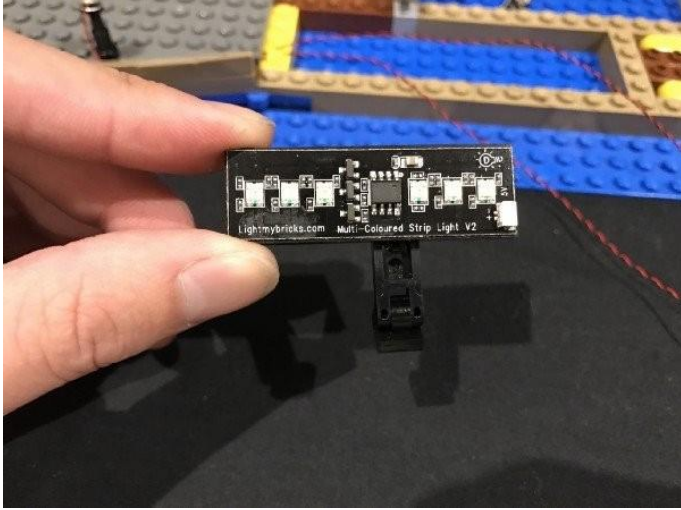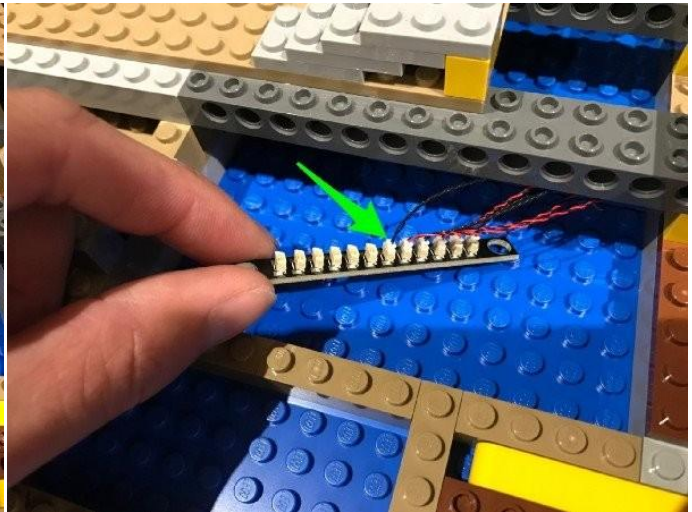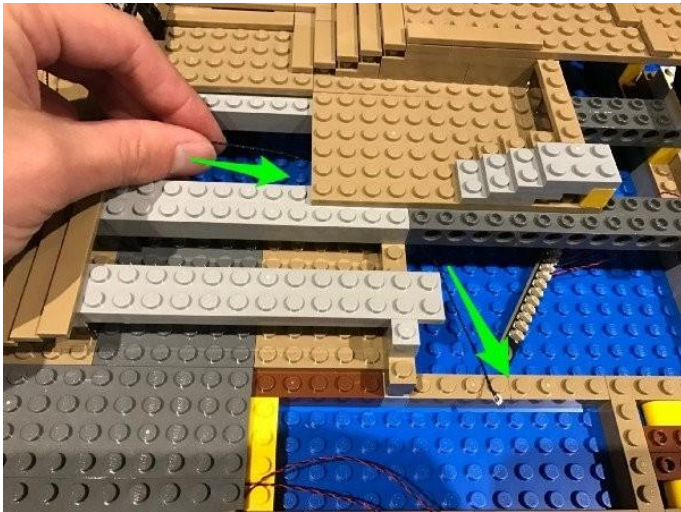
107. Connect the spot light to the following position facing the Opera House.

108. Loop the cable behind the spot light and then pull towards the inside. Thread the cable underneath the following section and then connect it to a spare port on the 12-port expansion board
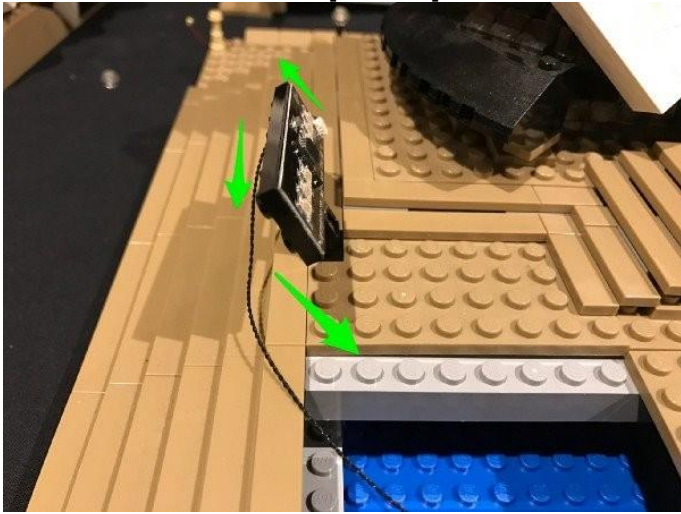

# 109

110. Carefully reconnect the 6x8 plate we removed earlier. The cable should fit nicely between plates. Take caution and ensure you do not forcefully connect the plate and snap the cable.
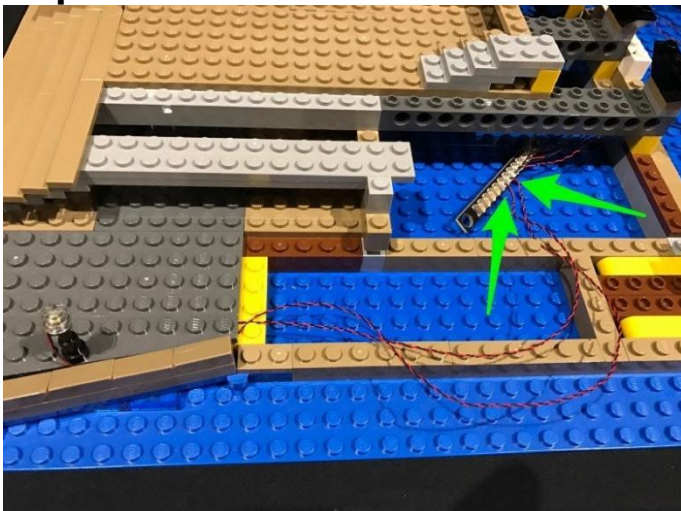
111. **Start with the two lamp posts on the far left. Disconnect the plate and then lay cables underneath and ensure the cables underneath are laid in between studs before reconnecting the plate.**
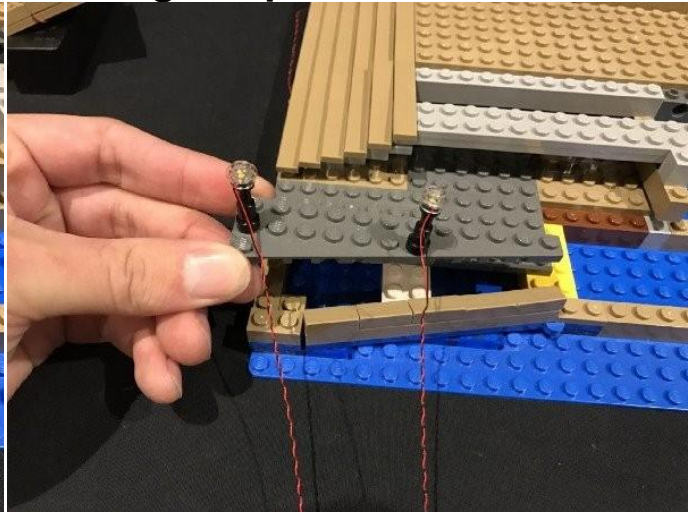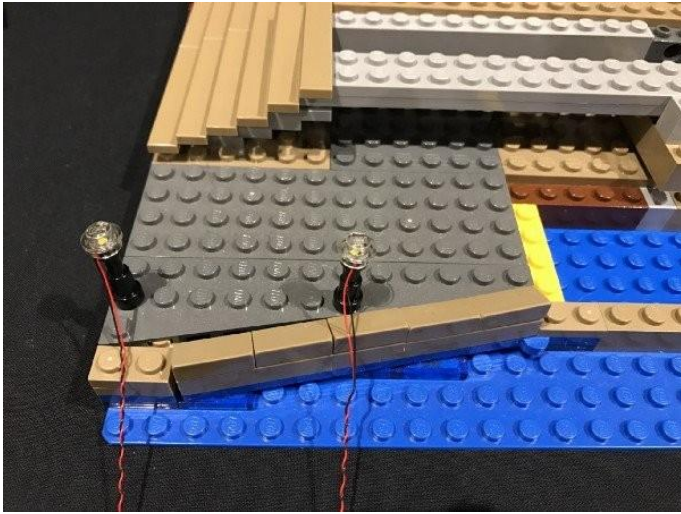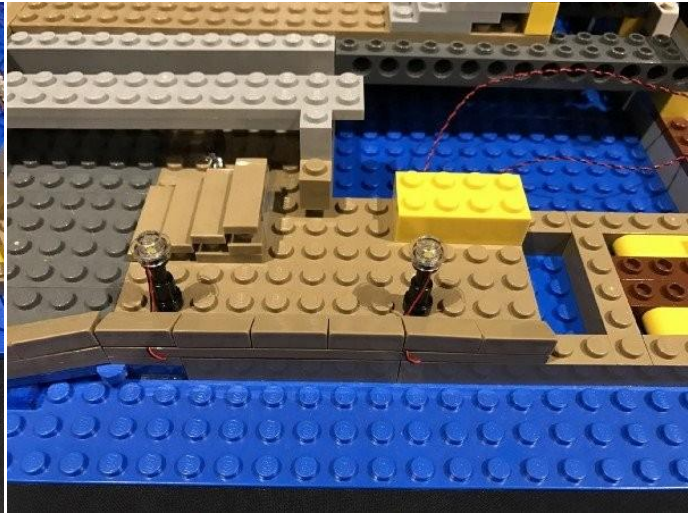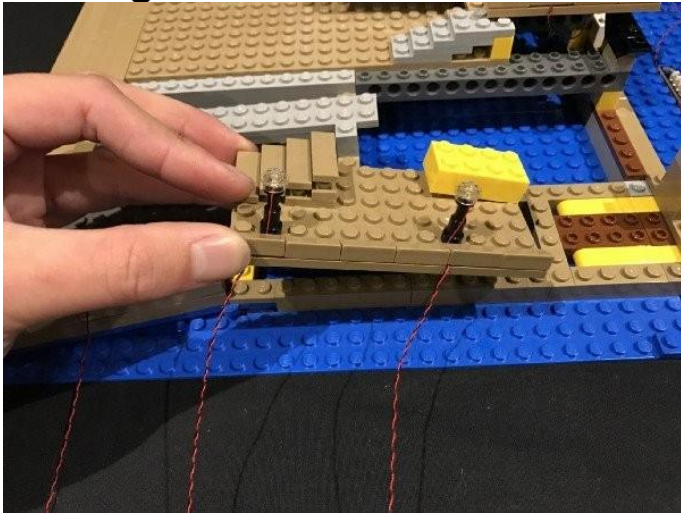

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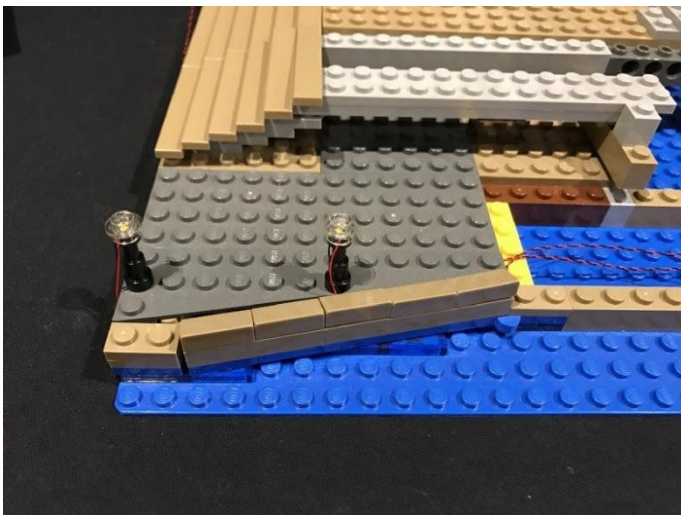
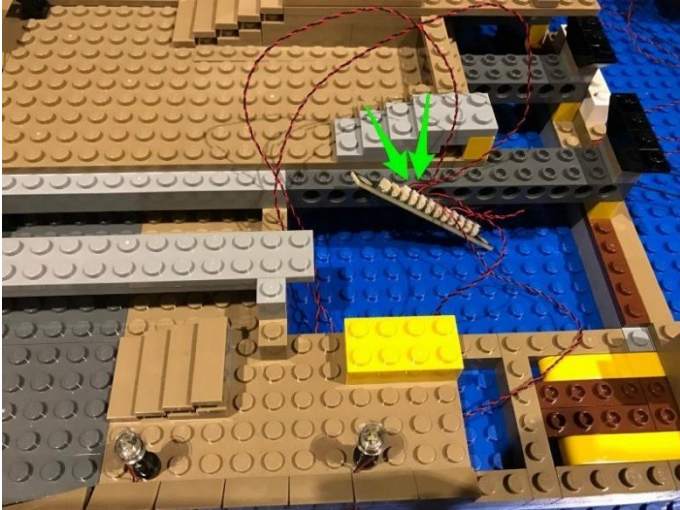**113.** **Connect the cables for these two lamp posts to the 12-port Expansion Board.**

114. Secure cable for the next two lamp posts along by first disconnecting the plate and then laying the cables underneath before reconnecting the plate. Ensure the two cables are neatly laid and coming out underneath.
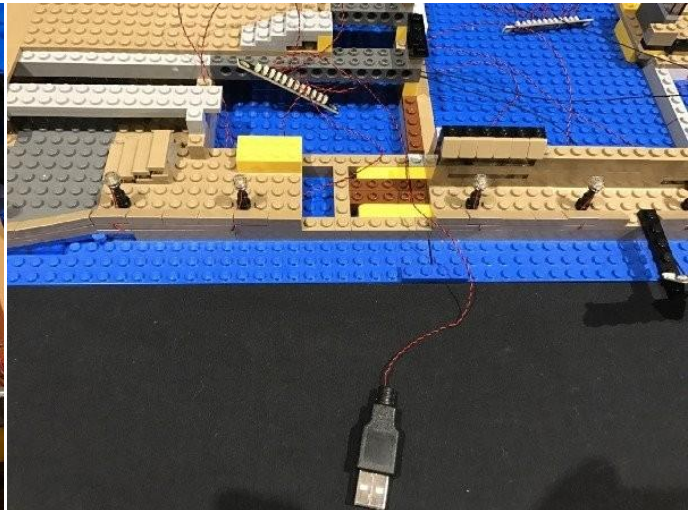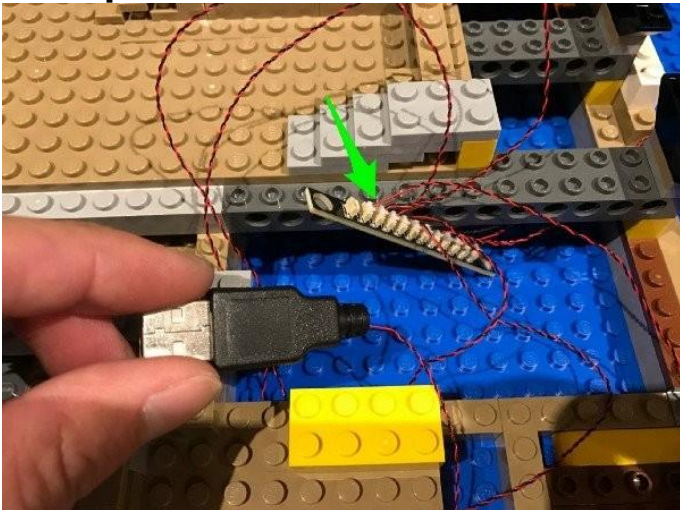

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**116.**Connect the two lamp post cables to the expansion board.

117. Take the USB Cable and connect it to the expansion board. Lay the cable down with USB plug facing outside. This will be where the USB power Bank will sit.

118. Reconnect the remaining lamp post section ensuring you lay the cable underneath the plate. Ensure you also have plenty of length for the USB Cable.
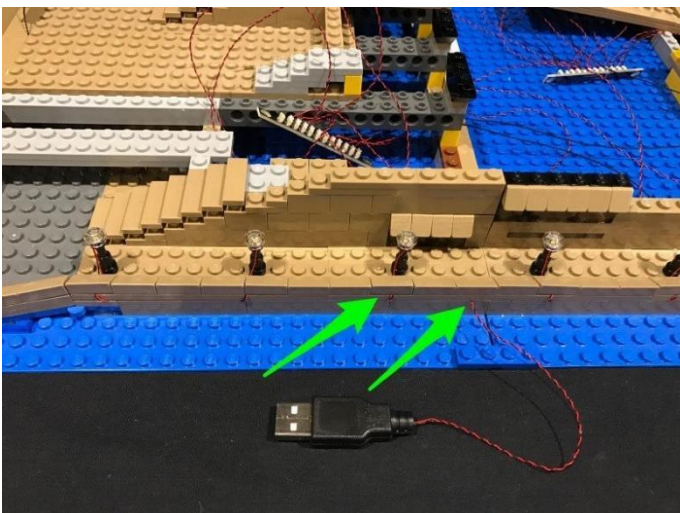
119. Connect the remaining lamp post cable to the last port on the expansion board.
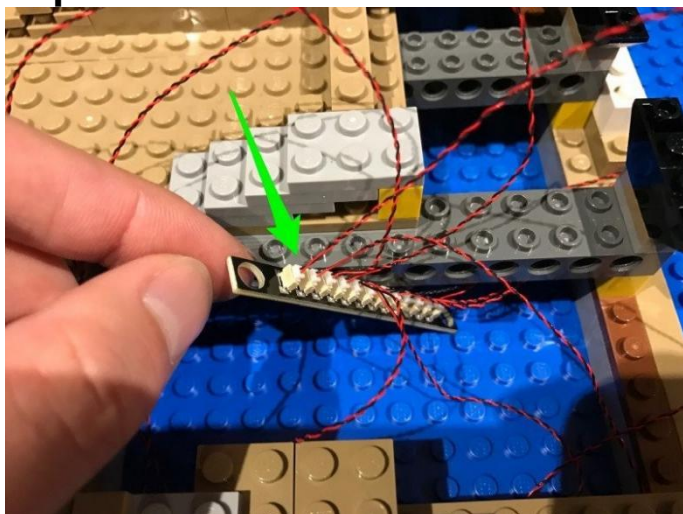

120. Tuck all the cables and expansion board underneath sections as neatly as you can ensuring there no loose wires.

121. Before we start reconnecting all the sections we removed, take this time to test all the lights we have installed so far and to ensure everything is properly connected. Connect the USB Cable to your USB power bank and ensure all lights are working OK.
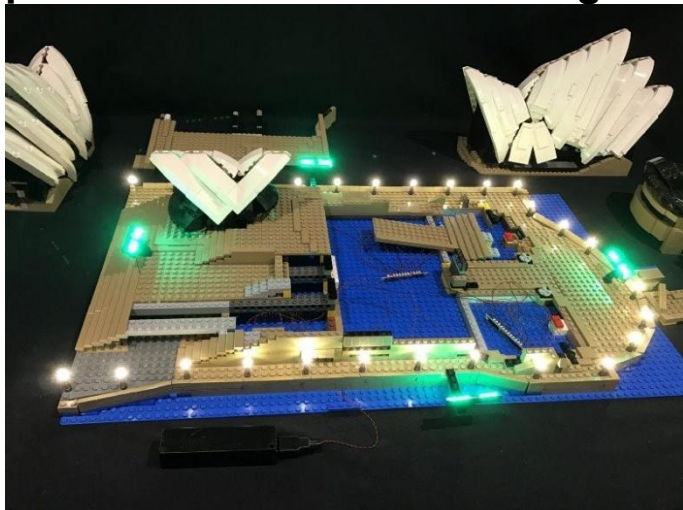
122. We can now start reconnecting all the sections we removed earlier. Follow the below images to reconnect sections in order.
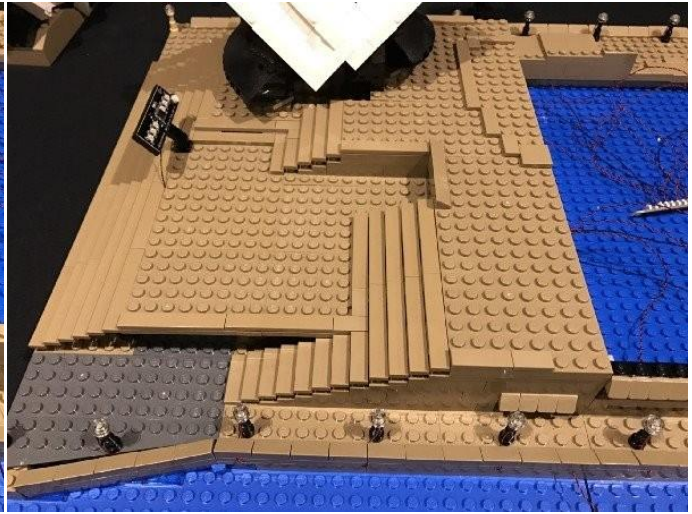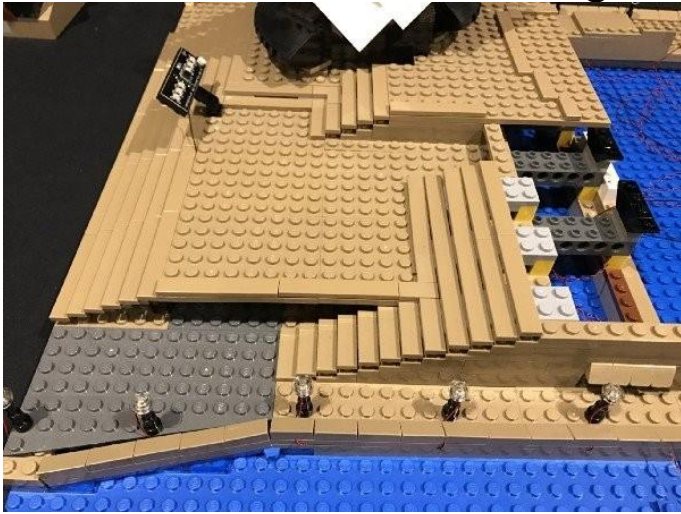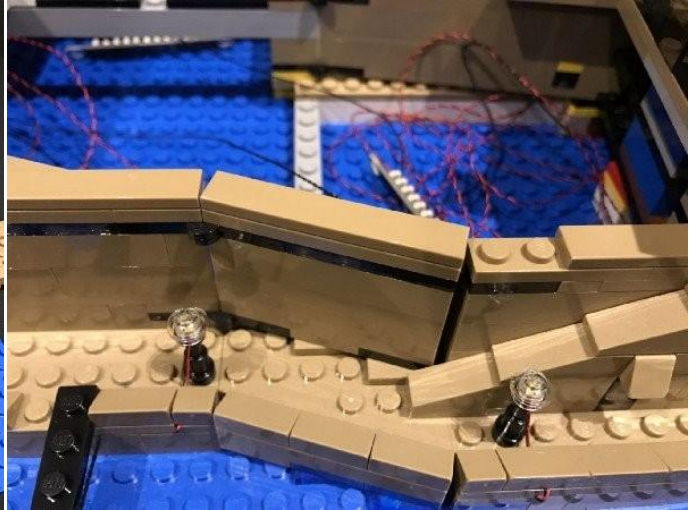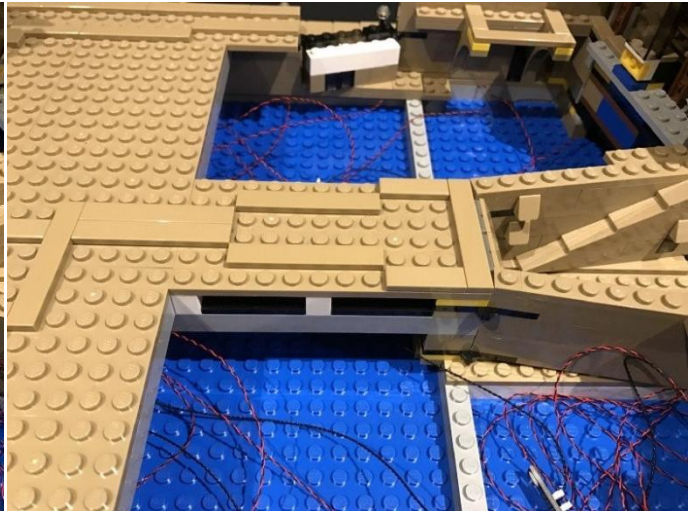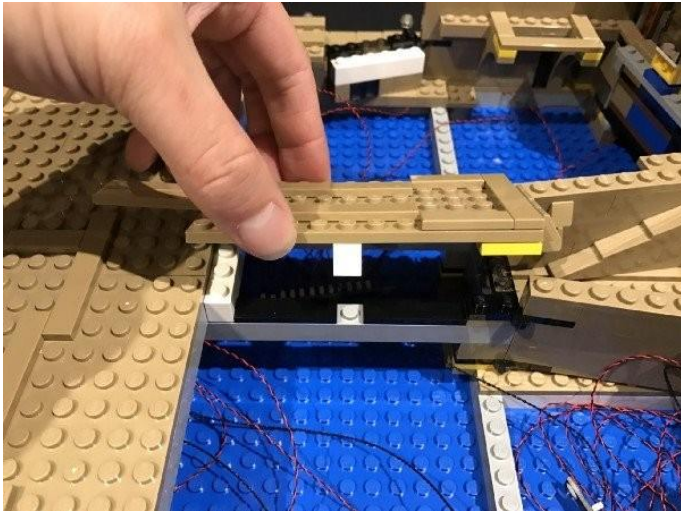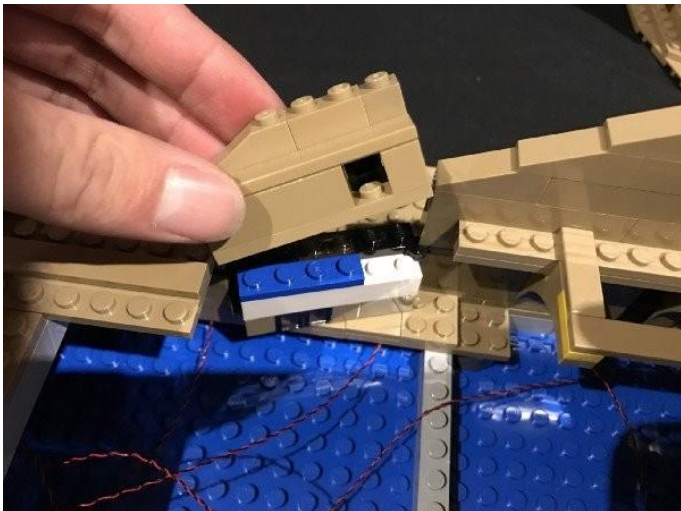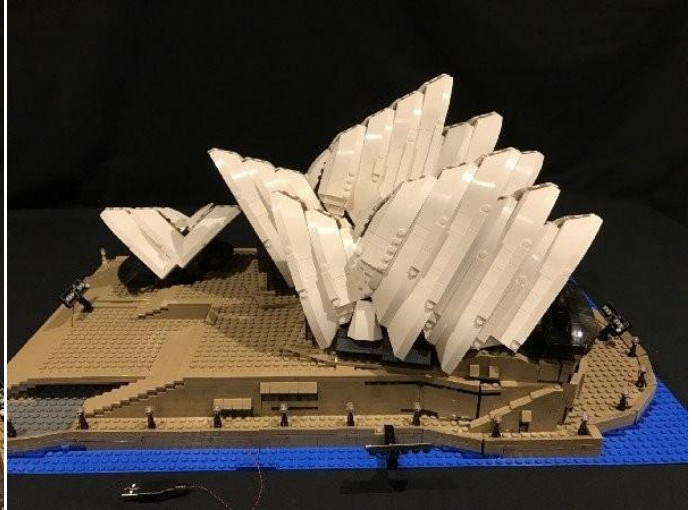

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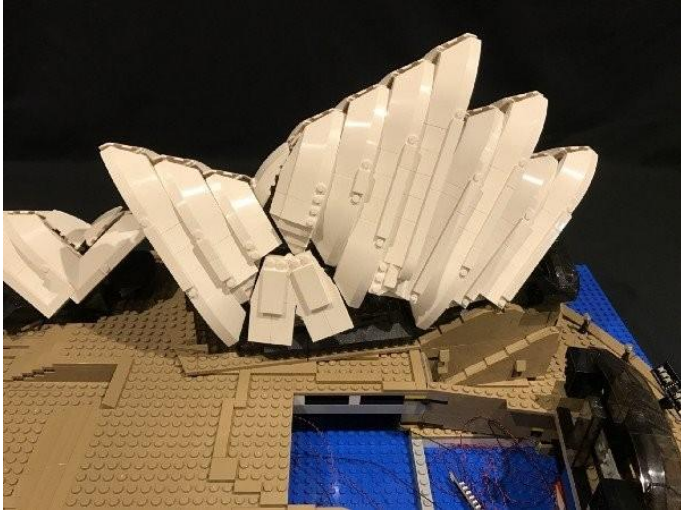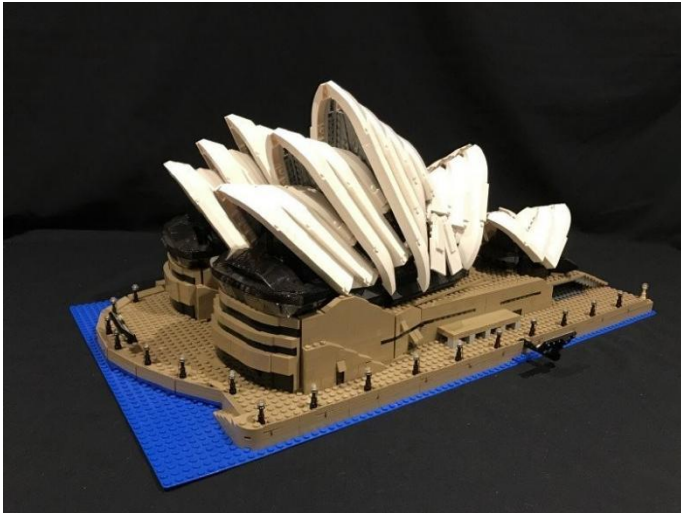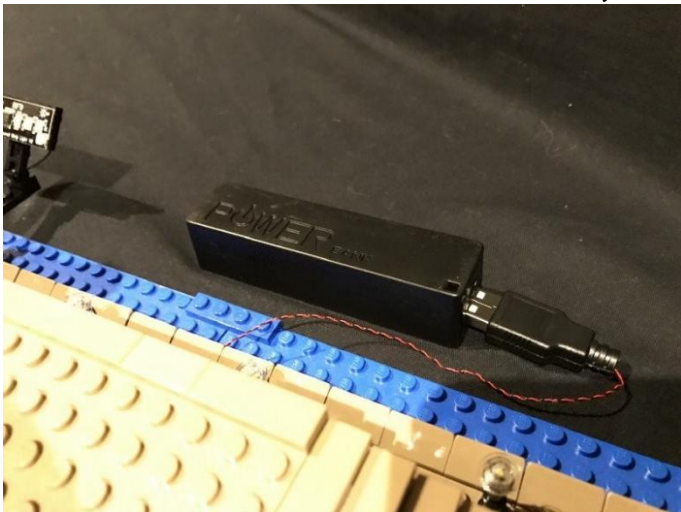**124**

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130. This finally completes installation of your Sydney Opera House Lighting Kit. You can now position your USB power Bank behind, connect the USB Power Bank, and ENJOY!

Good job, you've done all the installation steps, power it up and enjoy your work.