

Sydney Opera House #10234

Package contents:

28x White 30cm DotLights

4x Multi-Coloured Strip Lights

3x 12-Port Expansion Boards

1x 6-Port Expansion Board

7x 30cm Connecting Cables

1x 30cm USB Cable

Plate Pieces:

2x Plate 1x6, Black

4x Plate 2x6, Black

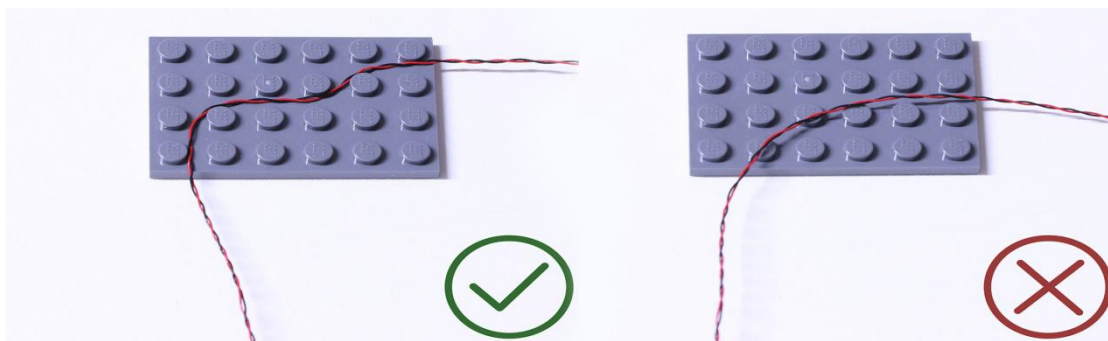
4x Plate, Modified 1x2 with handle on End—Close Ends, Black

4x Tile, Modified 1x1 with Clip, Black

Note:

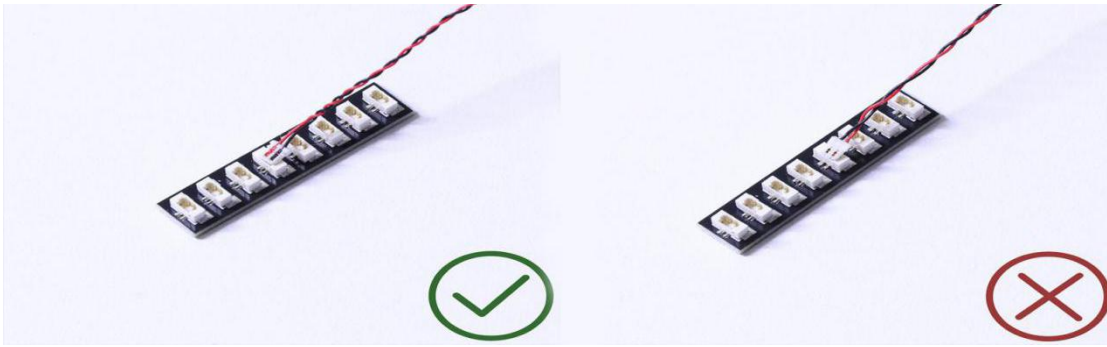
Place wires on the surface or under the LEGO building blocks.

The wire can be placed between the building blocks or under the block, but they should be placed between the studs correctly.

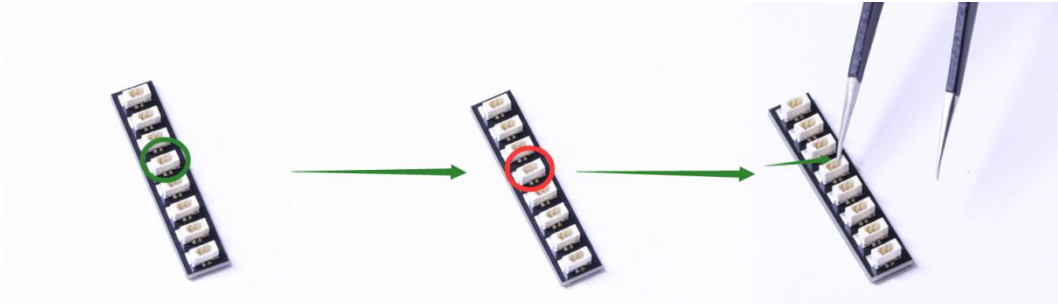


Insert the connectors to the ports.

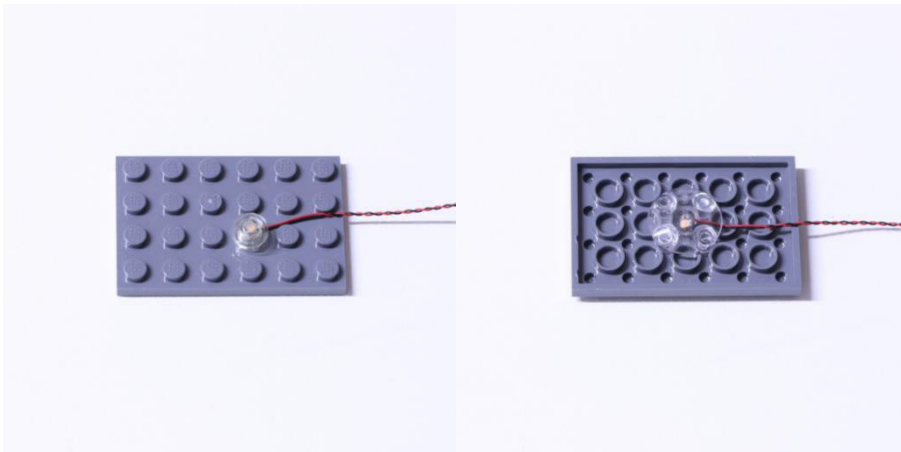
Be careful when you are operating, there's only one correct way to insert, make sure the expansion board is upward, find the soldered "=" sign on the left of the port. When you are inserting, the side which the wires can be seen should be faced to the "=" sign and if you feel hard to insert, please stop, and don't force it, for that may result in bent pins inside the port or overheating of the expansion board.



At this point, use the tweezers to straighten the bent pins.

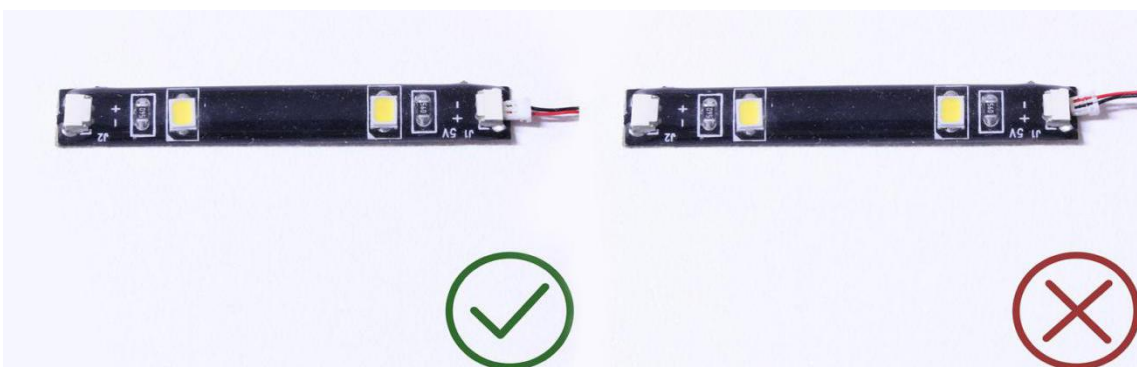


When installing dot lights, make sure they are correctly placed (Yellow LED package is exposed). You can put them either on the top of the studs or between studs.



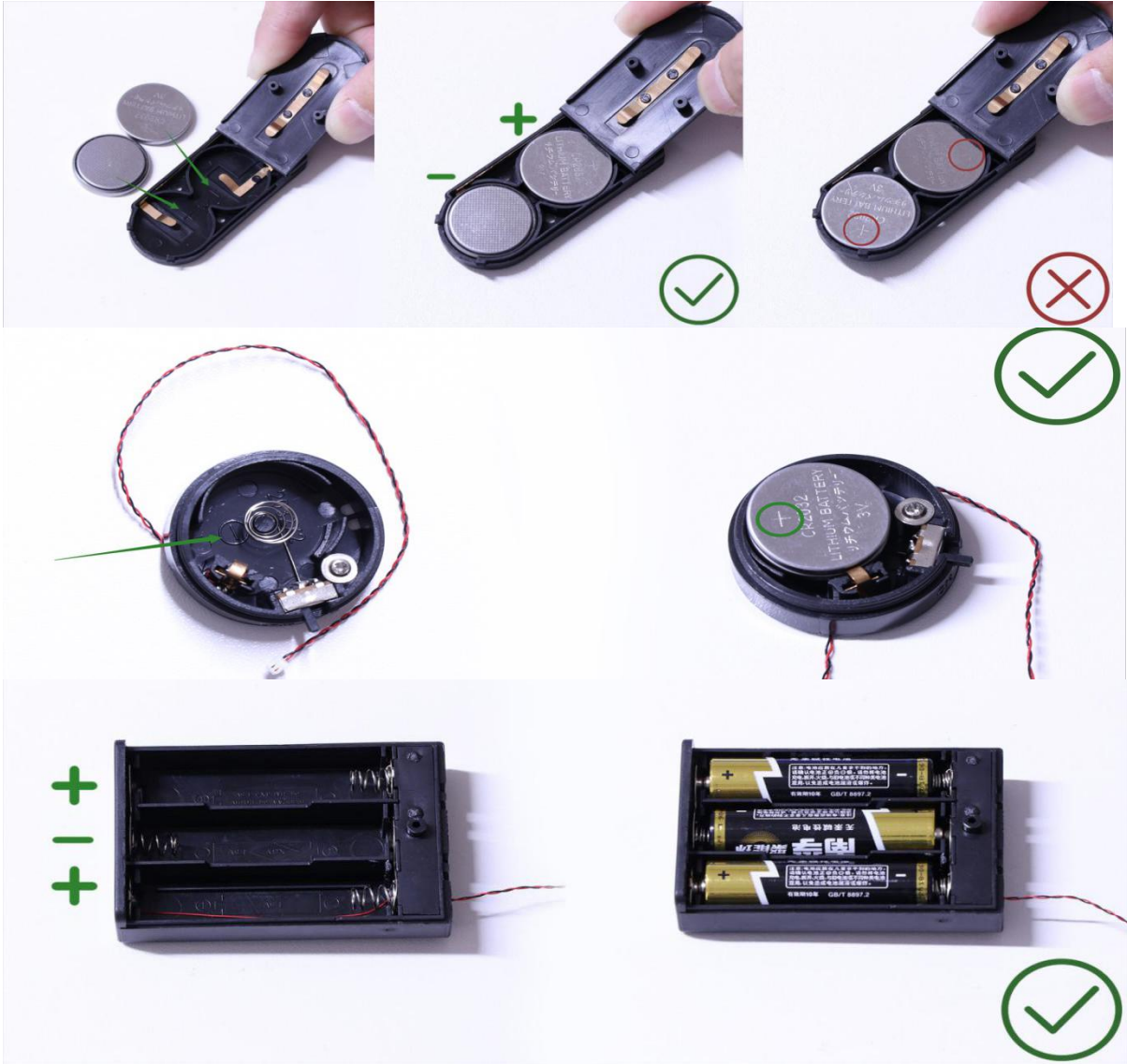
Connecting cable connectors to Strip Lights

Take extra care when inserting connectors to ports on the Strip Lights. Connectors can be inserted only one way. With the Strip Light facing up, ensure the side of the connector with the wires exposed is facing down. If a plug won't fit easily into a port connector, don't force it. Doing so will damage the plug and the connector.



Finally, please pay attention to the positive and negative terminals of the battery when installing the

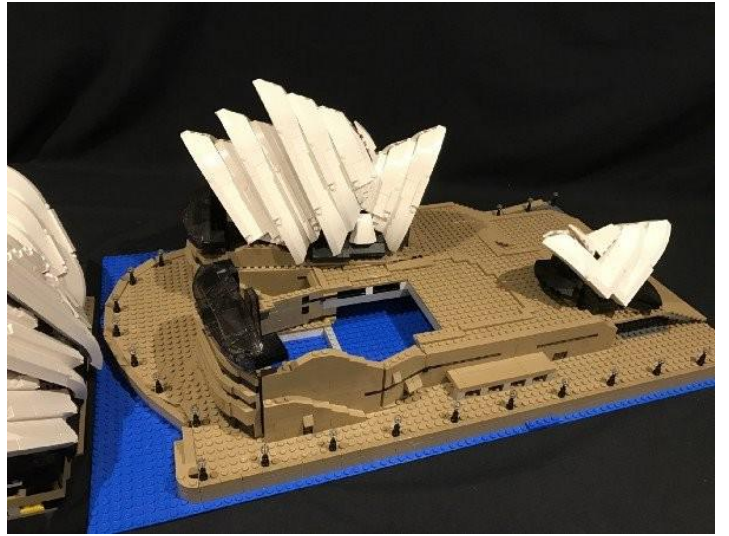
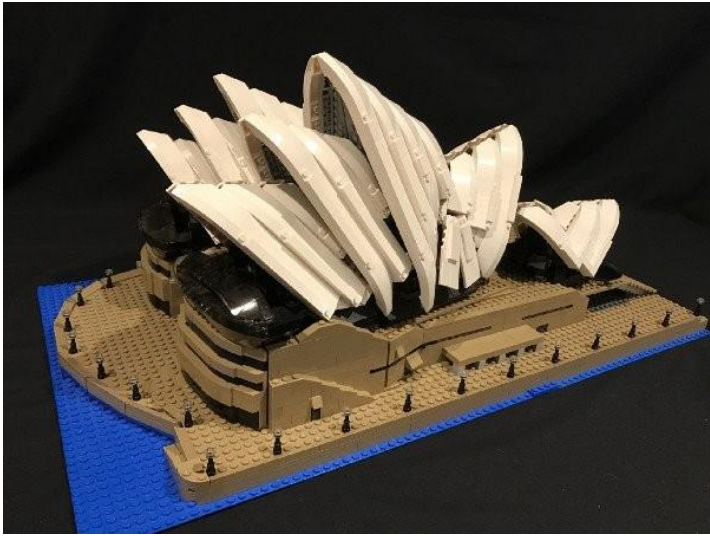
battery case.

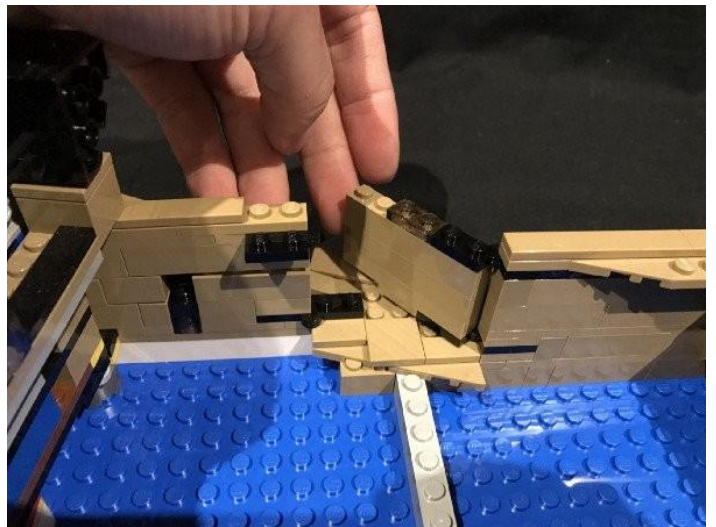
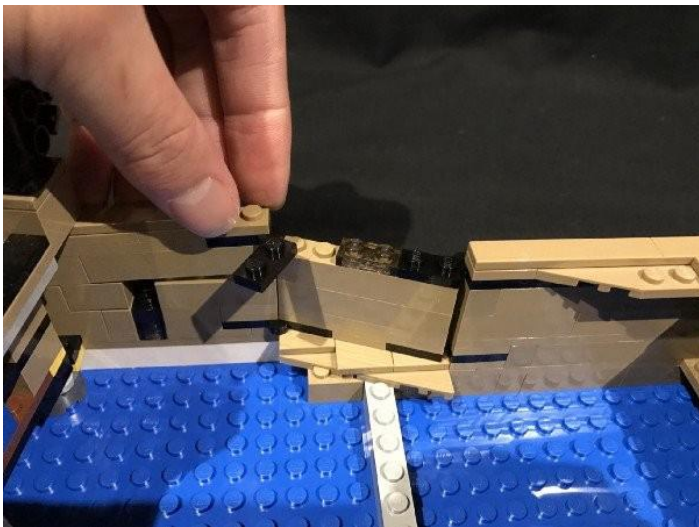
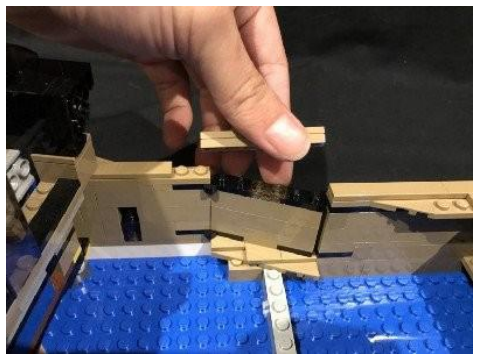
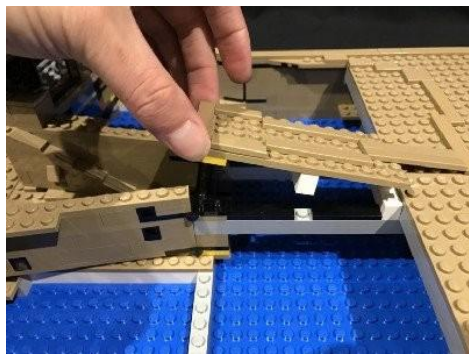
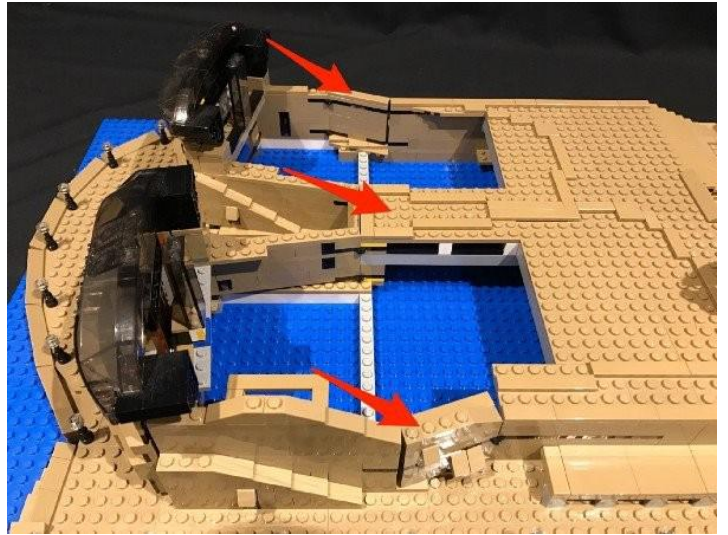
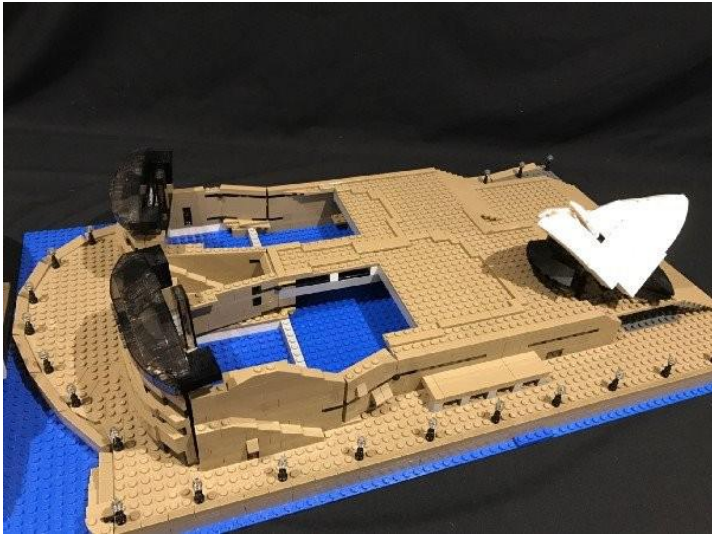


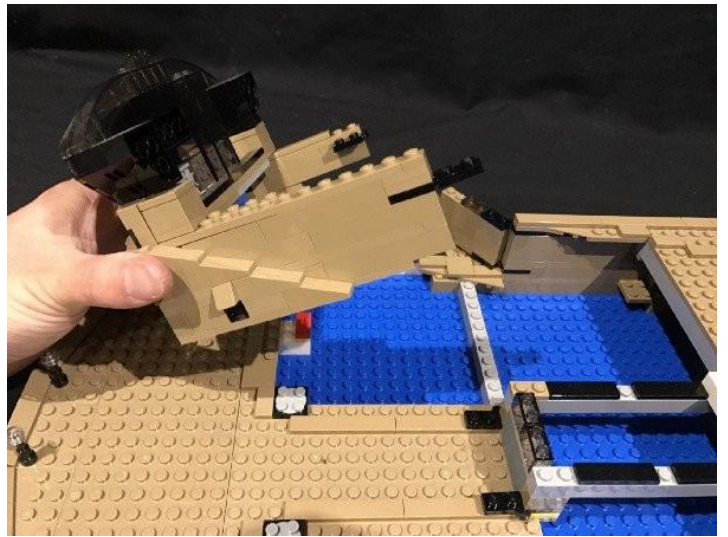
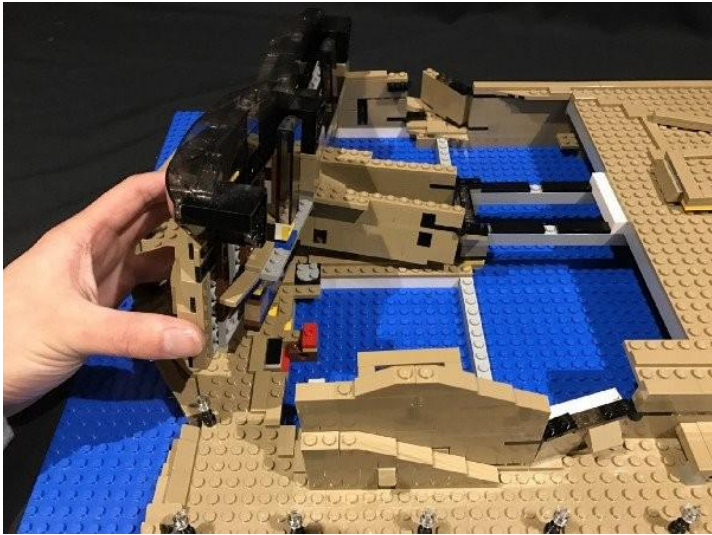
OK, Let's Begin!

Instructions for installing this kit

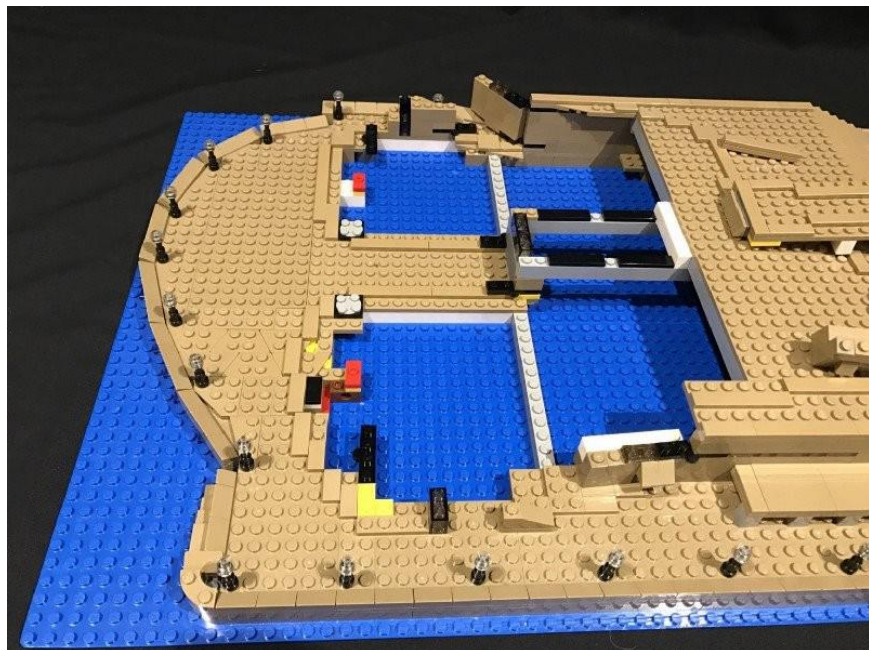
1.) In order for us to install lights to all of the lamp posts, we will need to remove several sections from the top of the base. This will also allow us to wire all the lighting and hide cables underneath. With the opera house positioned as per below, follow the images in order to remove sections.



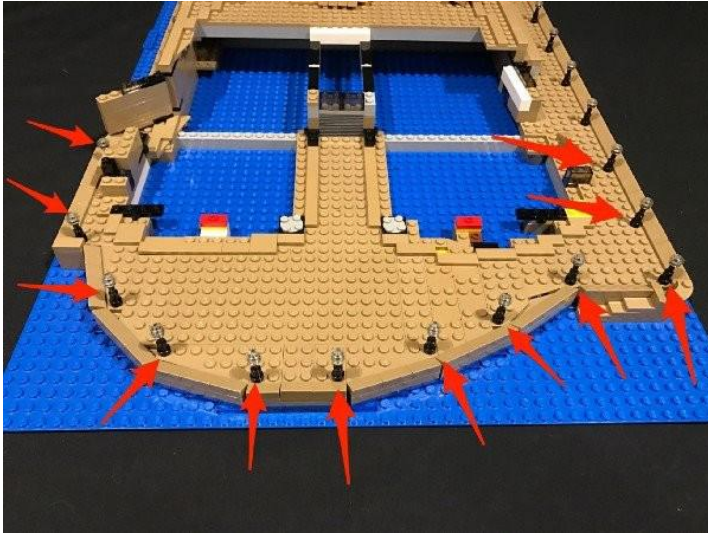




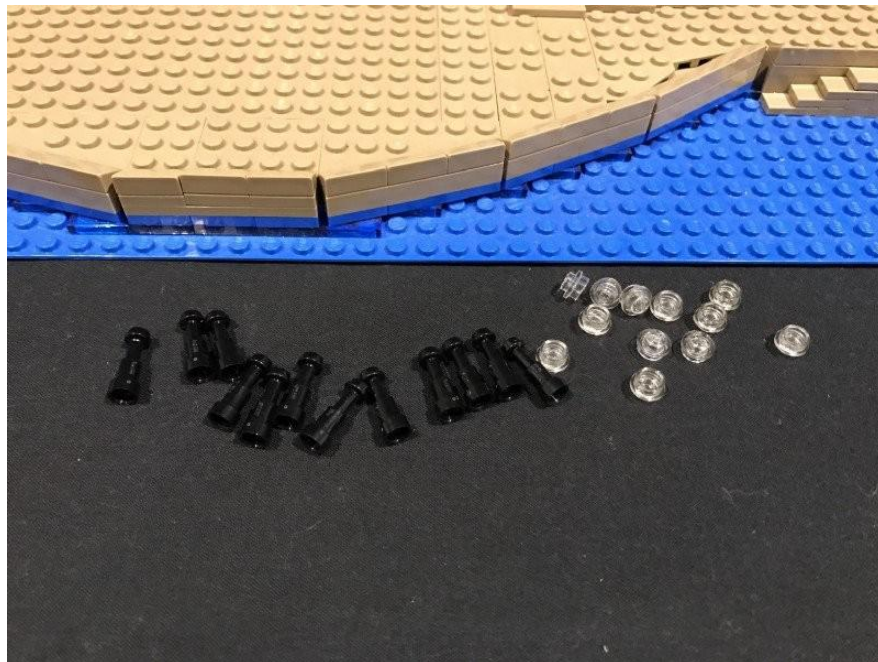
Your opera house should look similar to below



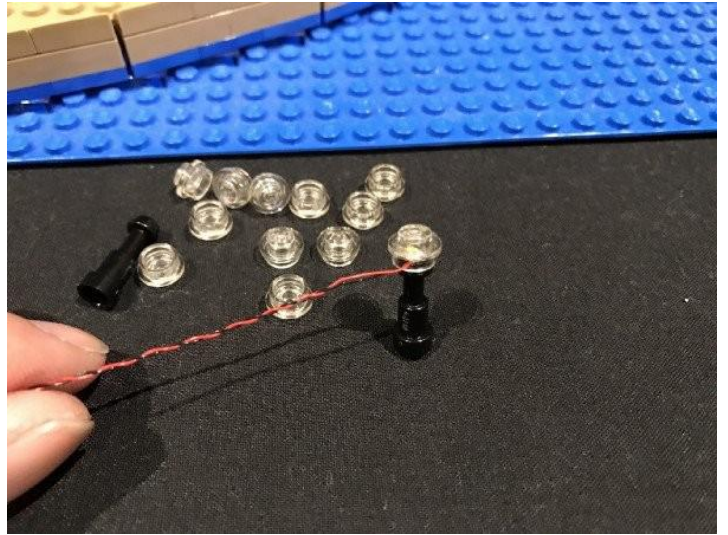
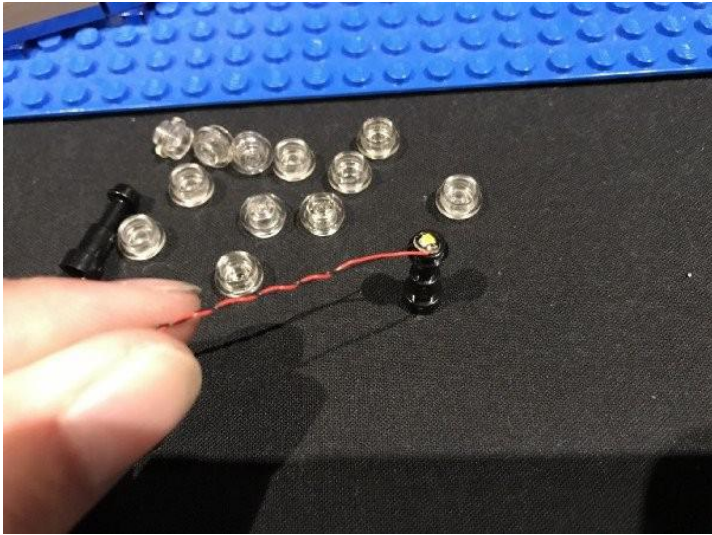
2.) Turn your set around so that you are facing the front and then remove the 12x pictured lamp posts.



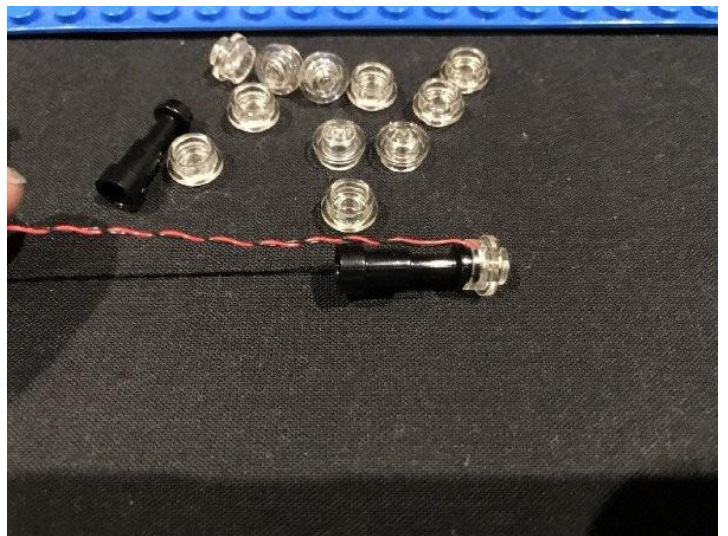
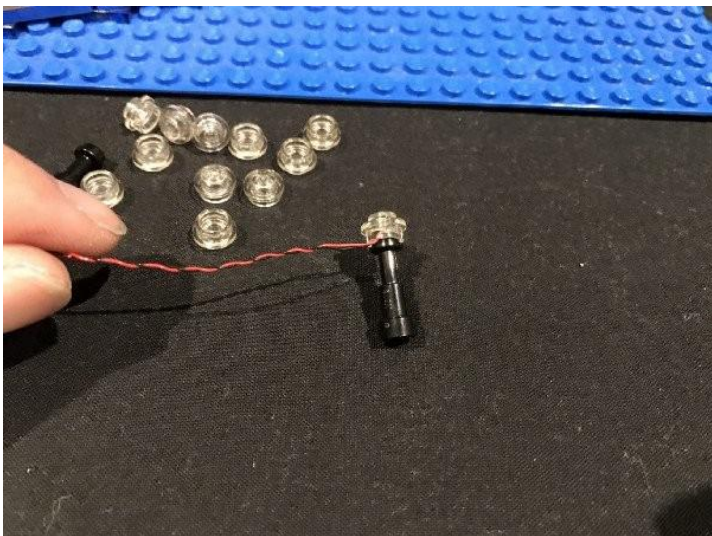
Disconnect the trans-clear round plates from all of the lamp posts



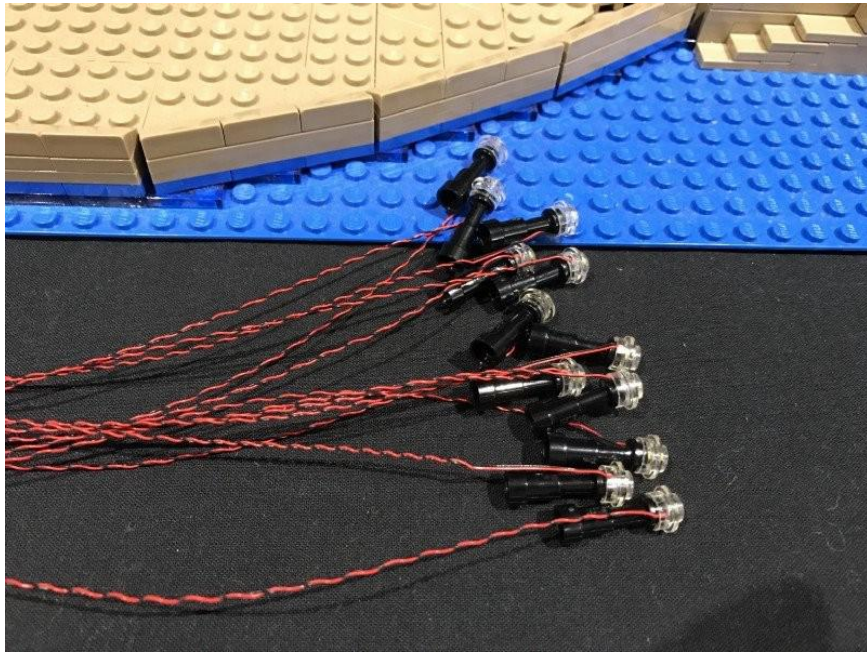
3.) Take a White 30cm Dot Light and place it directly over the top of one of the lamp posts. Secure the light in place by reconnecting a trans- clear round plate over the top.



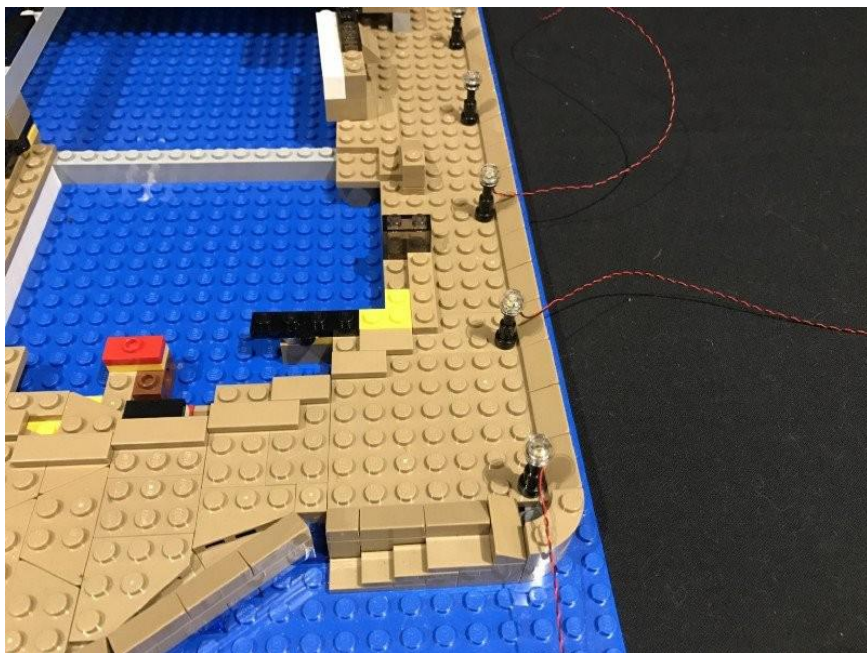
Push the cable down so that it is facing directly down.



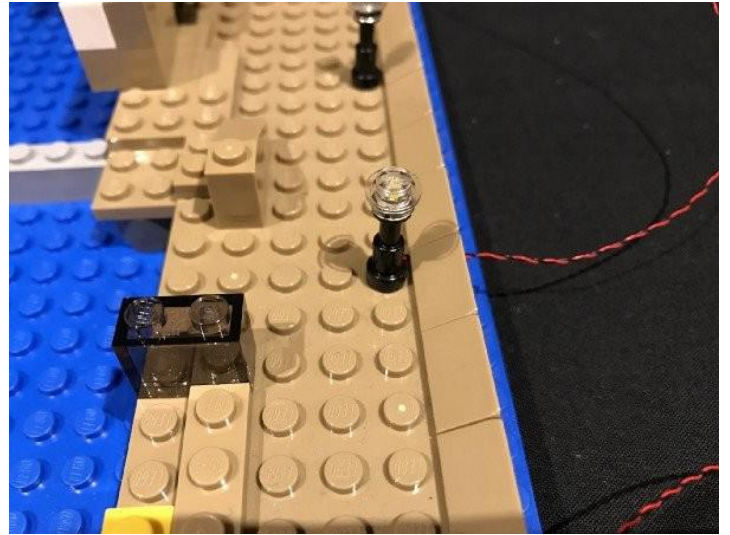
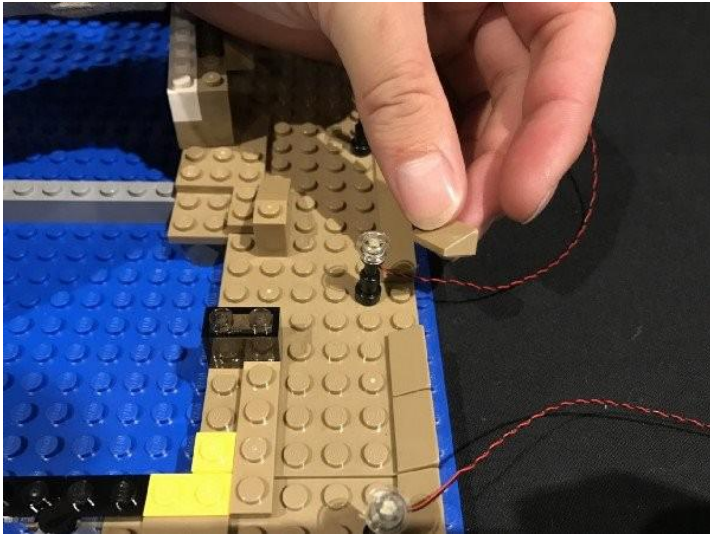
Repeat this step to install another 11x White 30cm Dot Lights to the remaining 11 lamp posts.



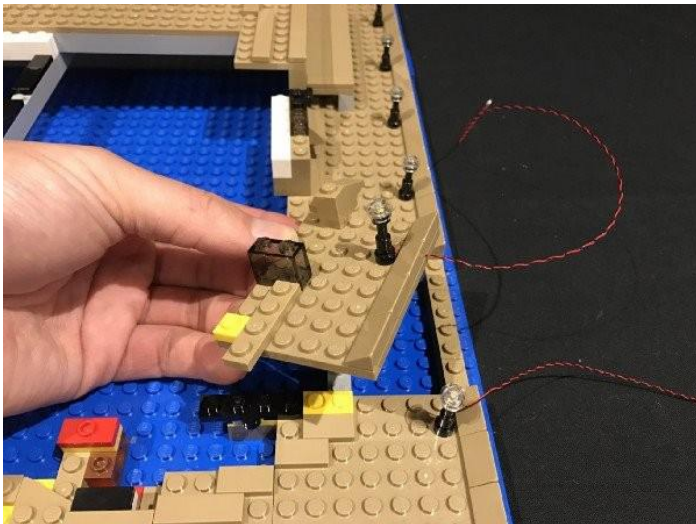
4.) Reconnect three of the wired lamp posts to the right side of the set. Ensure the cables are facing the outside as per below

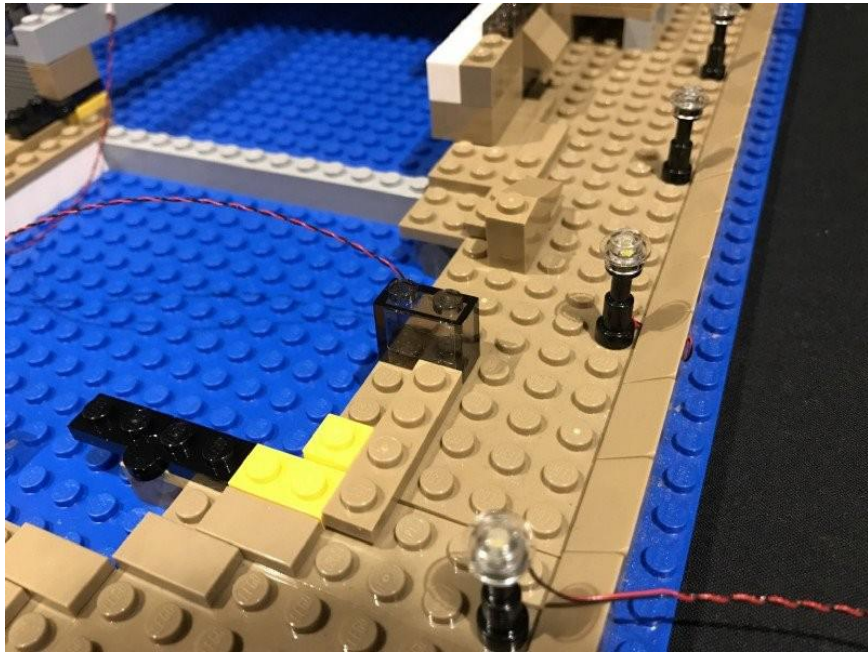


5.) Starting with the top lamp posts, hide the lamp post cable underneath the following tile next to it. Ensure the cable is laid in between studs before reconnecting the tile over the top.

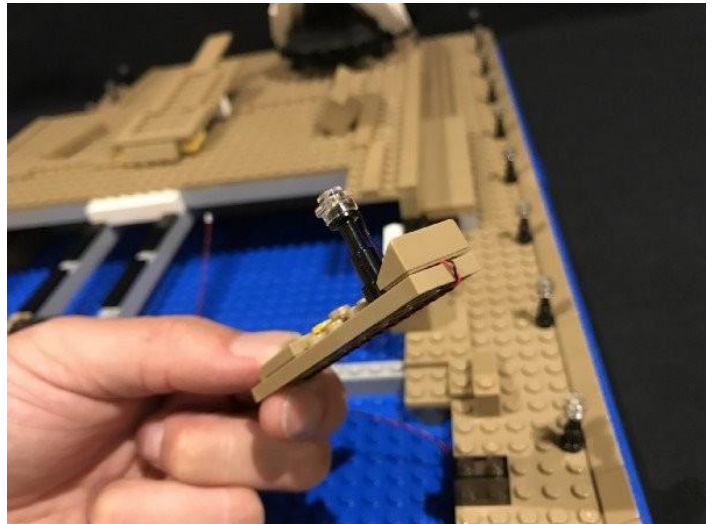
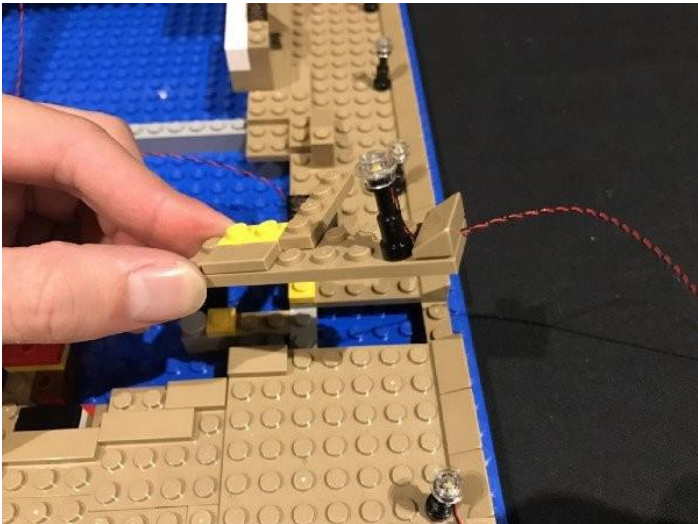
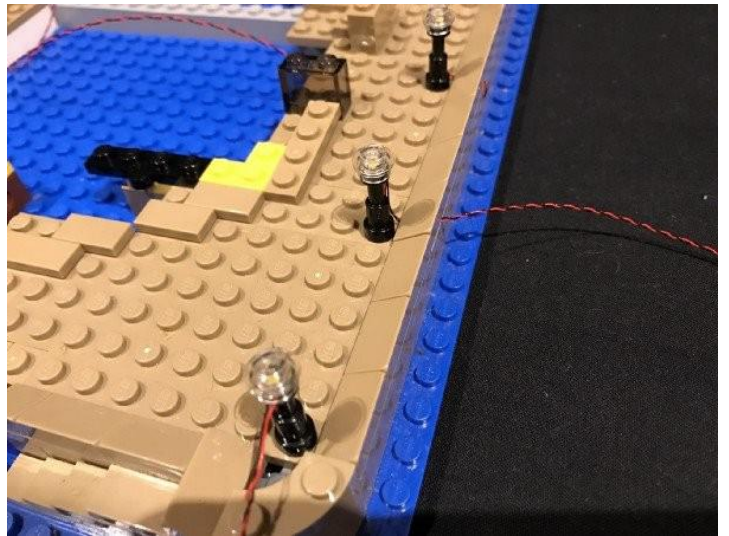
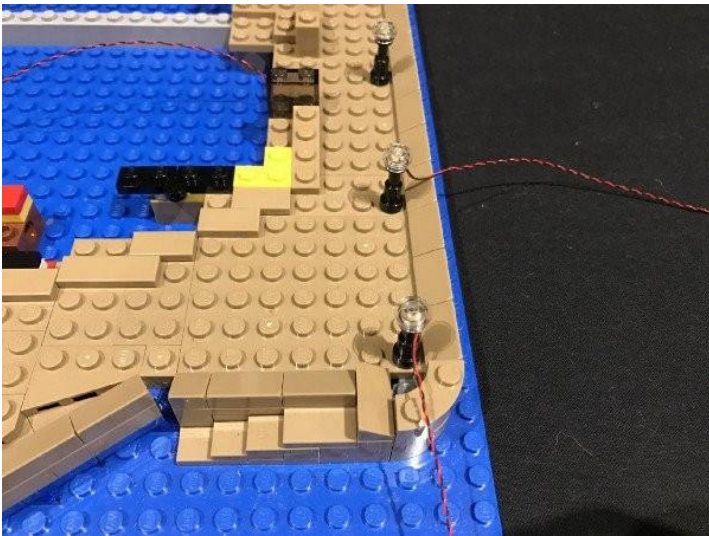


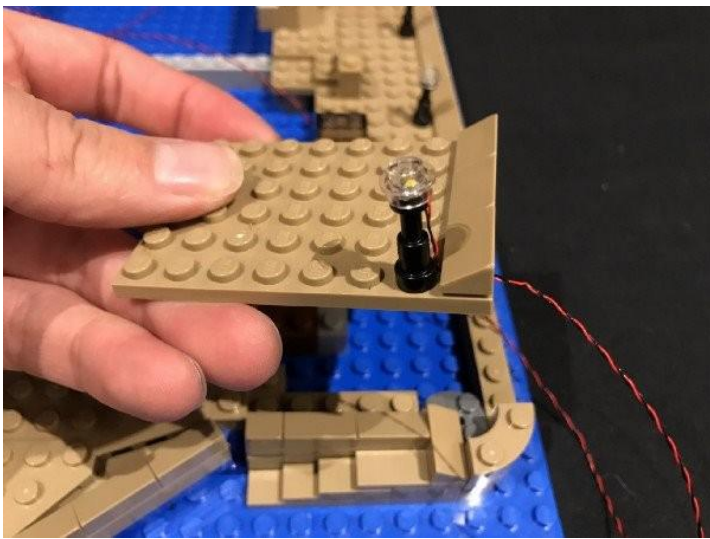
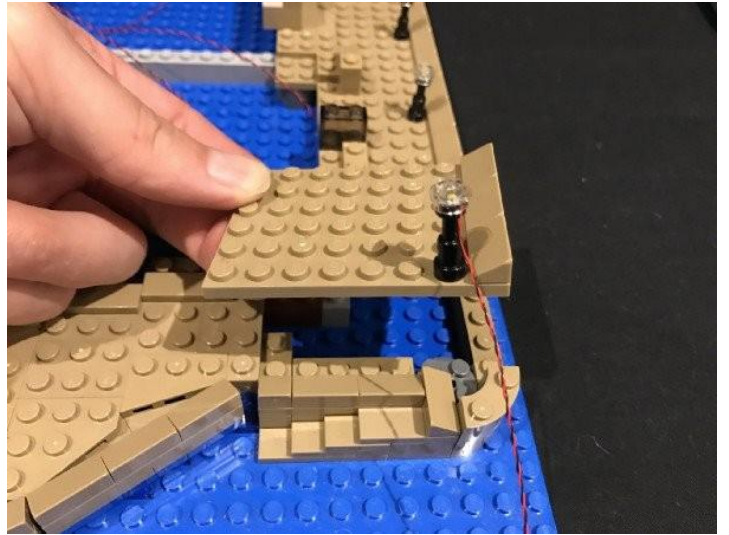
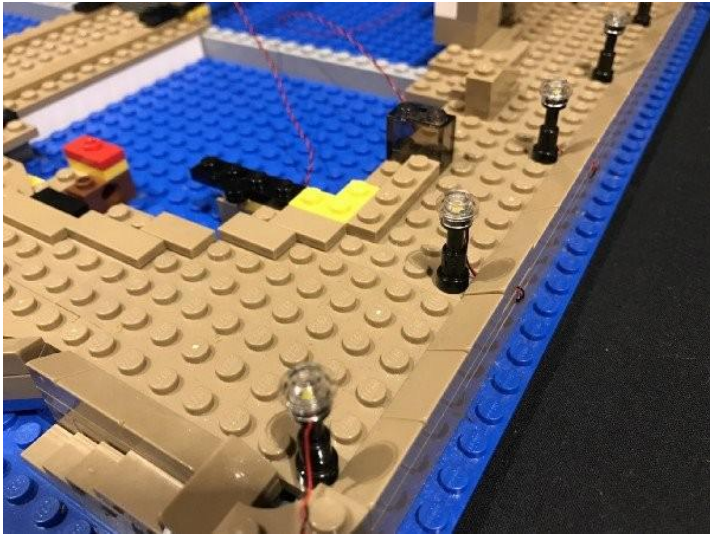
Remove the entire plate the lamp post is connected to and then bring the cable underneath before reconnecting the plate.



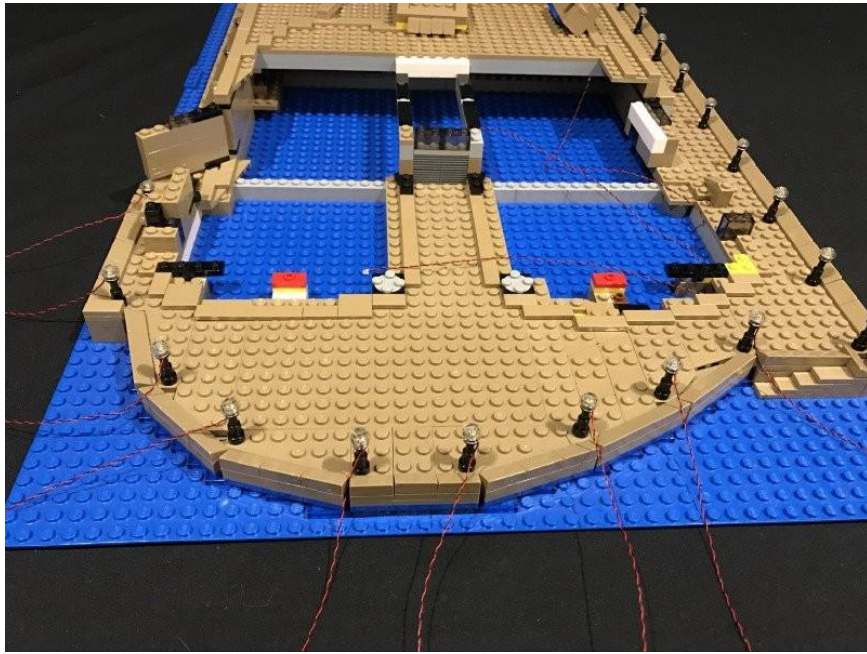


Repeat this step for the other 2 wired lamp posts.





6.) Reconnect the remaining 9 wired lamp posts to the set, ensuring the cables are facing toward the outside.

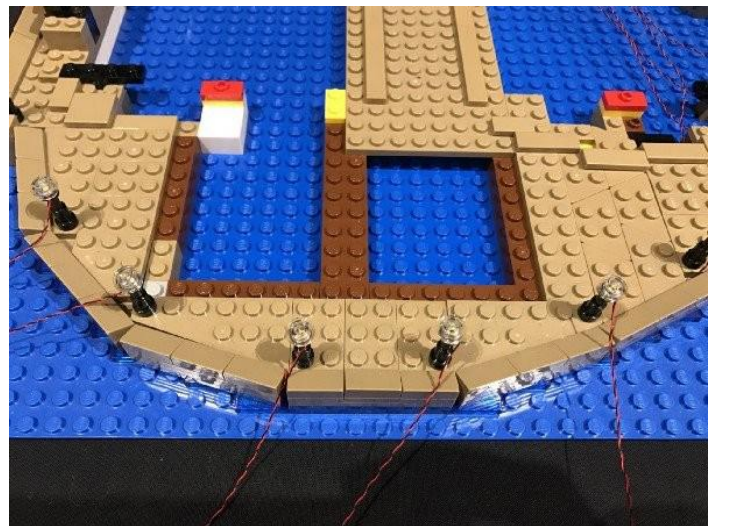
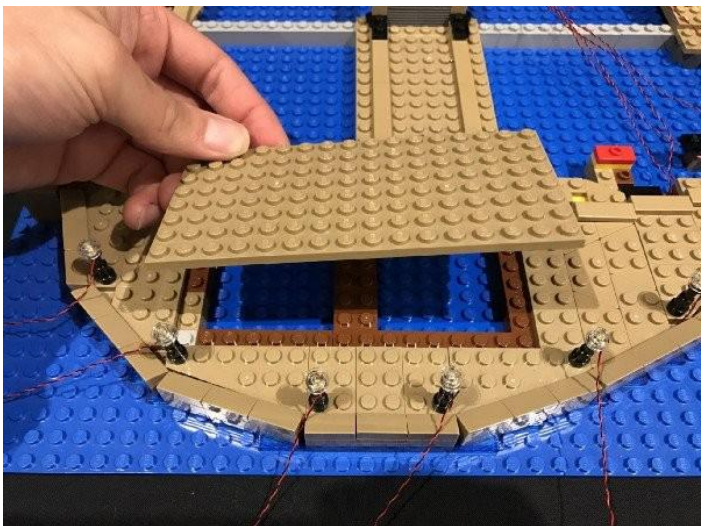
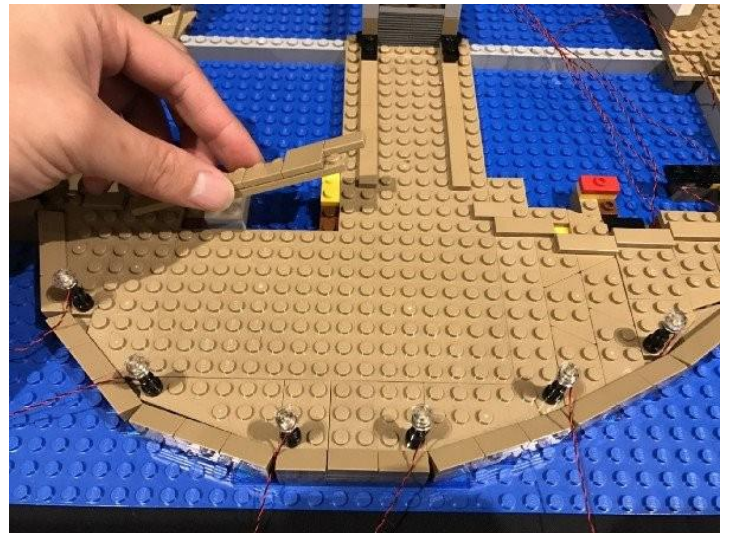
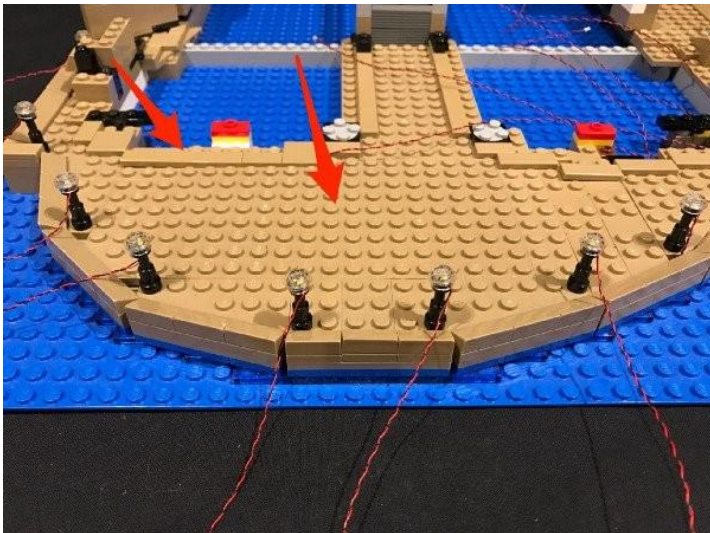


7.) Starting with the next 2 lamp posts on the right, loop them underneath the plates below. *Note: for these 2, we do not need to lay the cable underneath the tiles on the outside before doing so.* We do however require to remove extra plates in order to lay the cable all the way underneath to allow us to later connect them to an expansion board.

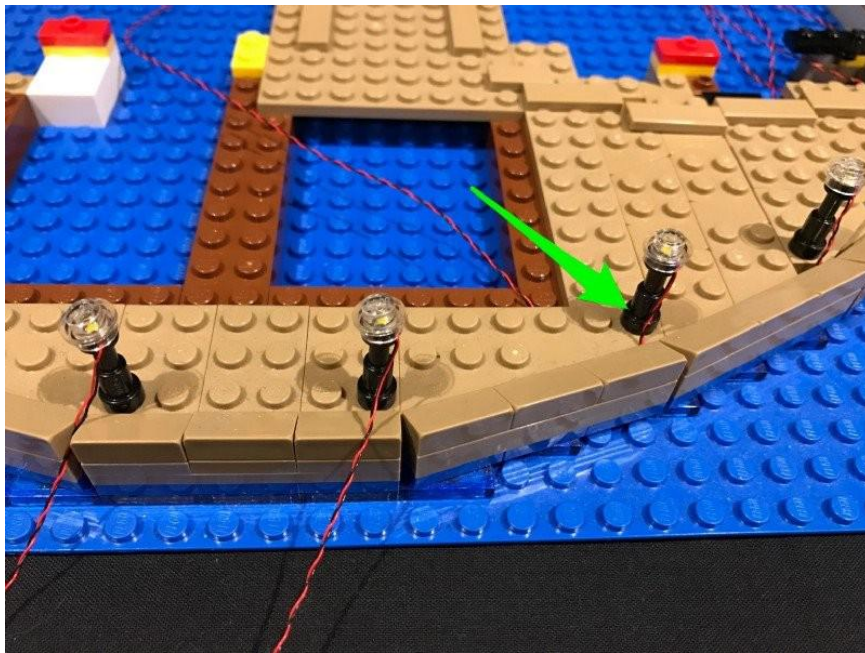




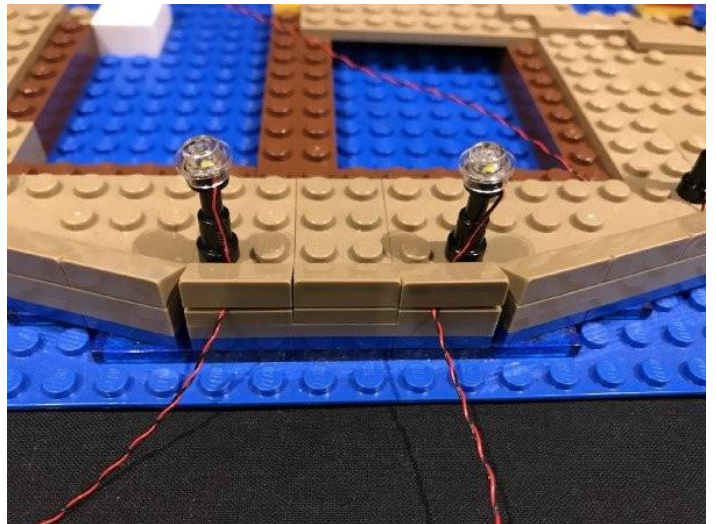
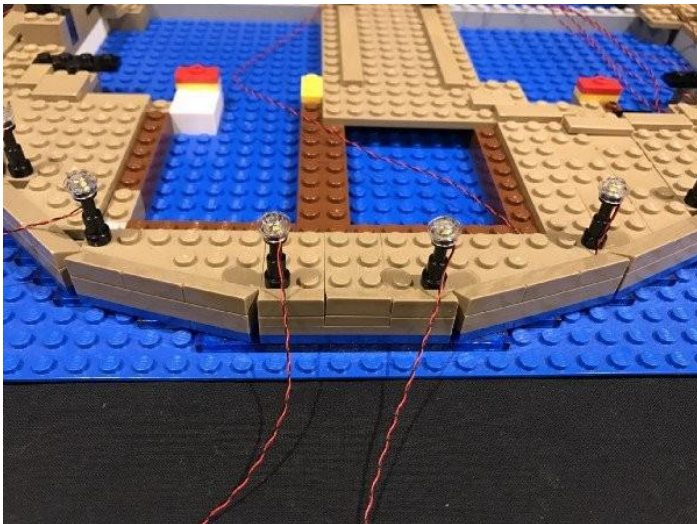
8.) To allow us to lay the remaining lamp post cables, remove the following sections.

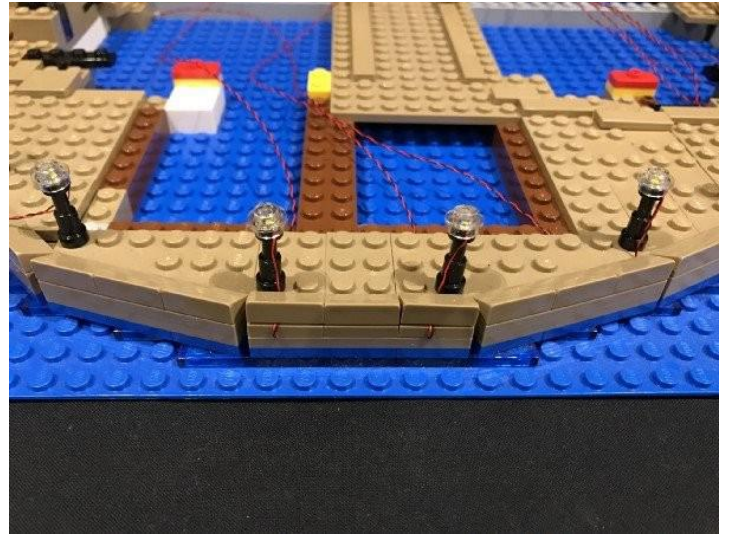


9.) The cable for the next lamp post on the right also does not require to be laid underneath the tile in front. Simply lift the plate it is connected to and lay the cable underneath as per below



10.) For the next 2 lamp posts cables along, lay them underneath tiles before looping/laying them underneath the plates they are connected to.

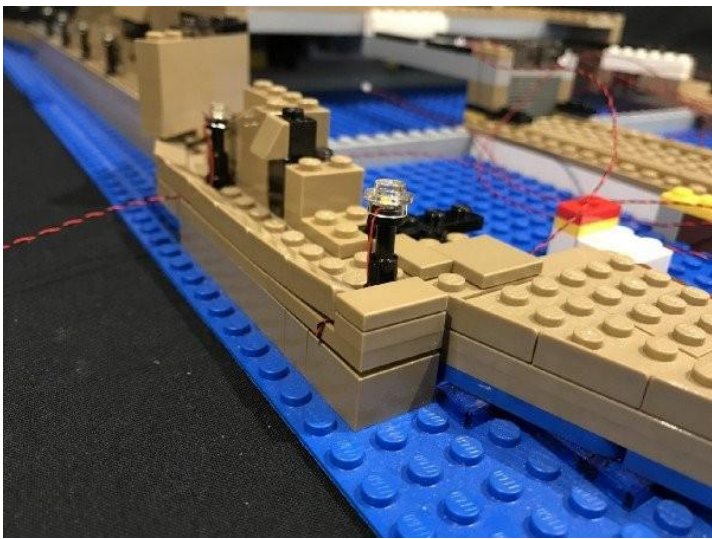
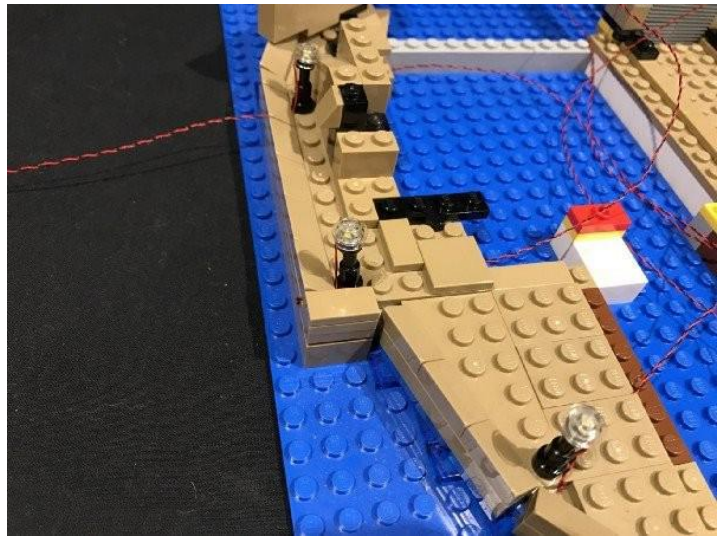
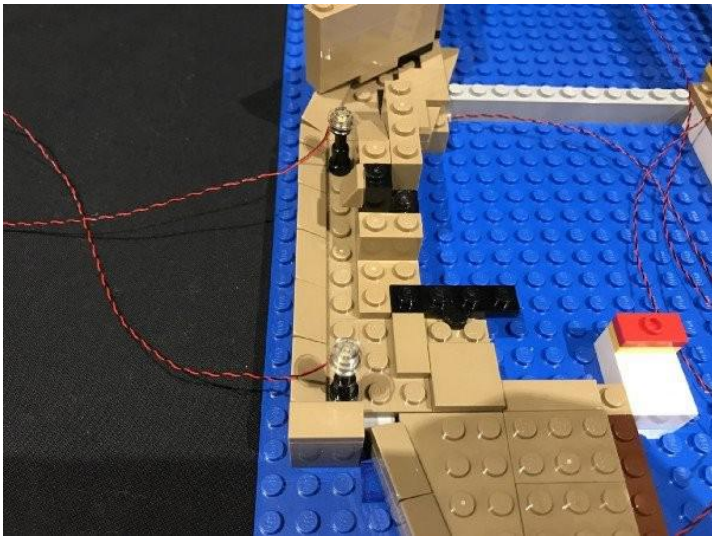




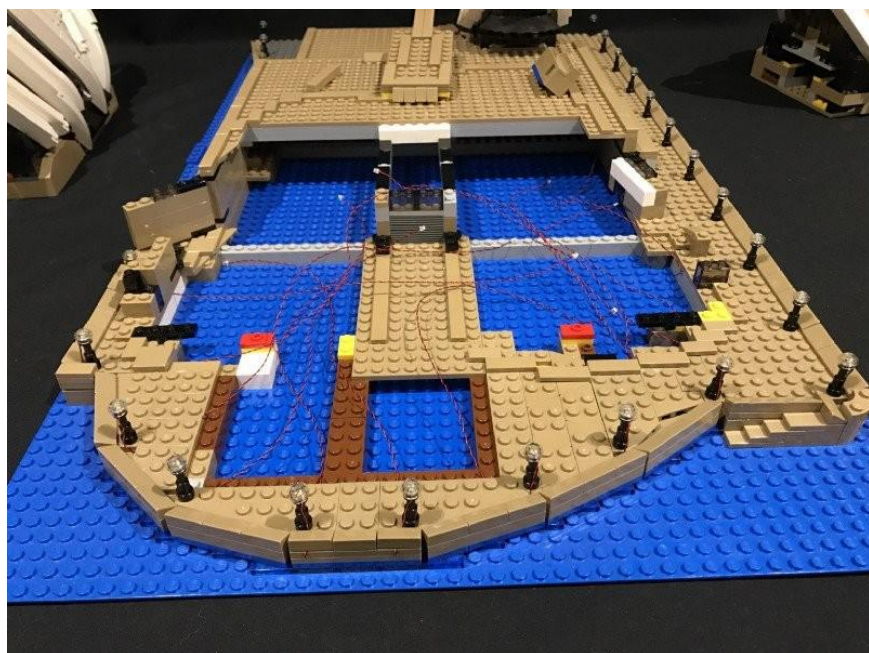
11.) For the next 2 lamp post cables, simply lay them underneath plates.



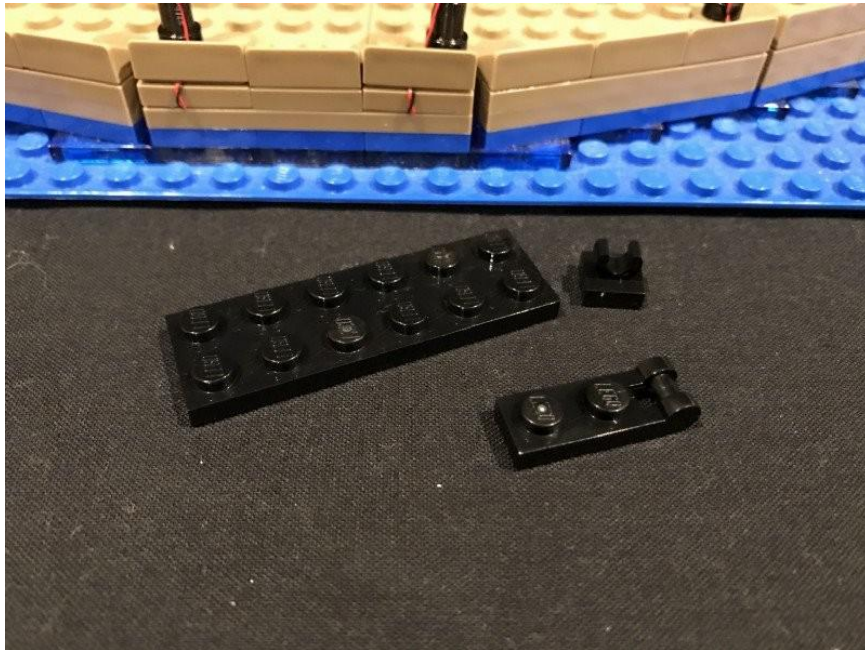
12.) Lay the remaining 2 lamp post cables underneath tiles before laying them underneath the plates they are connected to.



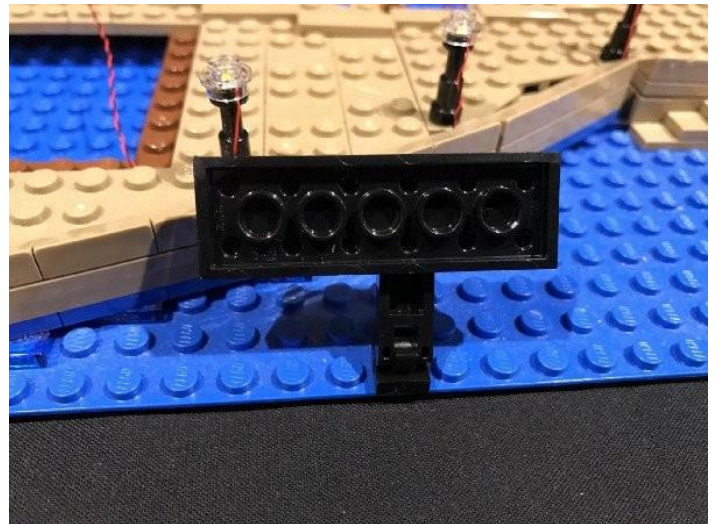
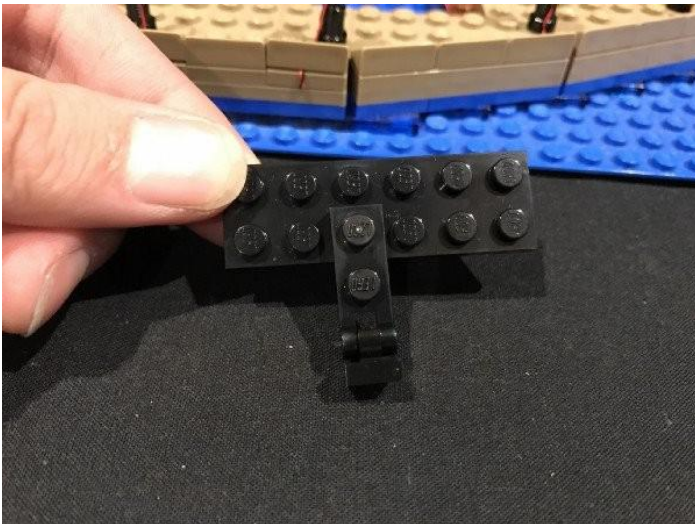
Your set should now look similar to the below:

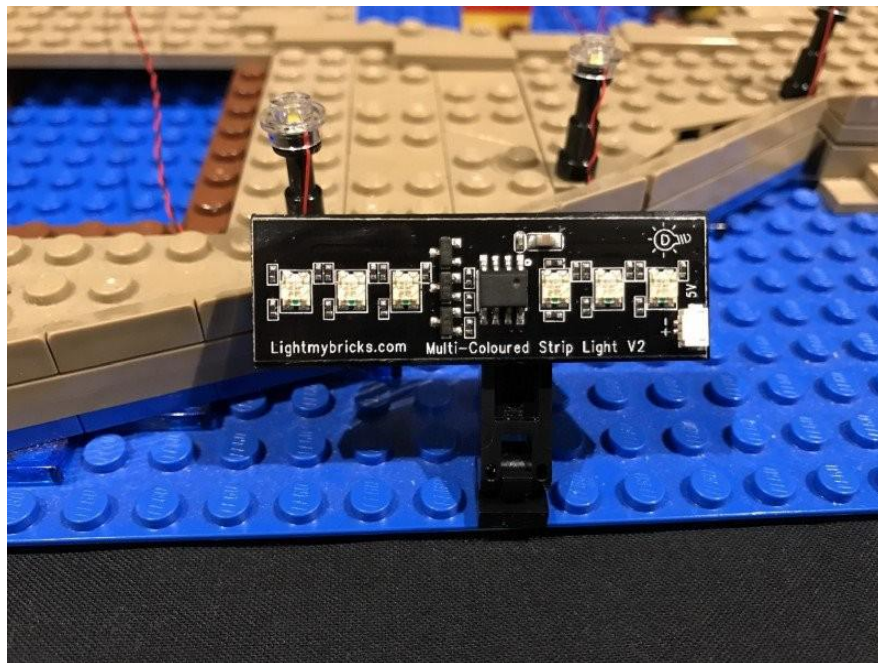
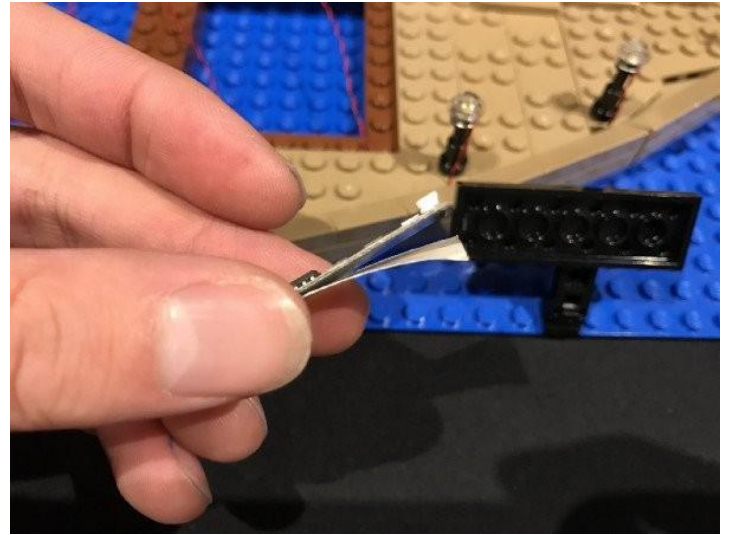
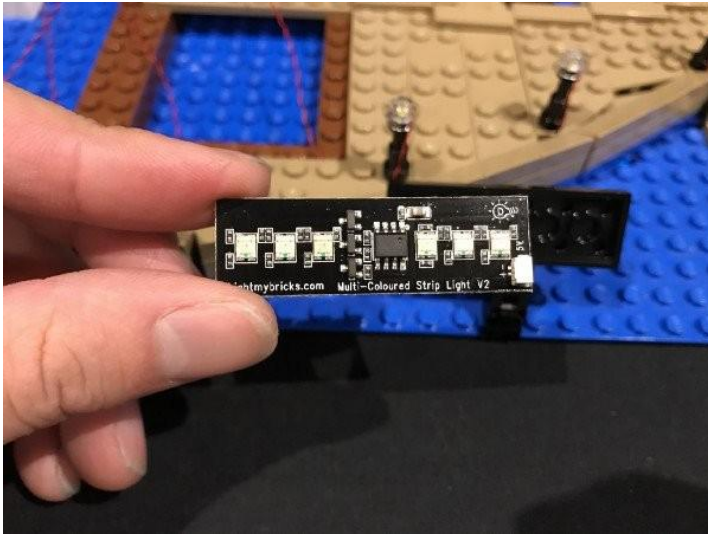


13.) Take the following LEGO Pieces that were provided in this light kit. These will make up one of the spot lights we are installing to each side.

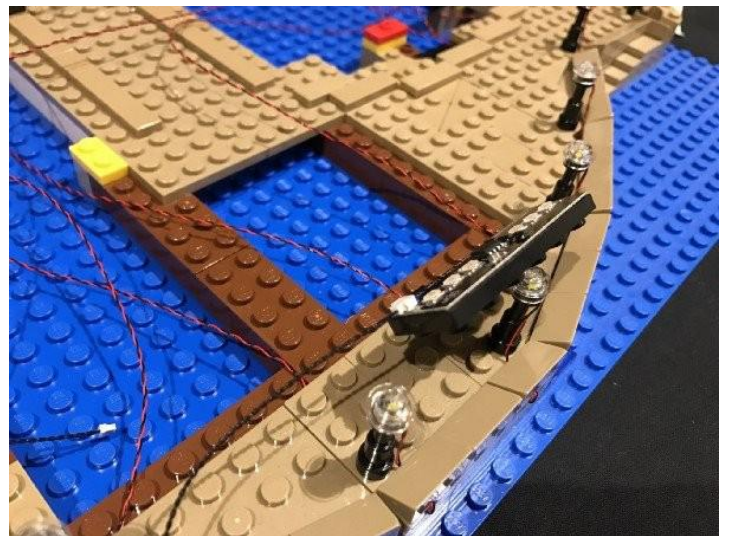
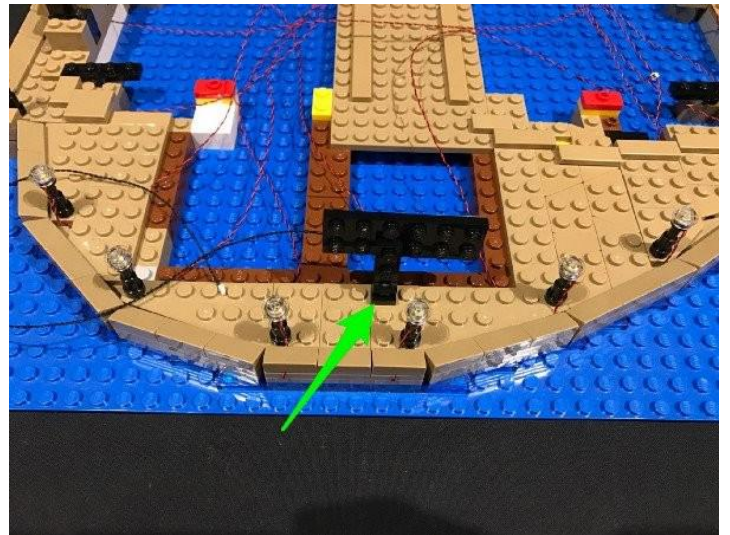
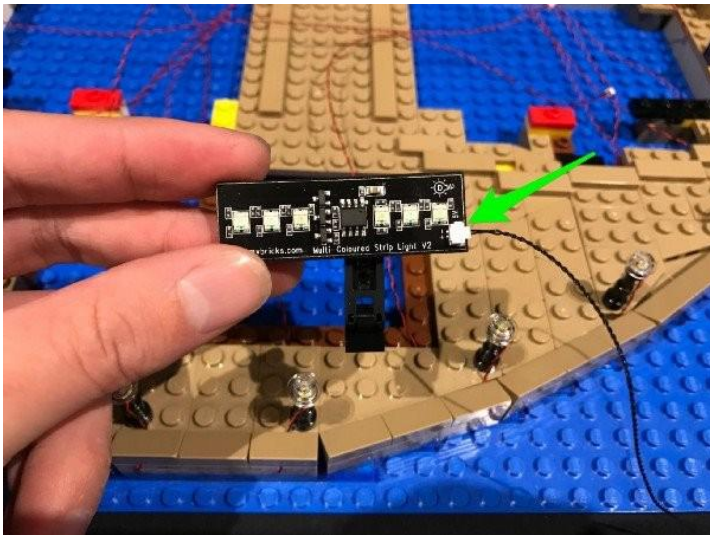


Assemble them as per below and then take a Multi-Coloured Strip Light and stick it to the base of the 2x6 plate using the adhesive backing.

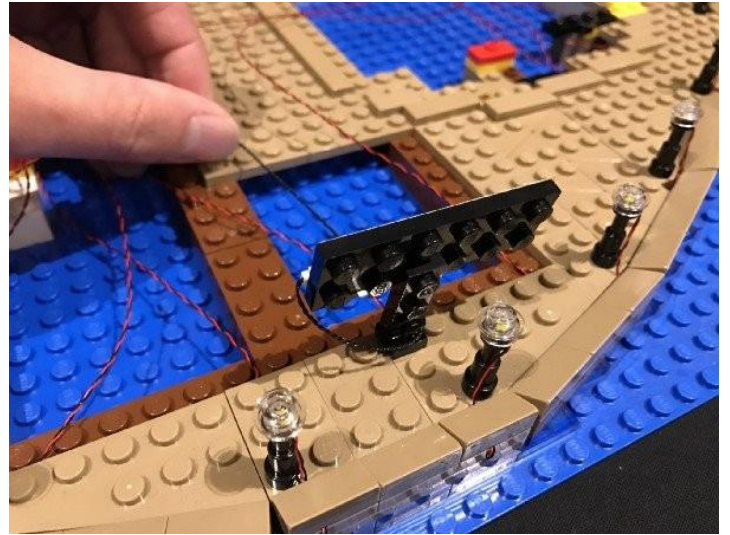
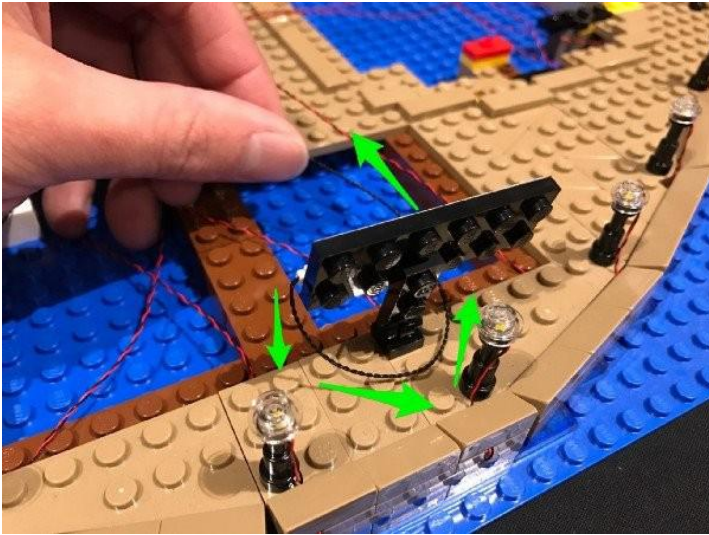




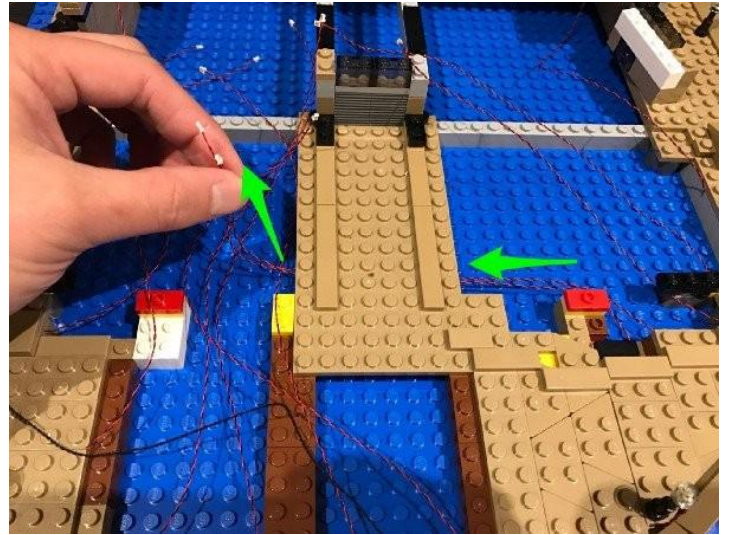
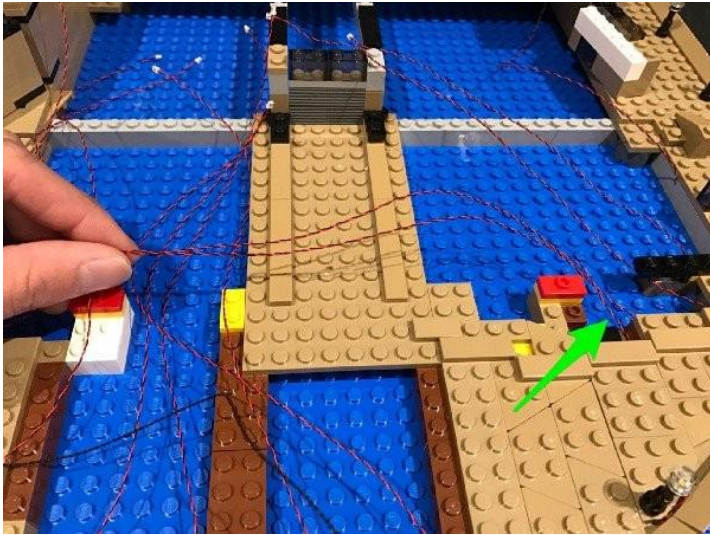
14.) Take a 30cm Connecting Cable and connect it to the port on the strip light and then connect the spotlight to the following position on the set. Ensure the spotlight is facing the correct way and then angle it up as per below:



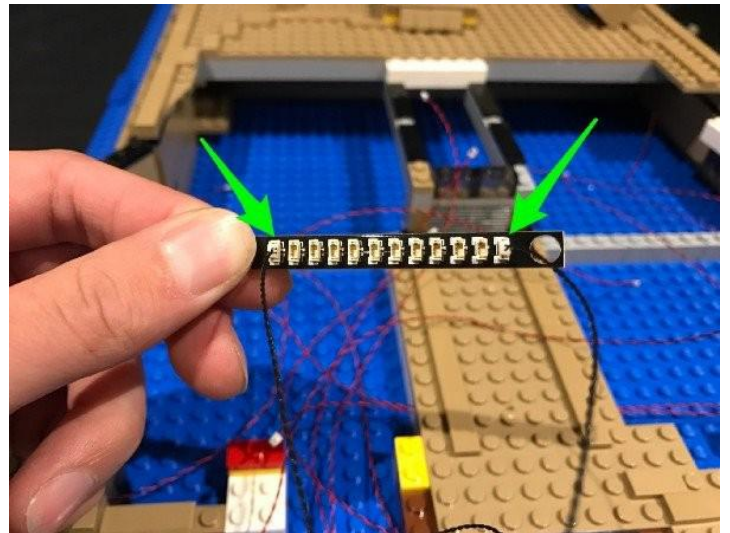
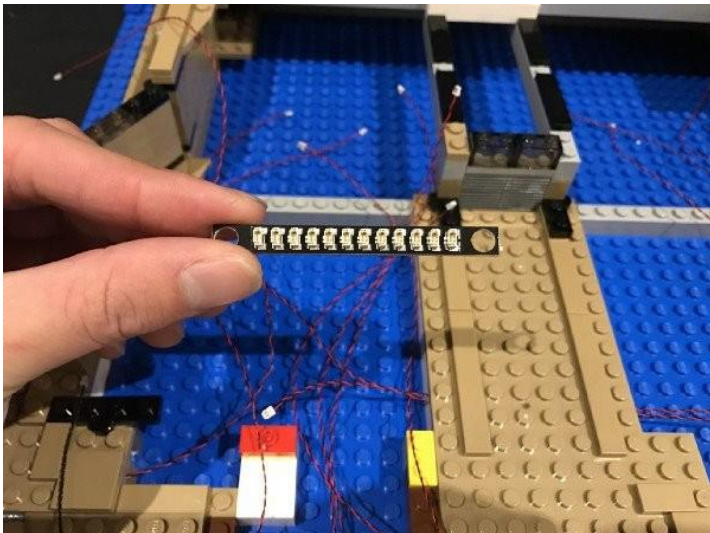
15.) Take the connecting cable from the strip light and then loop it around the base of the spot light and then pull it up around as per below



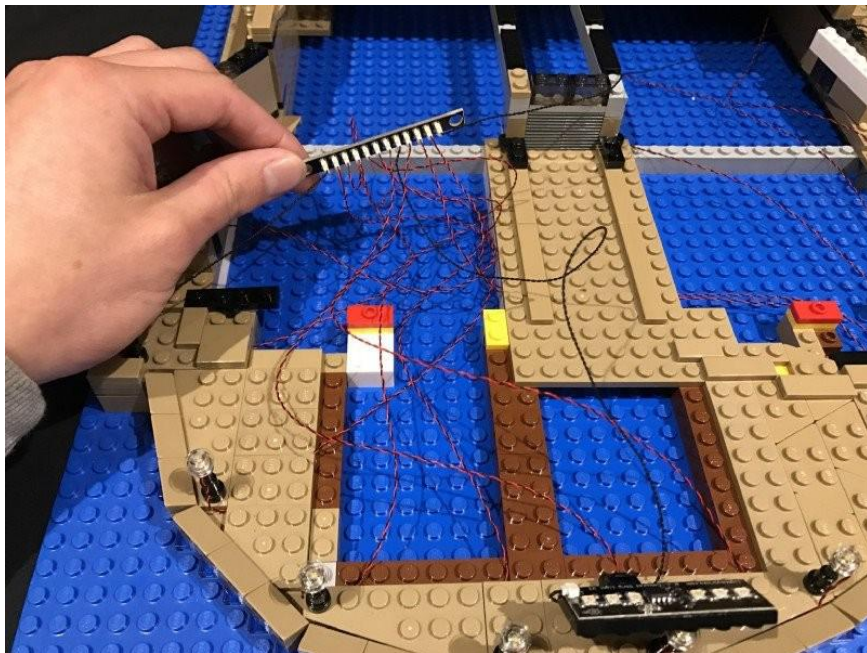
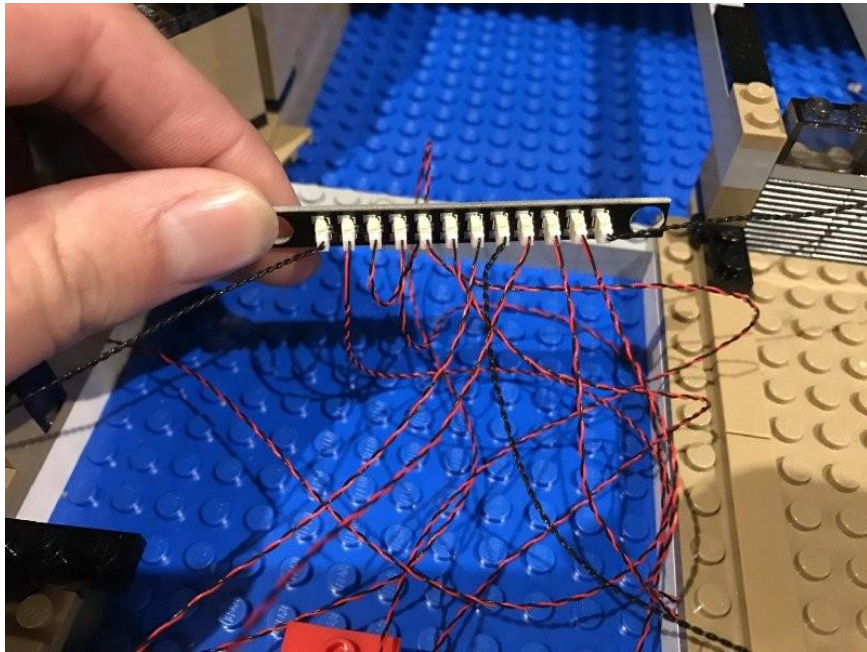
16.) Take the following 2 lamp post cables fro the right side and then lay them underneath the following plate by disconnecting and reconnecting it over the cables.



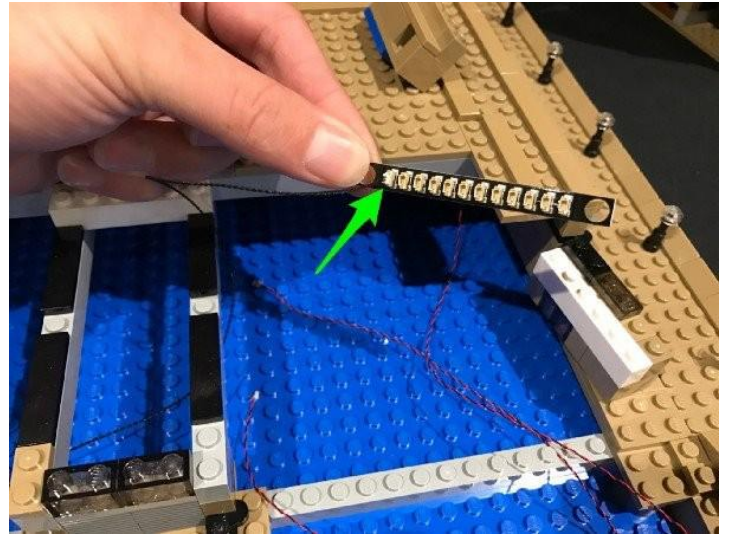
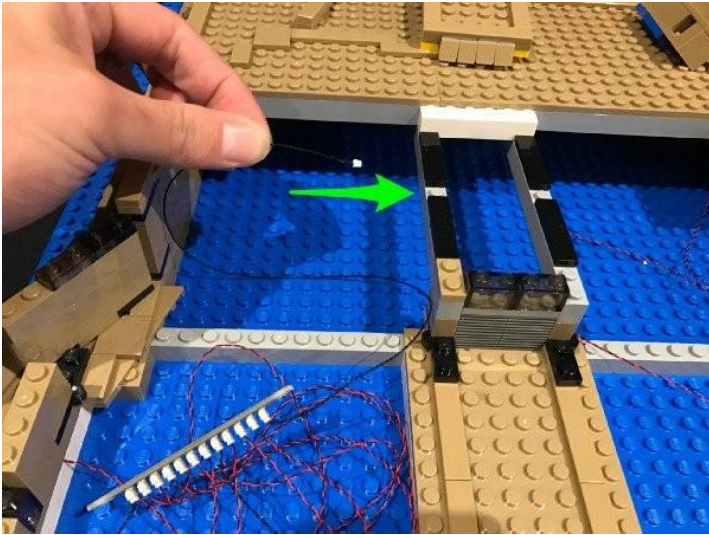
17.) Take a 12-port Expansion Board and then take 2x 30cm Connecting Cables and connect one to each port on the far sides.



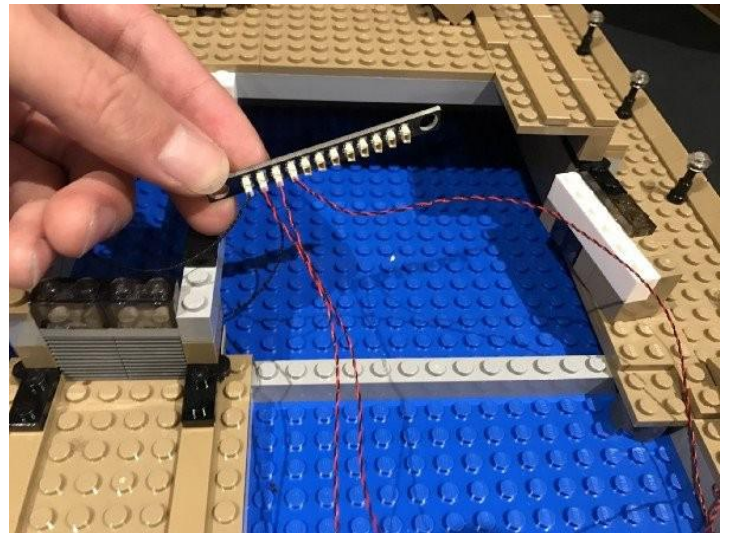
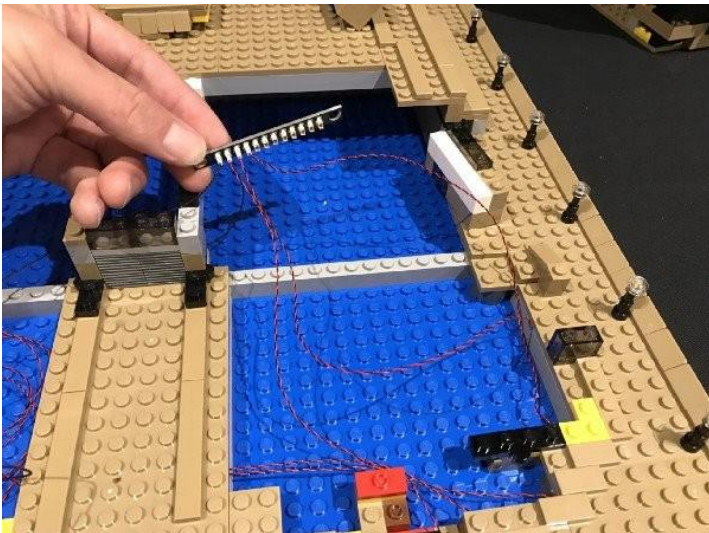
Take all the lamp post cables laid on the left side of the set as well as the 30cm cable from the spot light (there should be 10 in total) and connect them to the 12-port expansion board.



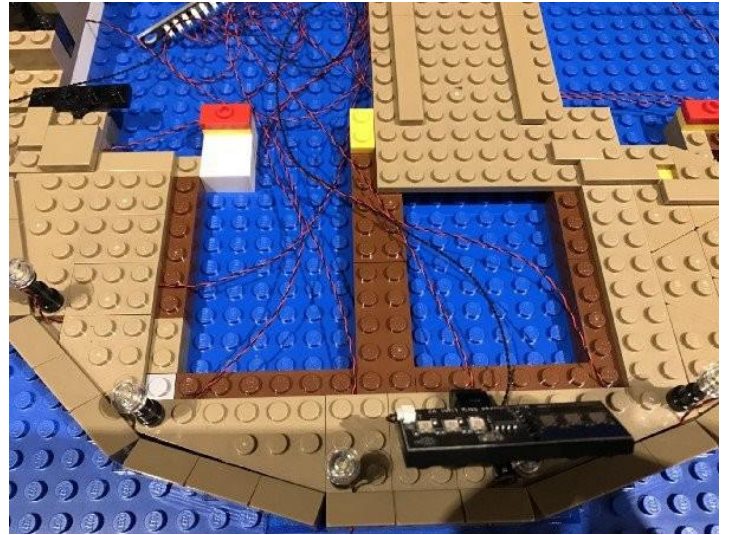
18.) Take the other end of the 30cm connecting cable closest to the top of the expansion board and thread it underneath the following section and then connect it to another 12-port Expansion Board.



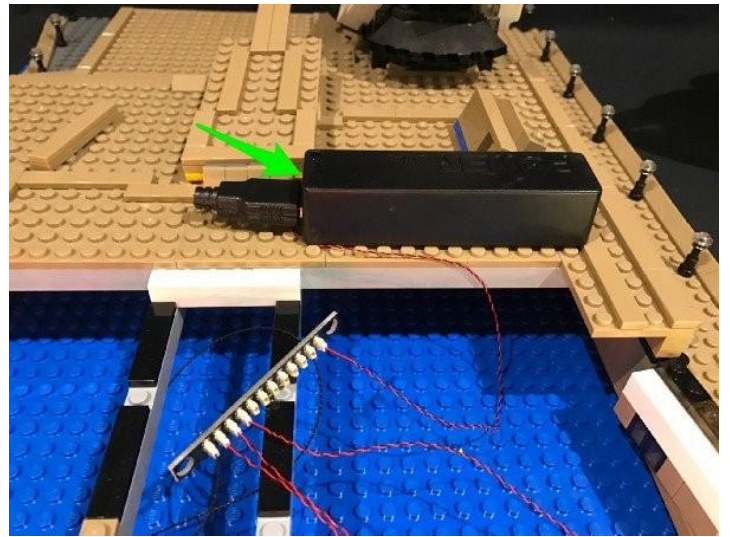
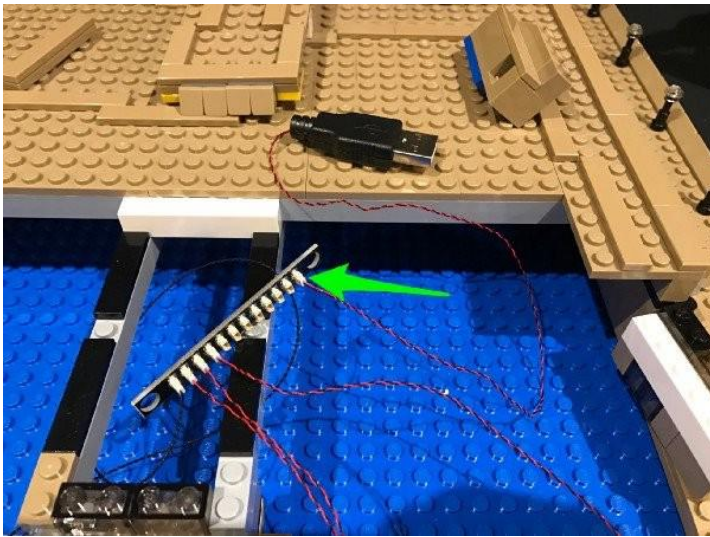
Connect the remaining 3 lamp post cables on the right side of the set to the next available ports on the expansion board.



19.) 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.

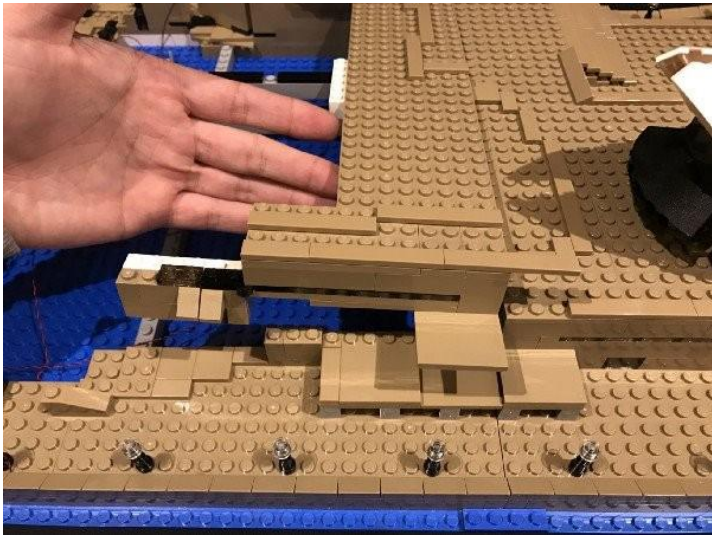


Take this time to test all the lights we have installed so far and to ensure everything is properly connected. To do so, take the 30cm USB Cable and connect it to a spare port on the 12-port expansion board on the right side. Connect the USB plug to your USB power bank and ensure all lights are workingOK.

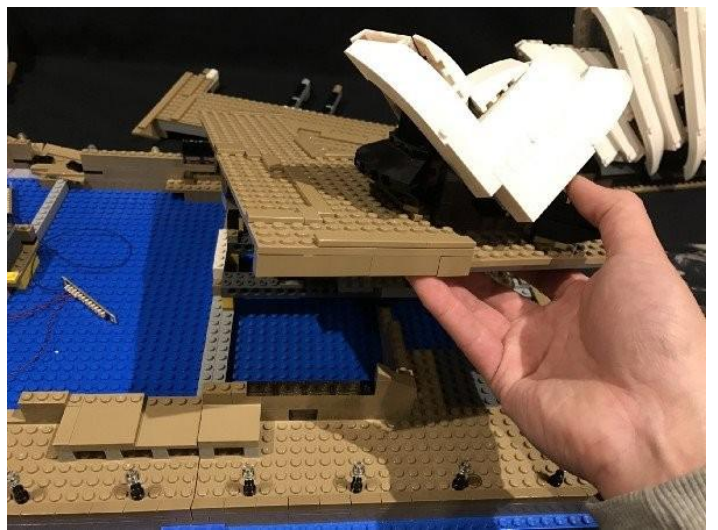


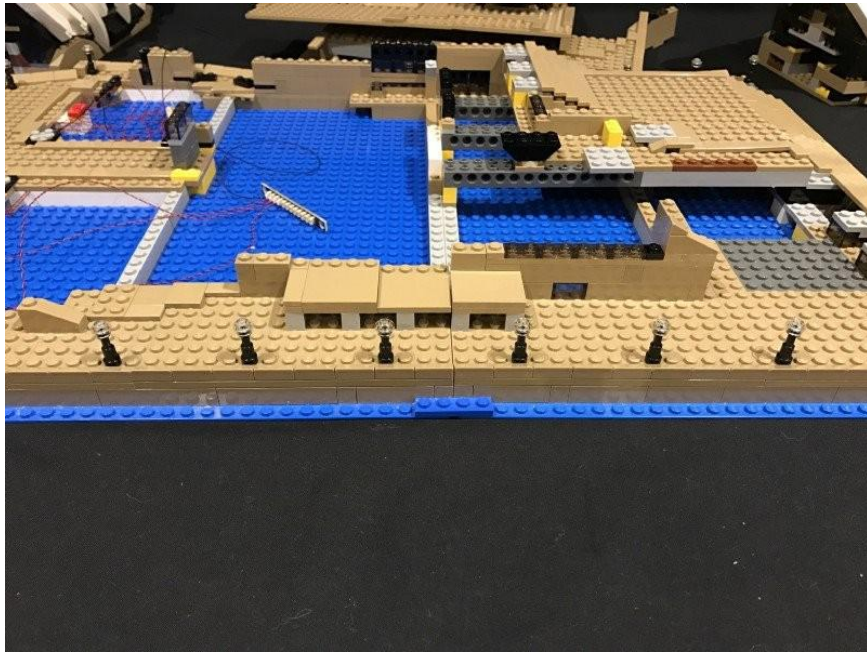
Once you have verified all the lights are working OK, disconnect the USB cable and power bank and proceed to the next step.

20.) Turn the set around to the right side (as per below) and then remove the following sections by following the example images.



place hand underneath the above section and then carefully remove

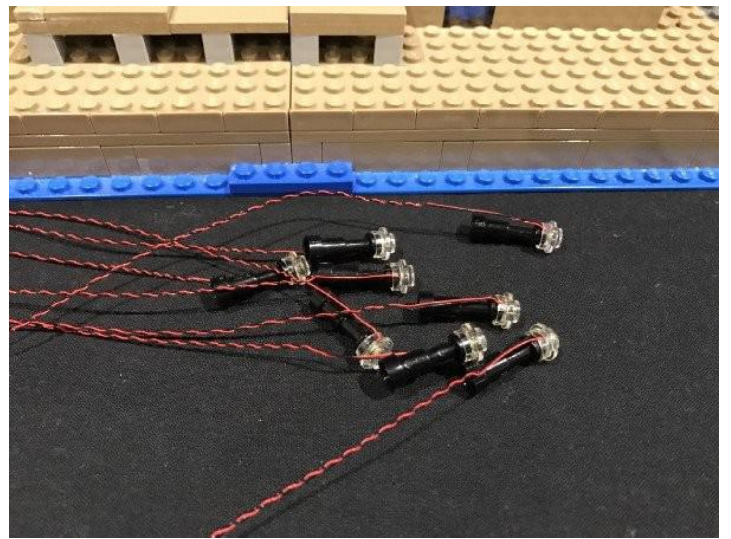
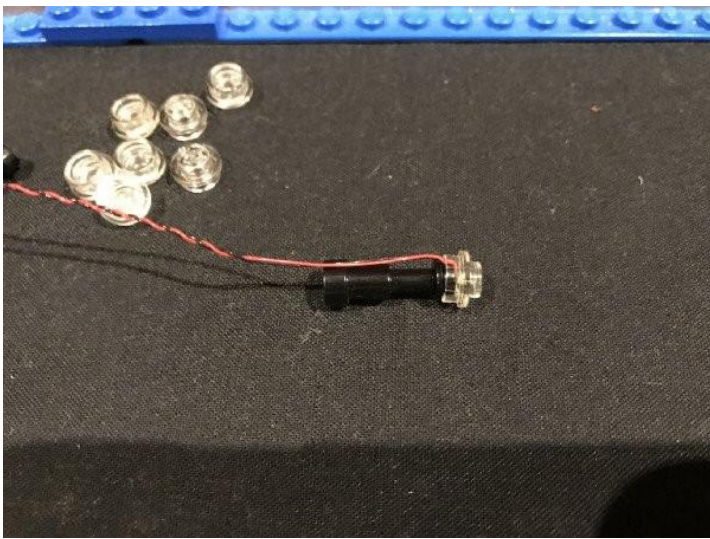
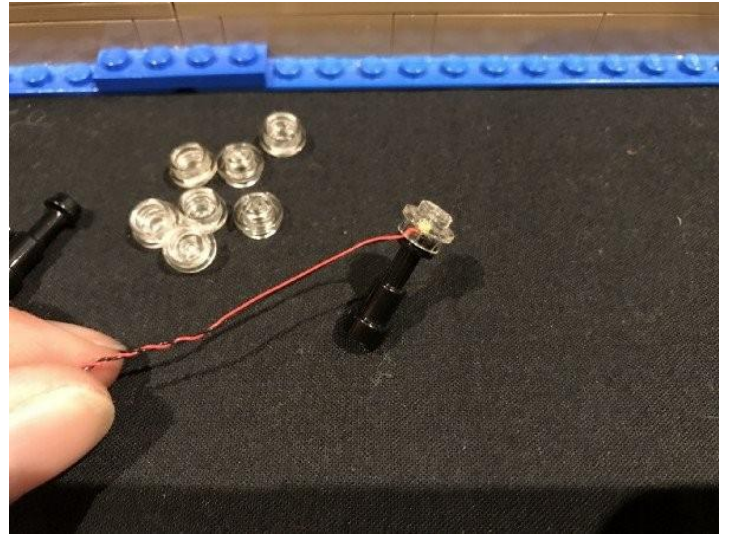
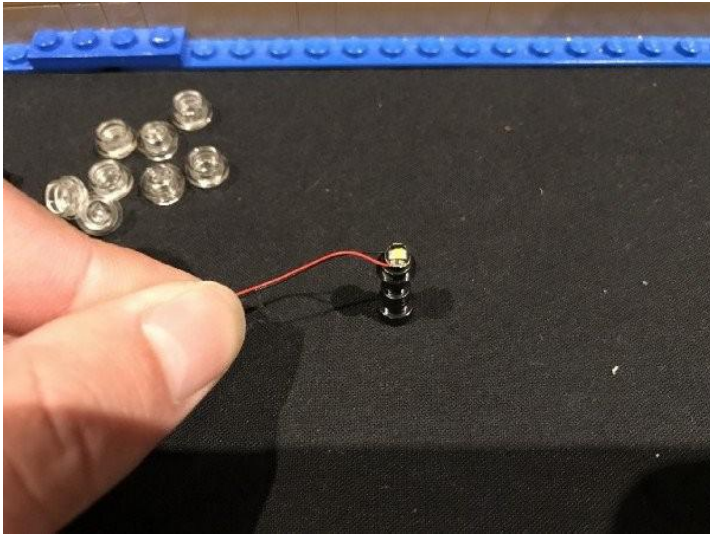




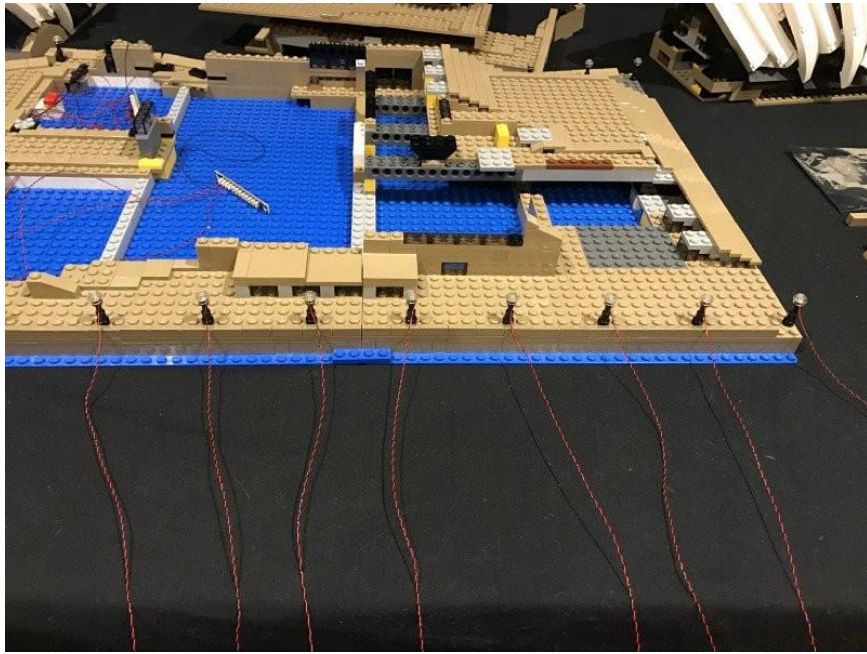
21.) Remove the remaining 8 lamp posts from this side of the set and then remove the trans-clear round plates from them



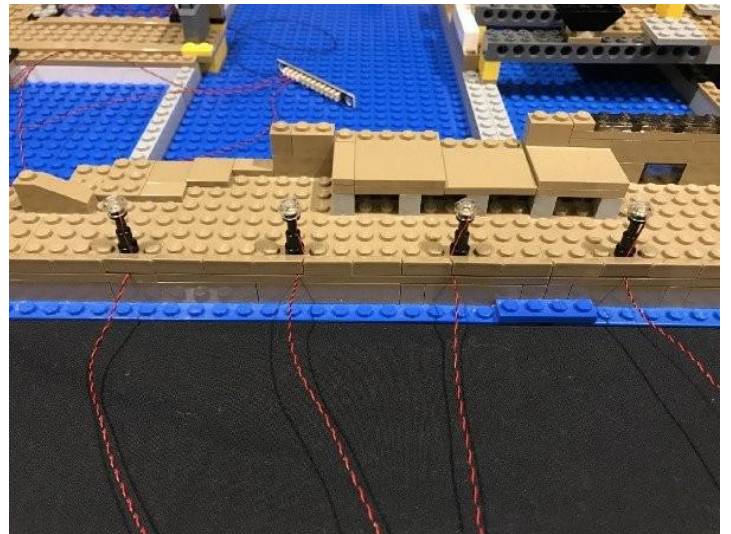
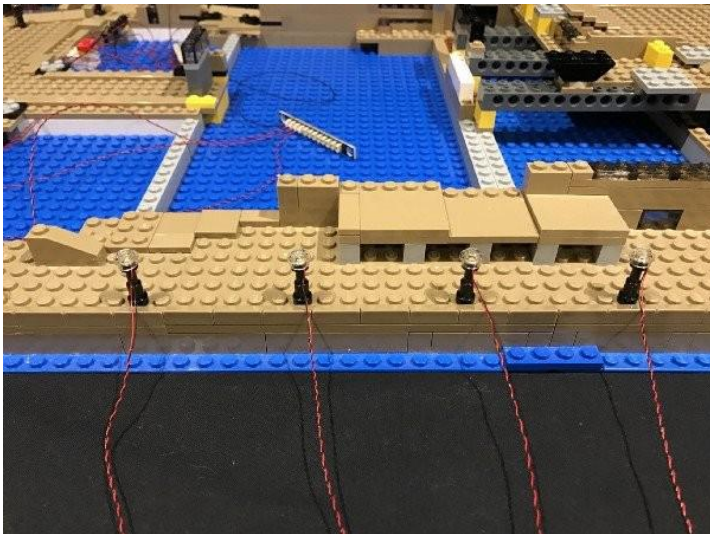
Following the same method we used for previous lamp posts, install another 8x White 30cm Dot Lights to these lamp posts.



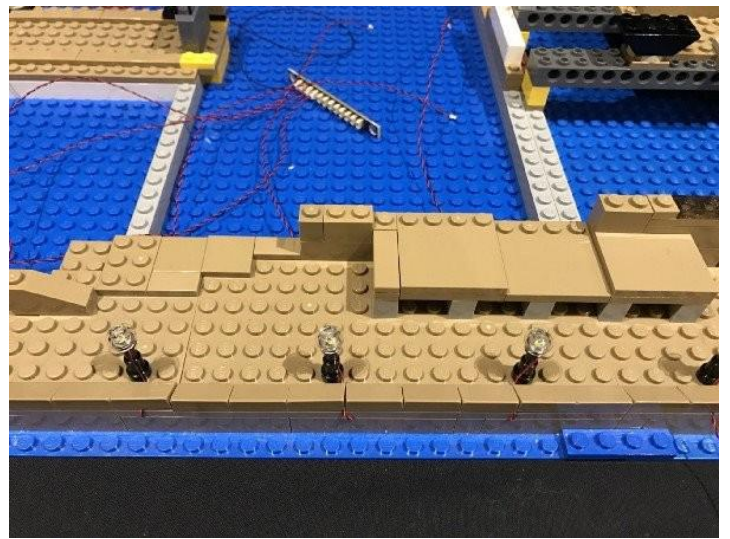
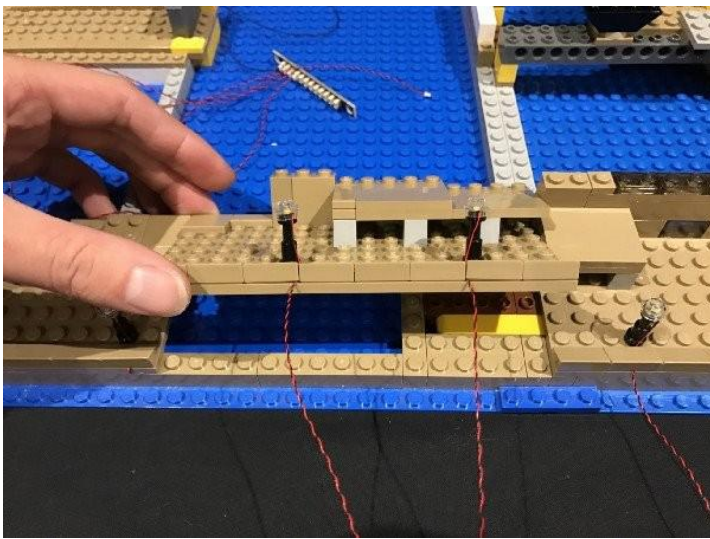
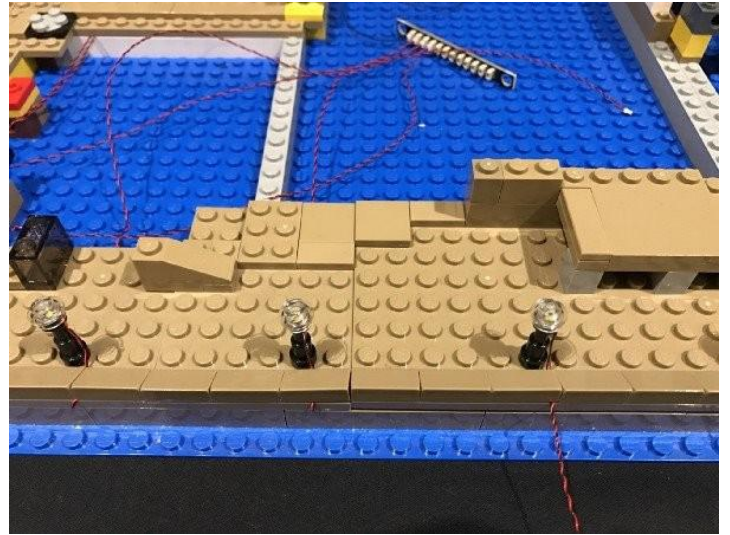
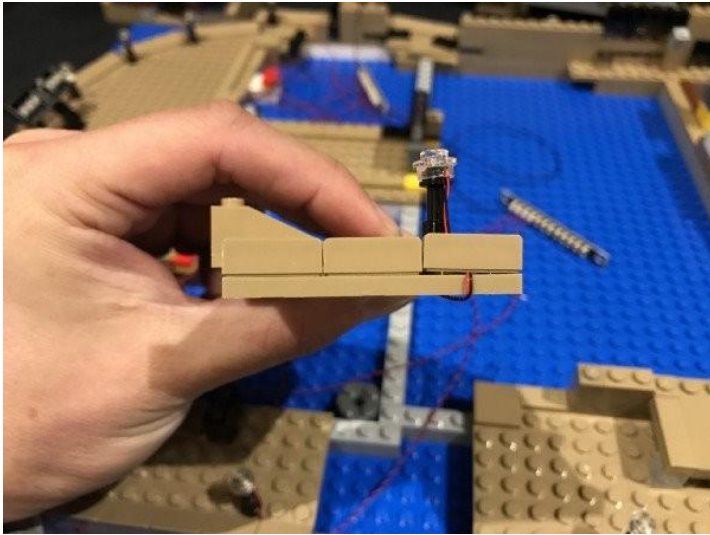
22.) Reconnect the 8 wired lamp posts to the set ensuring the cables are facing toward the outside.



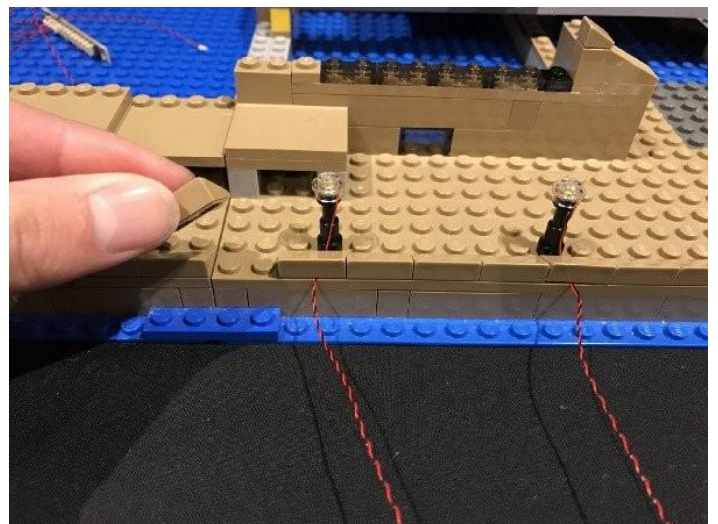
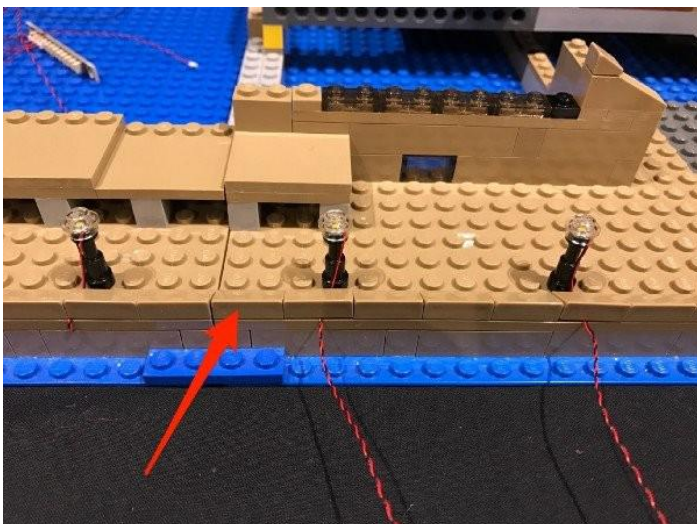
23.) Take the first four lamp posts on the left and then lay each cable underneath the tiles directly in front of them.



Remove the plates under the first three lamp posts and then tuck the cables underneath before reconnecting the plates.



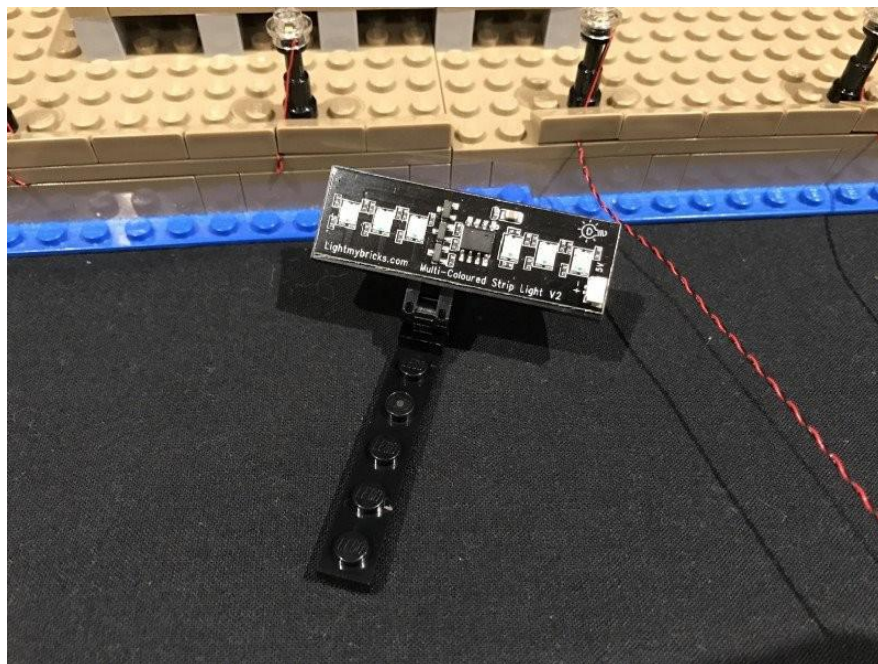
24.) Remove the following tile between the third and fourth lamp posts we just secured cabling for.



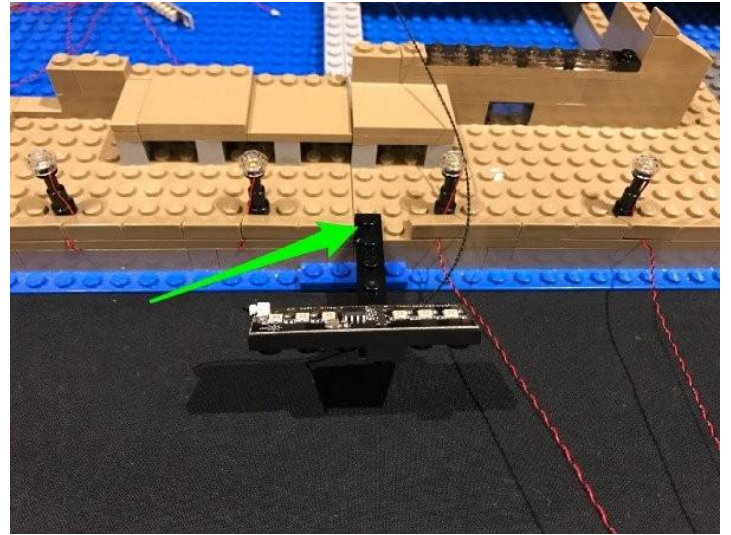
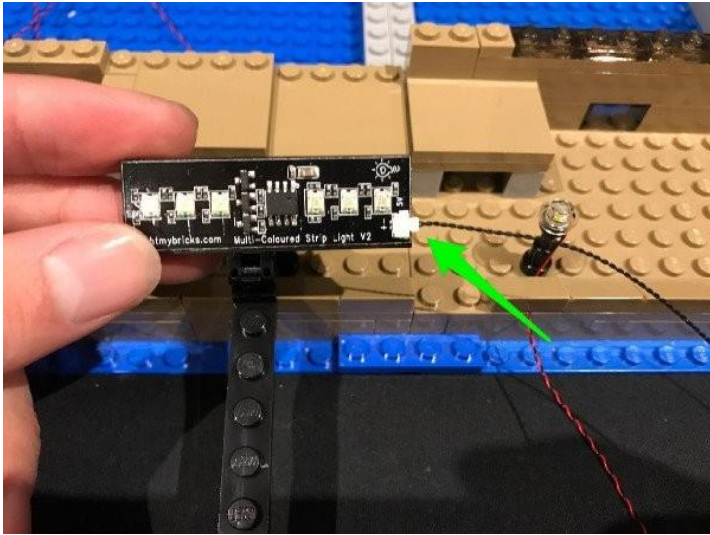
Using the following provided LEGO pieces, assemble them together to make another spot light this time, connected to the 1x6 plate.



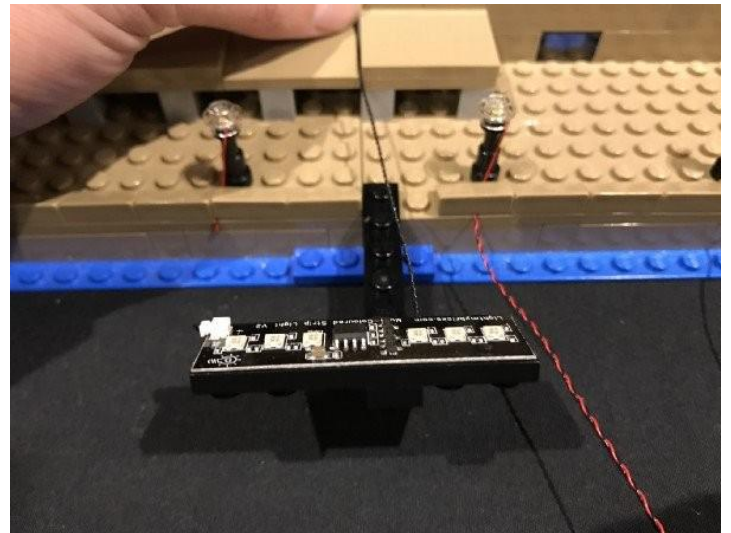
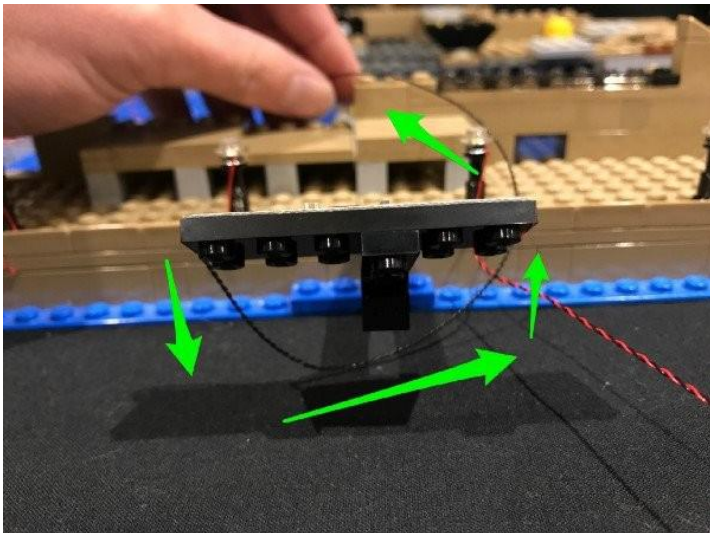
25.) Take another Multi-Coloured Strip Light and stick it to the base of the 2x6 plate.



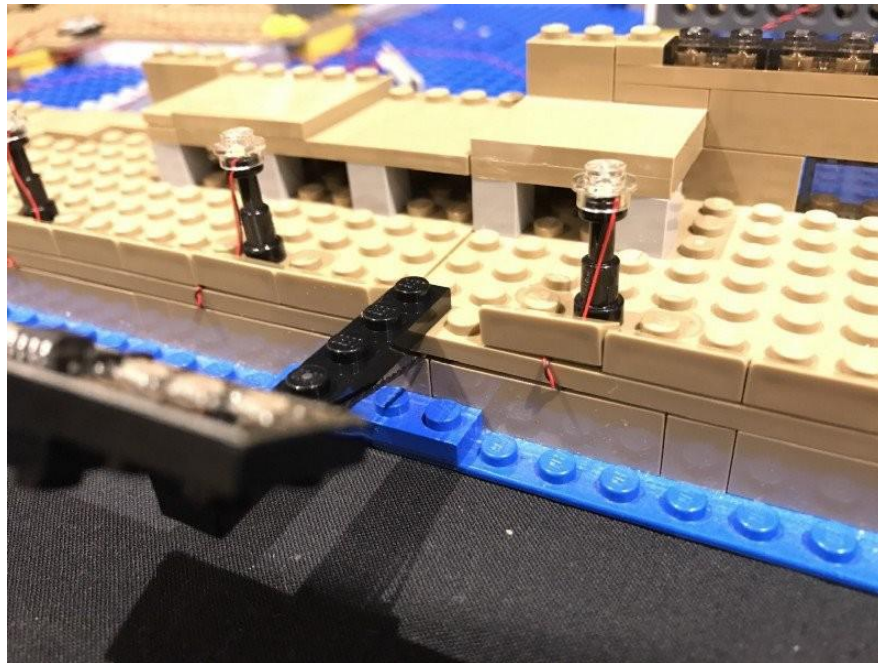
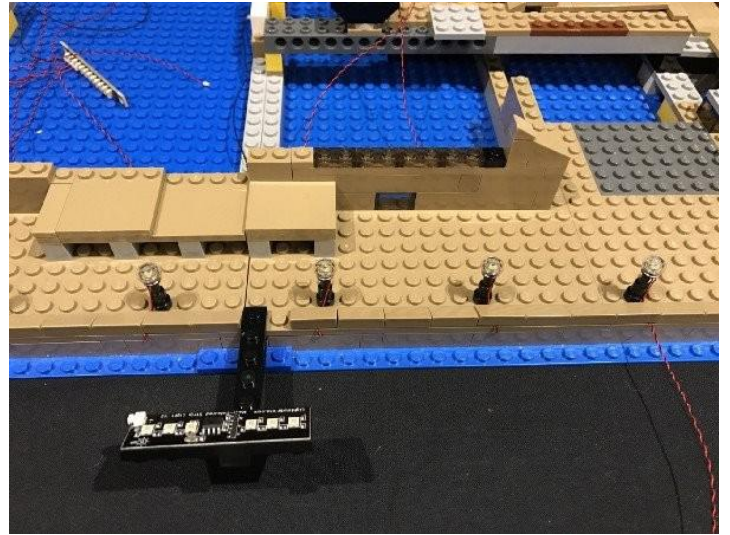
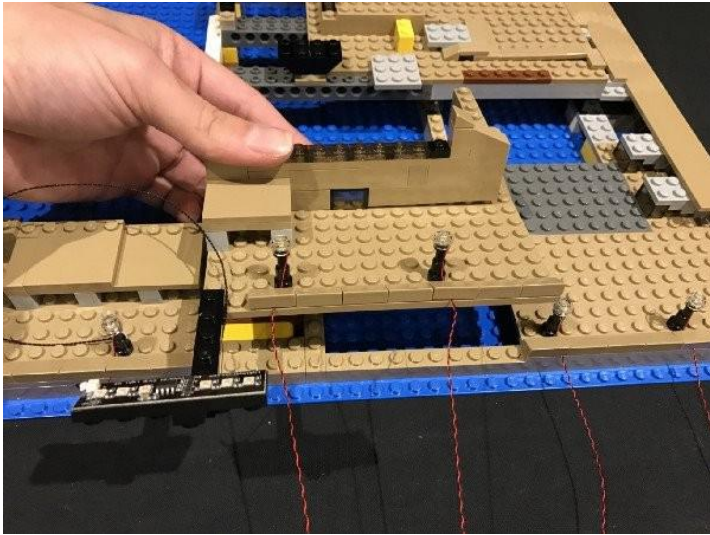
Take a 30cm Connecting Cable and connect it to the port on the strip light. Connect the spot light to the following position on the set.



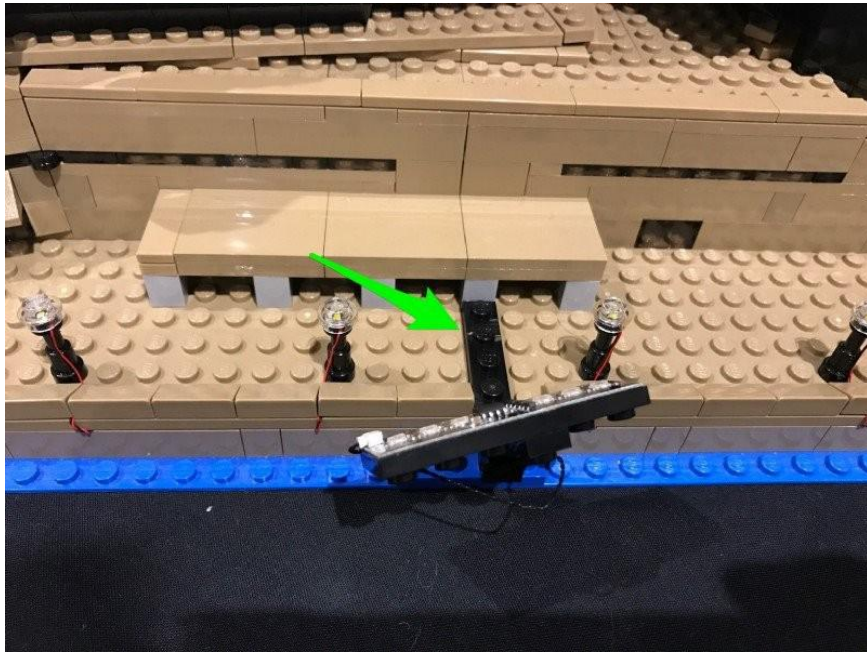
Loop the cable behind and then pull the cable in towards the set as per below.



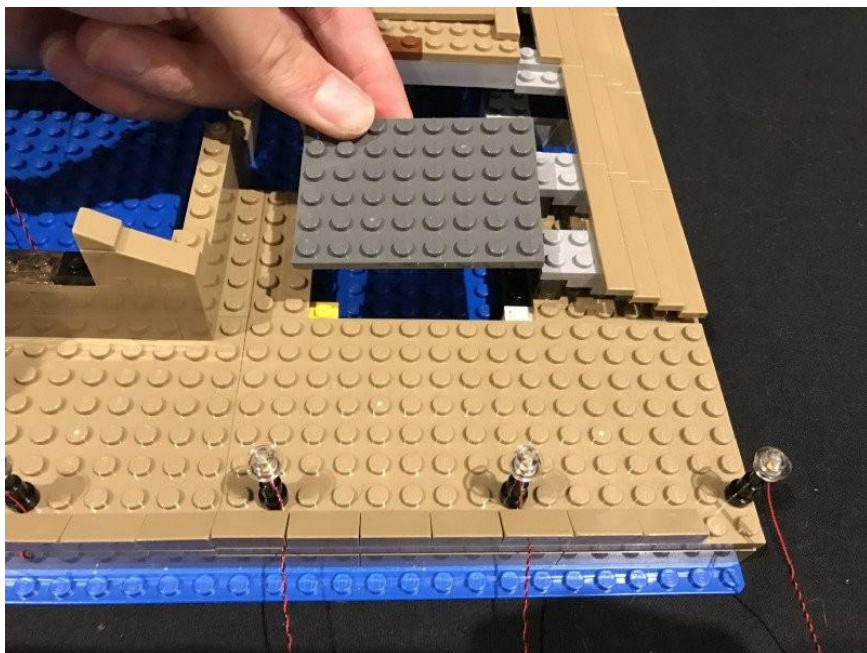
26.) Continue to secure the cables for the next two lamp posts along the sides as well as the spot light cable by laying them underneath tiles and then laying them underneath the plates below.

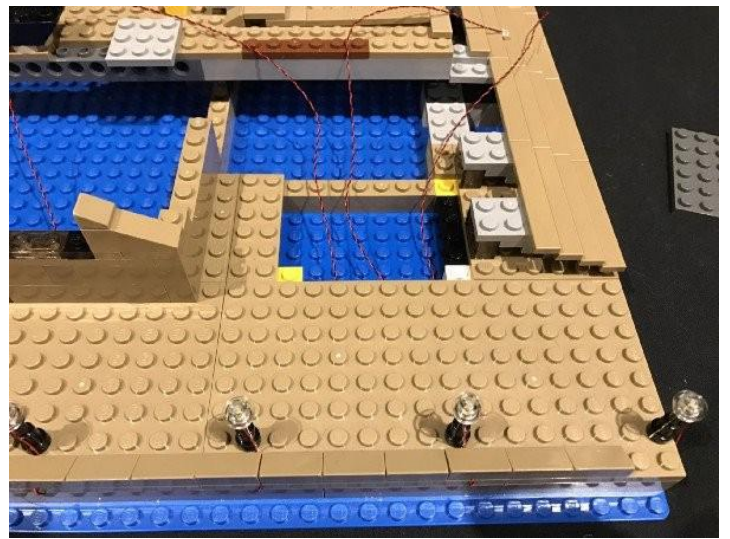
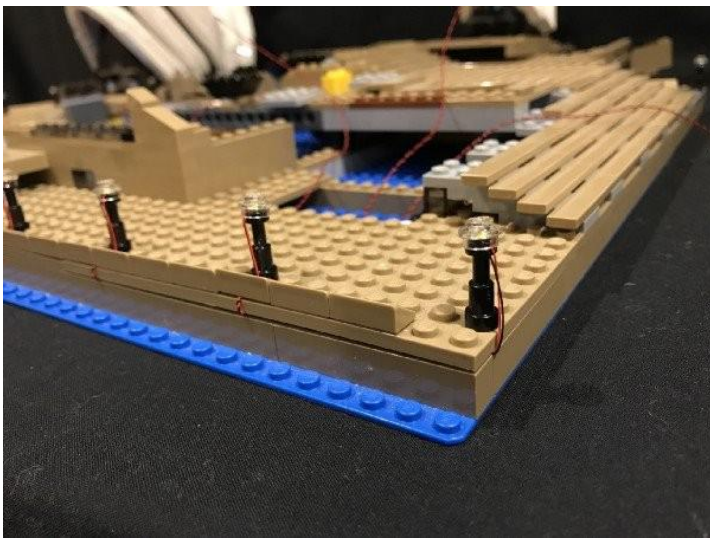
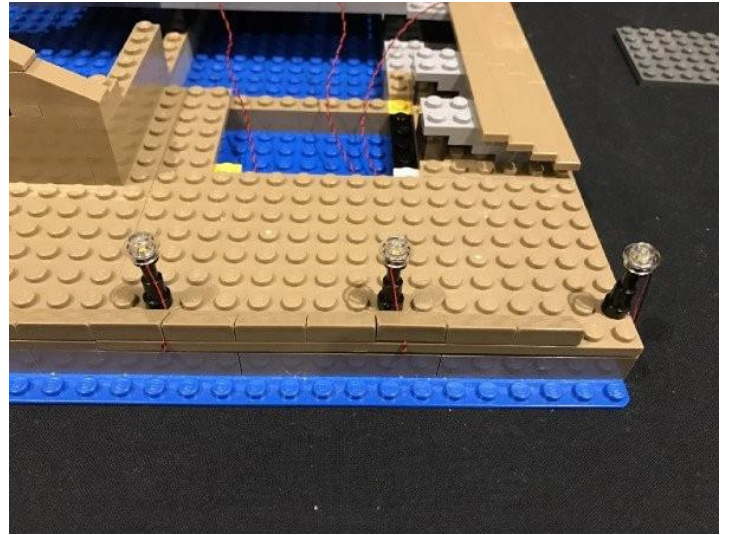
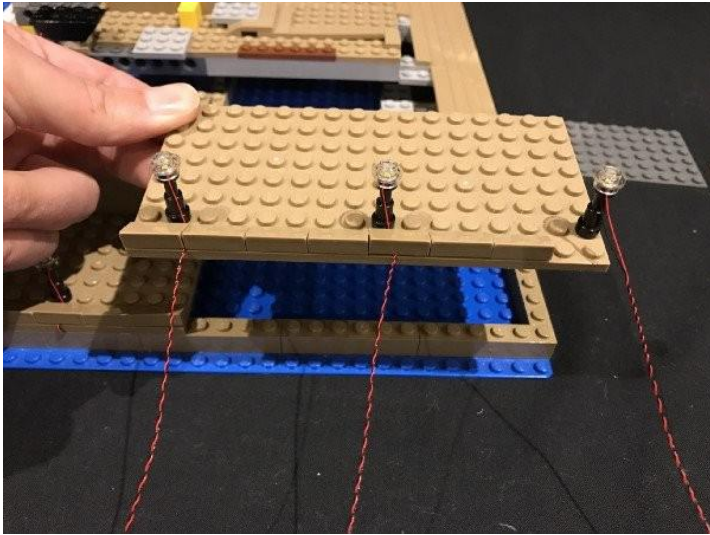


Reconnect the spot light base (1x6 plate) as per below and then set the angle of the spot light so that it is pointing up toward the left (eventually at the opera house)

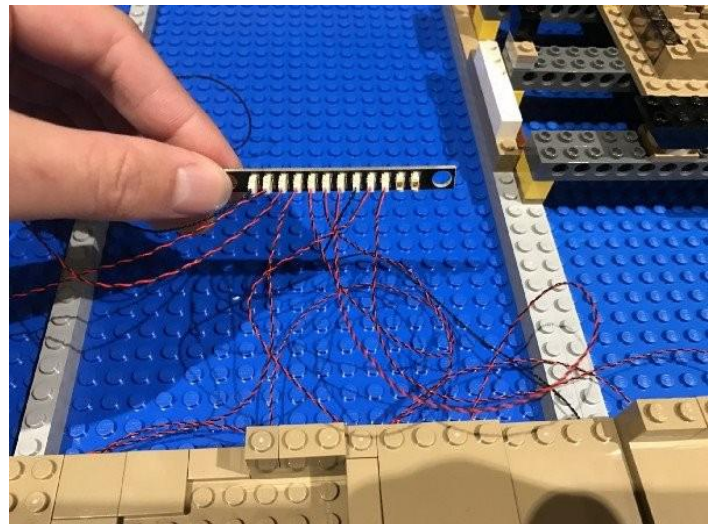
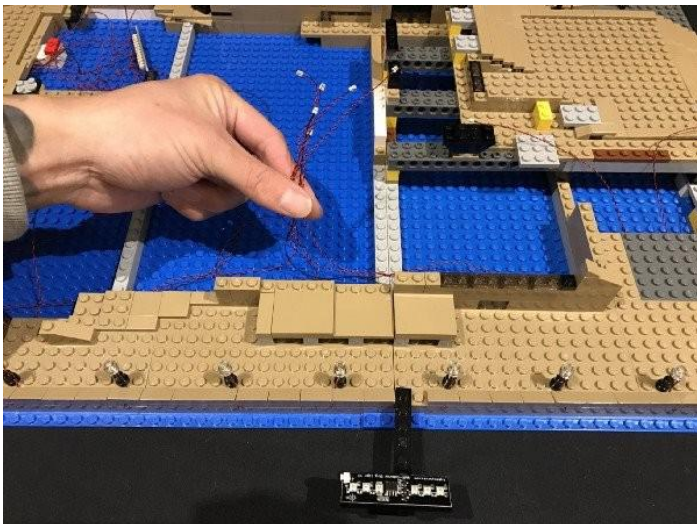


27.) Remove the following plate to allow us to then lay the cables for the remaining three lamp posts.

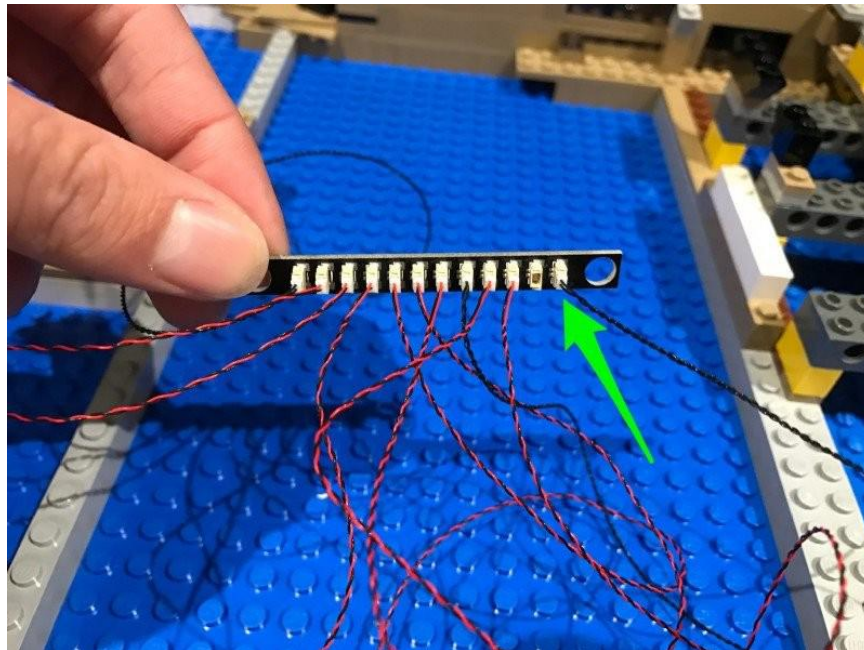




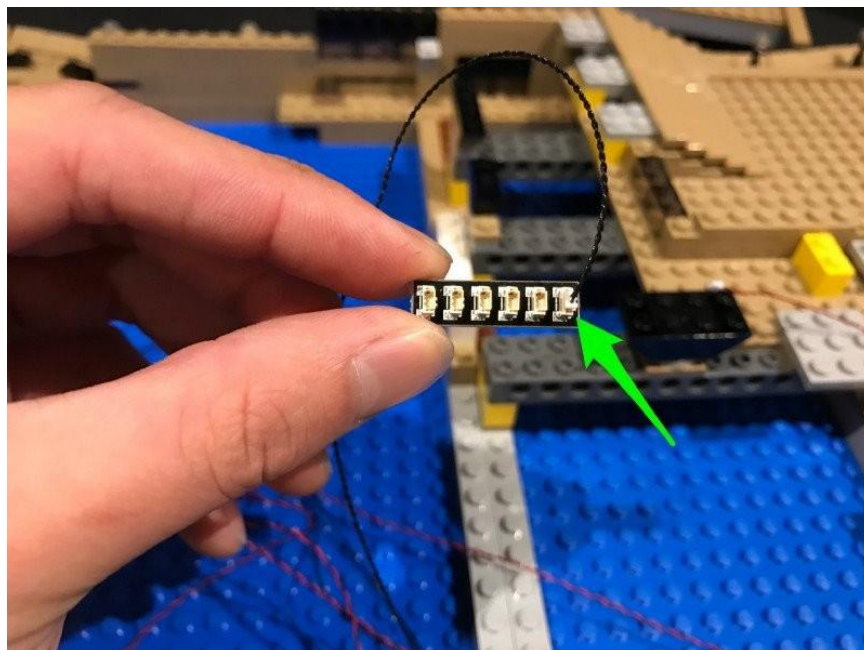
28.) Take the first six cables we laid on the left and then connect them to the 12-port expansion board we used in step 18.



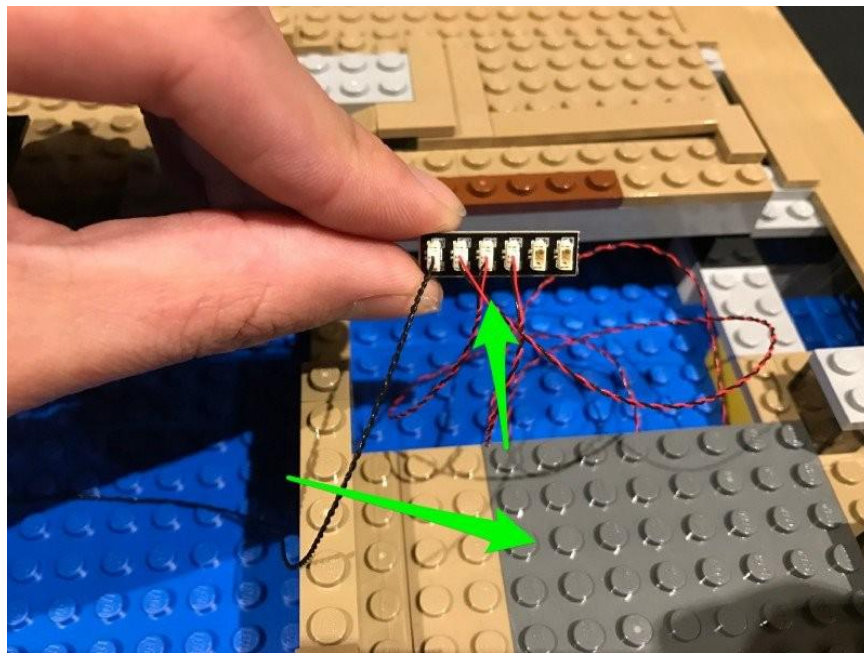
Take another 30cm connecting cable and connect it to one of the remaining ports on the expansion board.



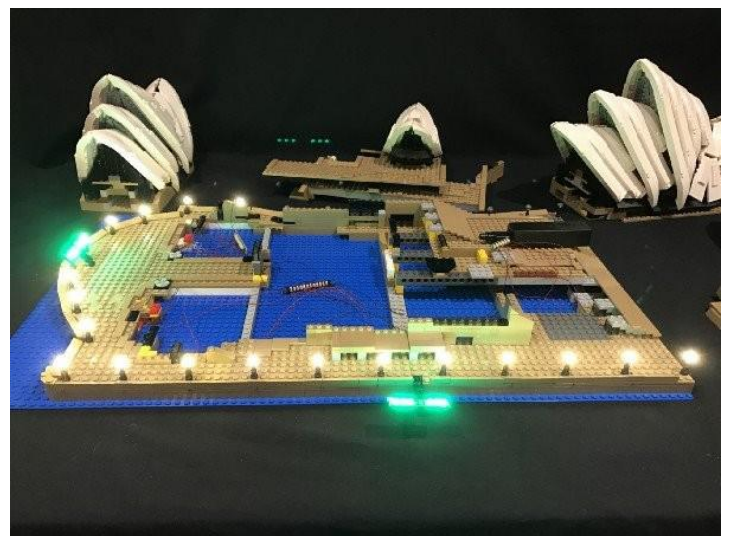
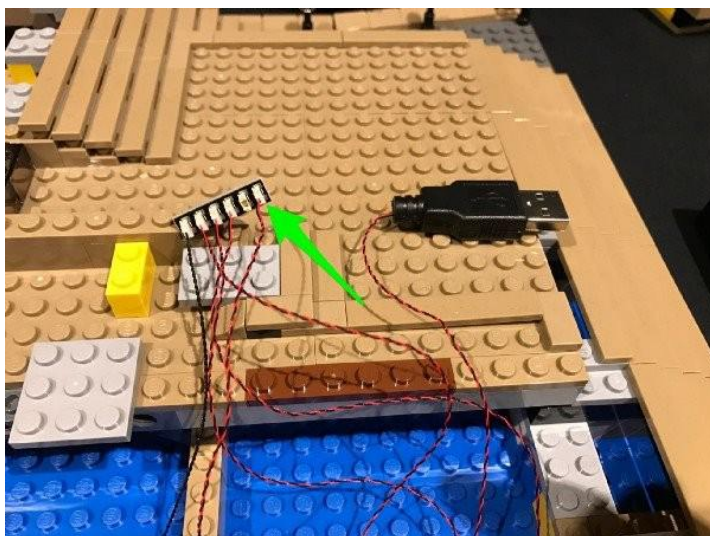
Connect the other end of the 30cm connecting cable to a 6-Port Expansion Board



29.) 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.

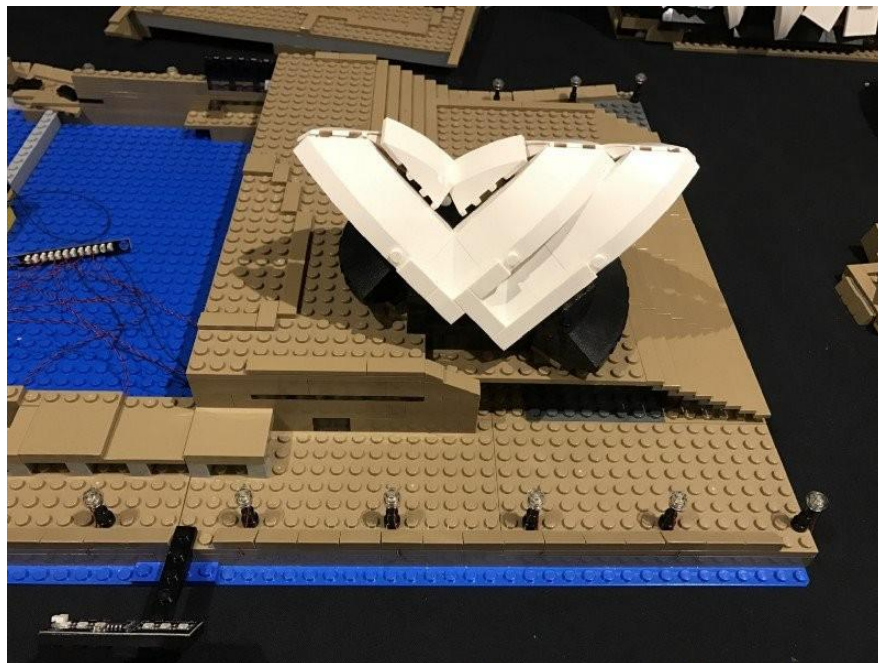
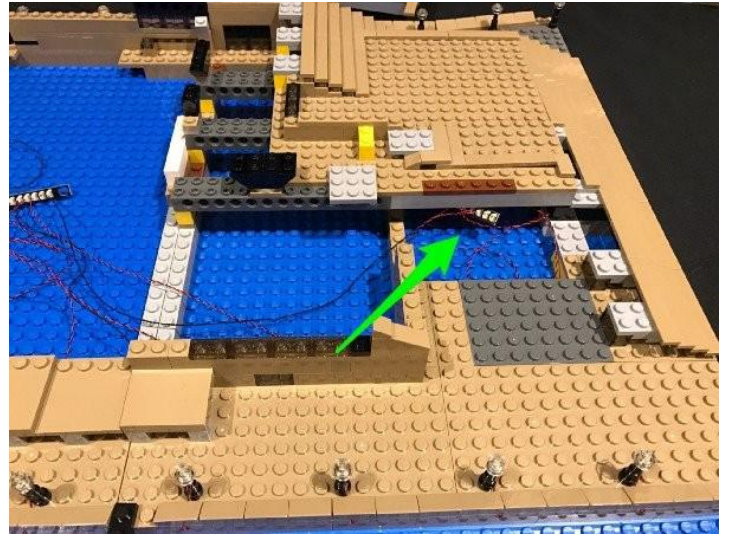
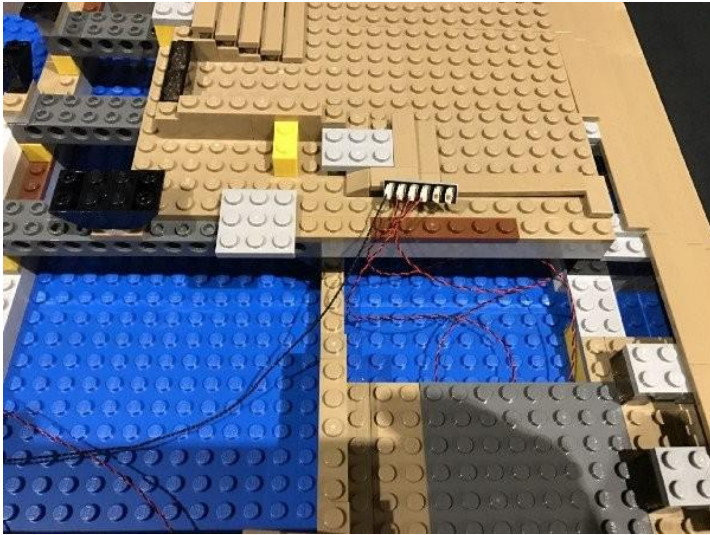


Take this time to test all the lights we have installed so far and to ensure everything is properly connected. To do so, take the 30cm USB Cable and connect it to a spare port on the 6-port expansion board. Connect the other end to your USB power bank and ensure all lights are working OK.

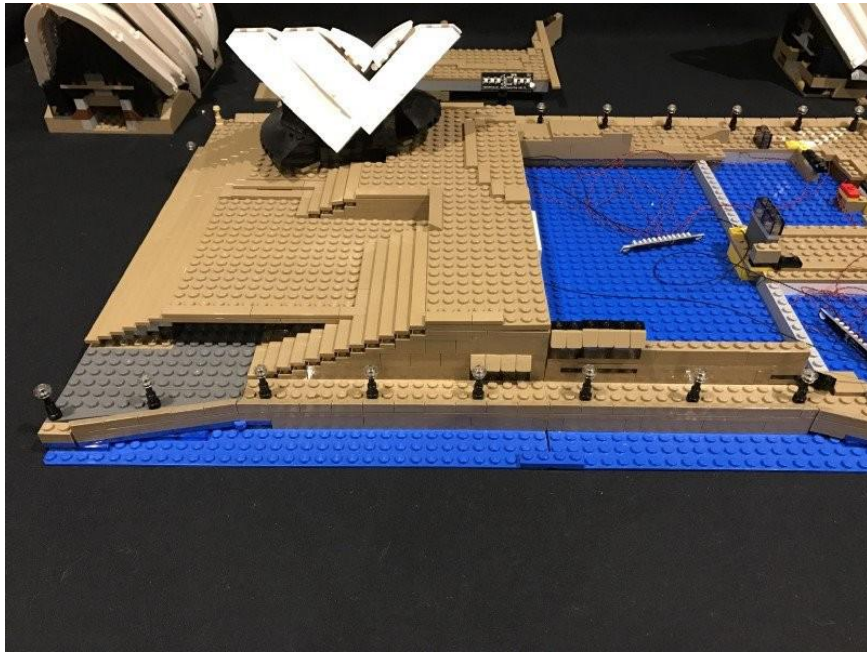


Once you have verified all the lights are working OK, disconnect the USB cable and proceed to the next step.

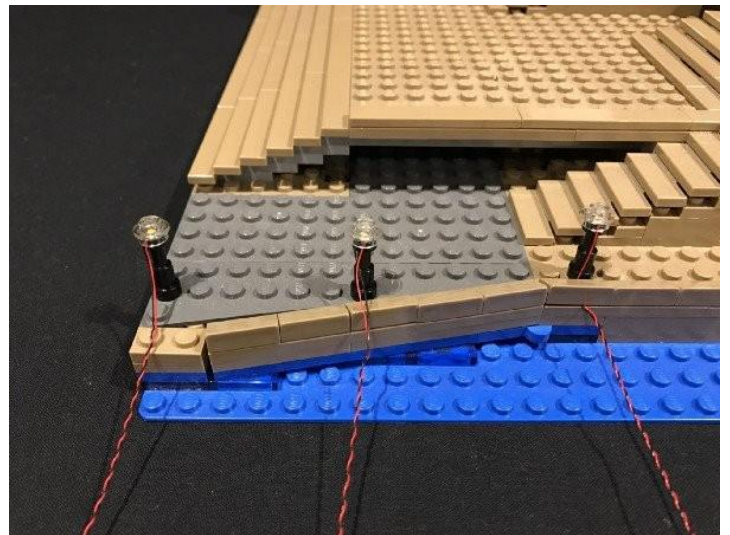
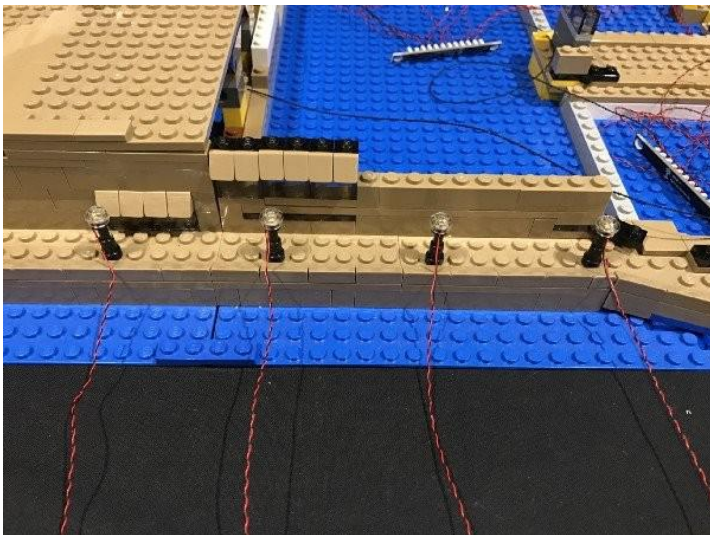
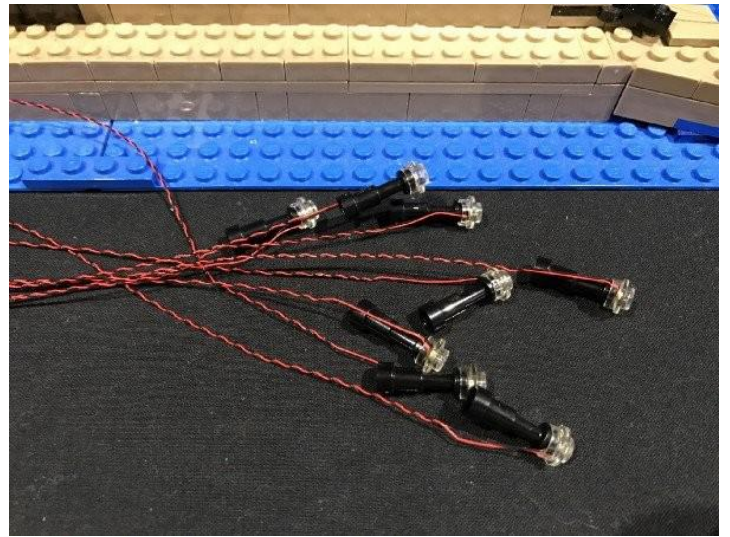
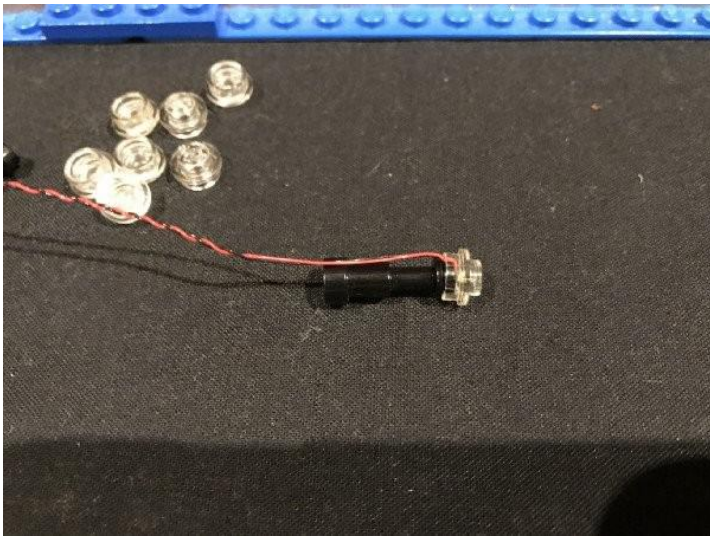
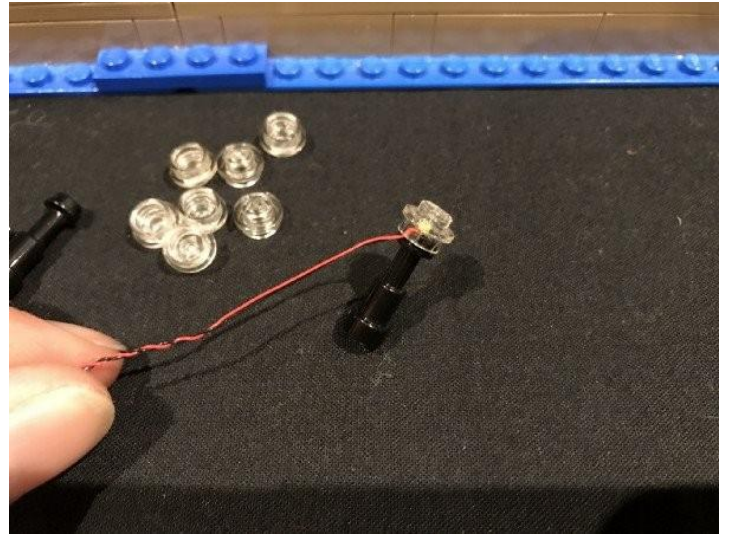
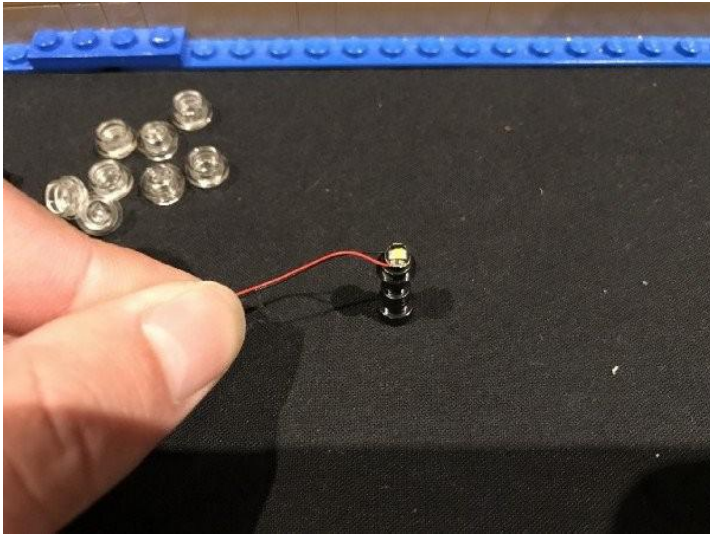
30.) Tuck in the cables from the 6-port expansion board underneath and then reconnect sections above which we removed earlier.



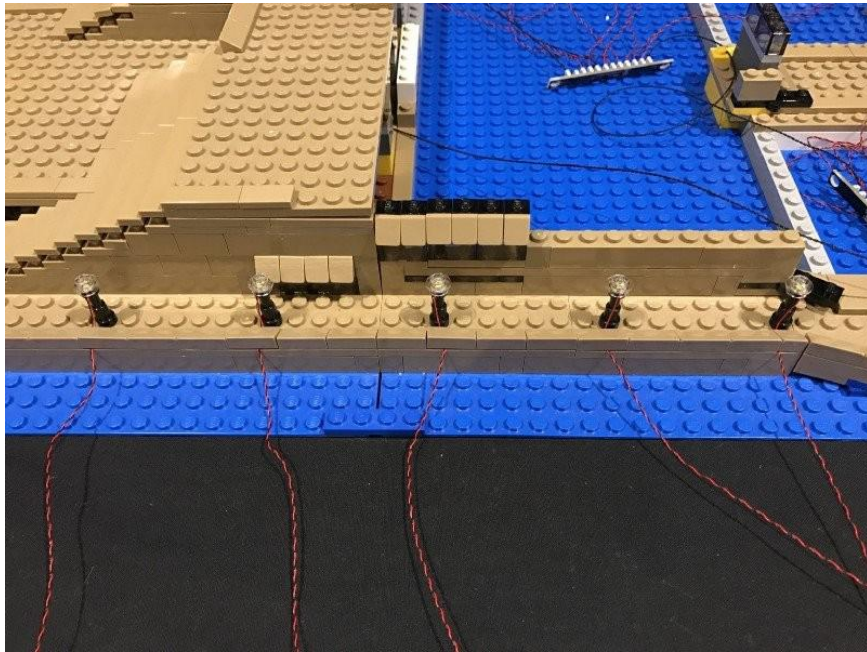
31.) Turn the set around so we are facing the opposite side and then remove the eight lamp posts we are yet to install lights for. Disconnect the trans-clear round plates from them.



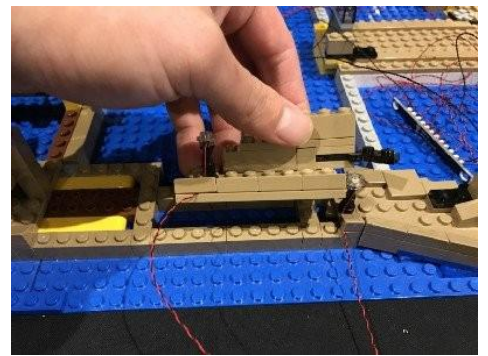
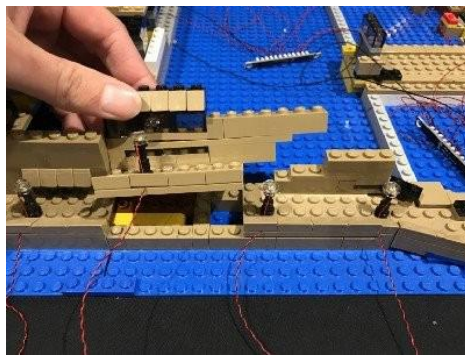
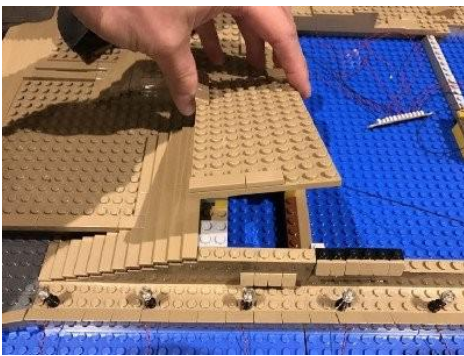
32.) Install the remaining 8x White 30cm Dot Lights to the lamp posts and then reconnect them to the set ensuring the cables are facing toward the outside.



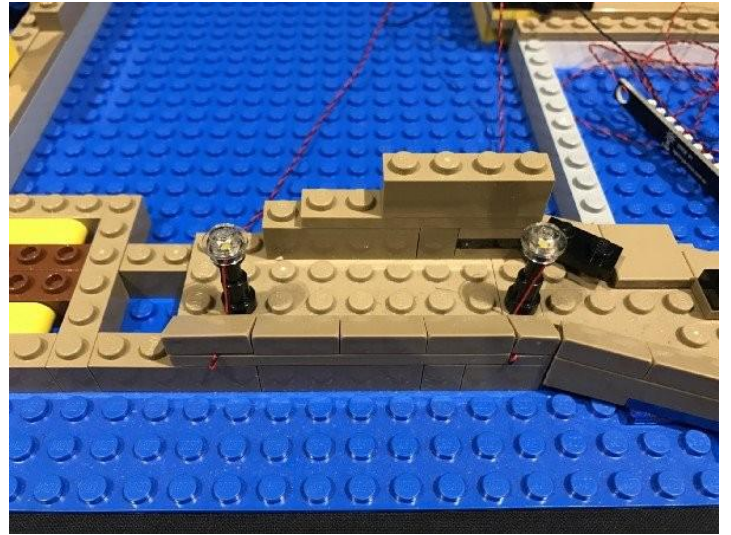
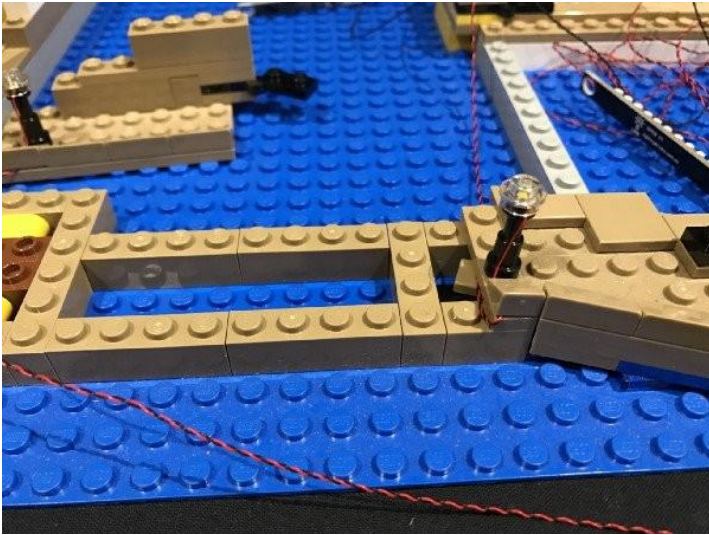
33.) Lay the cables for the five lamp posts toward the right underneath the tiles directly in front of them.



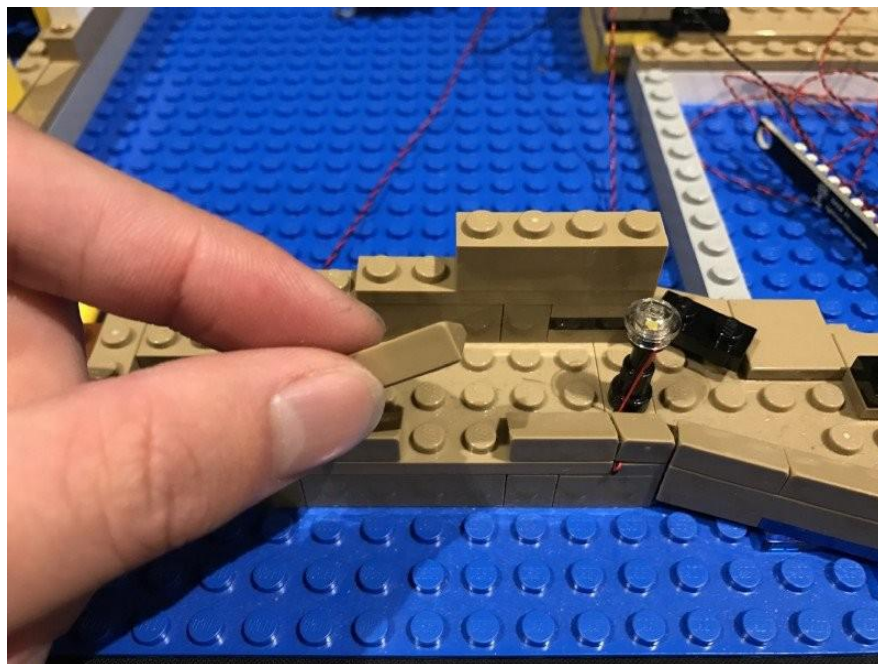
Remove the following sections.



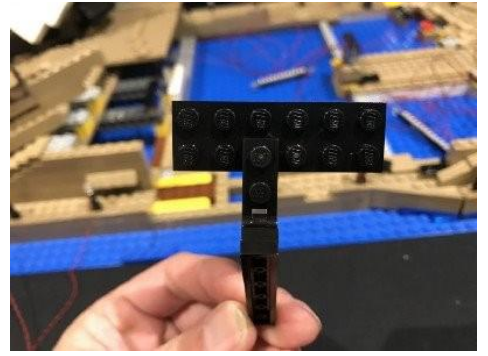
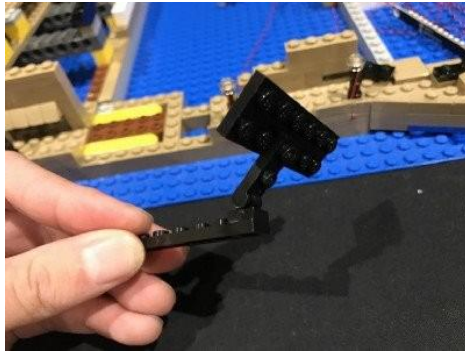
34.) First lay the lamp post cable on the right underneath the plate it is connected to, then lay the lamp post cable on the left underneath it's plate before reconnecting it. Ensure you carefully lay the cables in between studs underneath.



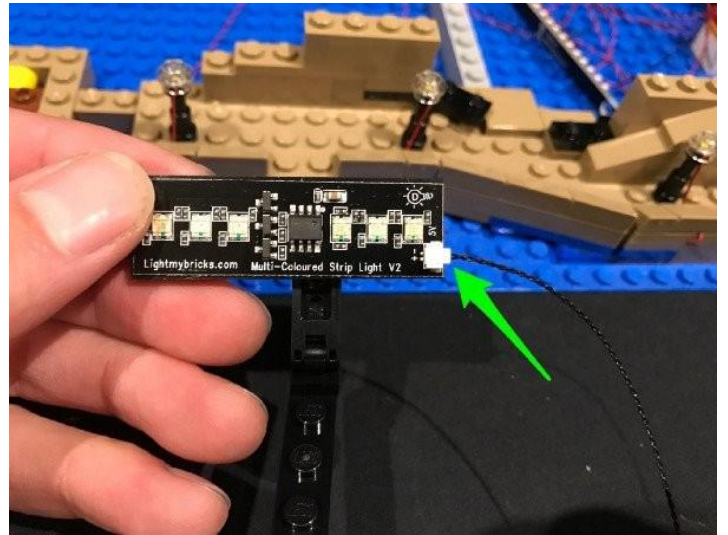
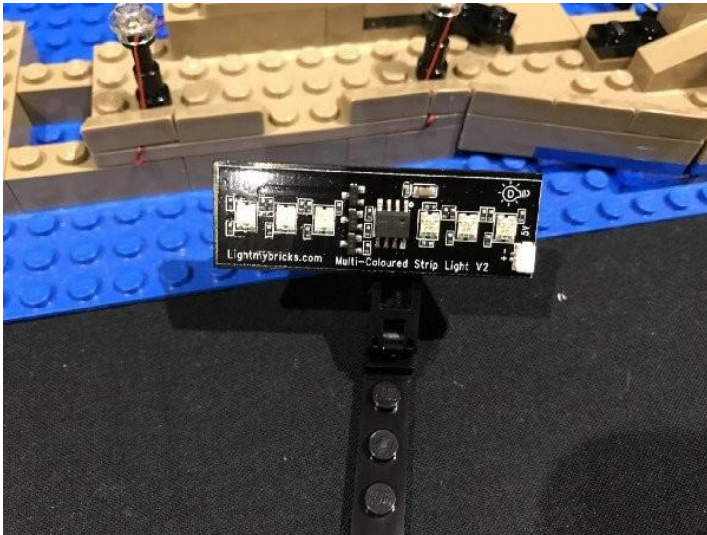
35.) Remove the following tile in between the two lamp posts we just connected as this is where we will be installing another spot light.



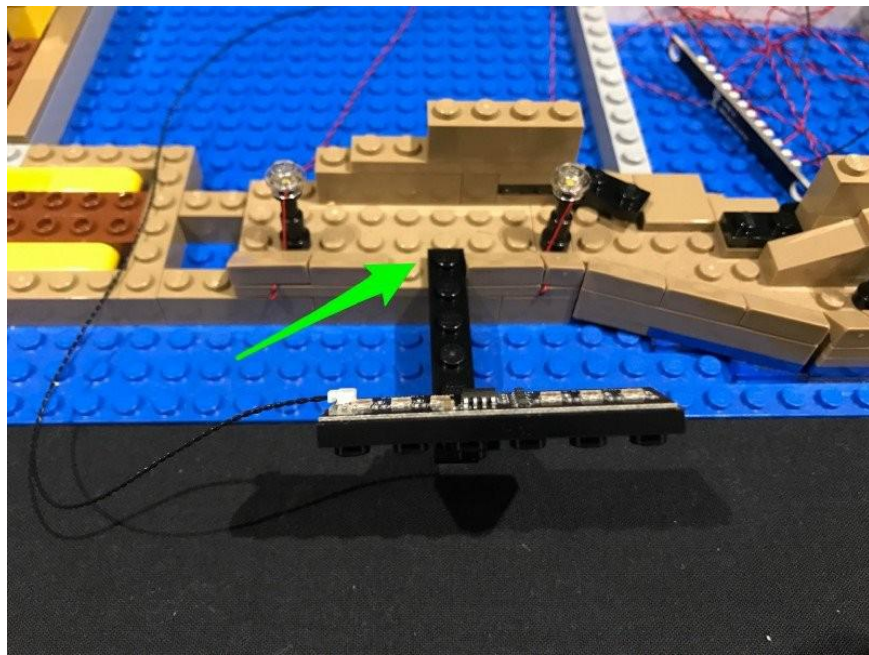
Locate the following provided LEGO pieces and assemble them as below to make another spotlight.



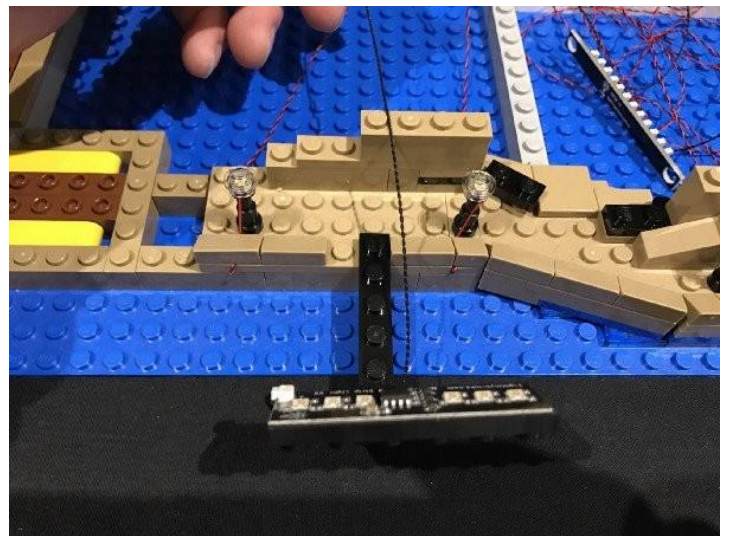
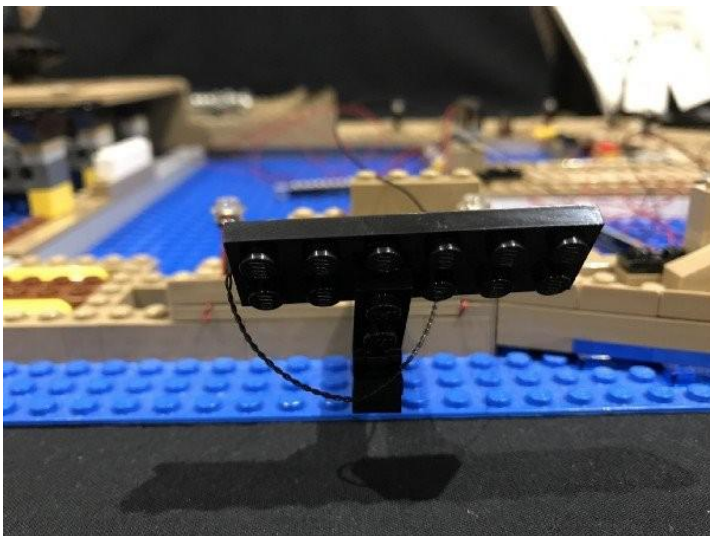
36.) Stick another Multi-Coloured Strip Light to the base of the 2x6 plate and then connect a 30cm Connecting Cable to the port.



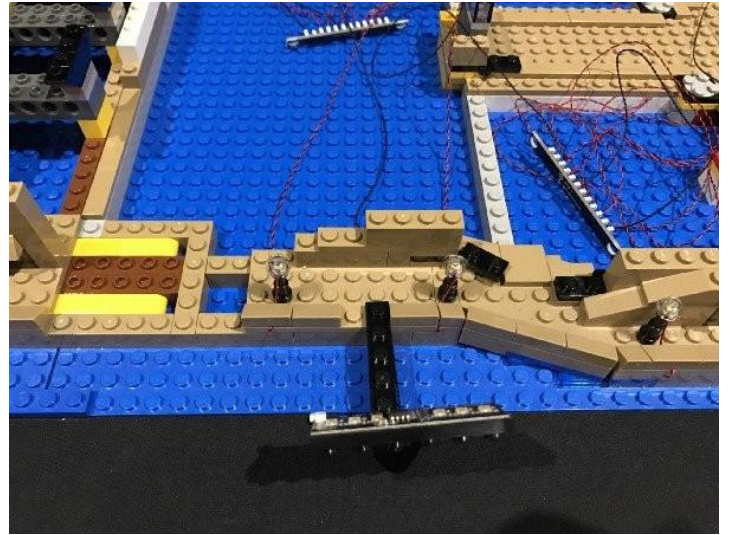
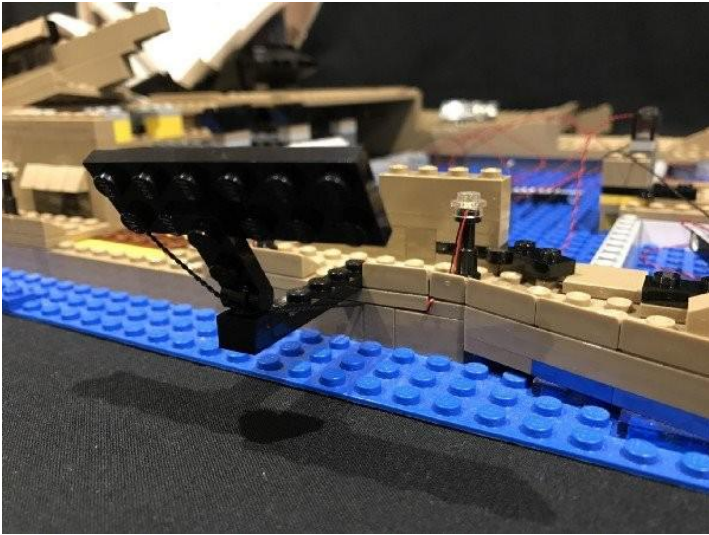
Reconnect the spot light to the following position



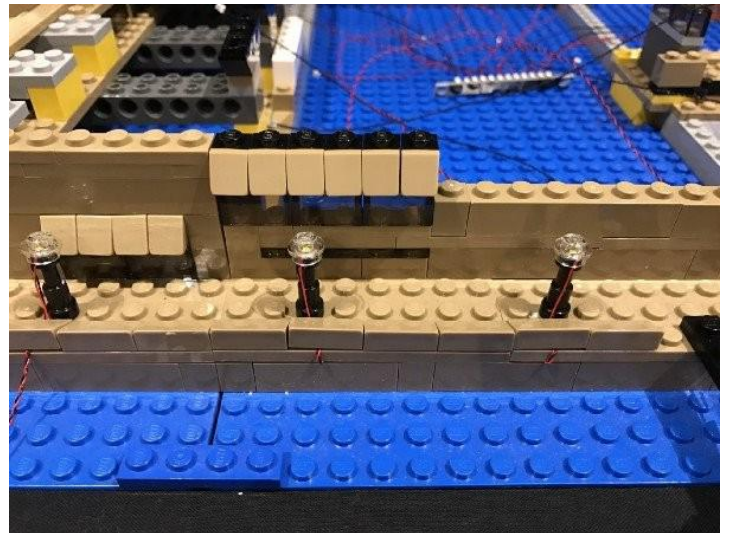
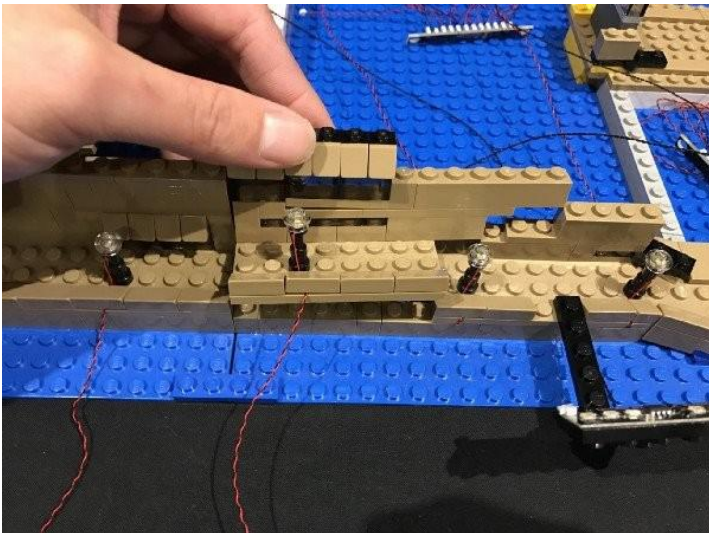
Loop the 30cm connecting cable around the spot light and then pull toward the inside of the set as per below.



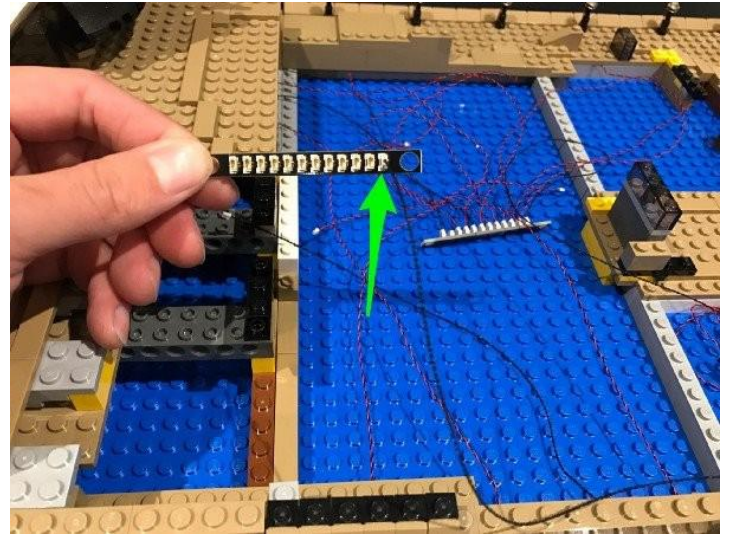
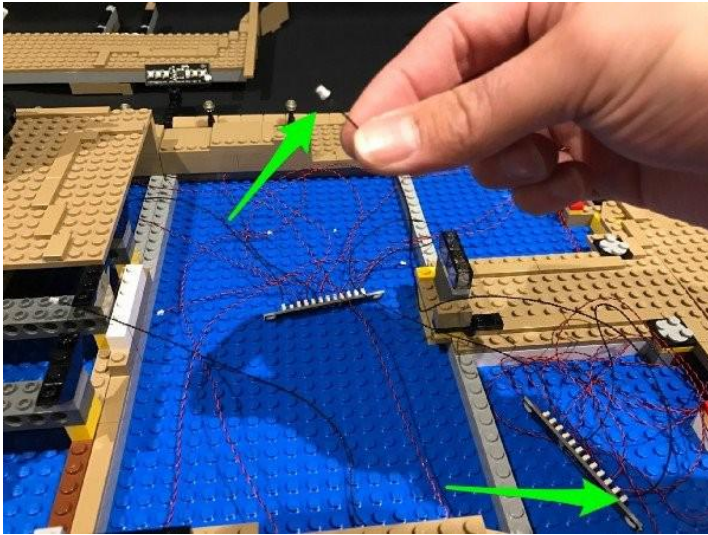
Disconnect the plate underneath again and then lay the spot light cable underneath before reconnecting the plate.



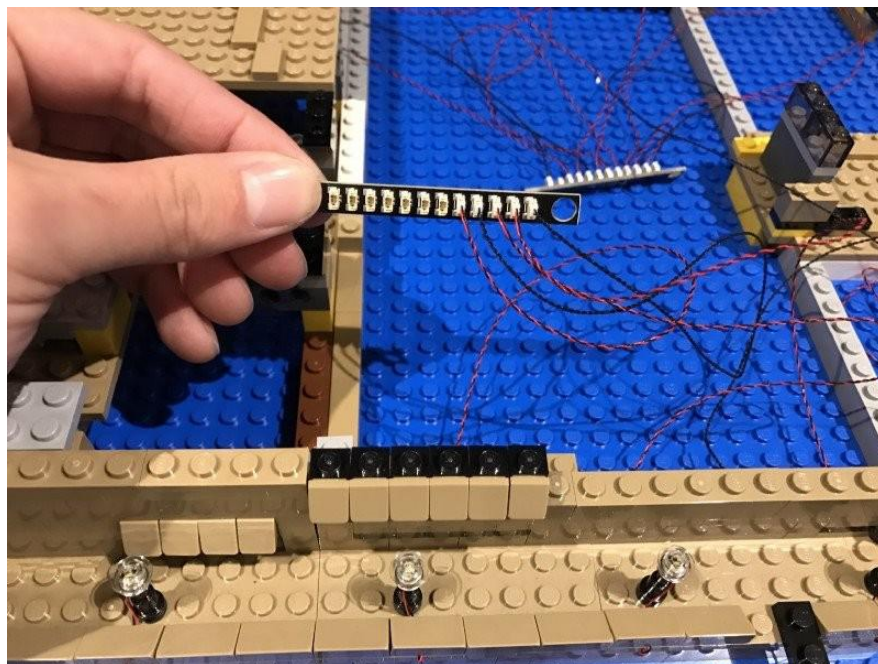
37.) Move on to the next lamp post toward the left and lay cable for the lamp post underneath the plate before reconnecting.



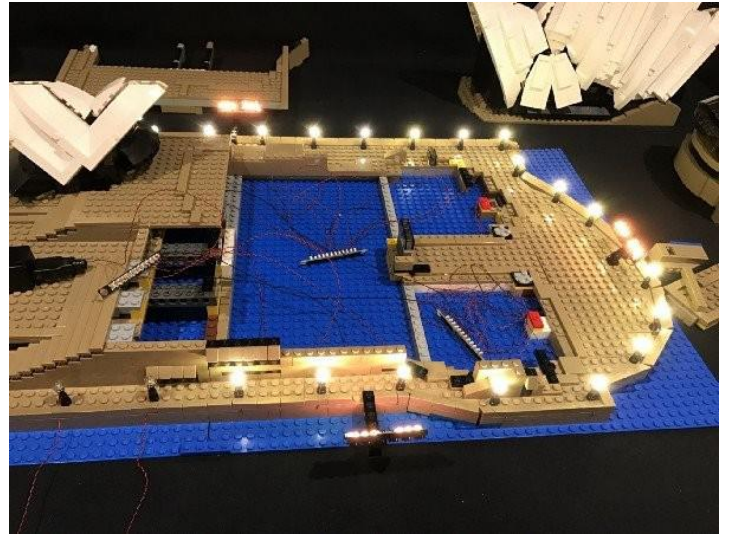
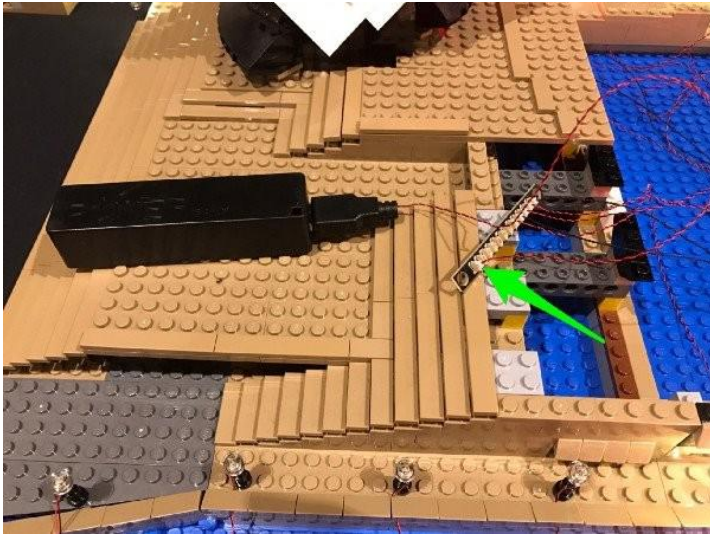
38.) Locate the other end of the 30cm Connecting Cable we connected to the very first 12-port Expansion board we used and then connect it to the last remaining 12-port Expansion Board.



Connect the three lamp cables we have secured down, as well as the spot light cable to the expansion board.

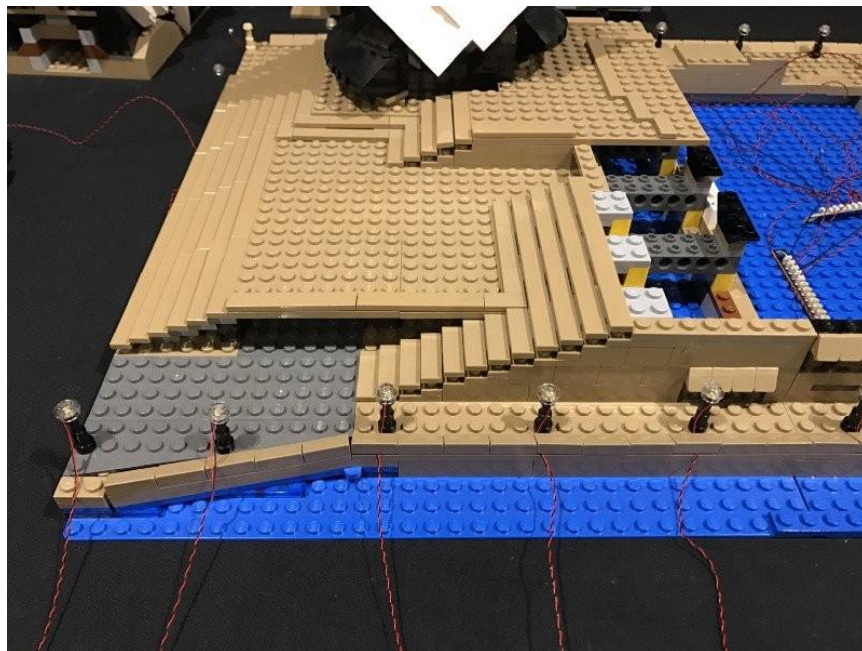


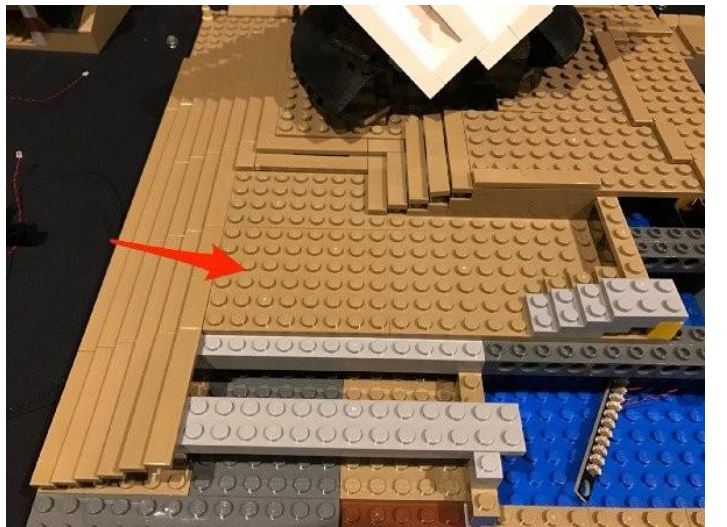
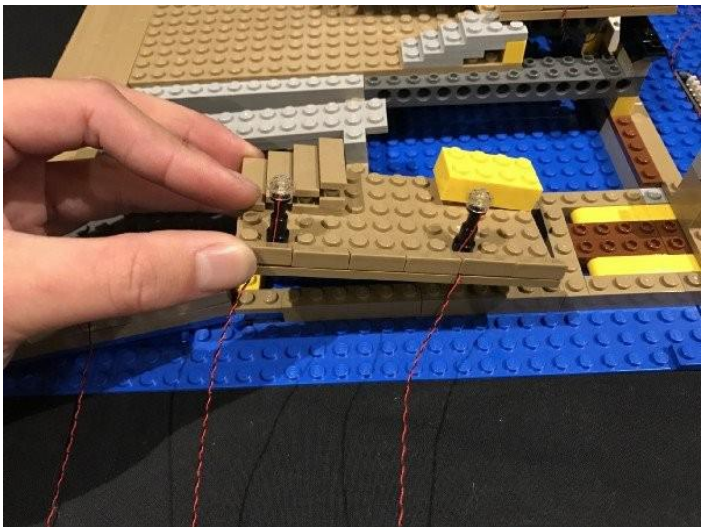
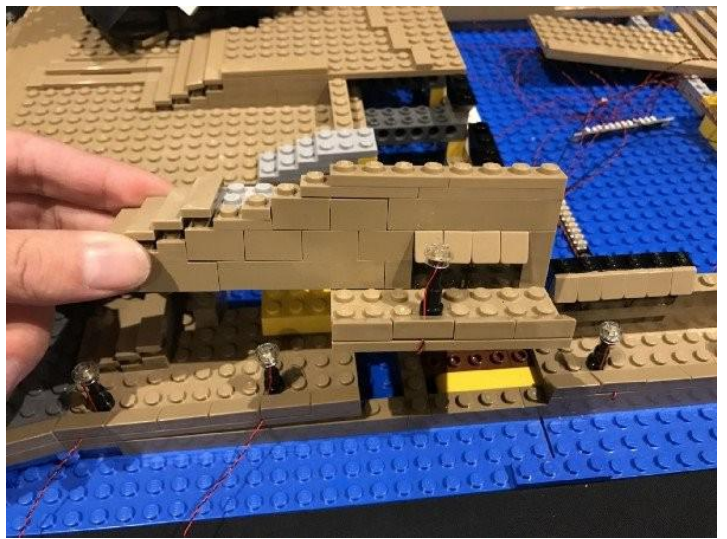
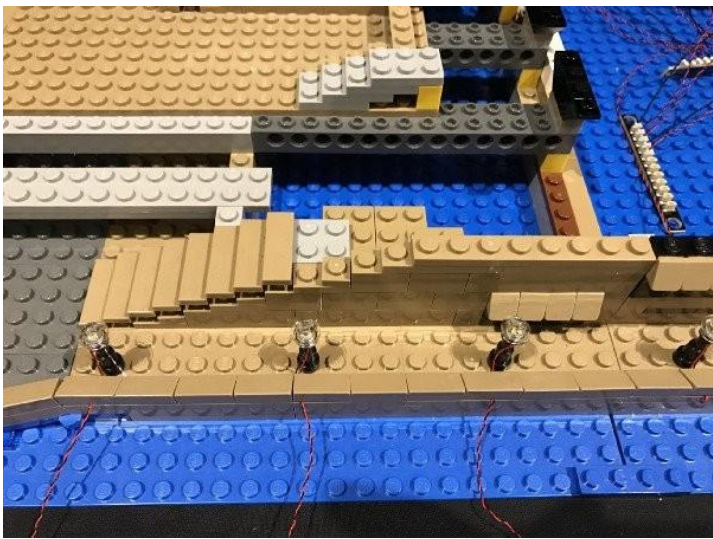
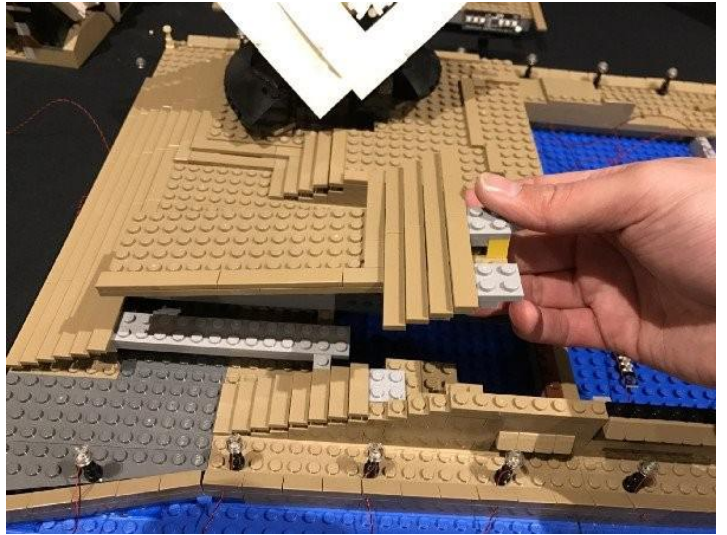
Take this time to test all the lights we have installed so far and to ensure everything is properly connected. To do so, take the 30cm USB Cable and connect it to a spare port on the 12-port expansion board. Connect the other end to your USB power bank and ensure all lights are working OK.

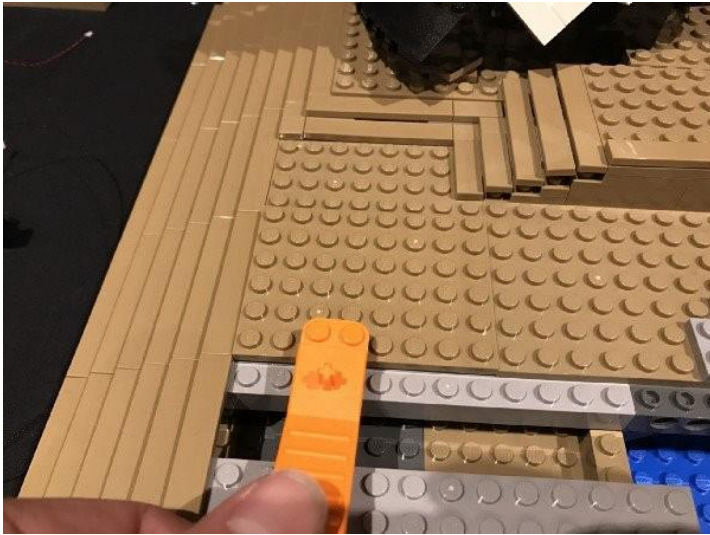


Once you have verified all the lights so far are working OK, disconnect the USB cable and proceed to the next step.

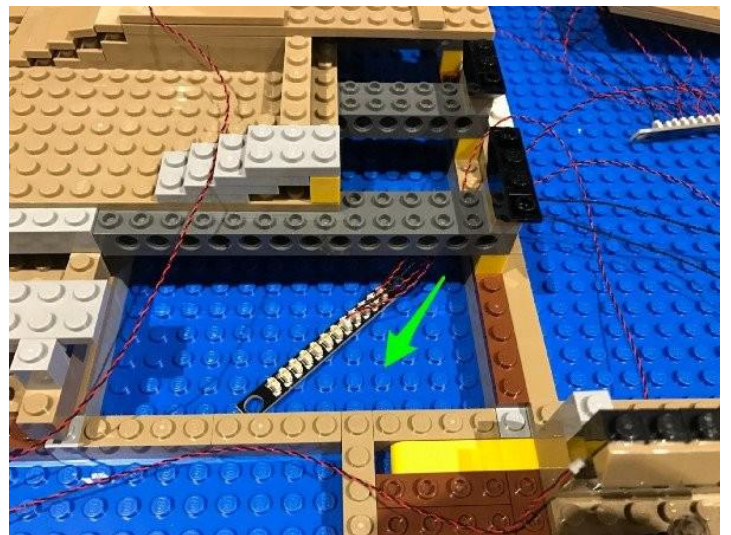
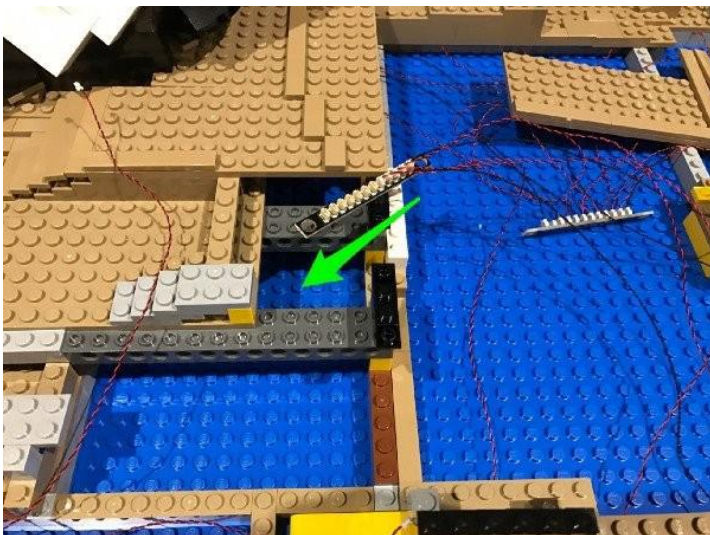
39.) We will now move onto connecting the rest of the lamp posts as well as the final spot light. In order to do so, we will need to remove sections to lay the cables underneath. Follow the below example images to remove sections.







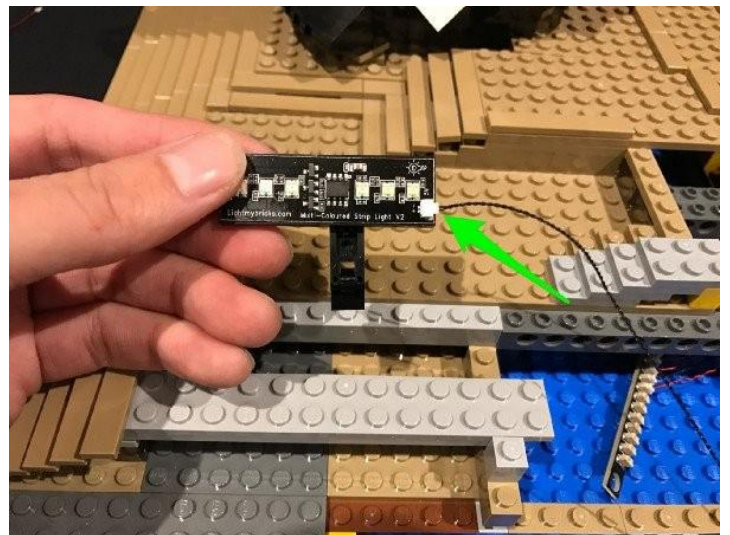
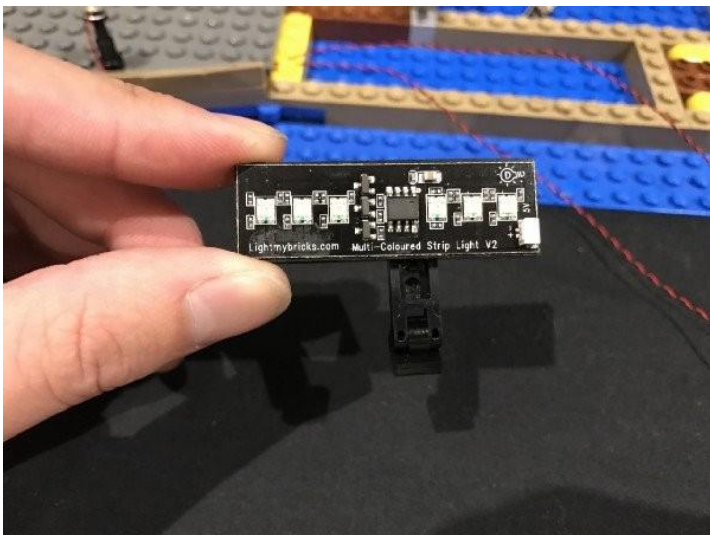
40.) Take the 12-port Expansion Board closest to you and then bring it across to the left by threading underneath the following section.



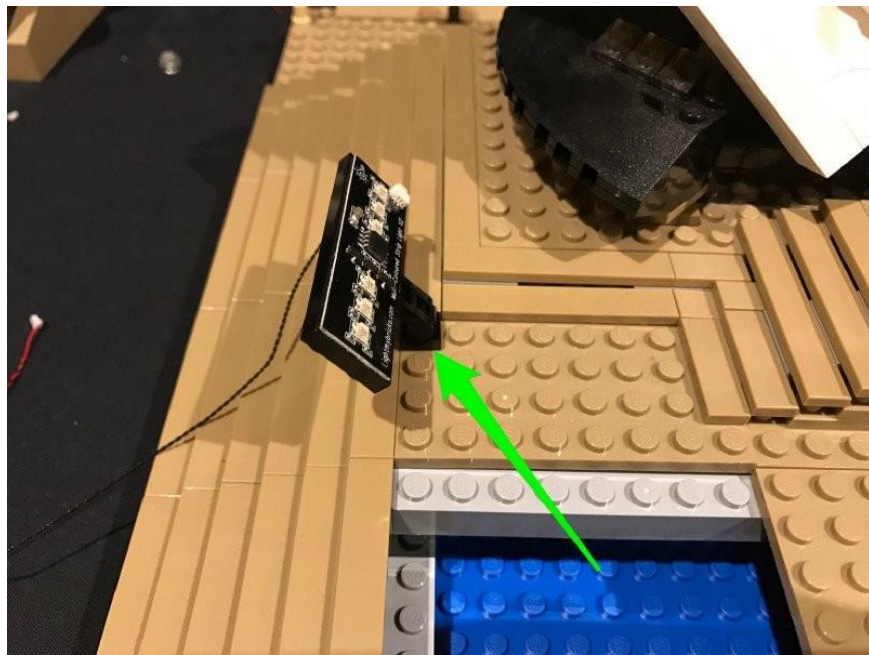
41.) Locate the remaining provided LEGO pieces and then assemble them as per below to make up a spot light



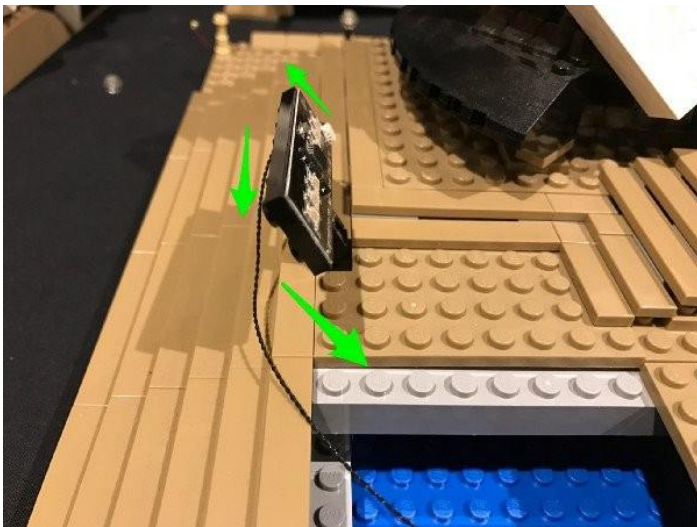
Stick another Multi-Coloured Strip Light to the base of the 2x6 plate and then connect a 30cm connecting cable to the port.

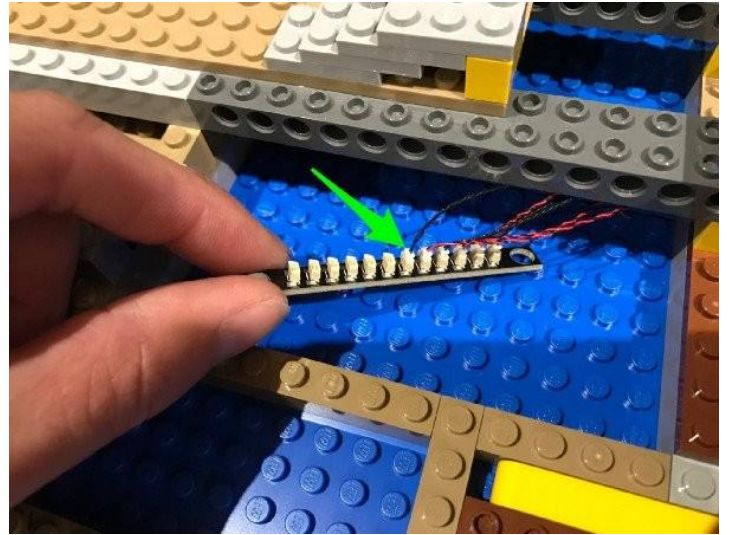
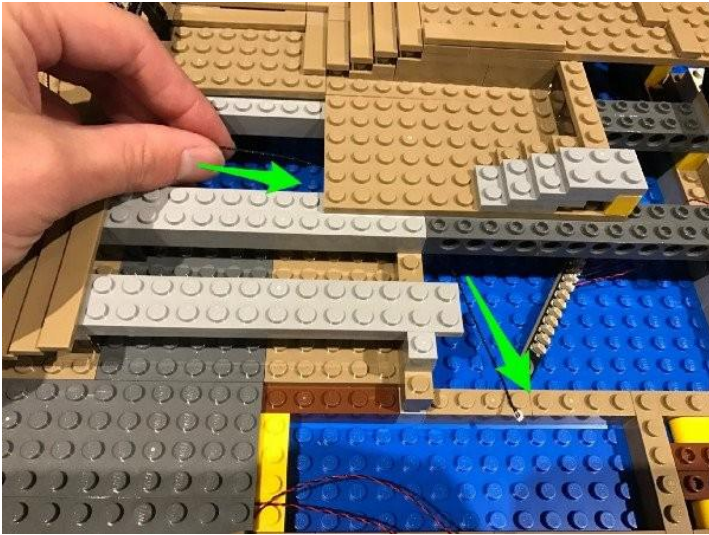


42.) Connect the spot light to the following position facing the Opera House.

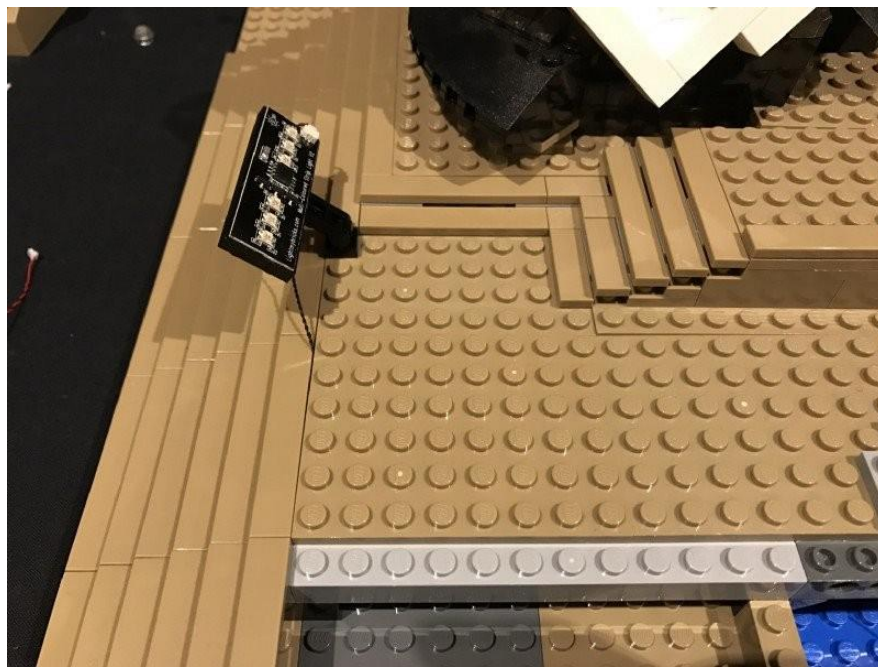


Loop the cable behind the spot light and then pull towards the inside.
Thread the cable underneath the following section and then connect it to
a spare port on the 12-port expansion board

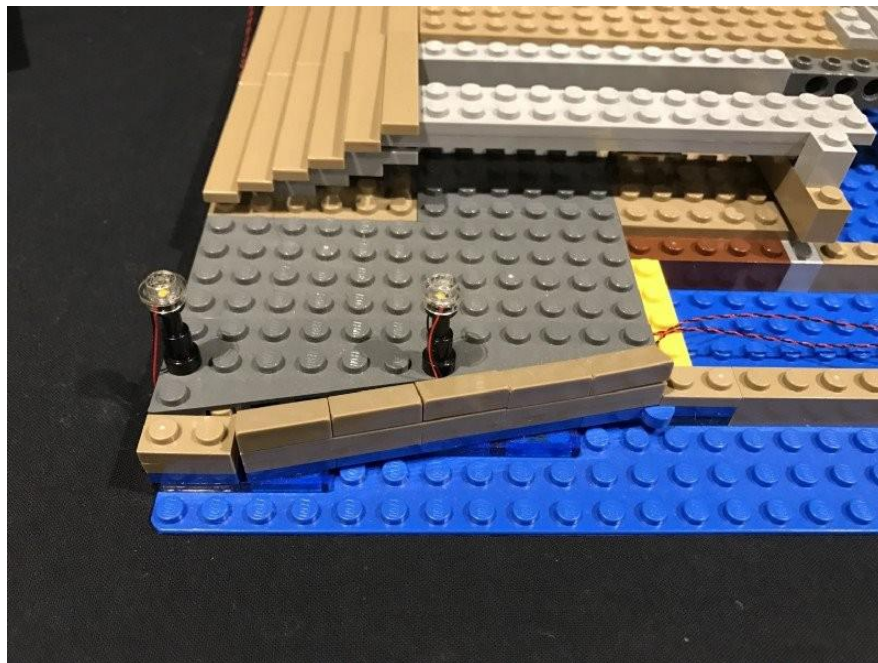
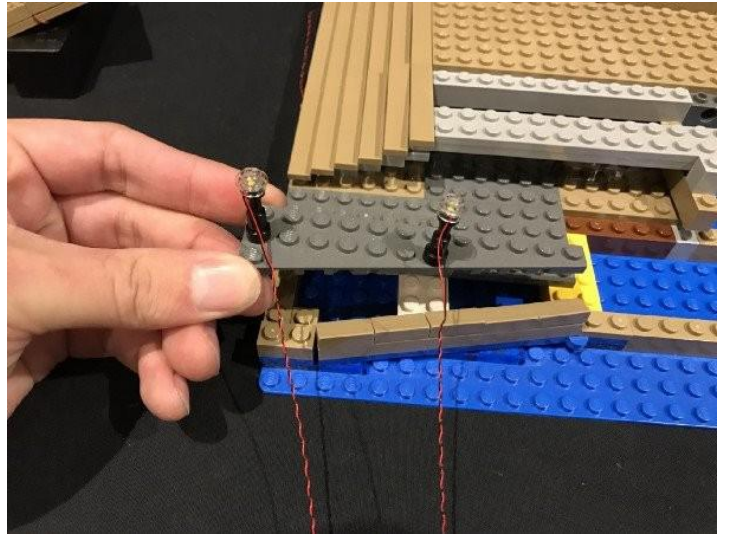
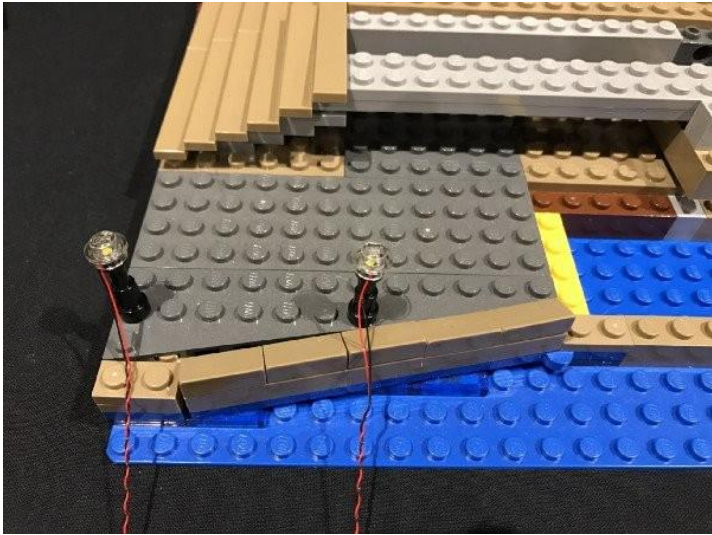




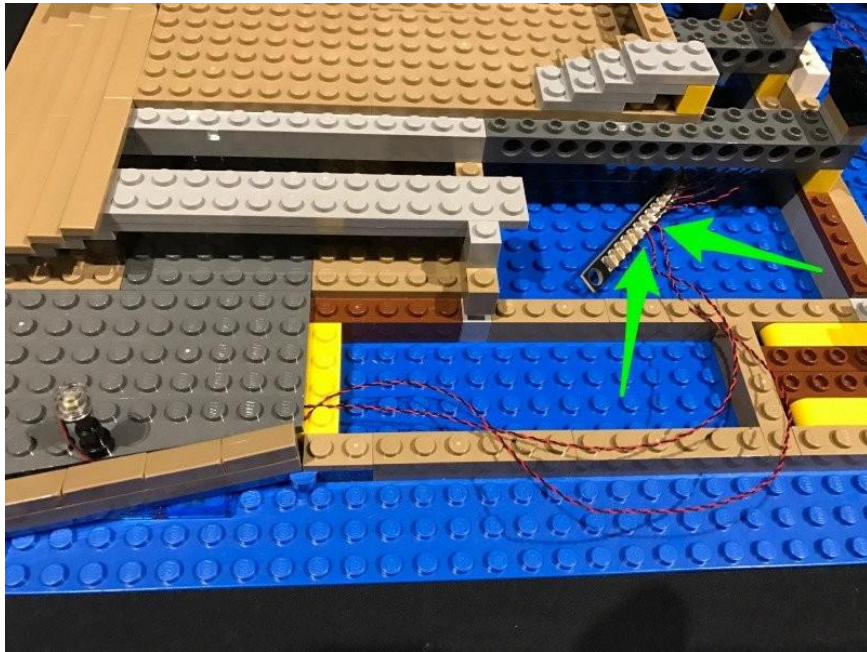
Carefully reconnect the 6x8 plate we removed earlier. The cable should fit nicely between plates. Take caution and ensure you do not forcefully connect the plate and snap the cable.



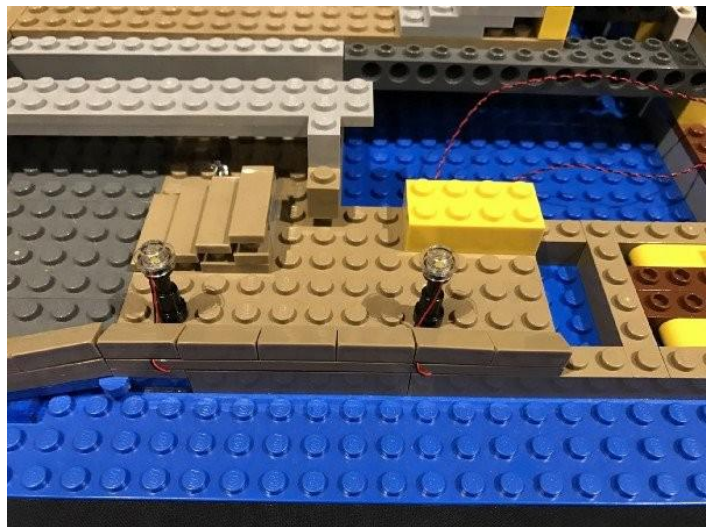
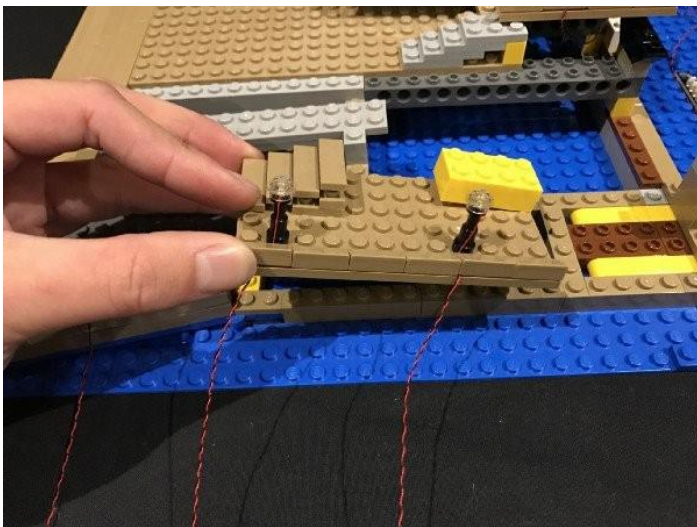
43.) Start with the two lamp posts on the far left. Disconnect the plate and then lay cables underneath and ensure the cables underneath are laid in between studs before reconnecting the plate.



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

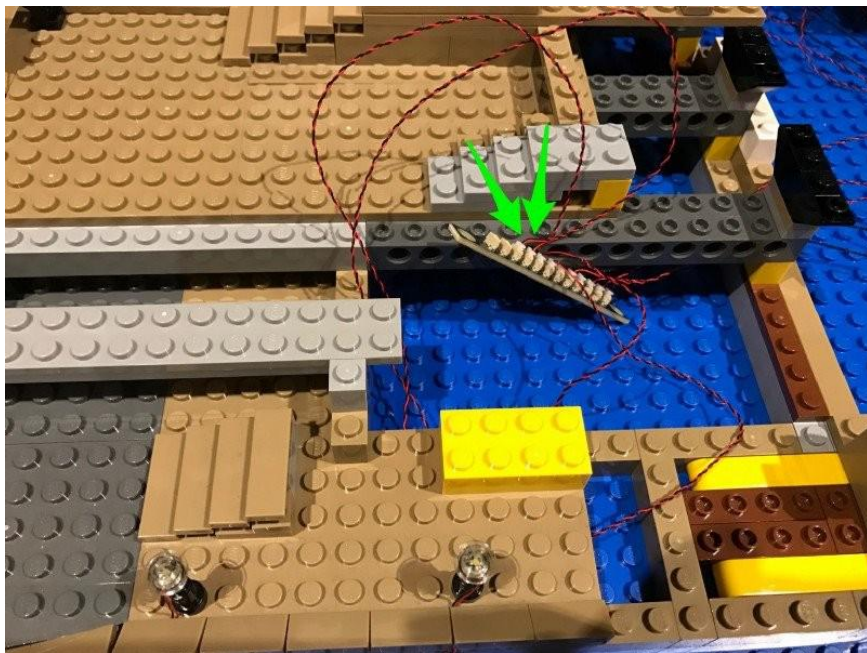


44.) Secure cable for the next two lamp posts along by first disconnecting the plate and then laying the cables underneath before reconnecting the plate. Ensure the two cables are neatly laid and coming out underneath.

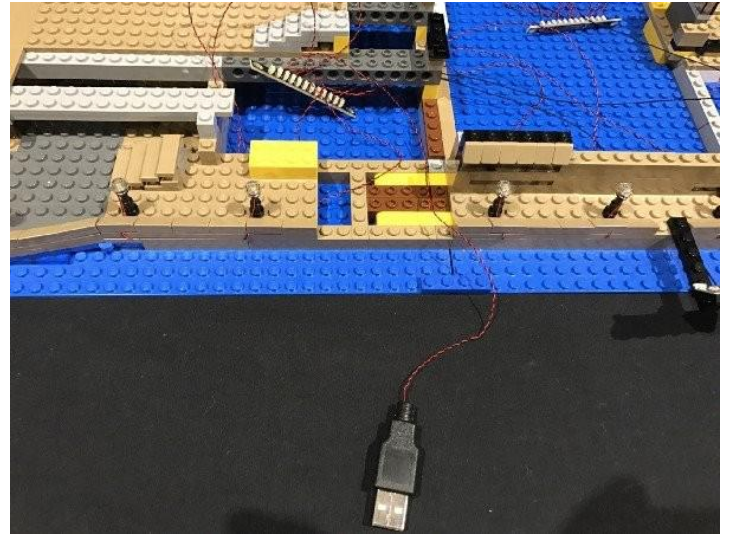
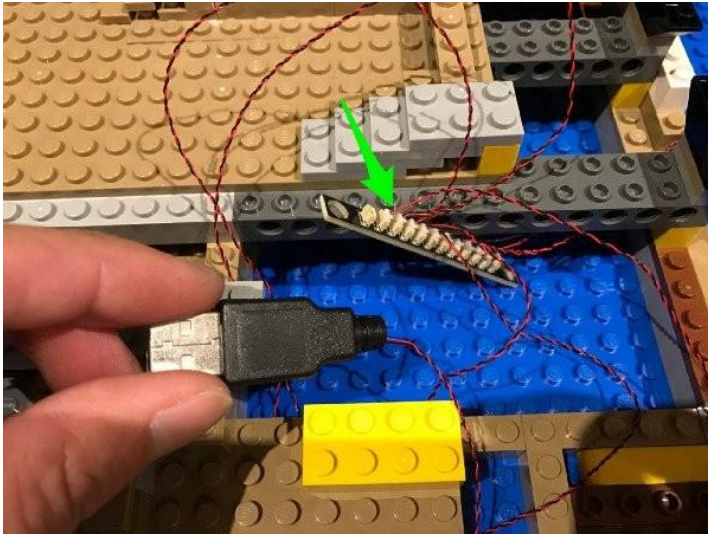




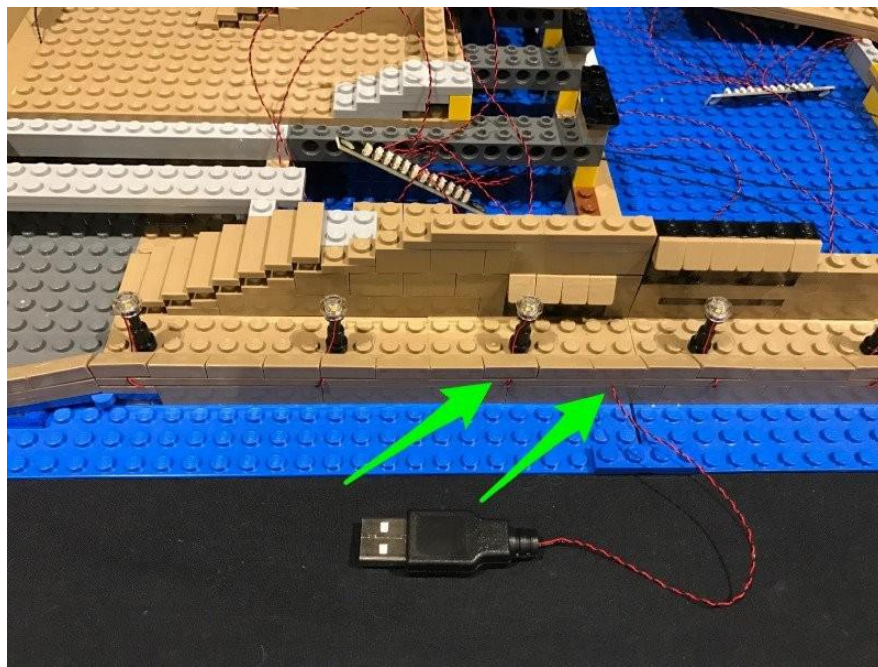
Connect the two lamp post cables to the expansion board.



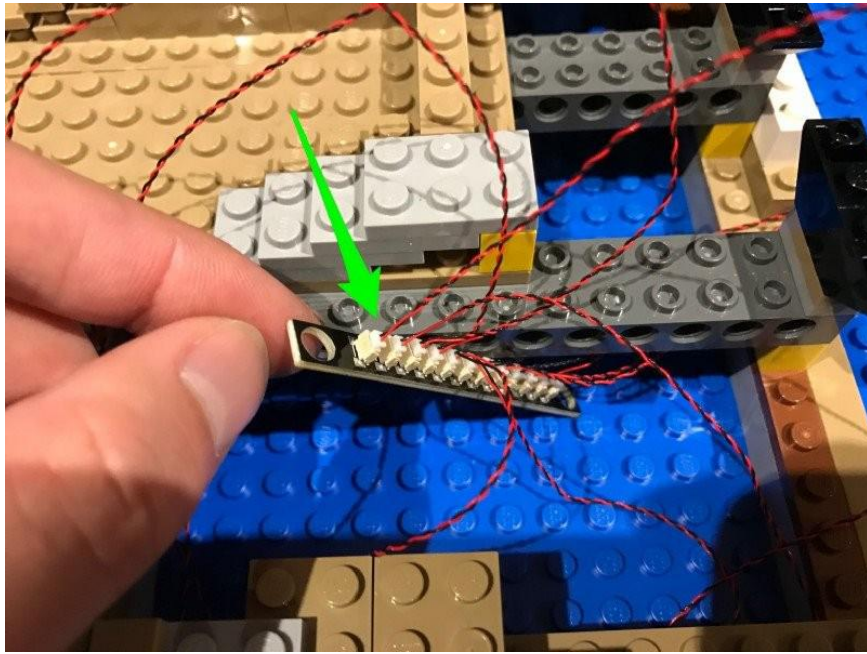
45.) Take the USB Cable and connect it to the expansion board. Lay the cable down with USB plug facing outside. This will be where the USB power Bank will sit.



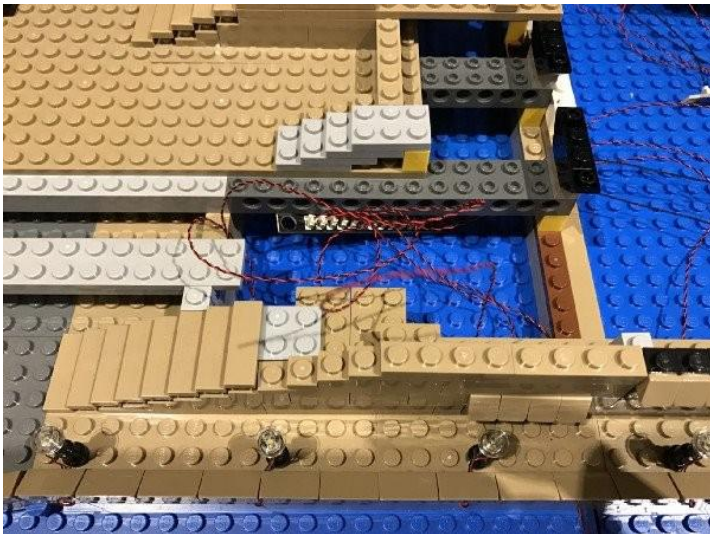
Reconnect the remaining lamp post section ensuring you lay the cable underneath the plate. Ensure you also have plenty of length for the USB Cable.



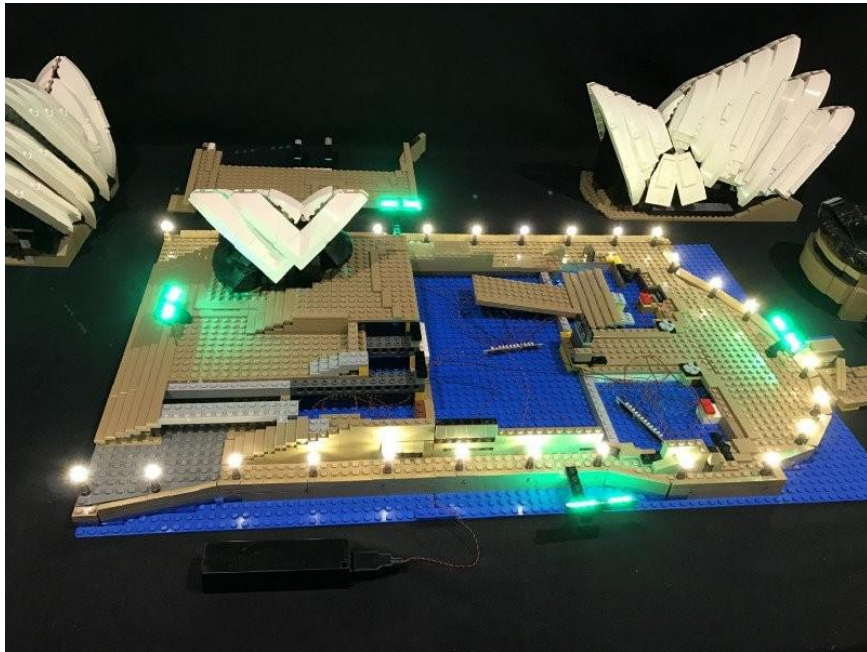
Connect the remaining lamp post cable to the last port on the expansion board.



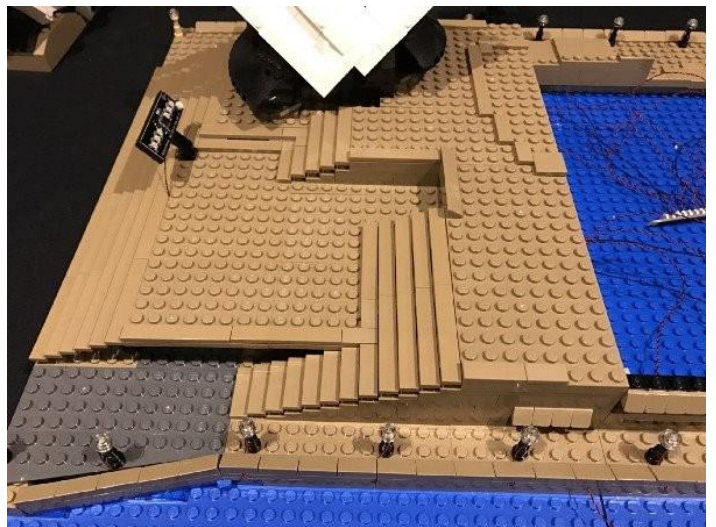
46.) Tuck all the cables and expansion board underneath sections as neatly as you can ensuring there no loose wires.



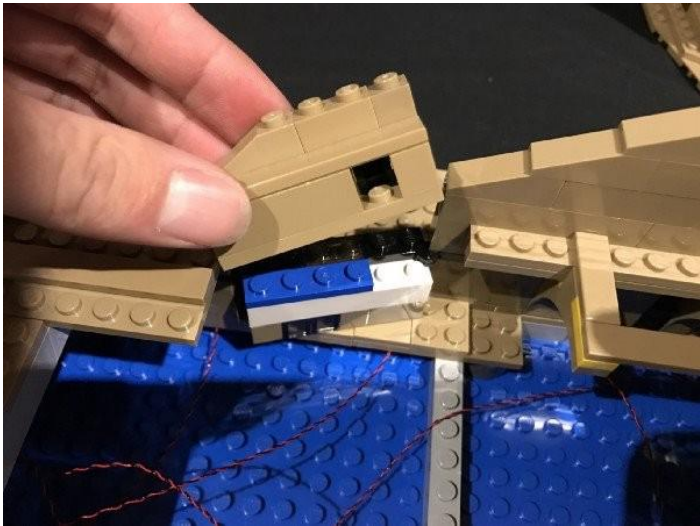
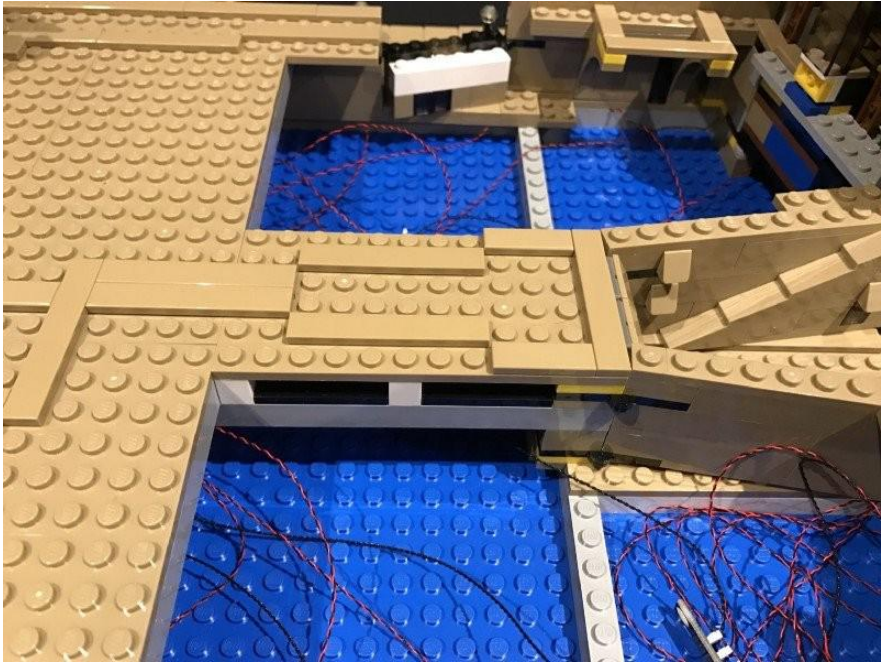
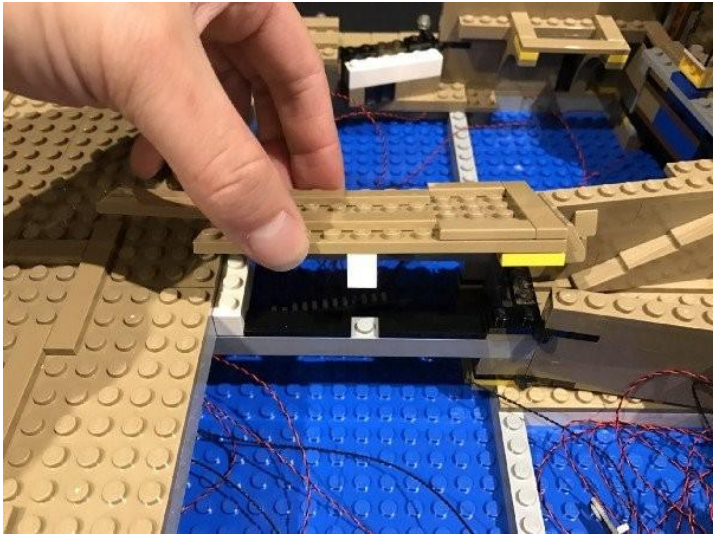
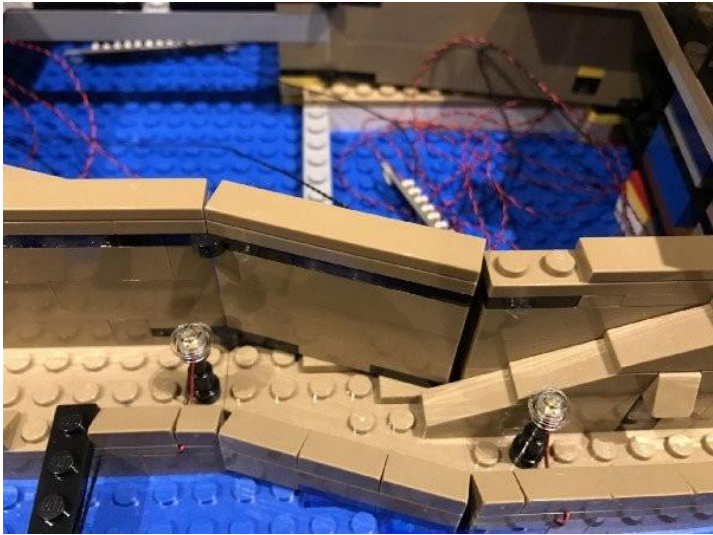
Before we start reconnecting all the sections we removed, take this time to test all the lights we have installed so far and to ensure everything is properly connected. Connect the USB Cable to your USB power bank and ensure all lights are working OK.

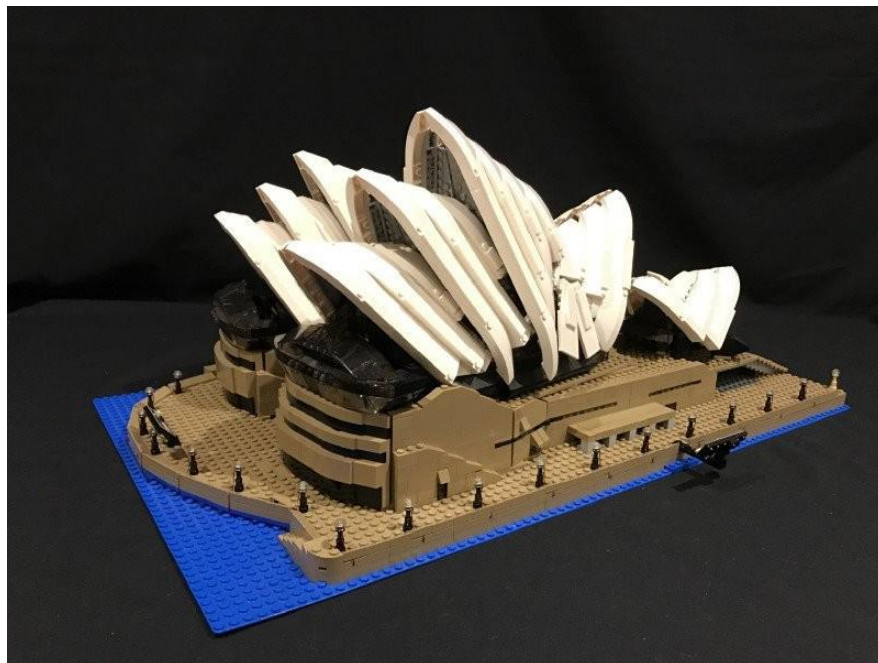
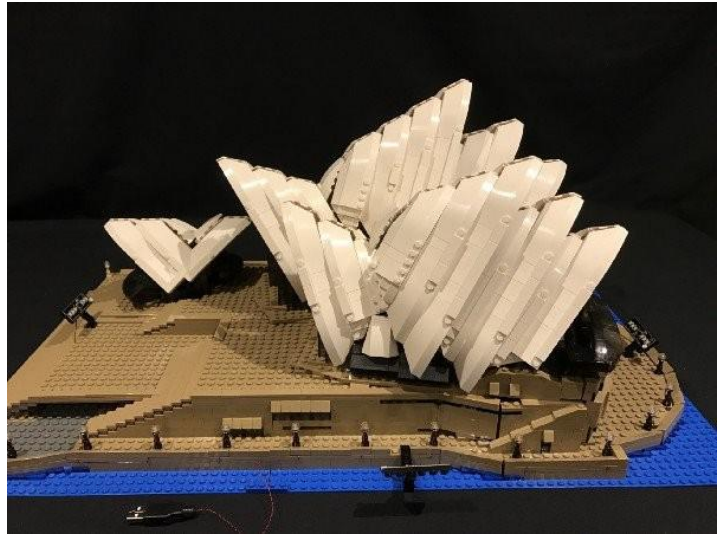
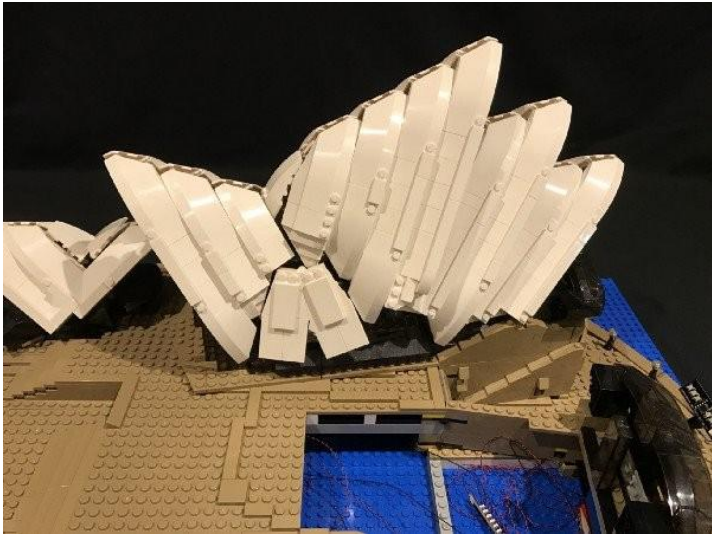


47.) We can now start reconnecting all the sections we removed earlier.
Follow the below images to reconnect sections in order.









This finally completes installation of your LEGO Sydney Opera House

Lighting Kit. You can now position your USB power Bank behind, connect the USB Power Bank, and ENJOY!

