# Light My Bricks : Green Grocer LED Lighting Kit

Here is the instructions document for the LEGO Green Grocer LED lighting kit. Please read and follow the steps carefully to ensure this lighting kit is installed properly.

## Package contents:

- 1x **Lamp Post with 30cm Bit Light installed**
- 2x **White 30cm Bit Lights**

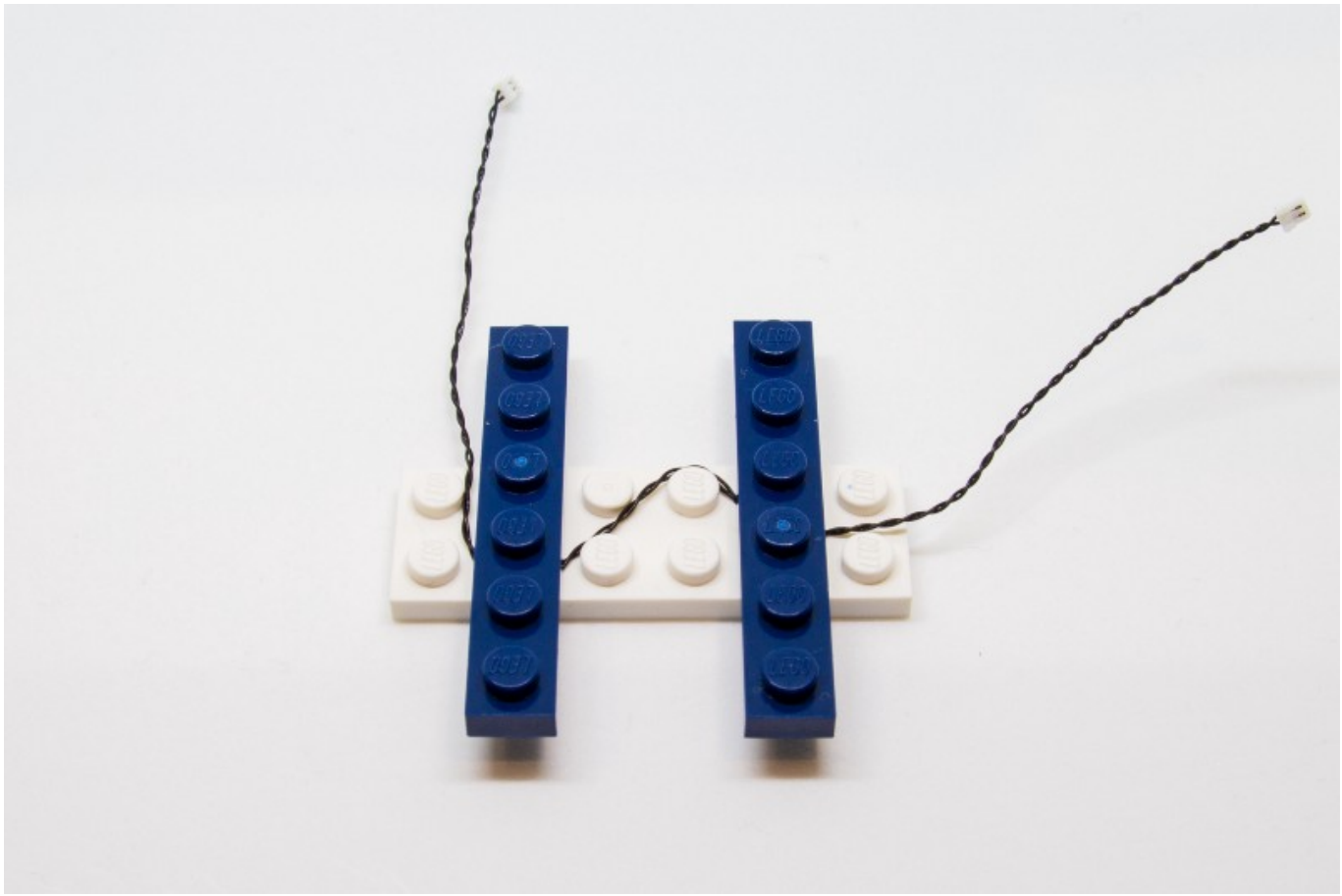
- 5x **White 15cm Bit Lights**
- 8x **White Strip Lights**
- 7x **LEGO Plates 1×6** (for mounting Strip Lights)
- 7x **15cm Connecting Cables**
- 2x **30cm Connecting Cable**
- 10x **Adhesive Squares**
- 2x **6-port Expansion Boards**
- 1x **Battery Pack** (requires 3x AA Batteries)
  OR
- 1x **USB Power Cable**

  ***Note – Battery Pack will be replaced with USB Power Cables from mid April 2020***

## Important things to note:

### Laying cables in between and underneath bricks

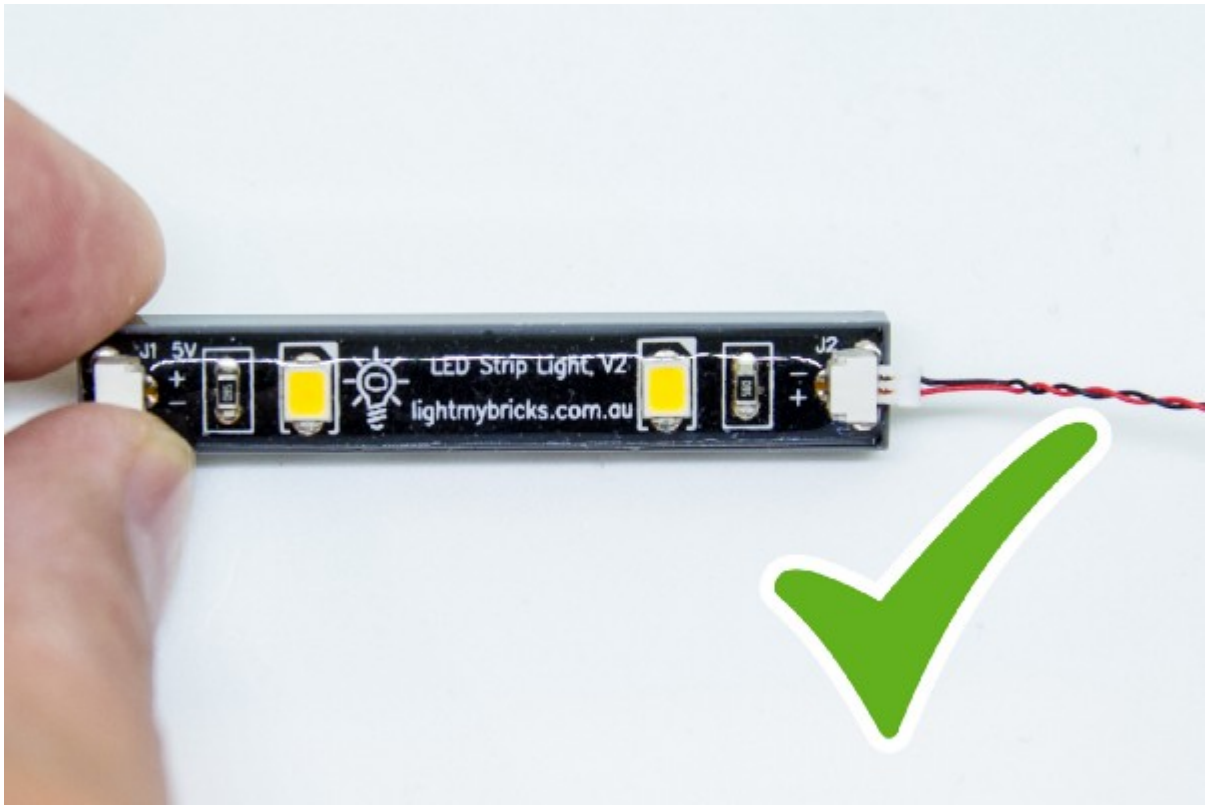
Cables can fit in between and underneath LEGO® bricks, plates, and tiles providing they are laid correctly between the LEGO® studs. Do NOT forcefully join LEGO® together around cables; instead ensure they are laying comfortably in between each stud.

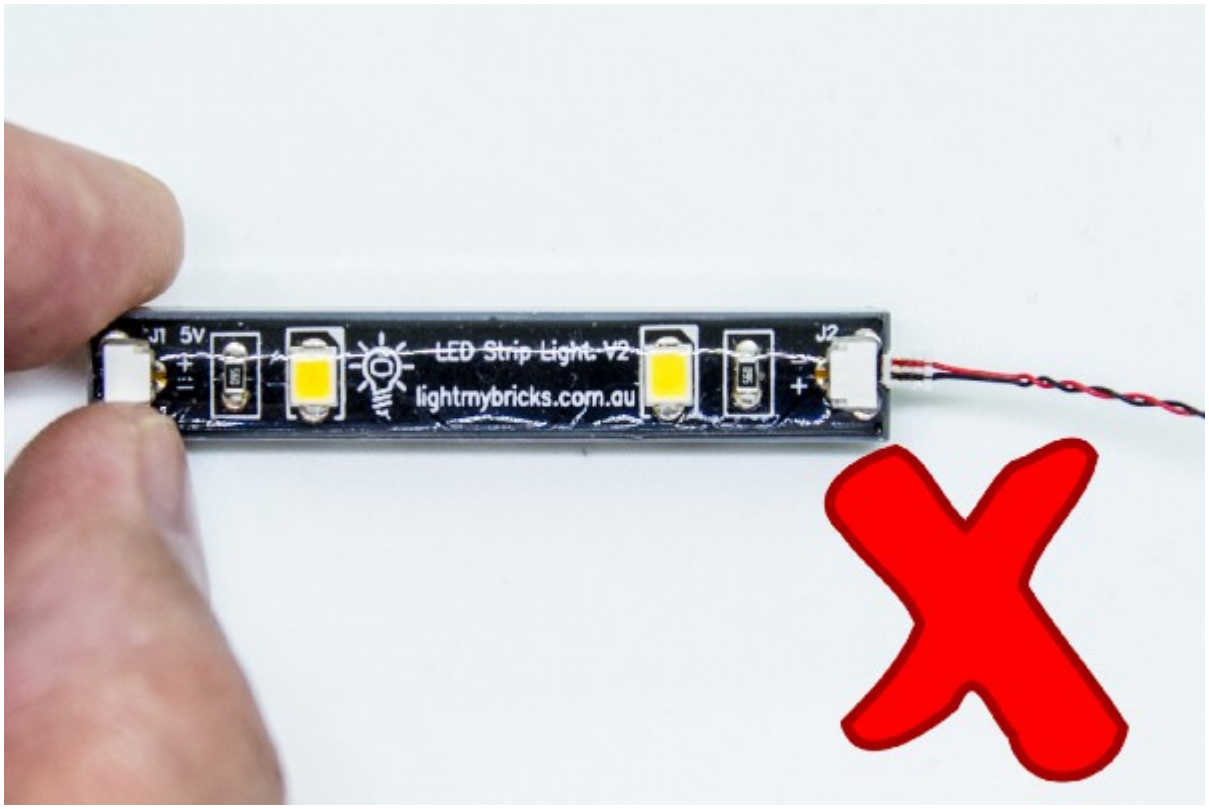


*CAUTION: Forcing LEGO® to connect over a cable can result in damaging the cable and light.*

## Connecting cable connectors to Strip Lights

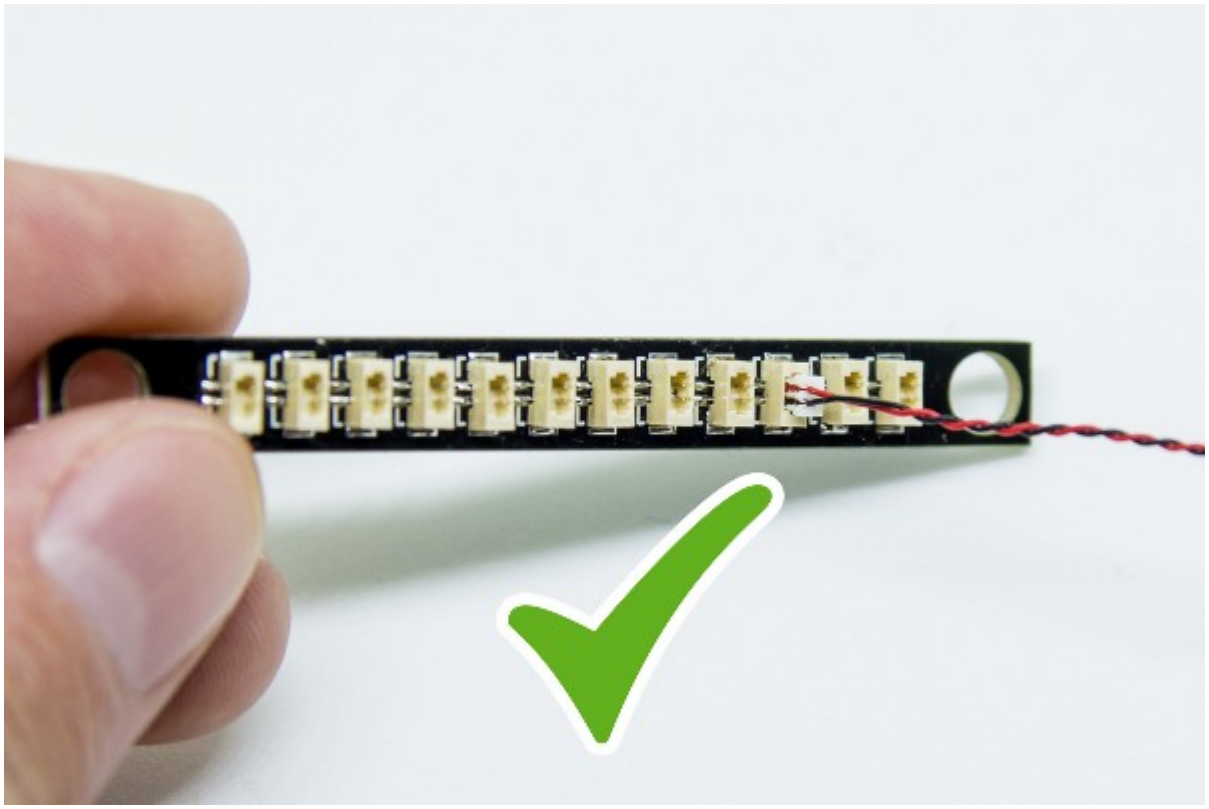
Take extra care when inserting connectors to ports on the Strip Lights. Connectors can be inserted only one way. With the Strip Light facing up, ensure the side of the connector with the wires exposed is facing down. If a plug won't fit easily into a port connector, don't force it. Doing so will damage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

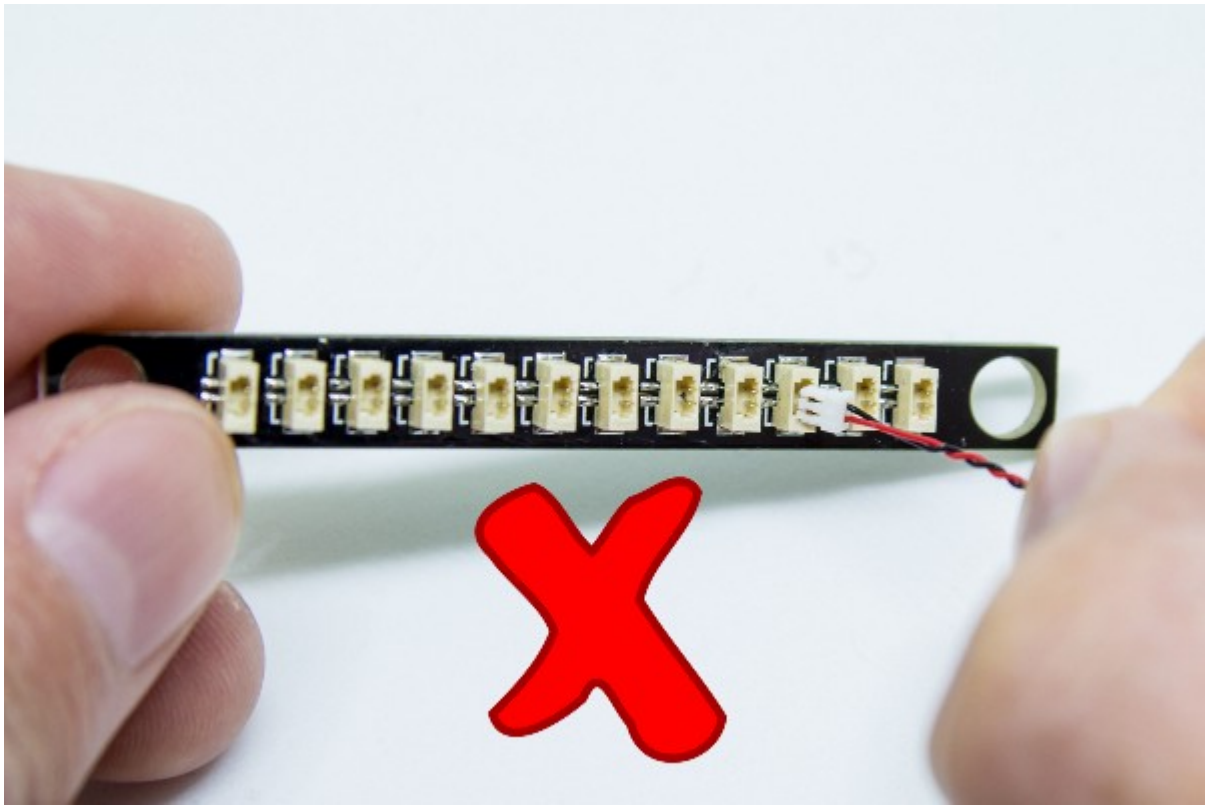



## Connecting cable connectors to Expansion Boards

Take extra care when inserting connectors to ports of Expansion Boards. Connectors can be inserted only one way. With the expansion board facing up, look for the soldered “=” symbol on the left side of the port. The connector side with the wires exposed should be facing toward the soldered “=” symbol as you insert into the port. If a plug won’t fit easily into a port connector, do not force it.

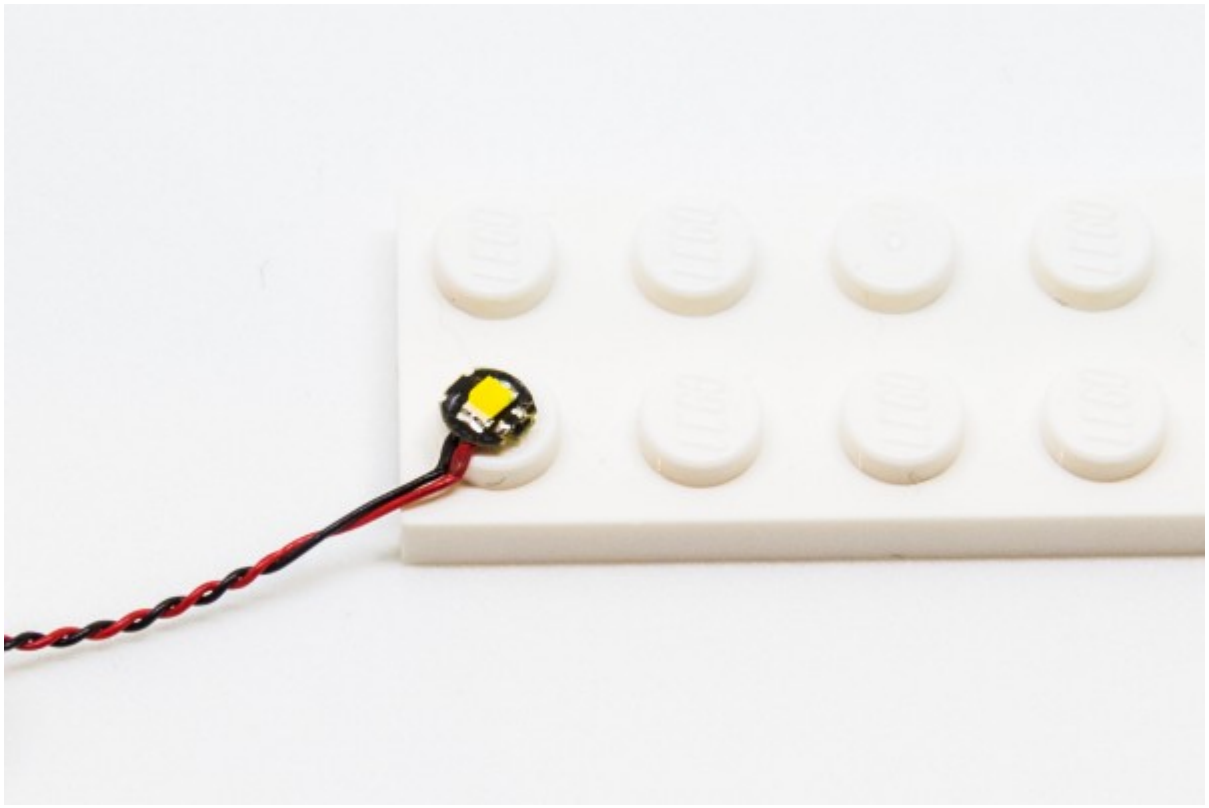


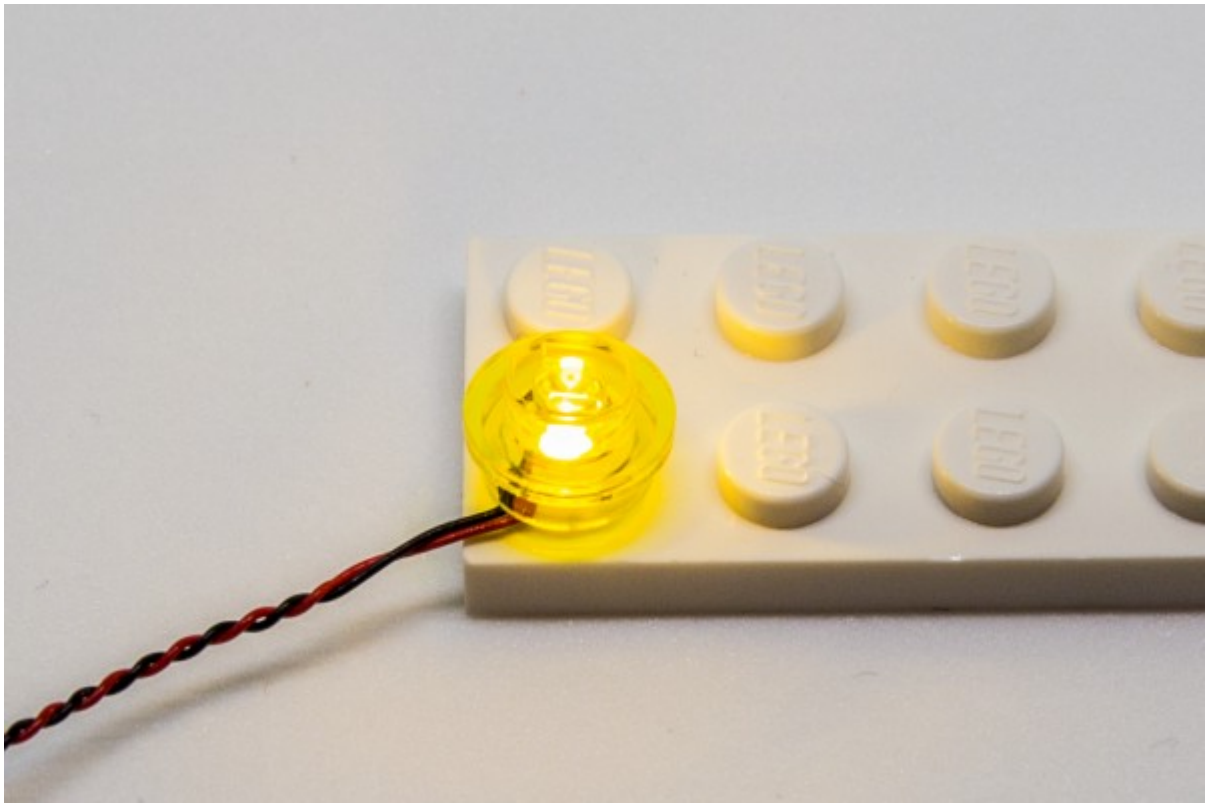


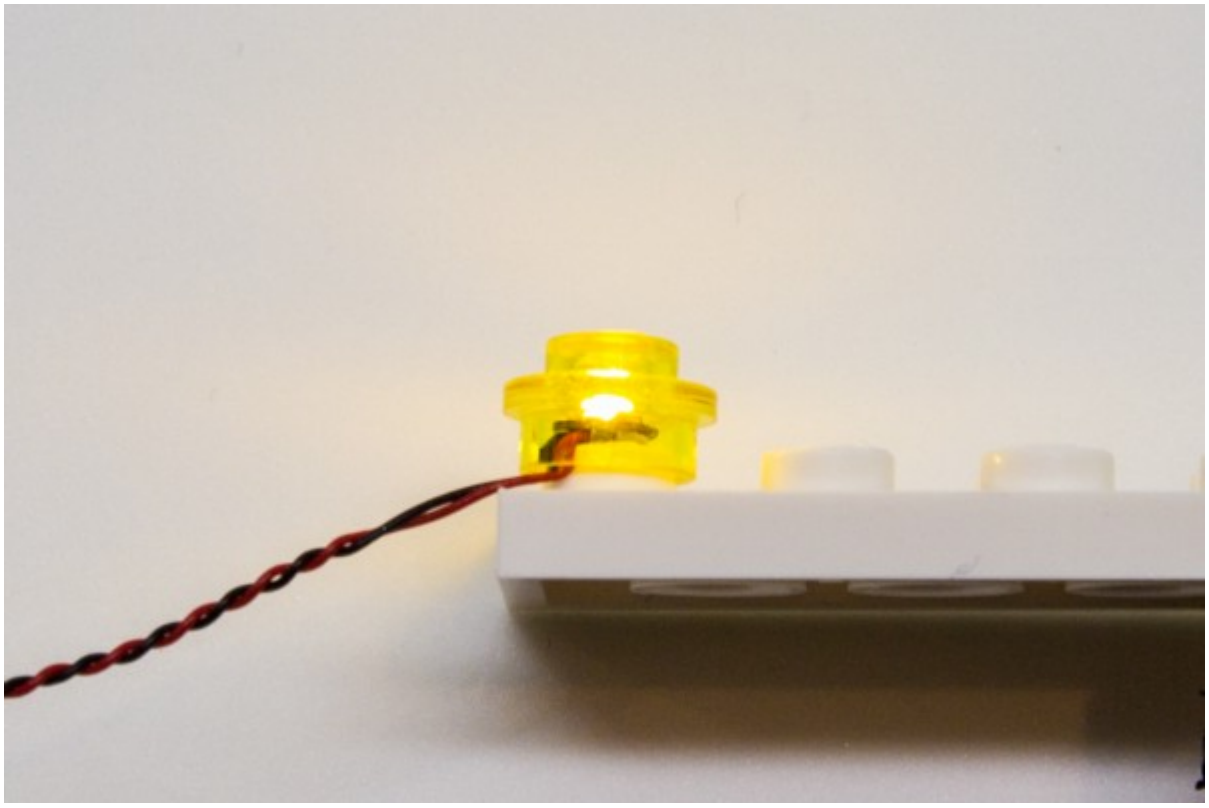
**WARNING: Incorrectly inserting the connector can result in bent pins inside the port or possible overheating of the expansion board when connected.**

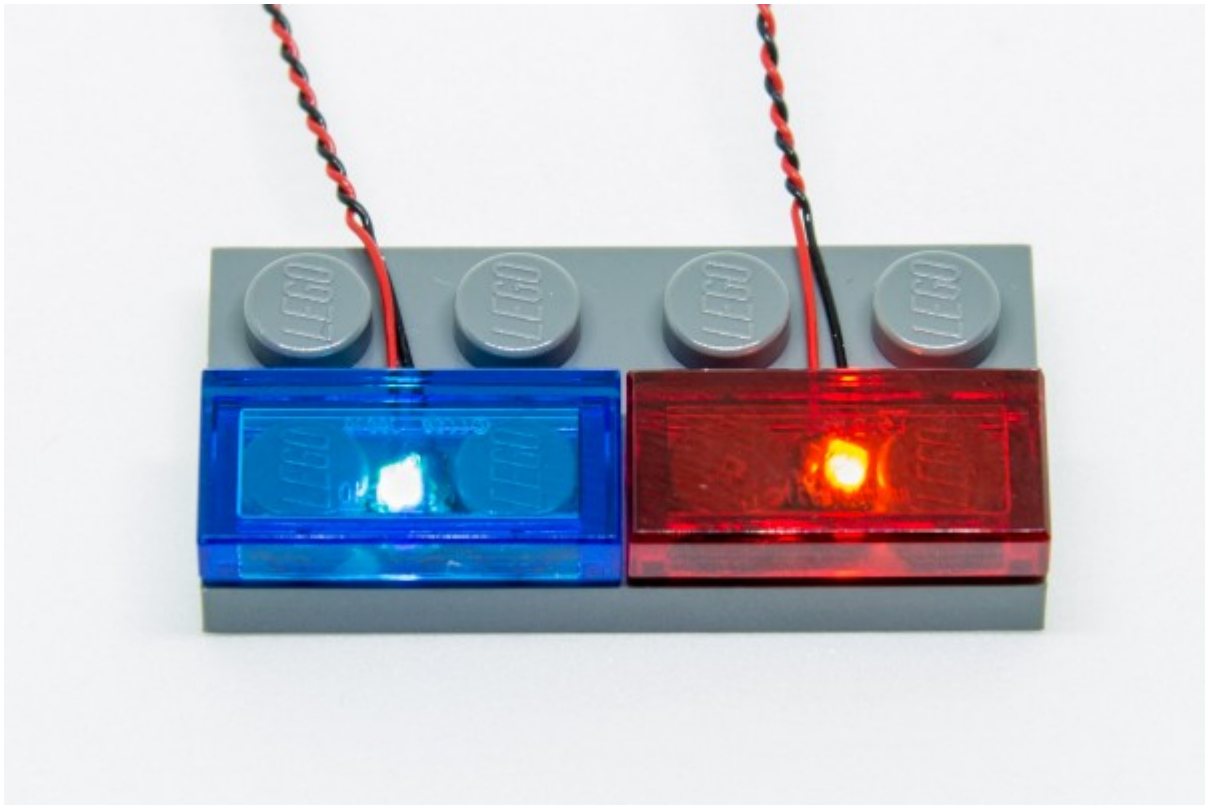
## Installing Bit Lights under LEGO® bricks and plates.

When installing Bit Lights under LEGO® pieces, ensure they are placed the correct way up (Yellow LED component exposed). You can either place them directly on top of LEGO® studs or in between.







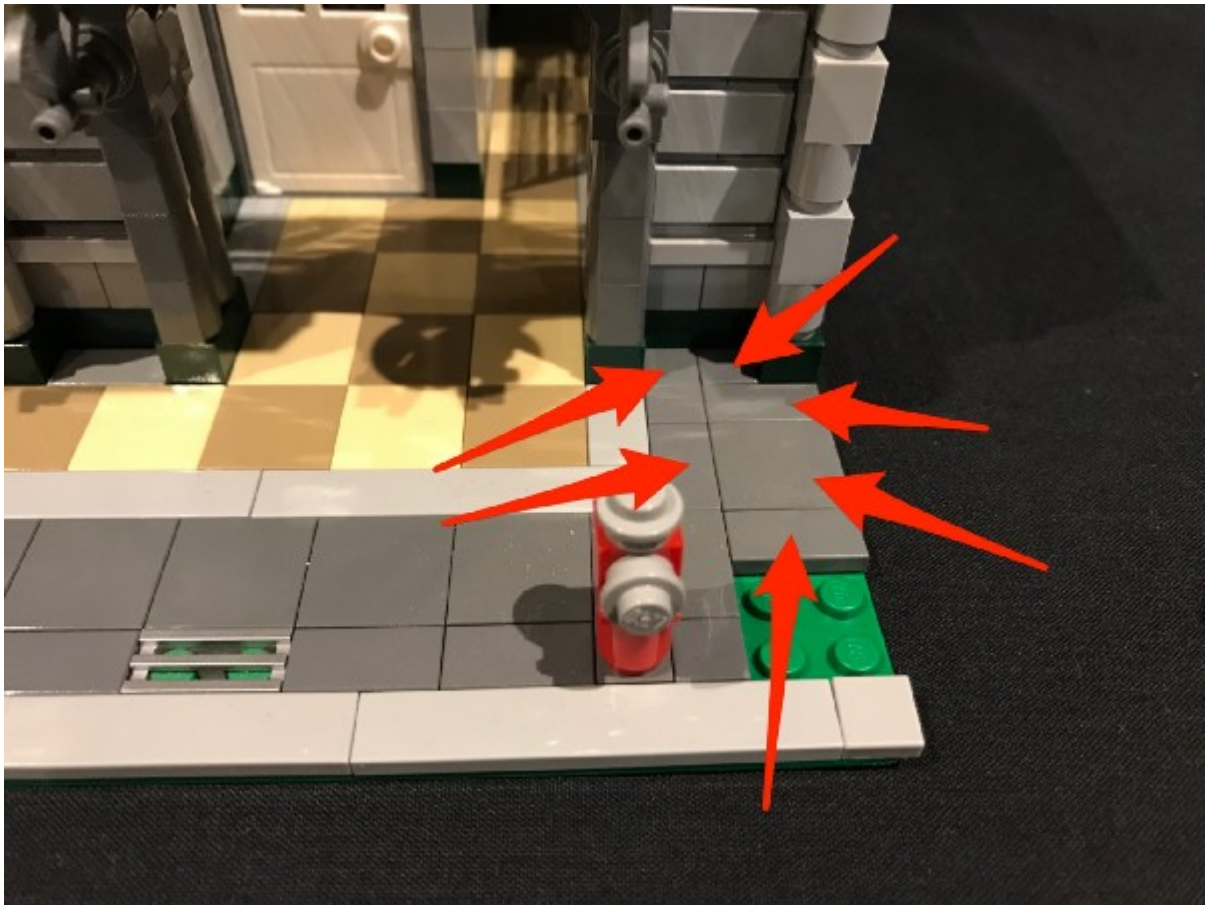


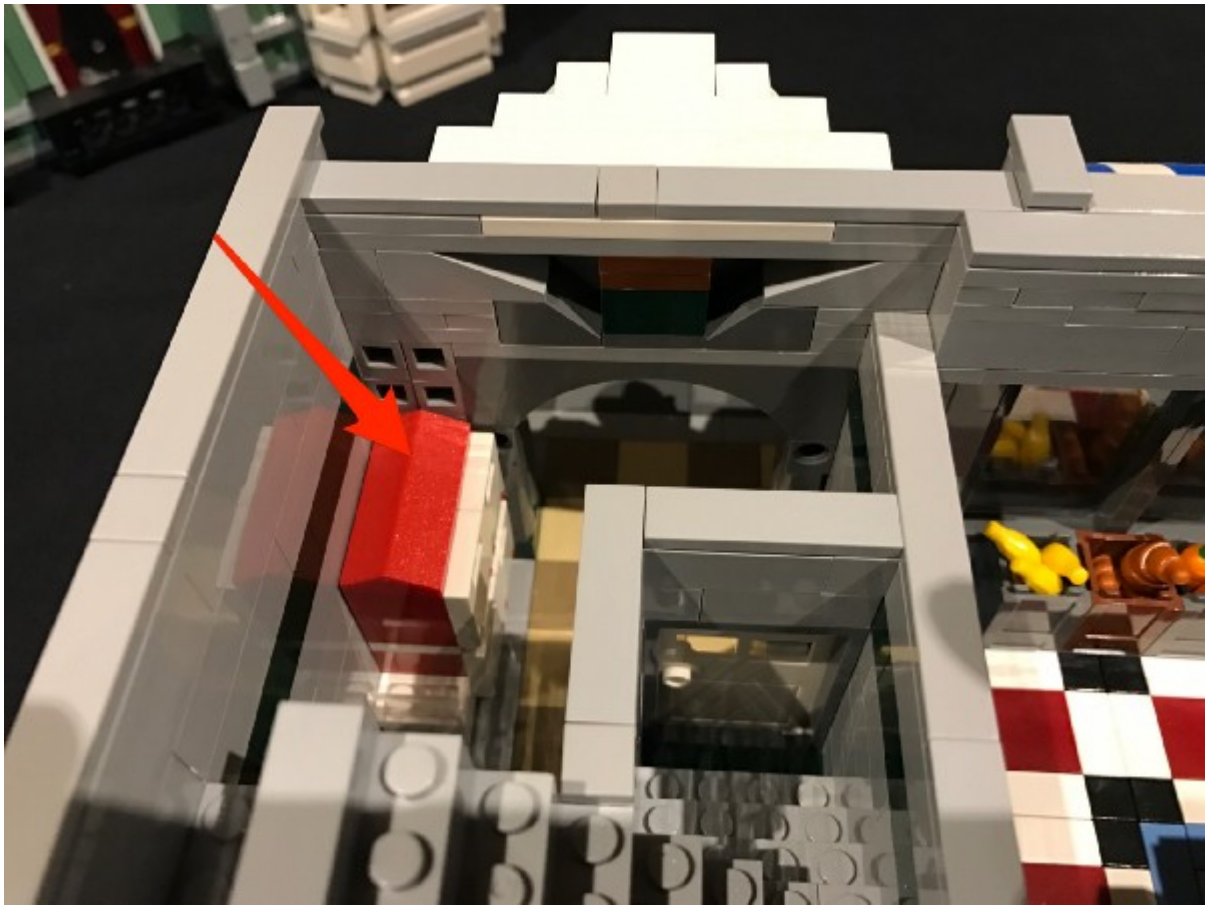
## OK, Let’s Begin!

## Instructions for installing this kit

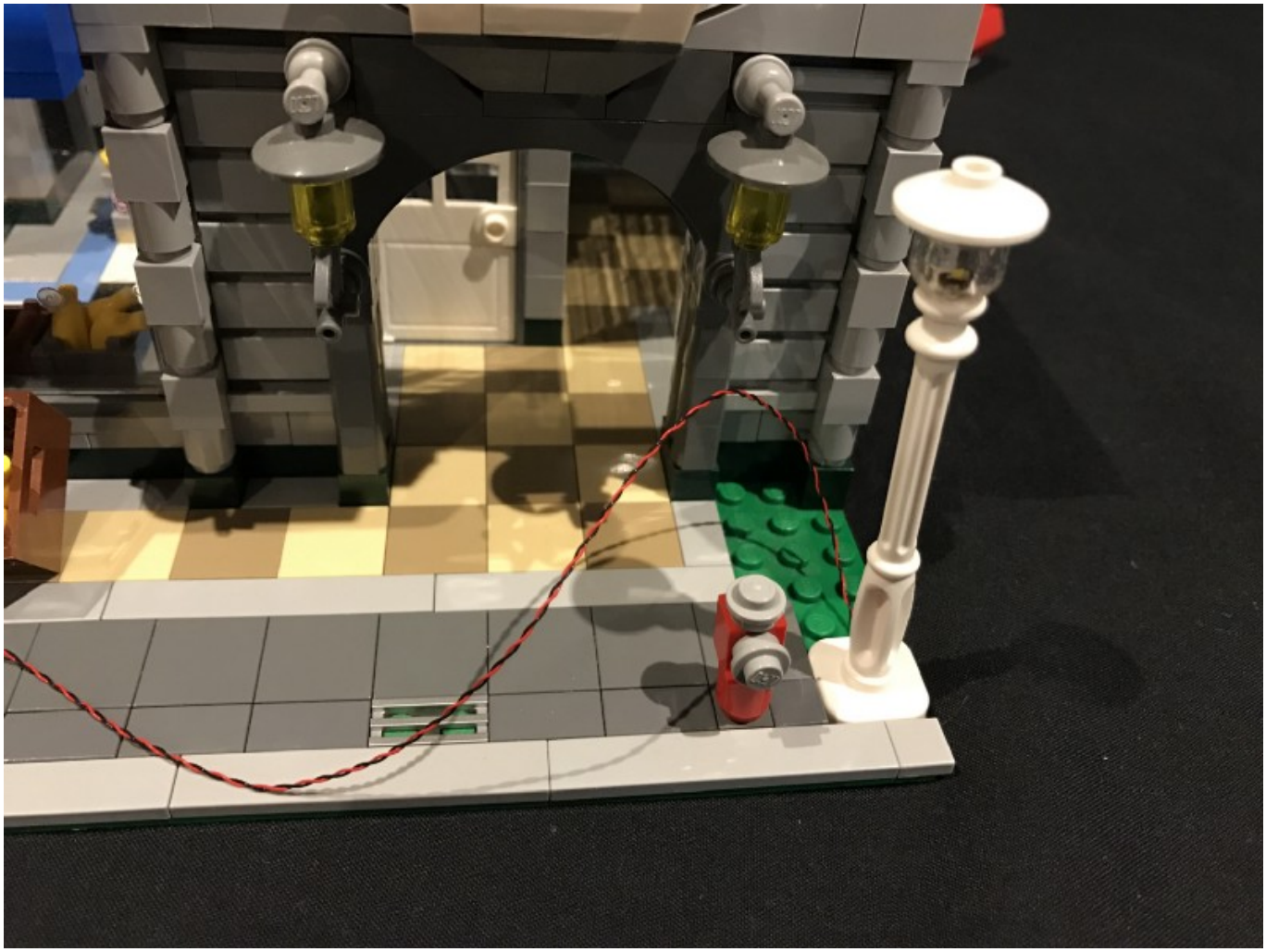
1.) This lighting kit is installed from ground up so start by removing the second and third floor, followed by the lamp post.

Remove the following tiles in front of the building as well as the section of mailboxes from inside the building

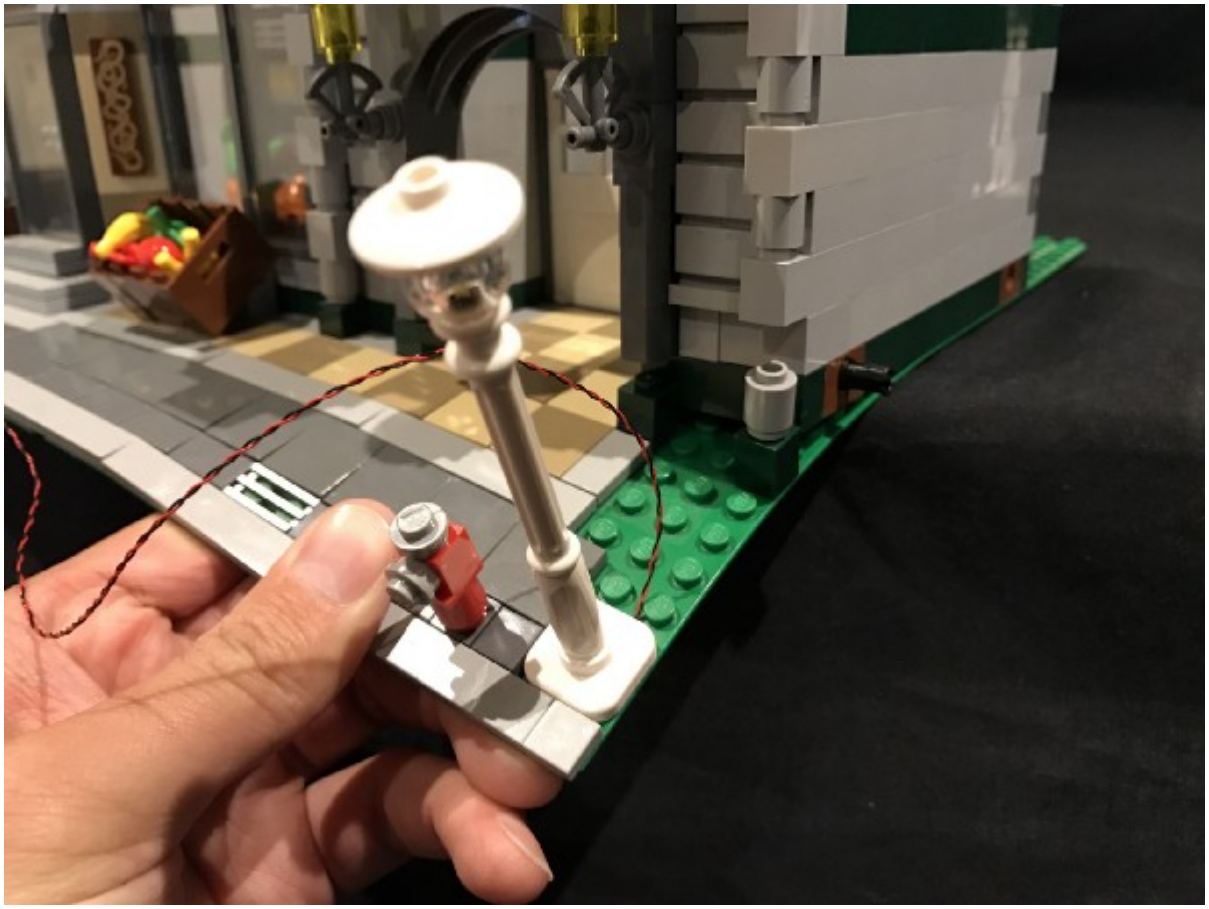


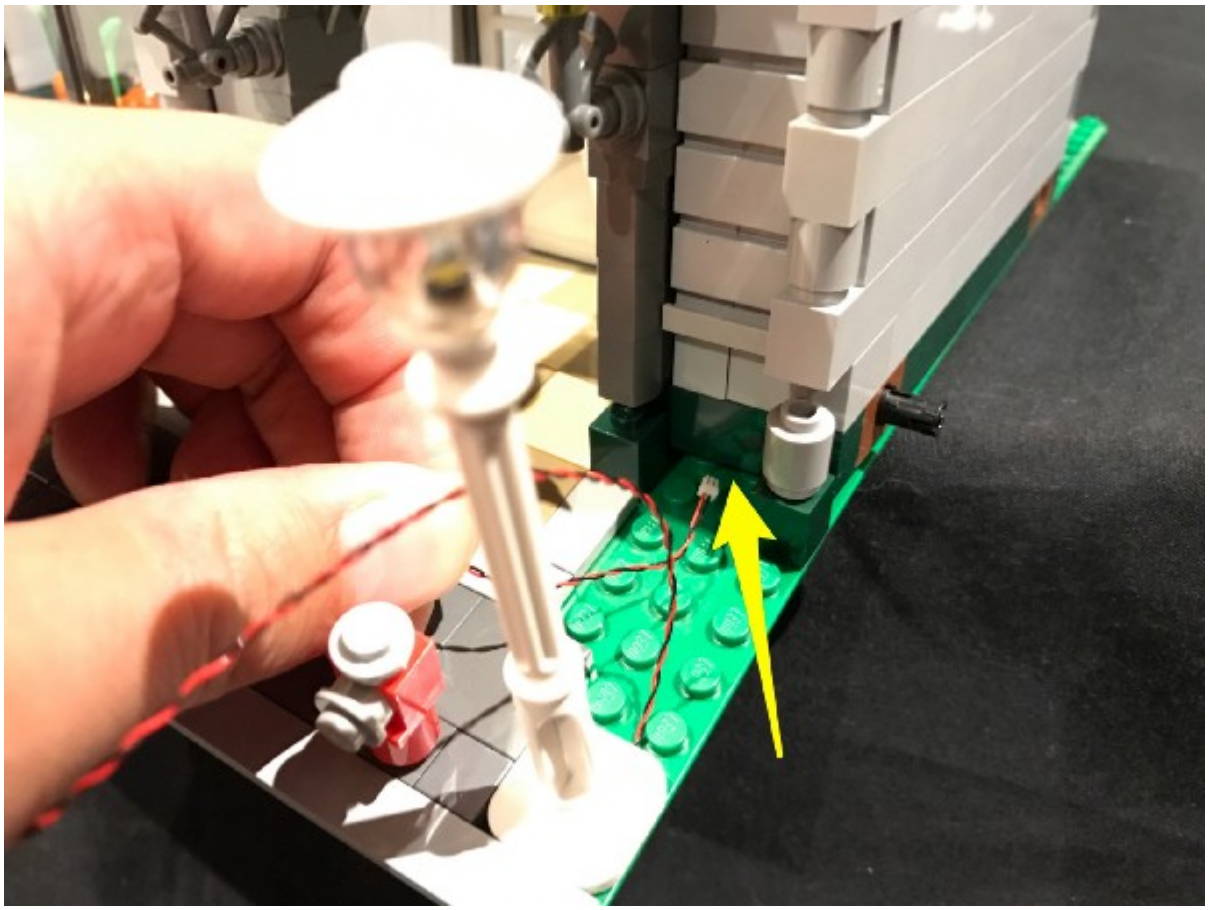


2.) Replace the stock lamp post with the **Light My Bricks lamp post with Bit Light installed** and ensure the cable is facing toward the building.

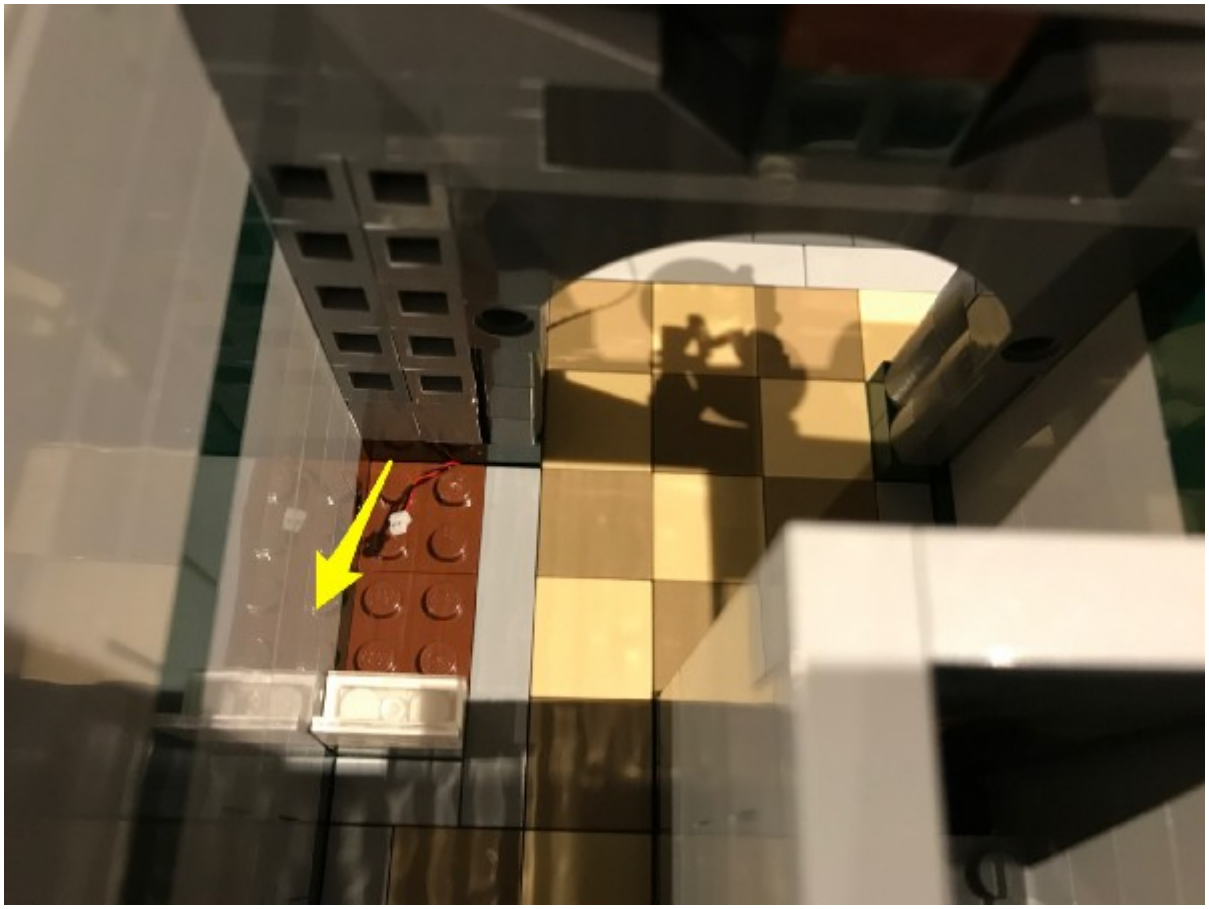


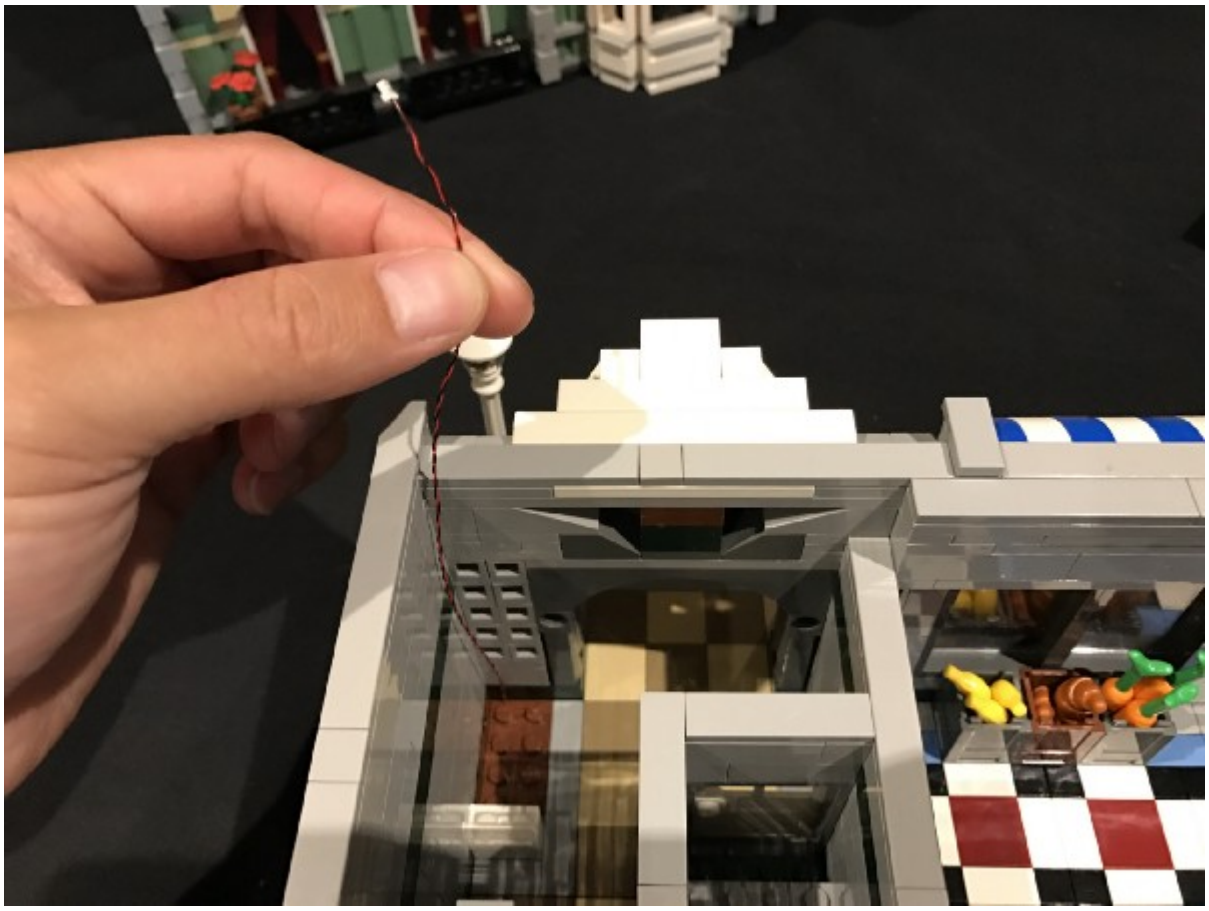
Gently bend the corner of the base plate down so that the building slightly disconnects from the base plate creating a gap in between allowing you to thread the lamp post cable underneath the wall.





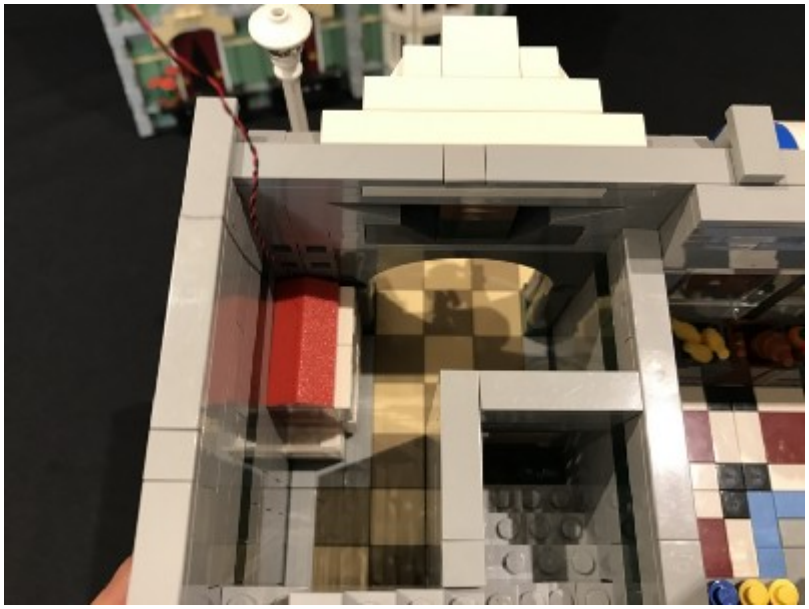
Pull the lamp post cable up from inside of the building.



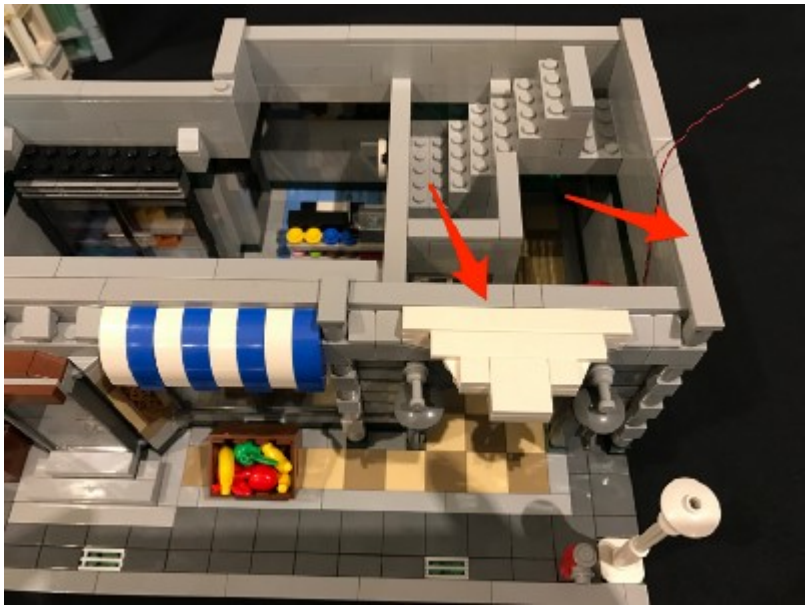


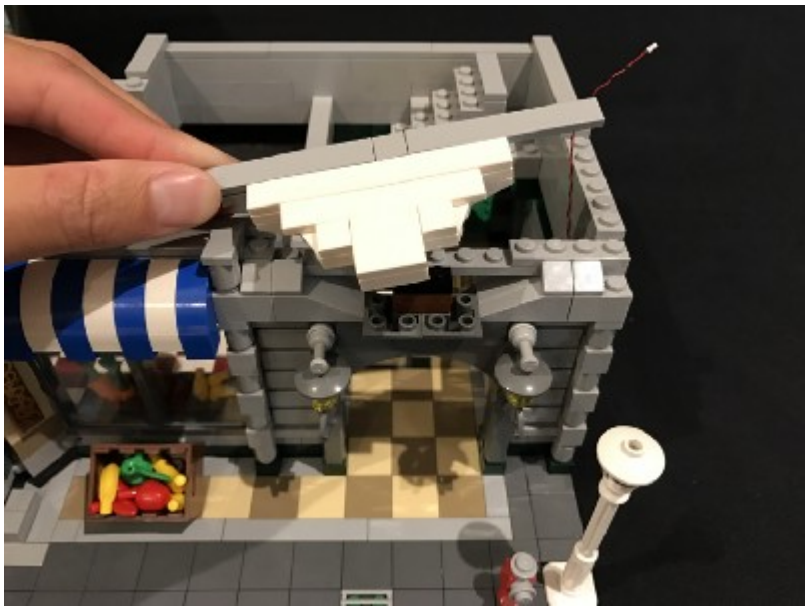
Ensure the lamp post cable is neatly laid straight and in between the studs of the base plate then reconnect the building and base plate back together. Reconnect the

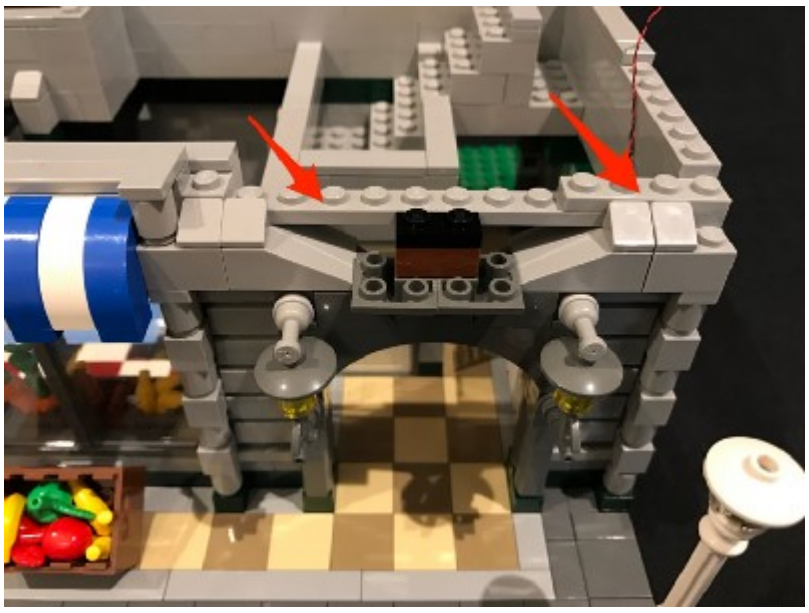
LEGO tiles we removed earlier as well as the section of mailboxes inside the building. The cable should be in between the mailboxes and the wall (in the corner).

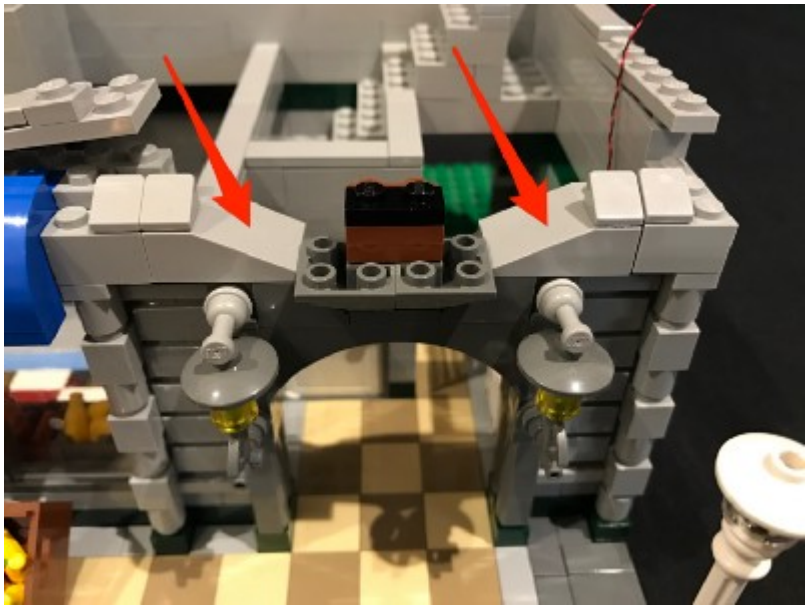


3.) We will now install lights to the 2 lamps at the front. Start by disconnecting the following sections to give us access to remove the two lamp shade sections from each side.

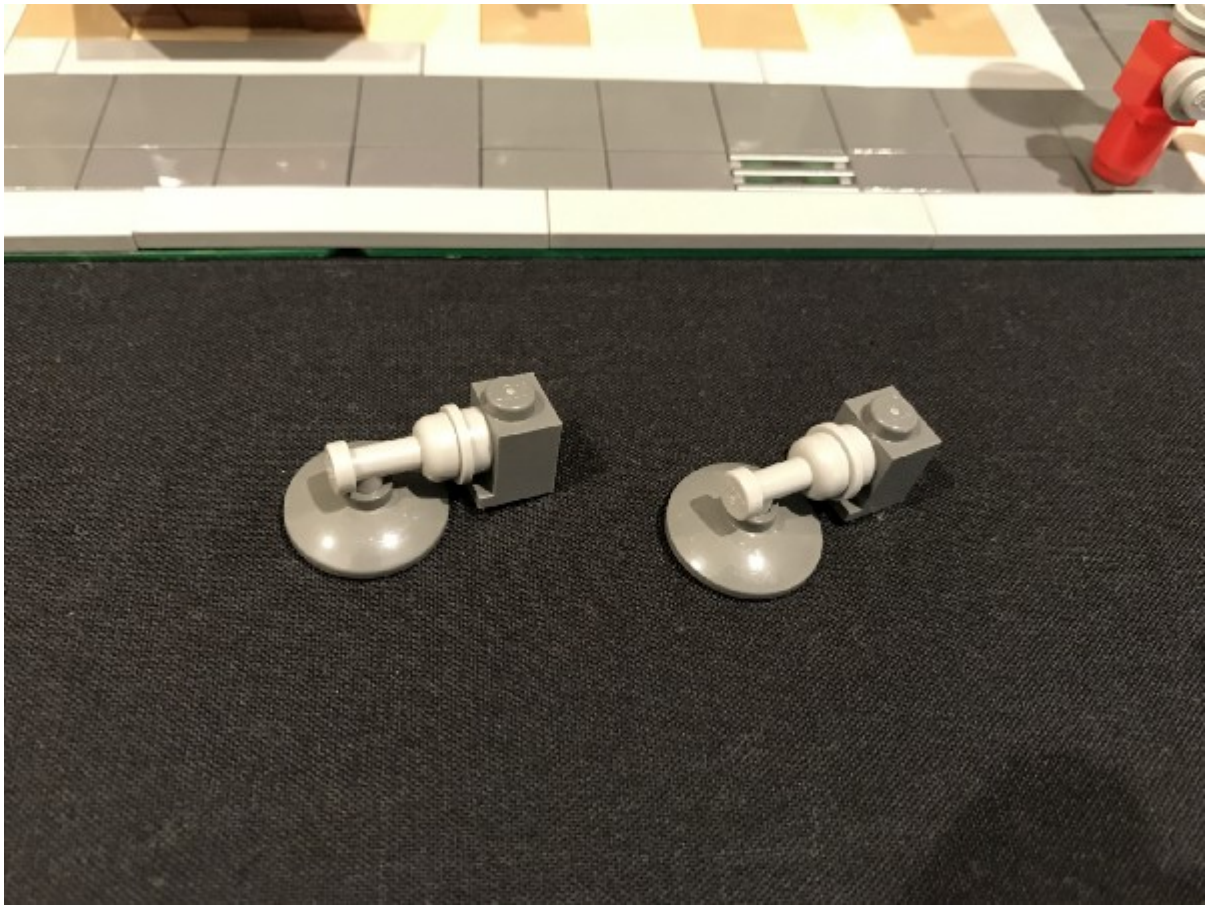


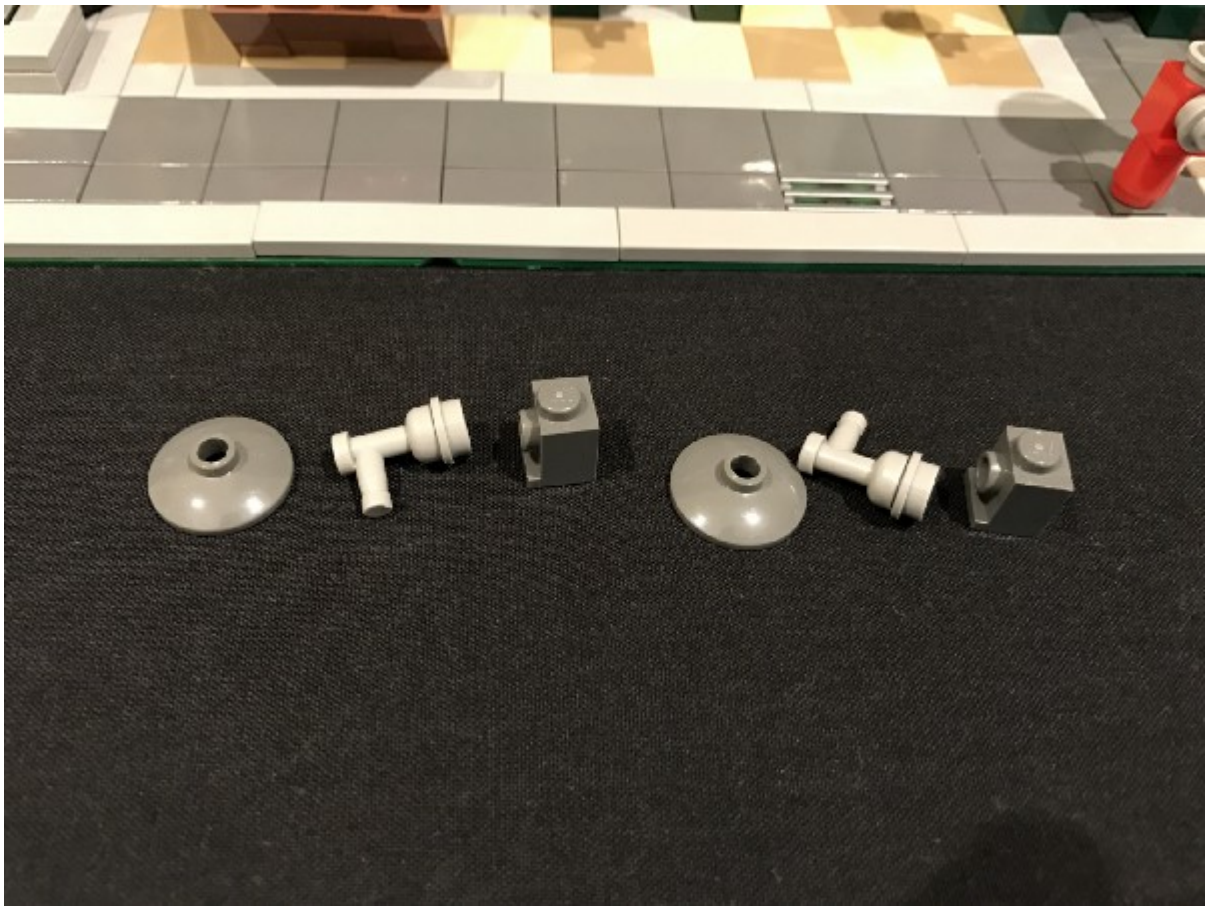






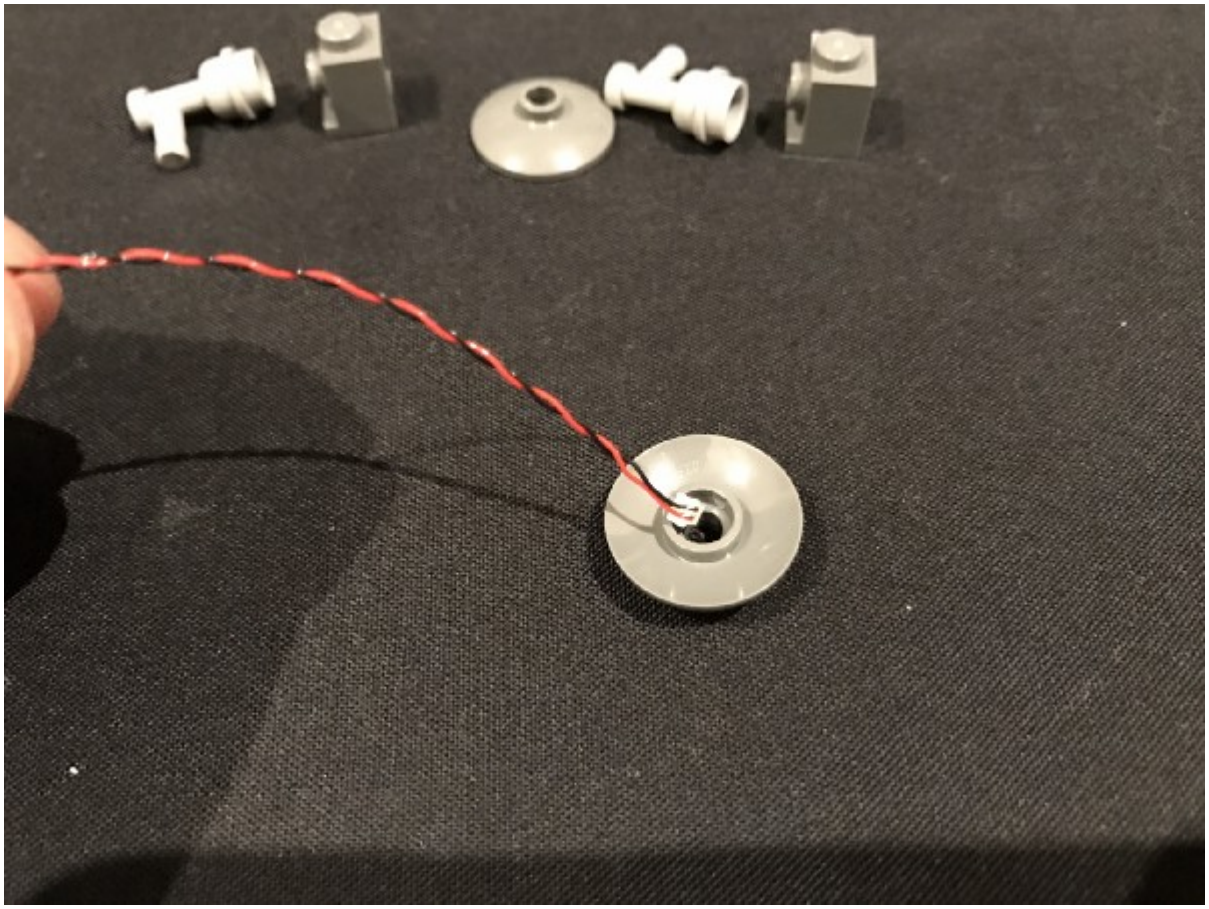
Disassemble the lamp shade sections as per below

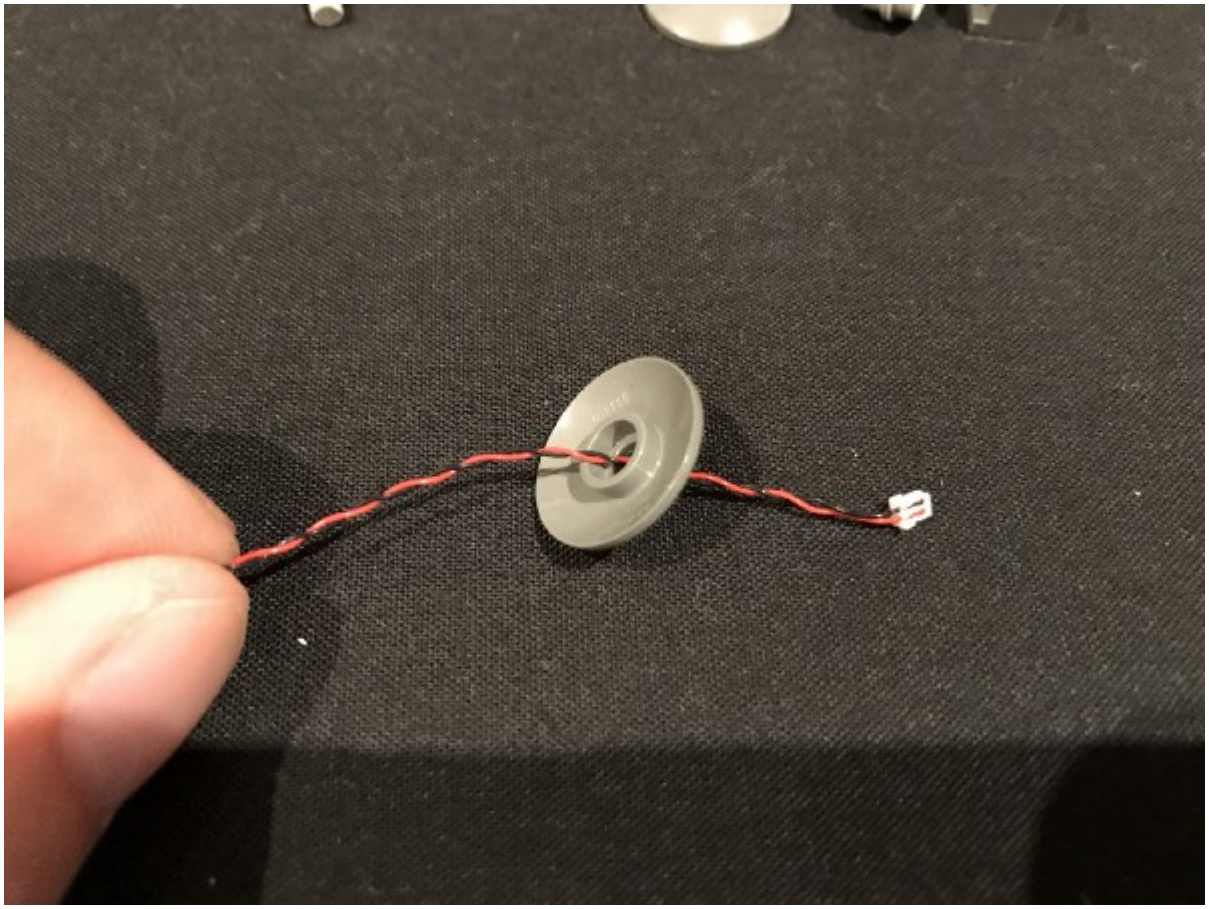


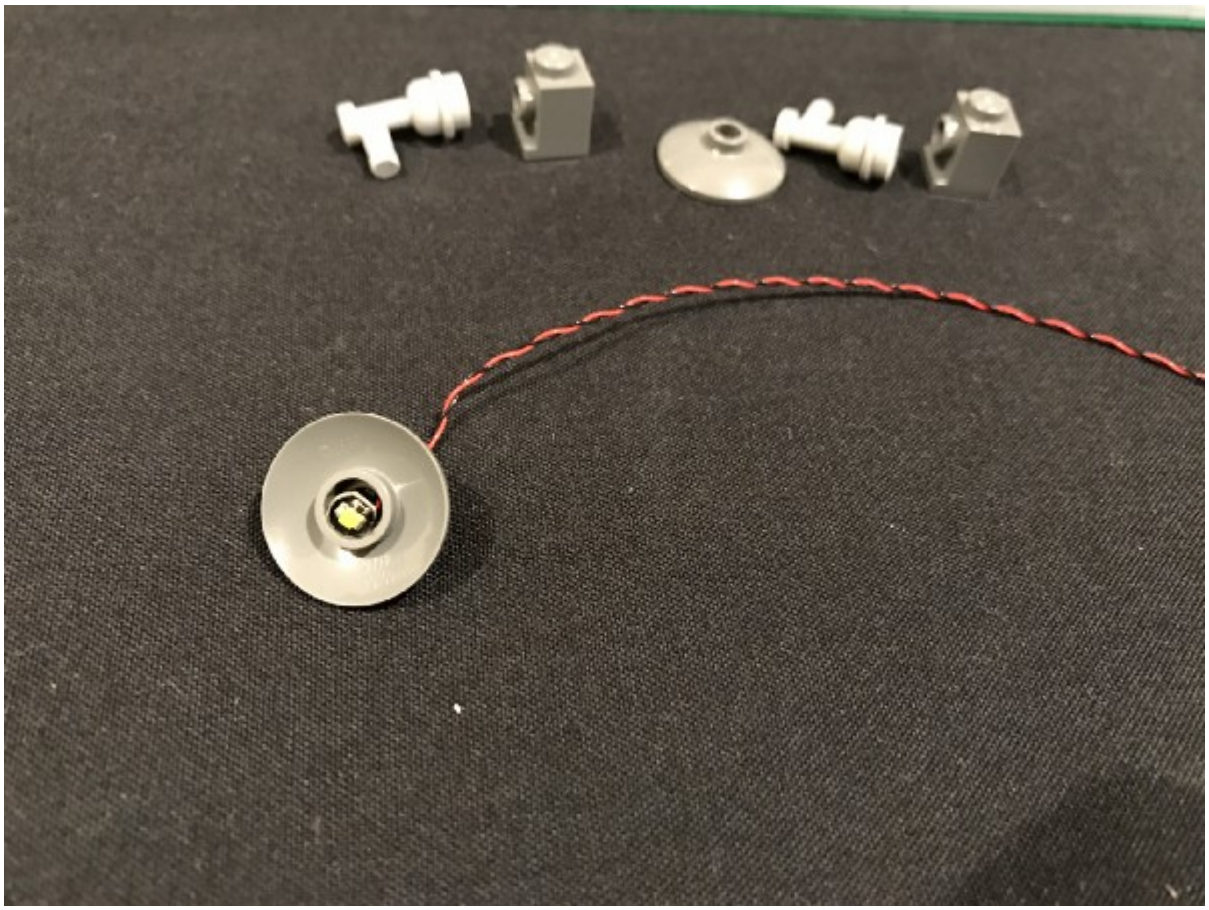


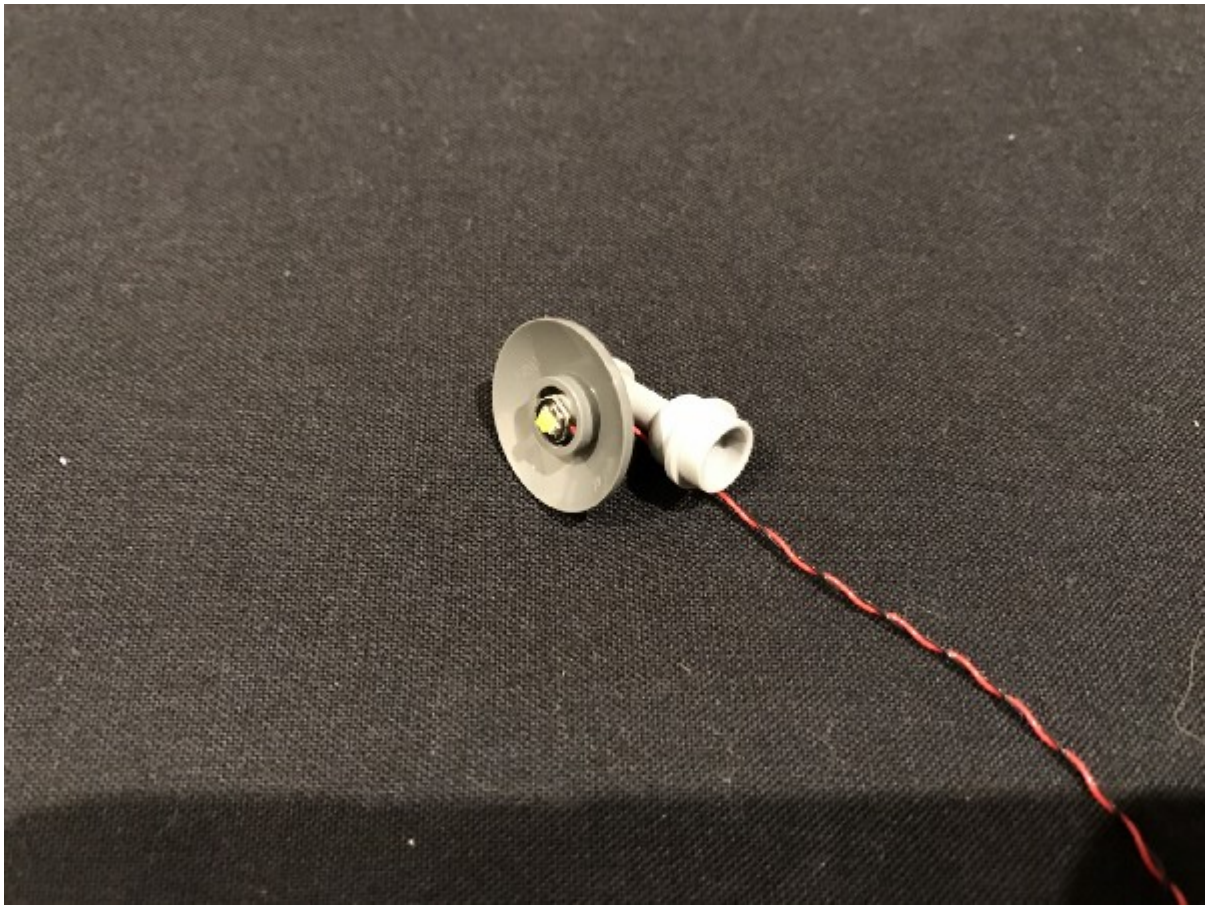
4.) Take one **White 15cm Bit Light** and thread the connector side of the cable through the base of the grey dish piece. Thread it all the way through until there is

about half a cm between the LED component and the hole. Reconnect the tap piece all the way through and then push the LED Component so that it is flat against the base of the dish.

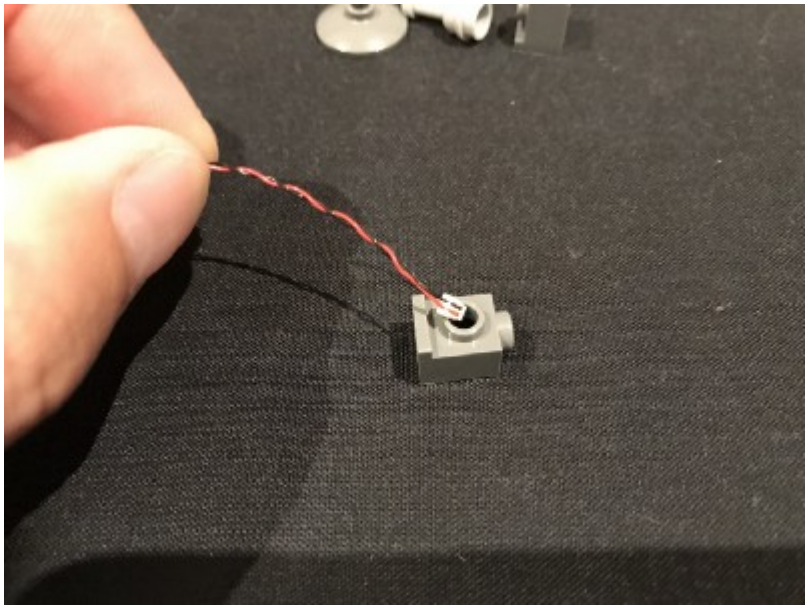


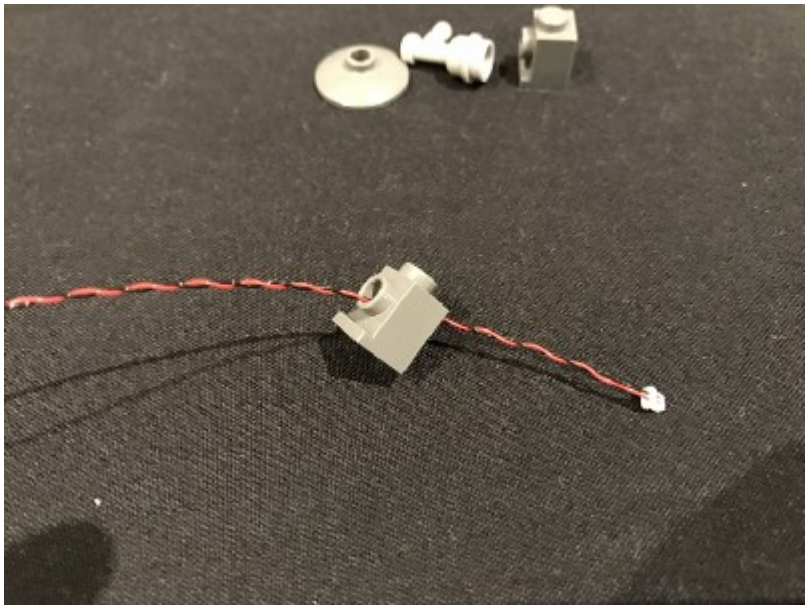


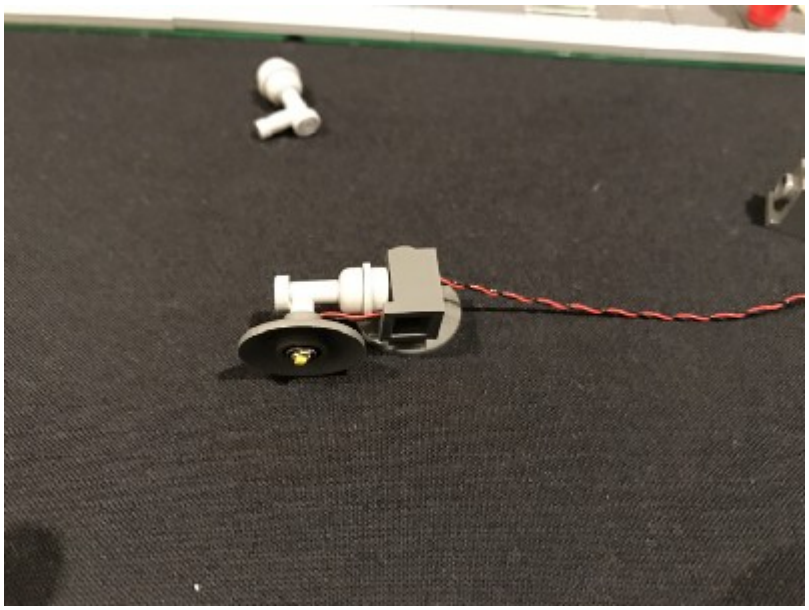




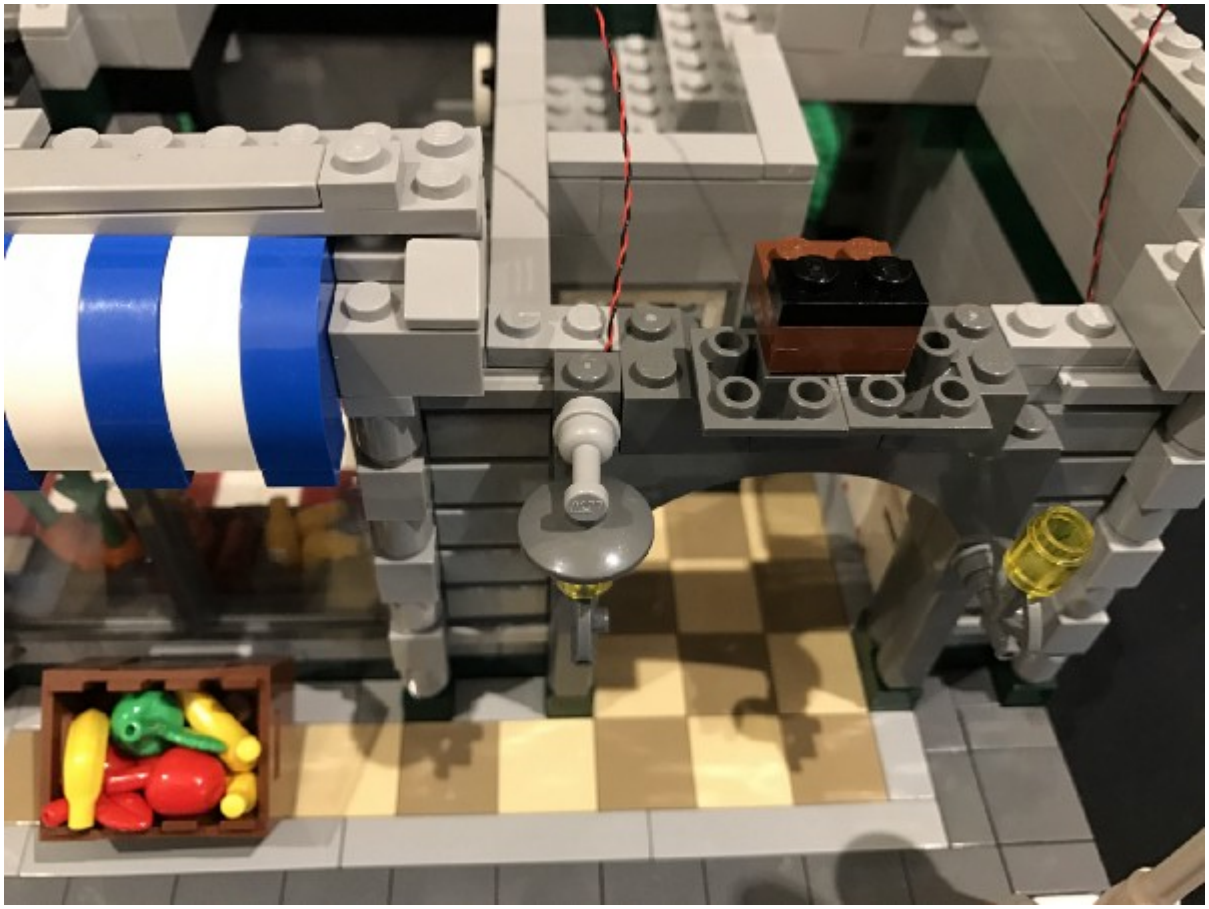
5.) Thread the cable through the front of the grey 1×1 brick with hole and then reconnect this back to the lamp shade section.

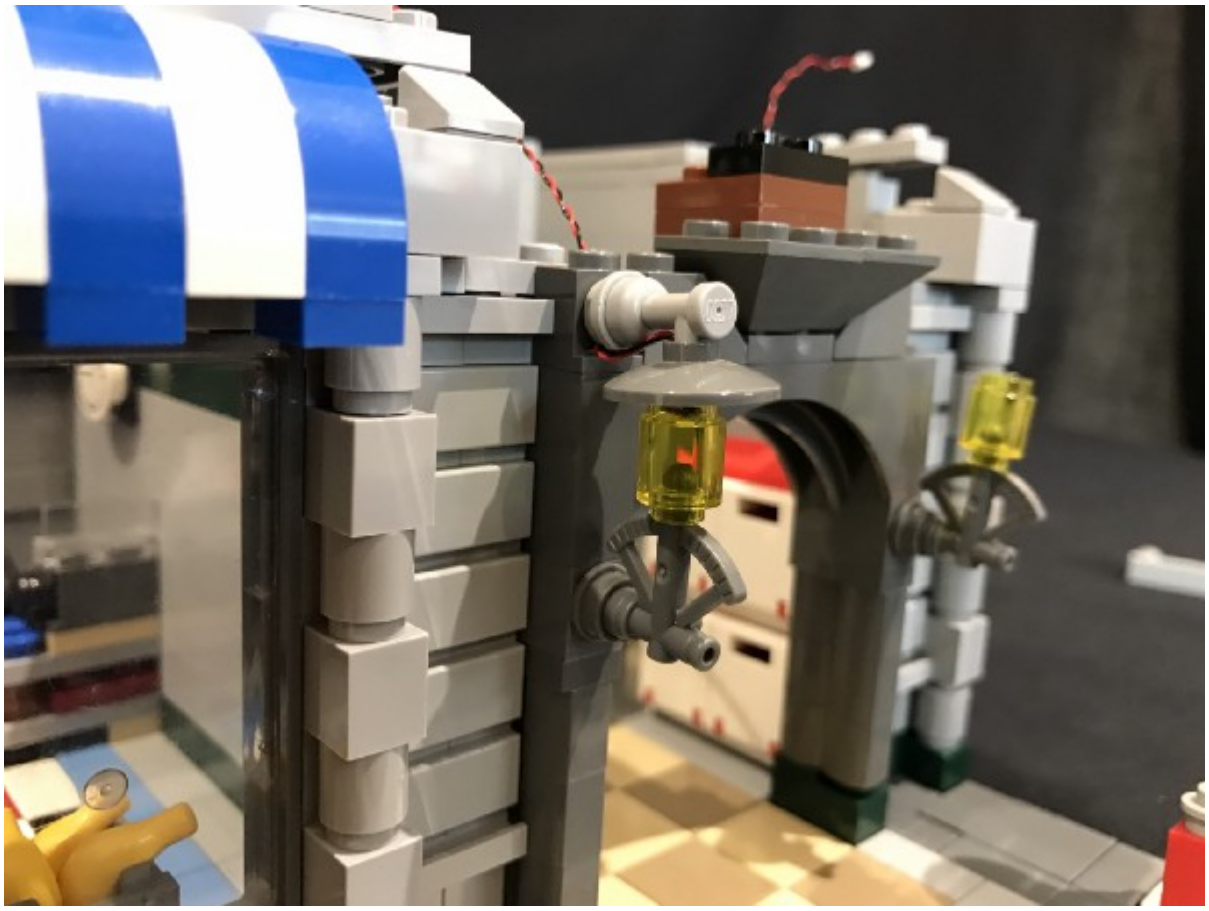




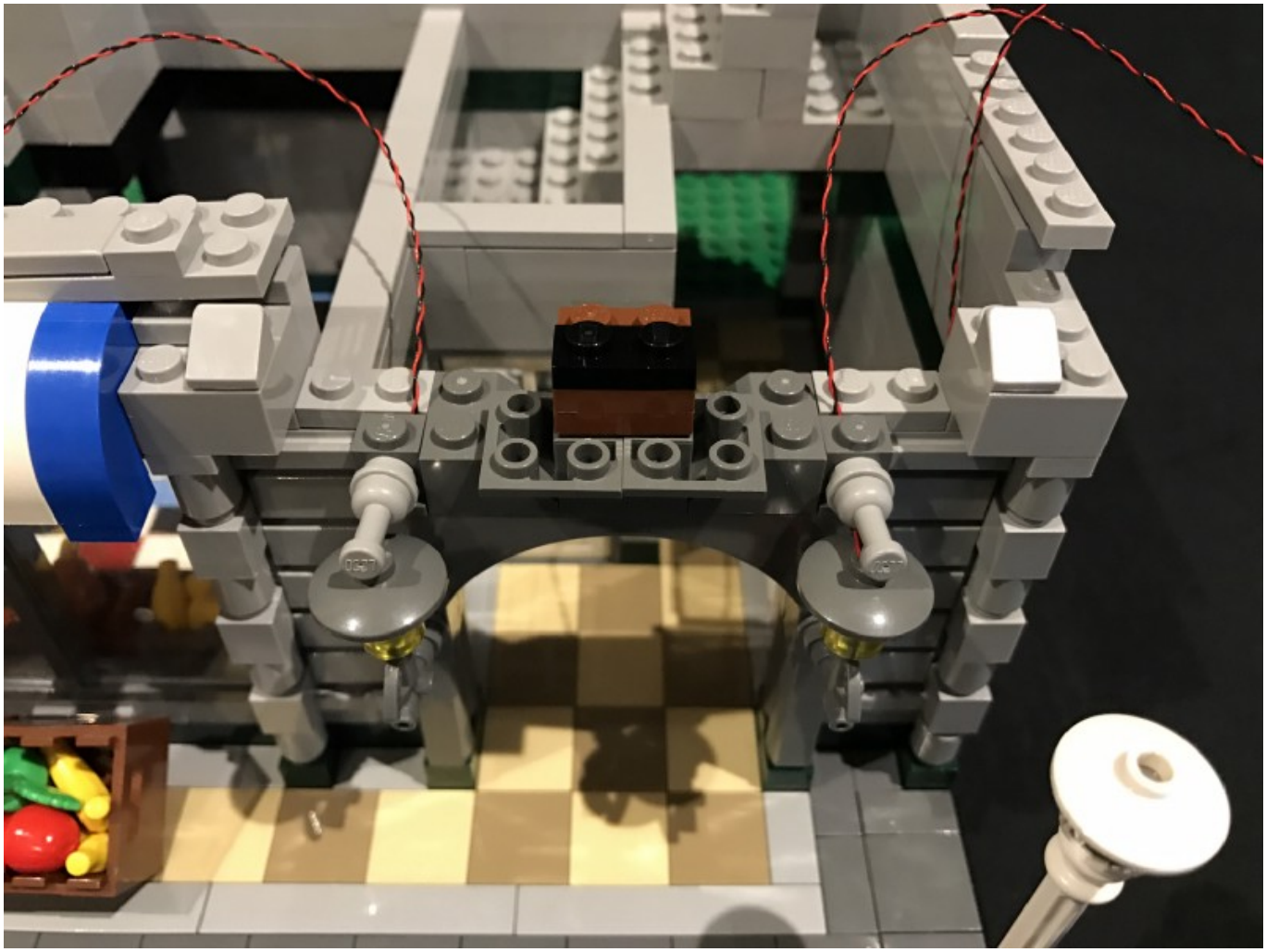


Reconnect this section back to the front of the building ensuring the cable is laid behind.

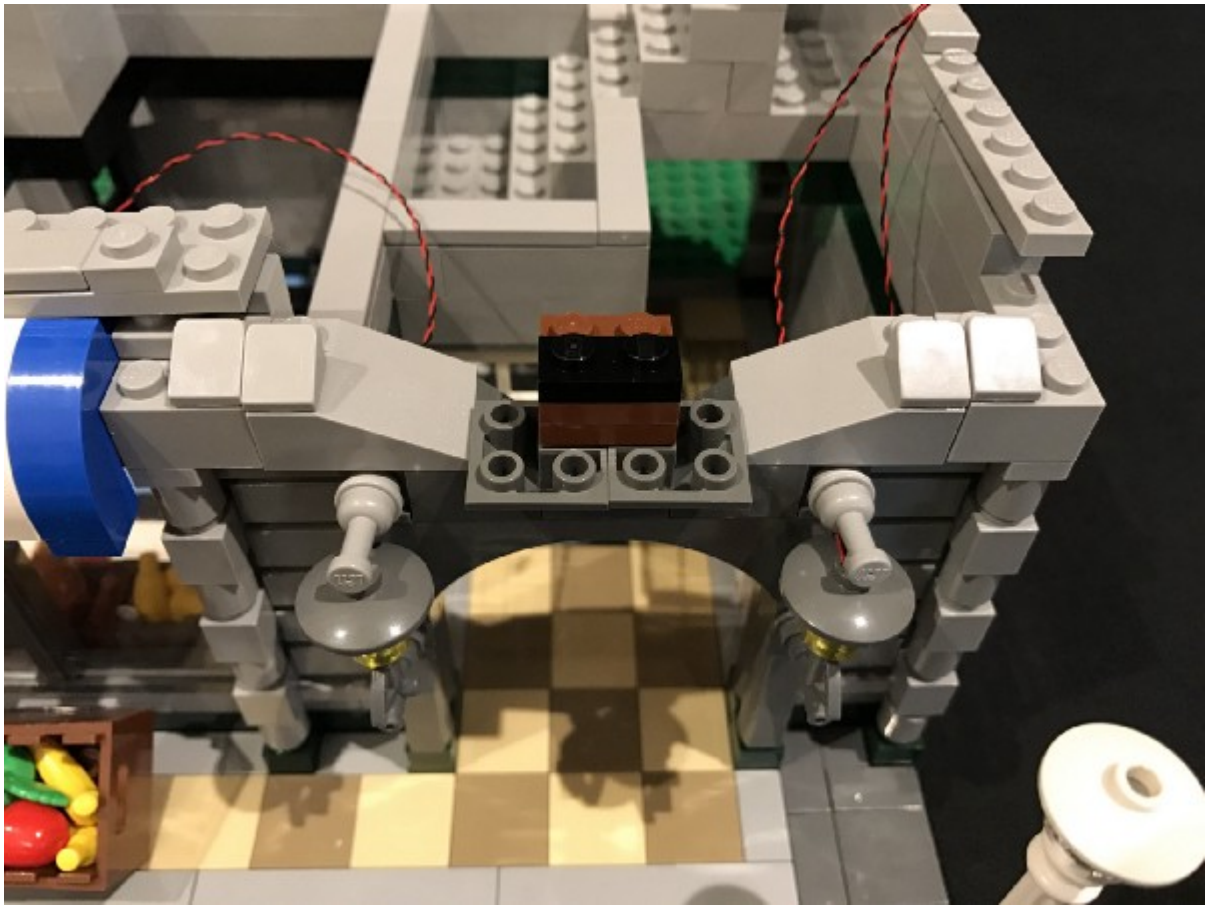


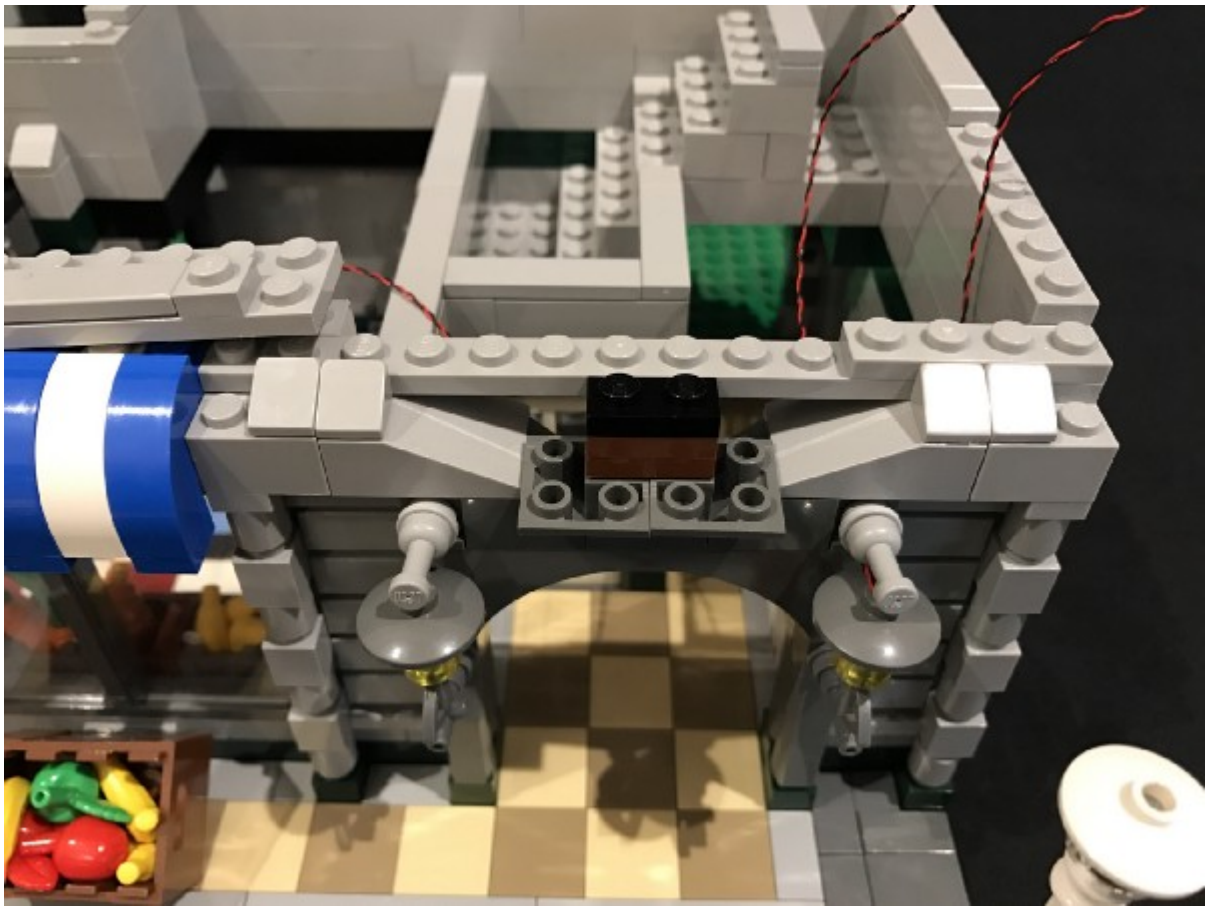


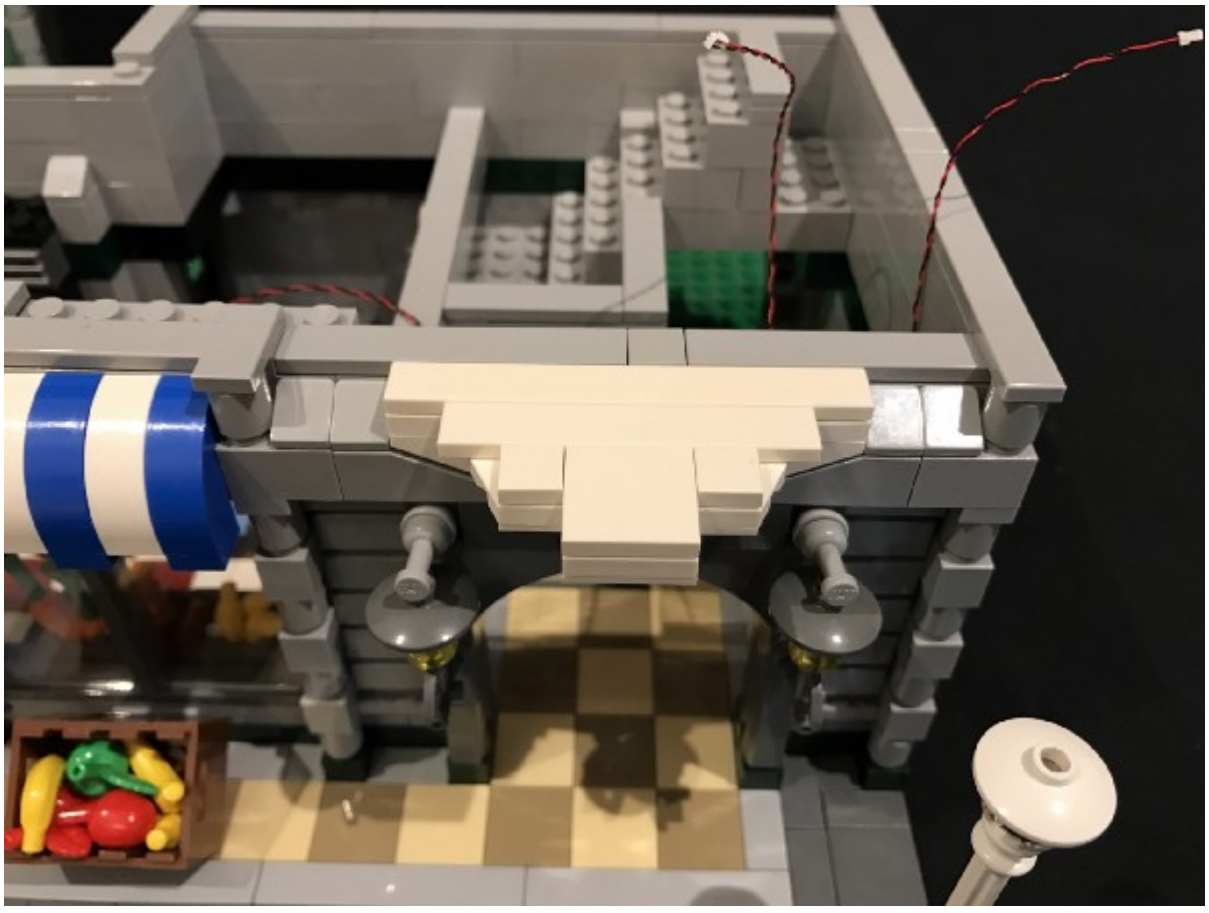
6.) Repeat the previous steps to install another **White 15cm Bit Light** to the right side.



Reconnect surrounding pieces we removed earlier.

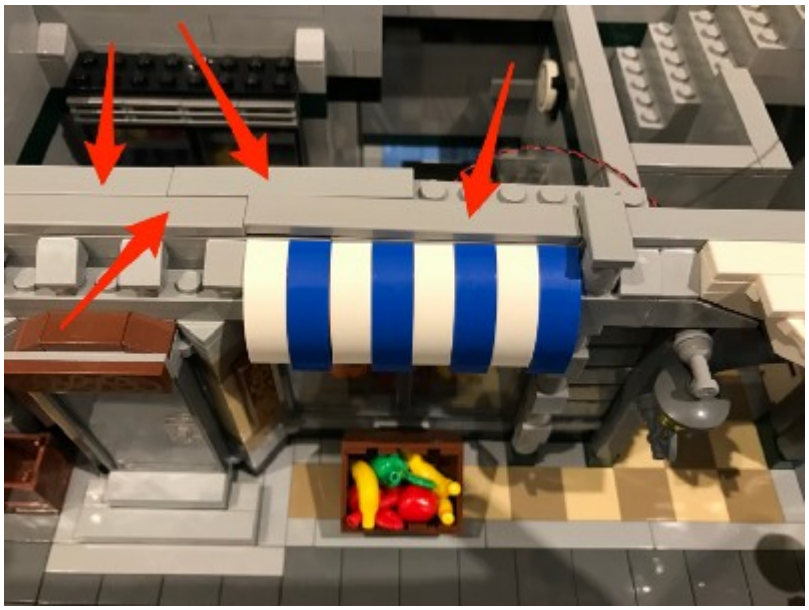


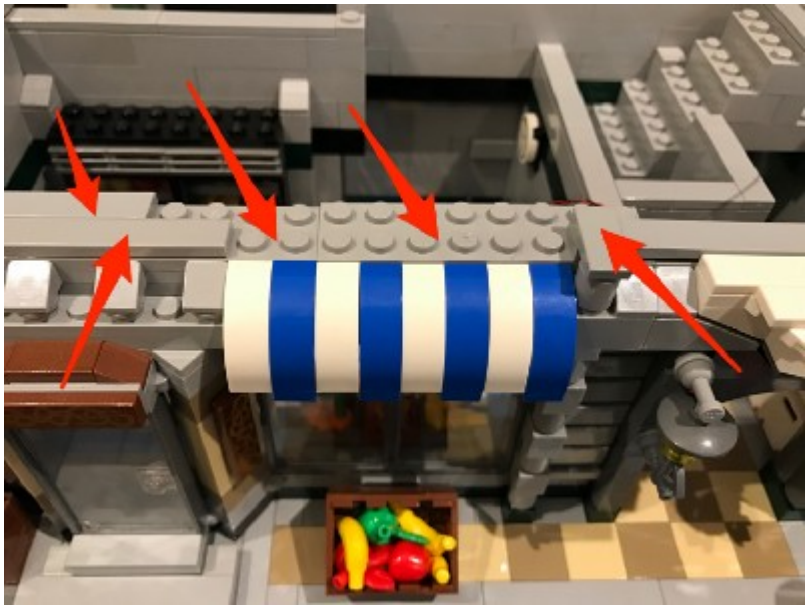


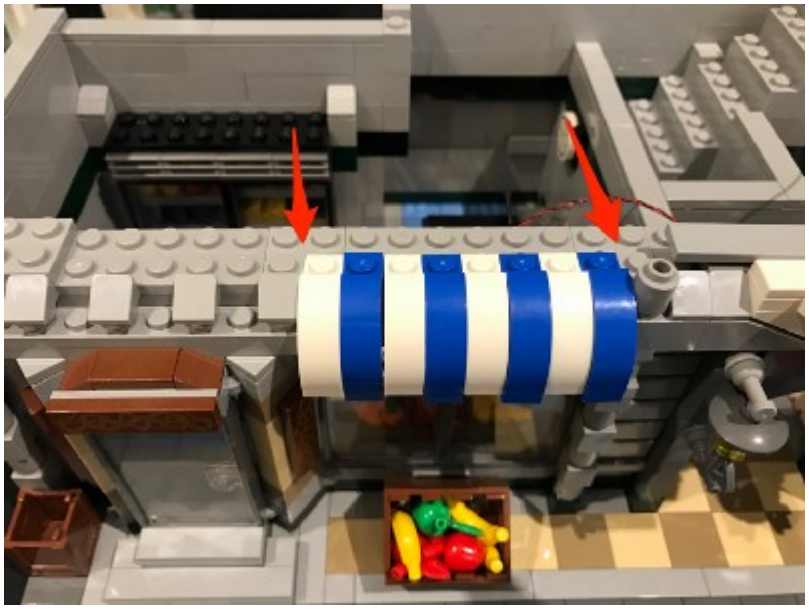


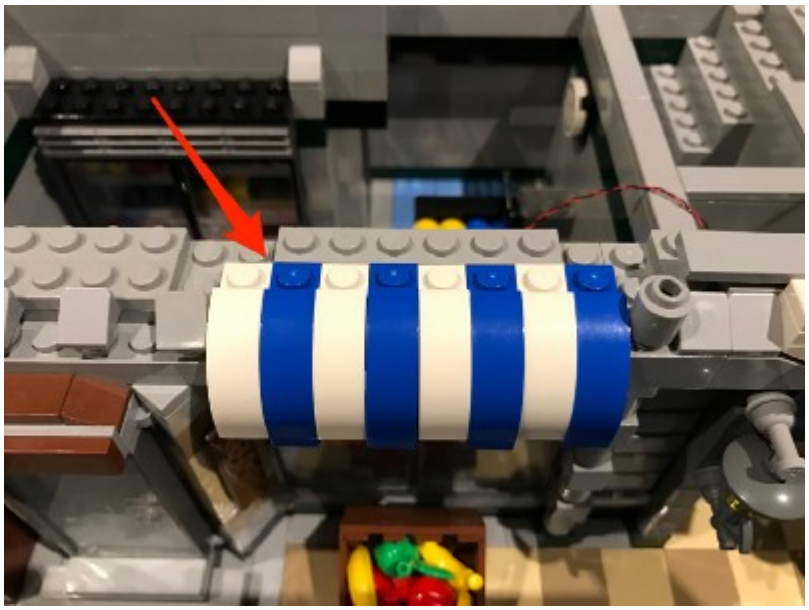
7.) We will now install lighting above the grocer window. Start by removing the following sections to allow us to remove the grey 2×8 plate with the blue and white

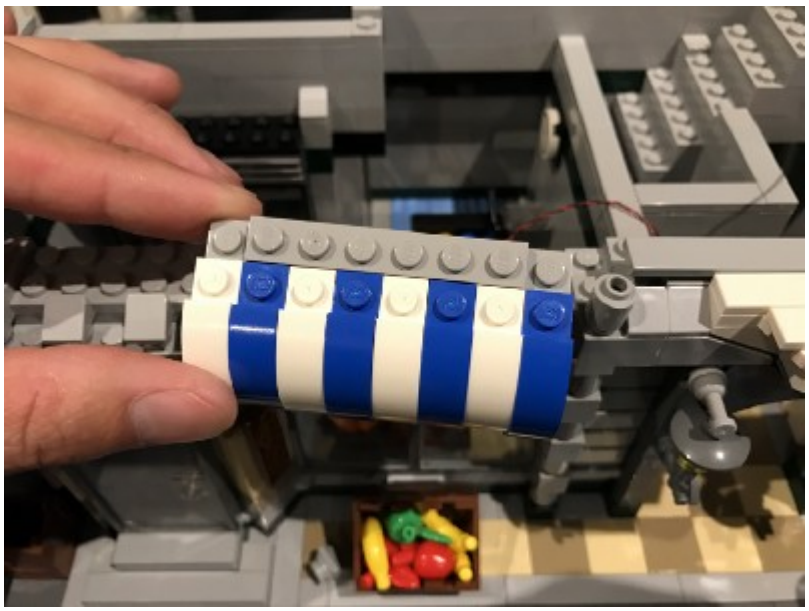
pieces on top.



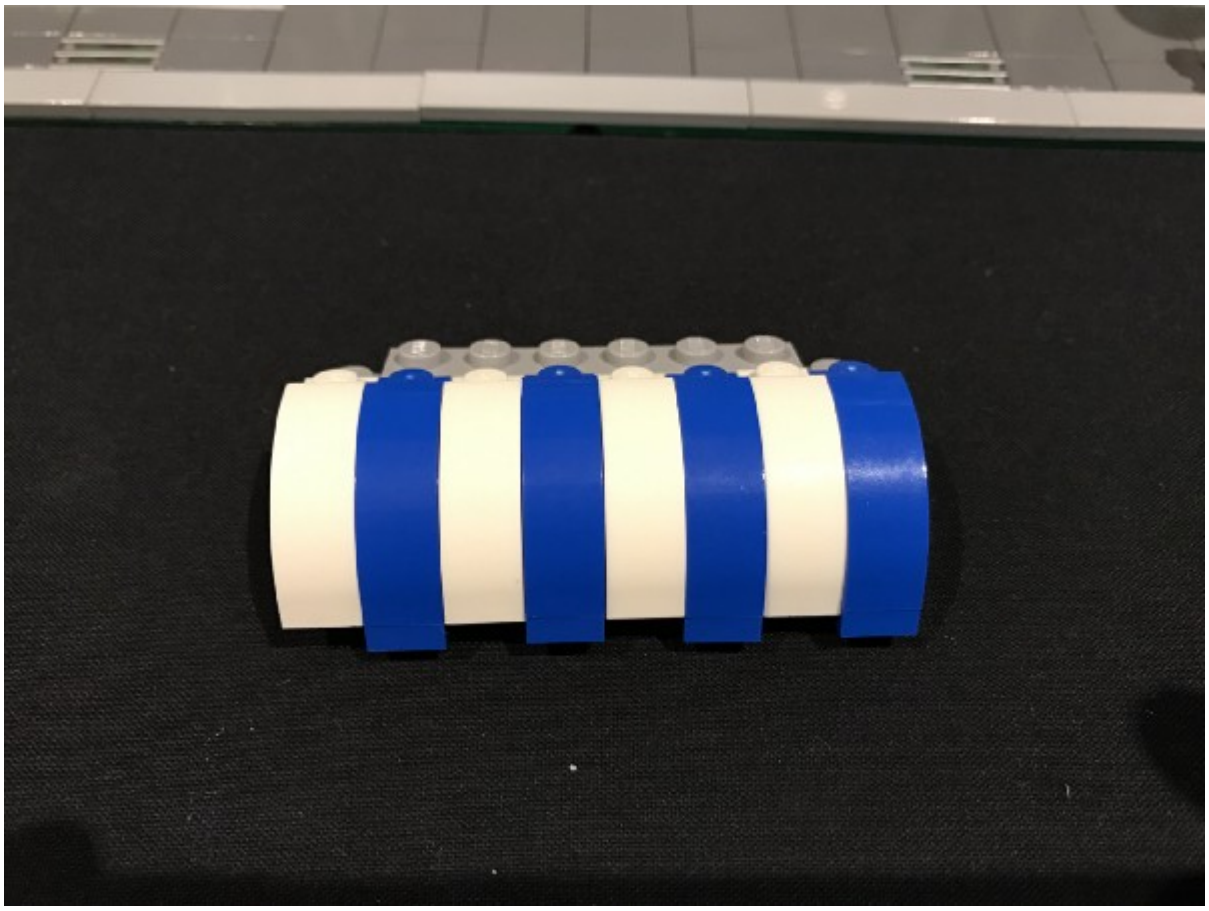


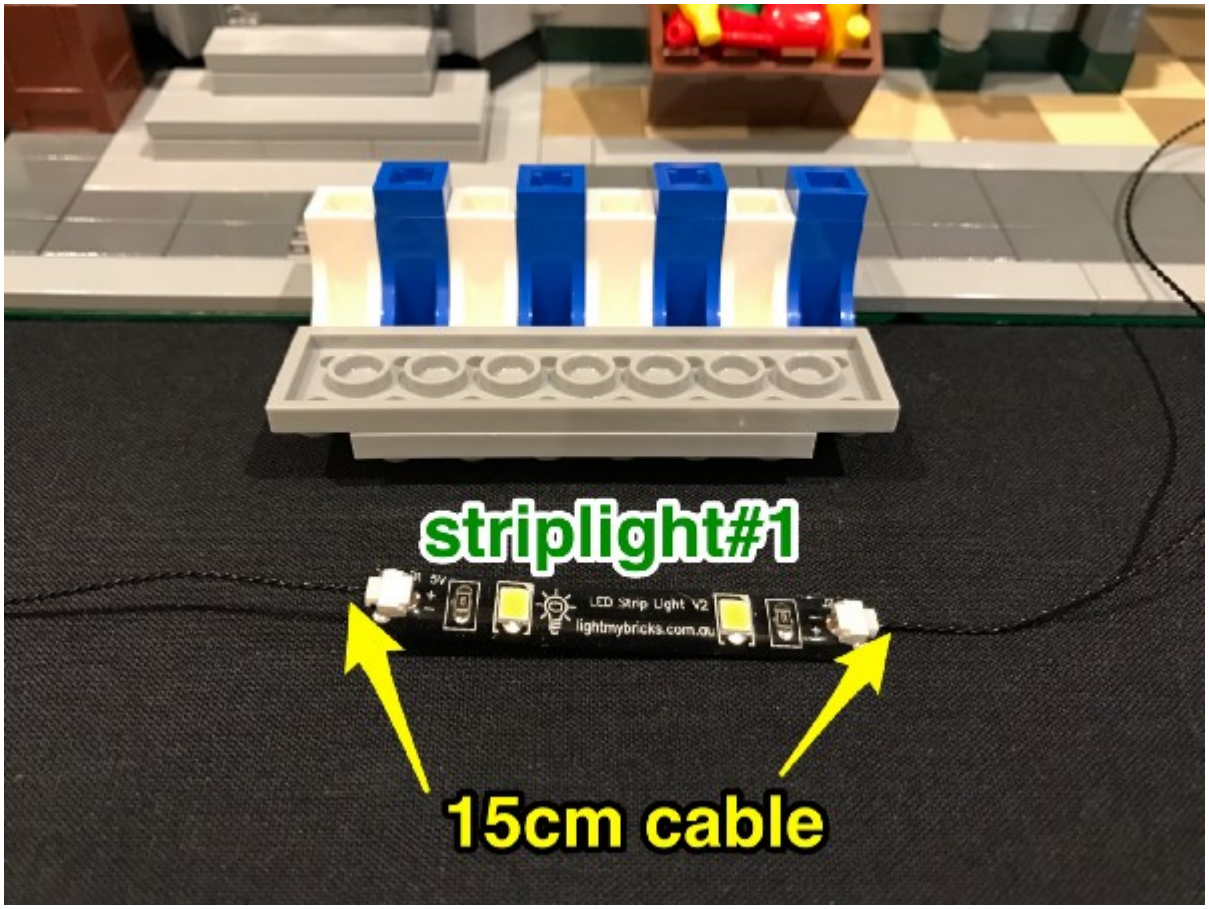


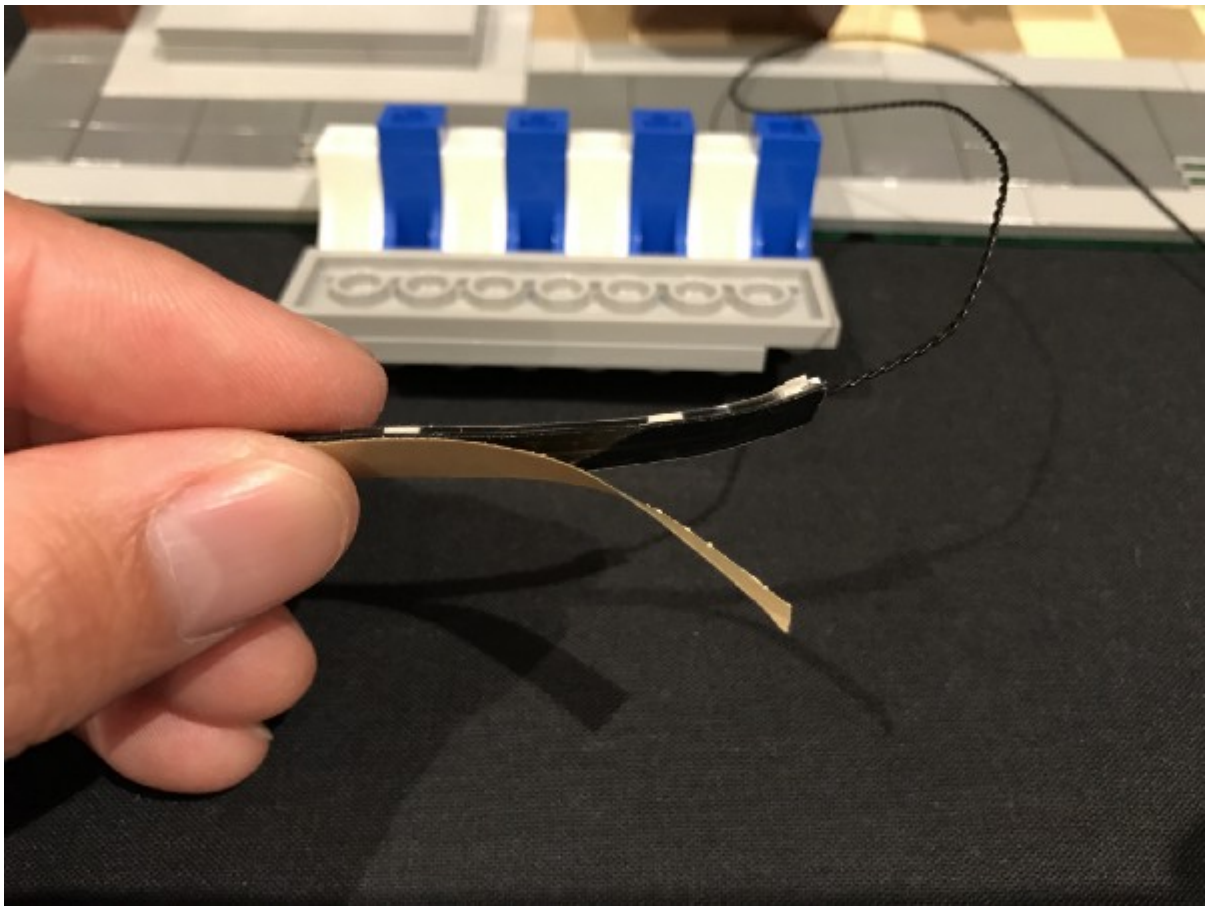


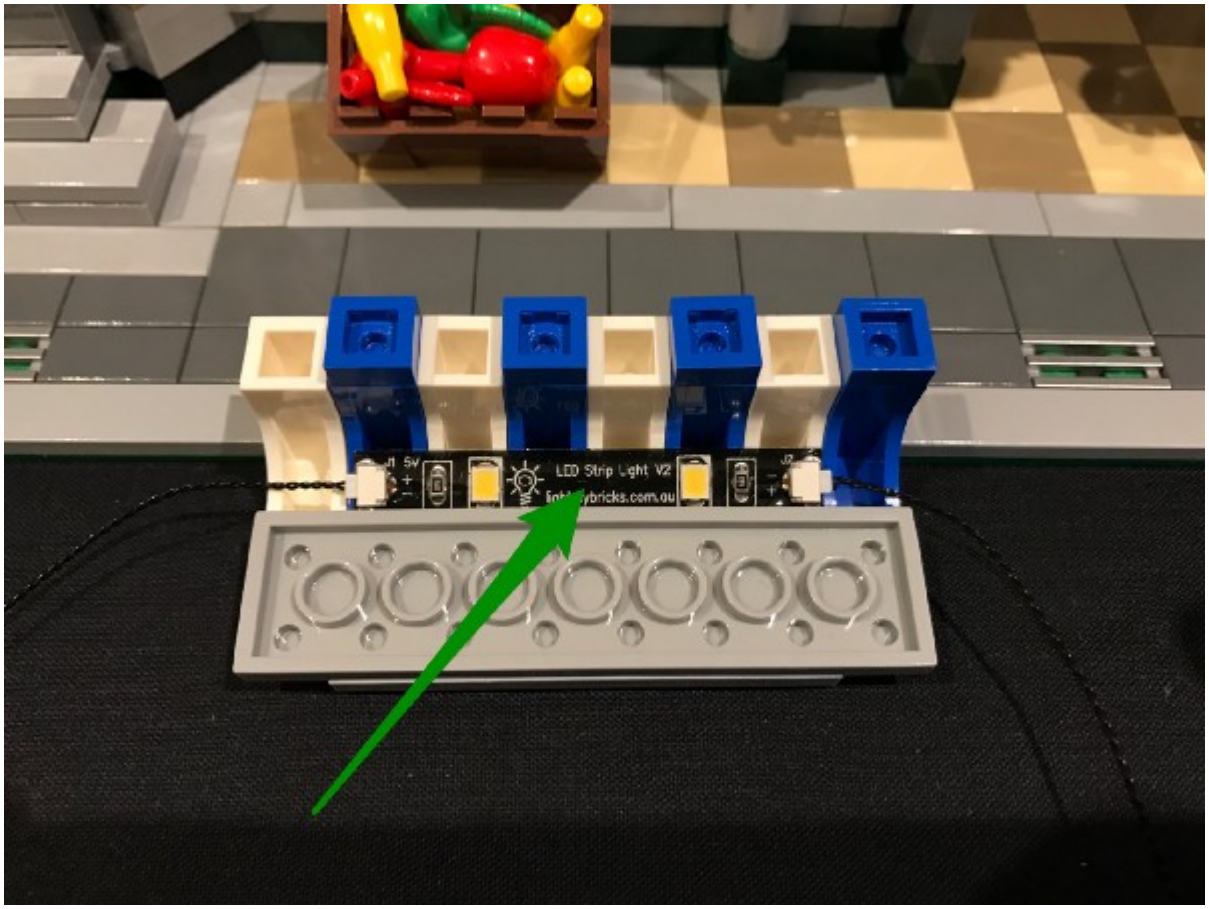


Flip this section over and then take an **LED Strip Light** and connect a **15 cm connecting cable** to each port. Stick the Strip Light underneath in the following position. We will be using several strip lights in this kit so we will identify this one as **striplight#1**.

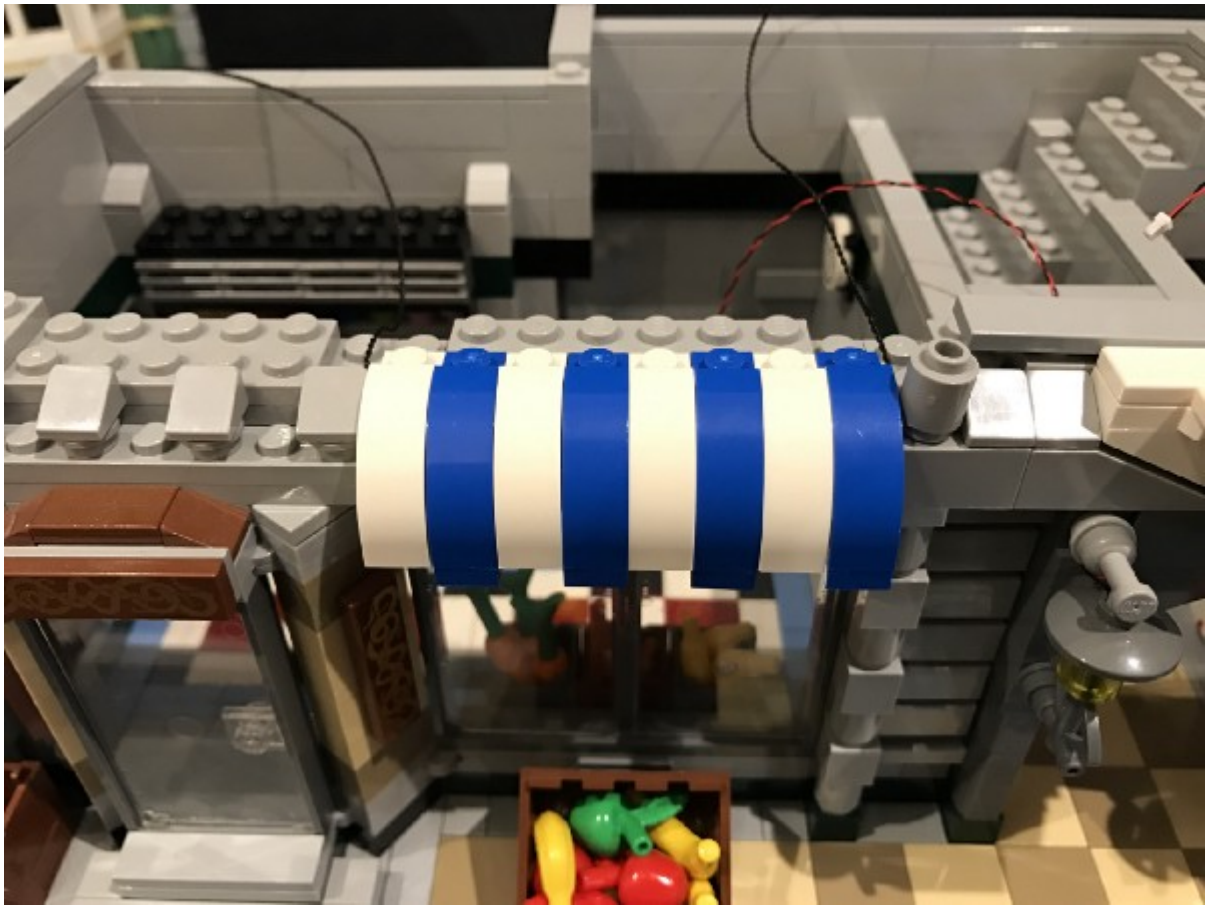


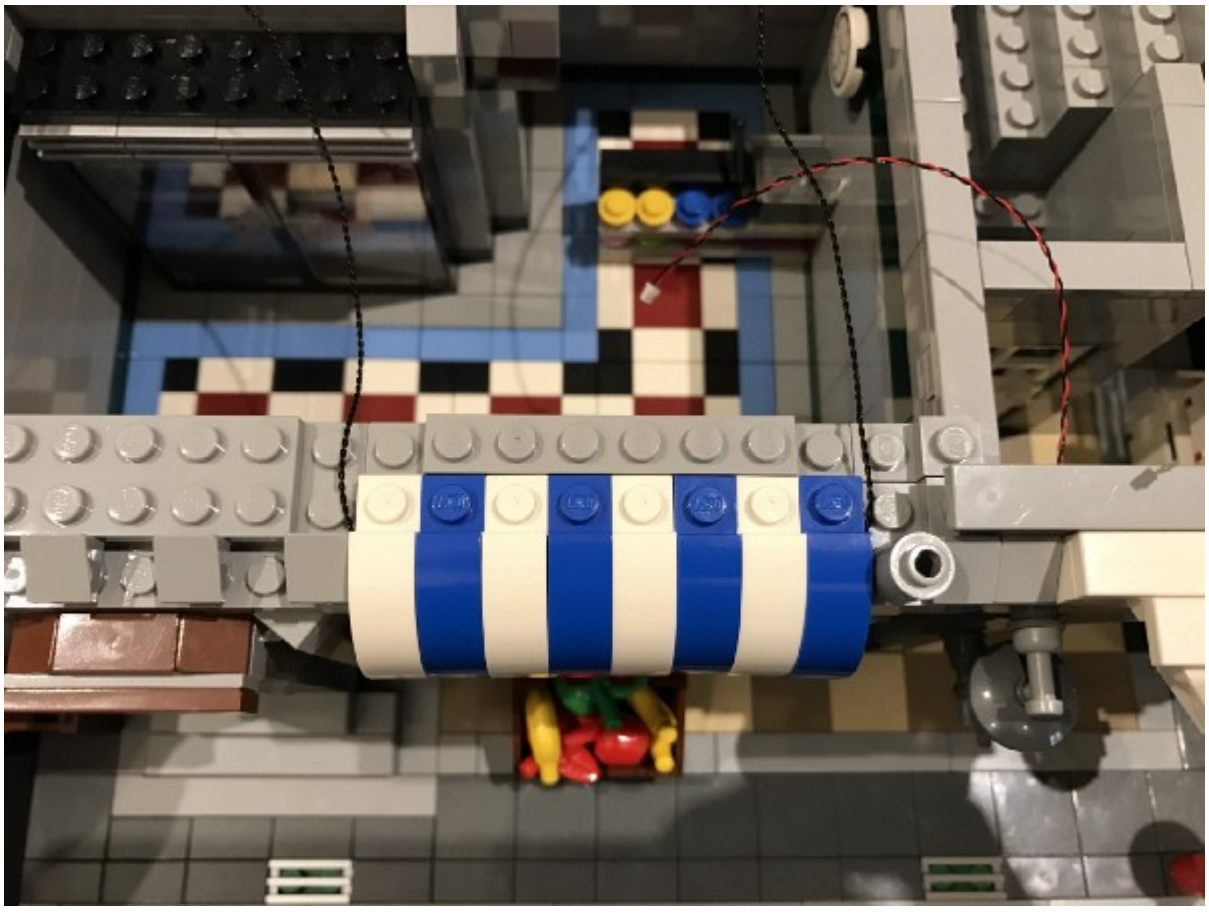

striplight#1
LED Strip Light V2
lightmybricks.com.au
15cm cable



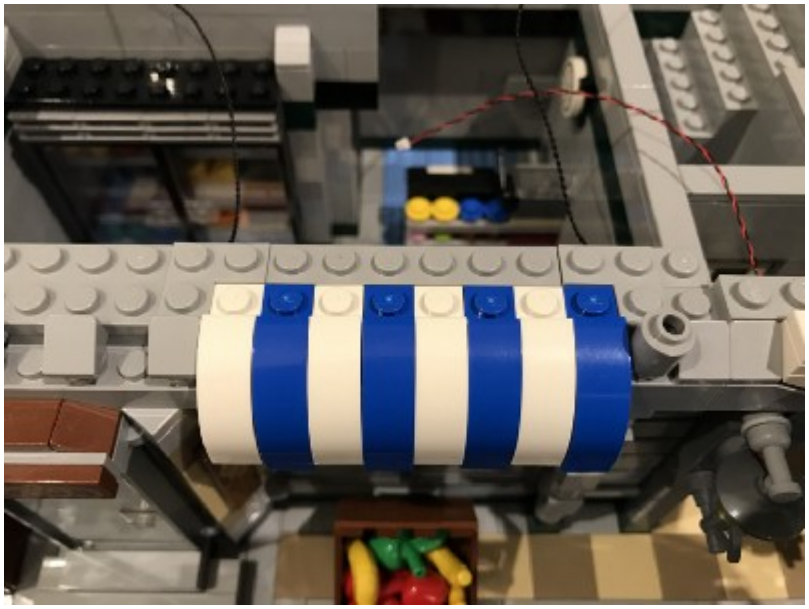



8.) Turn this section over and then reconnect it to the building ensuring the cables are placed behind and laid in between studs.

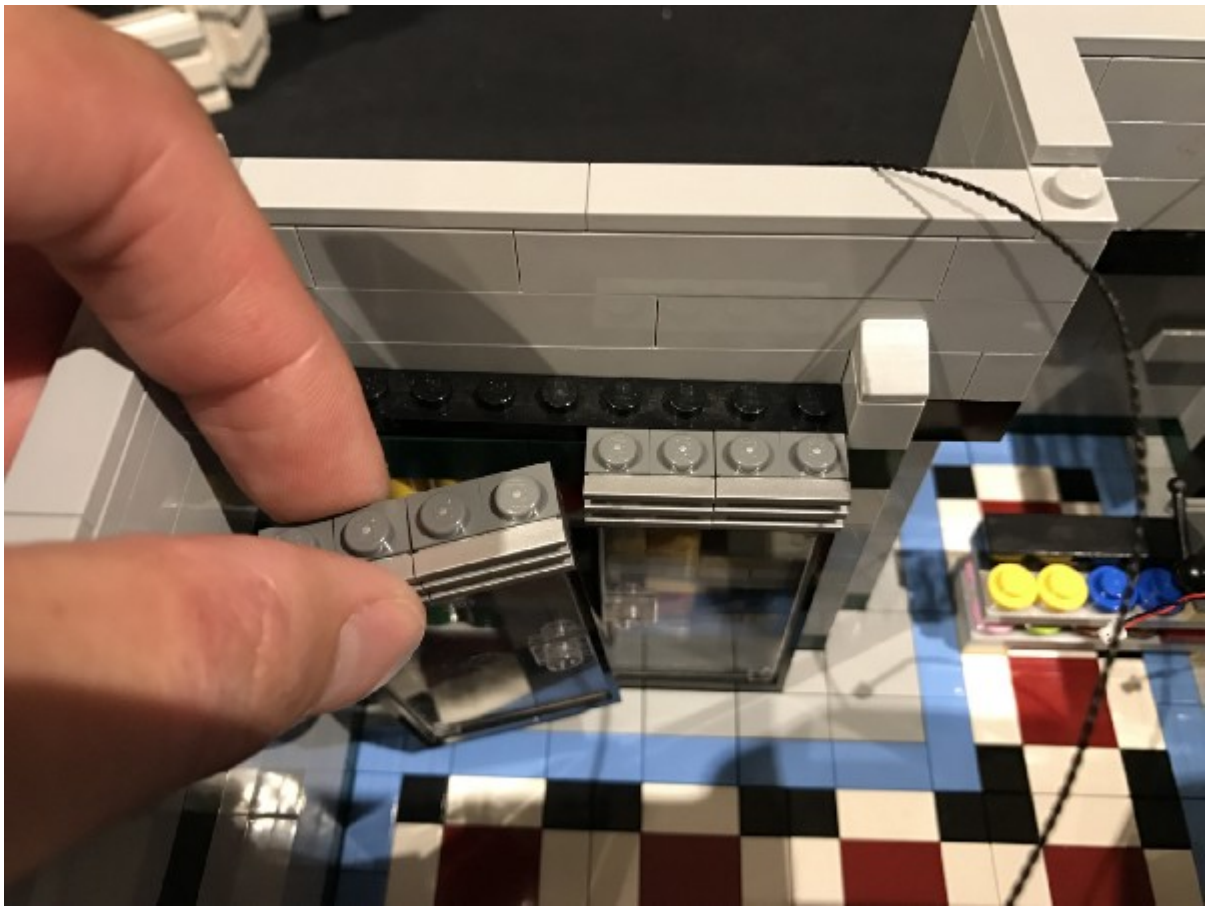


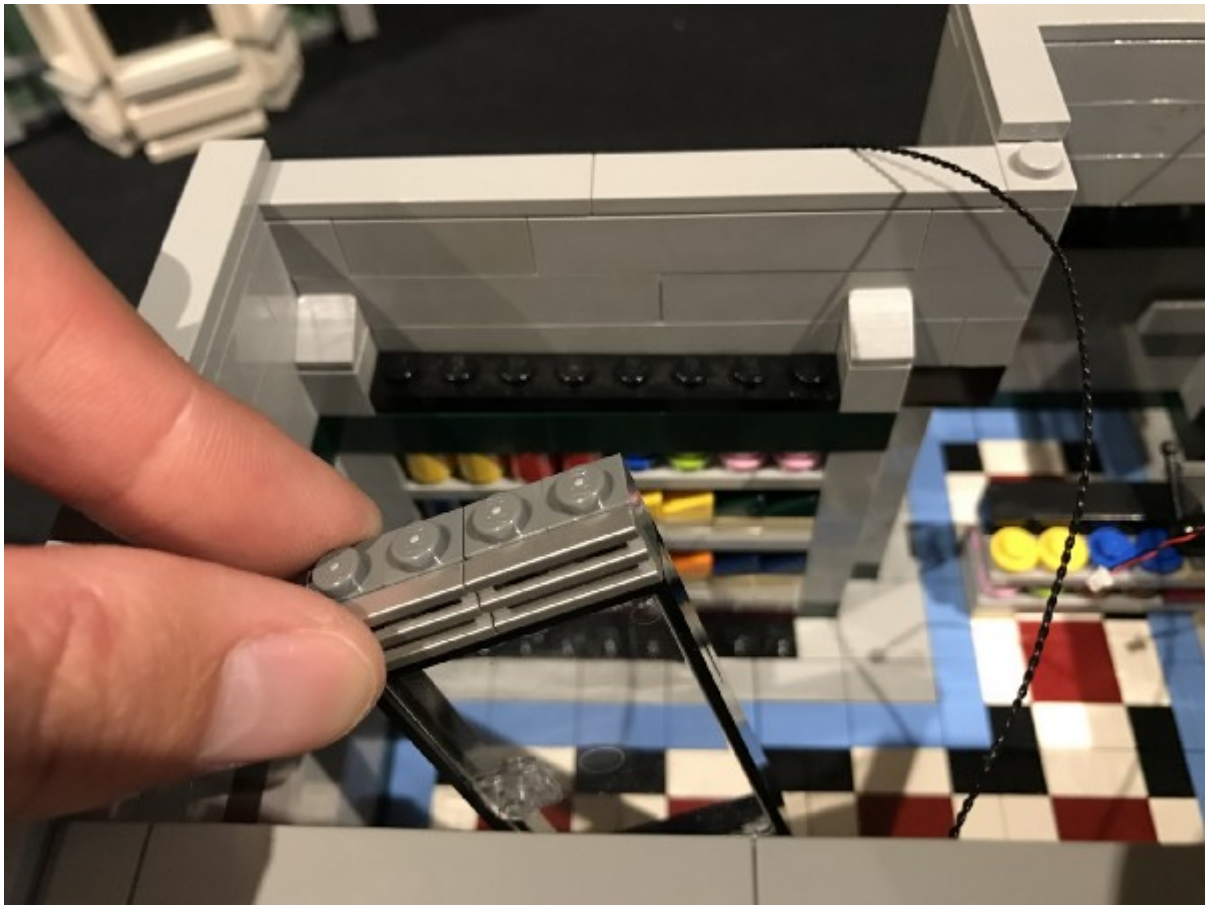


Reconnect the sections we removed earlier.

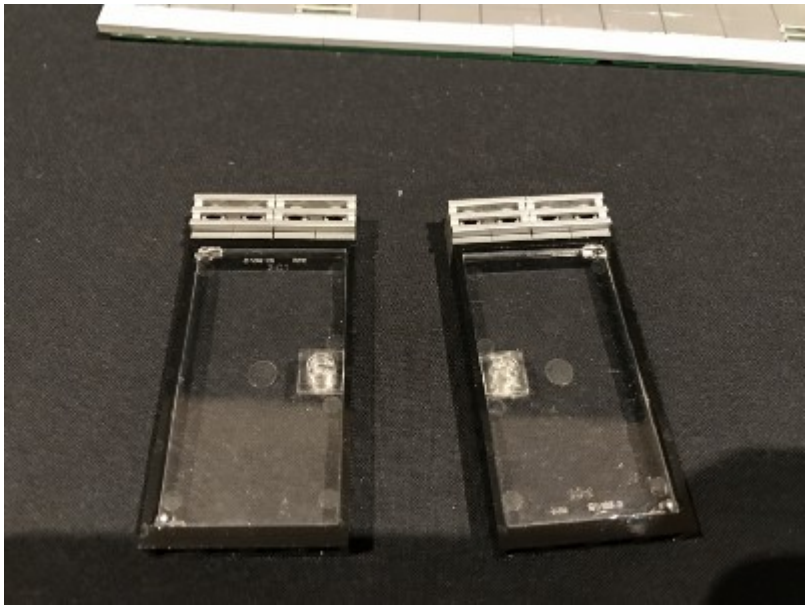


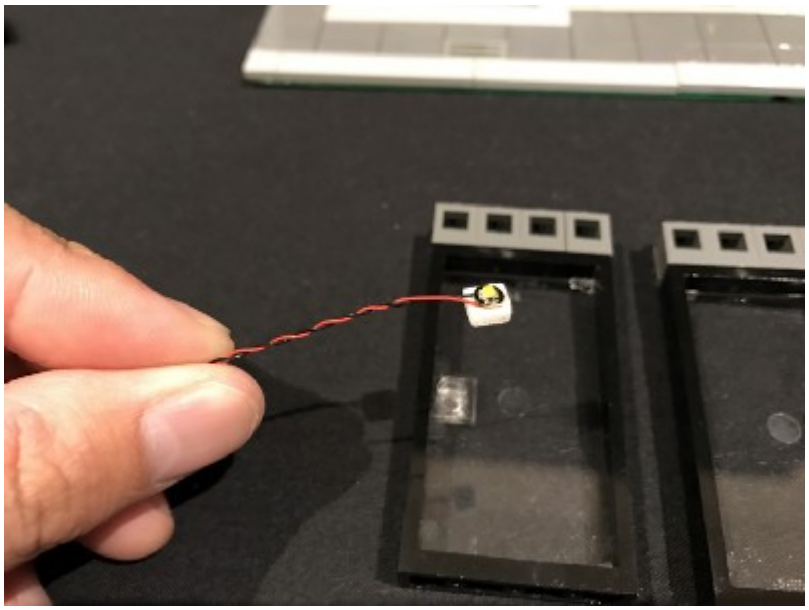
9.) We will now install the fridge lights. Remove the black 2×8 plate from the top of the fridge and then remove the two fridge door sections as per below.

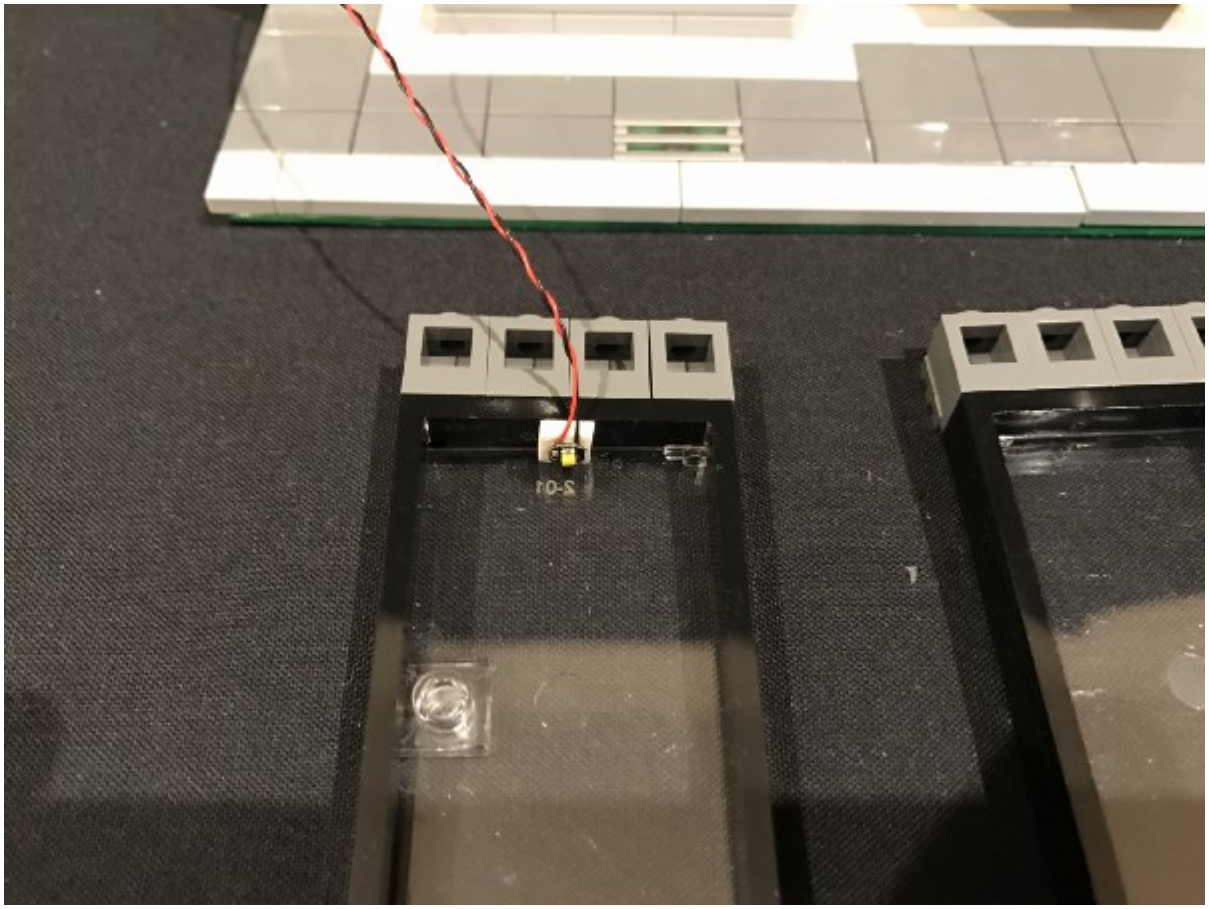


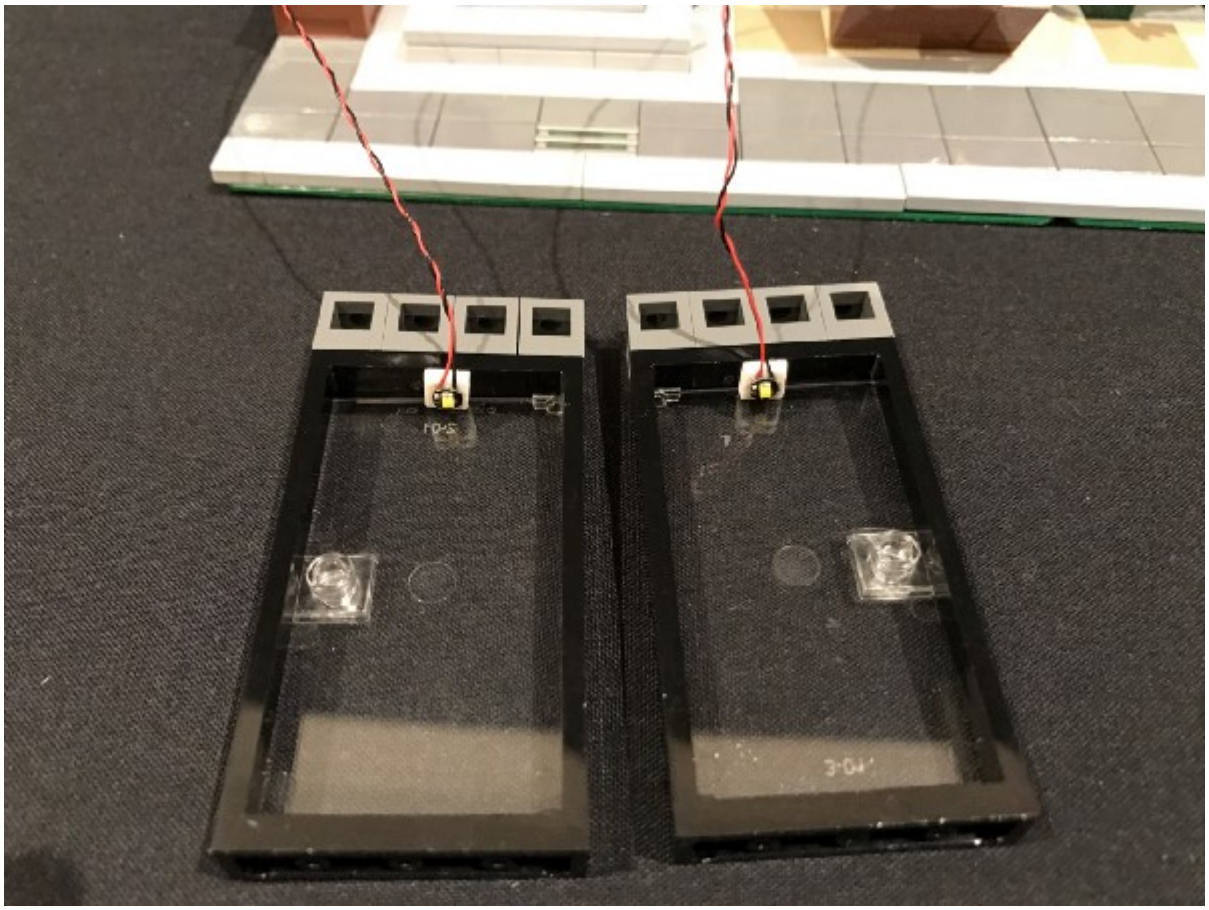


10.) Turn these pieces over and then take **2x White 30cm Bit Lights** and use **adhesive squares** to mount them underneath the frames in the following positions.

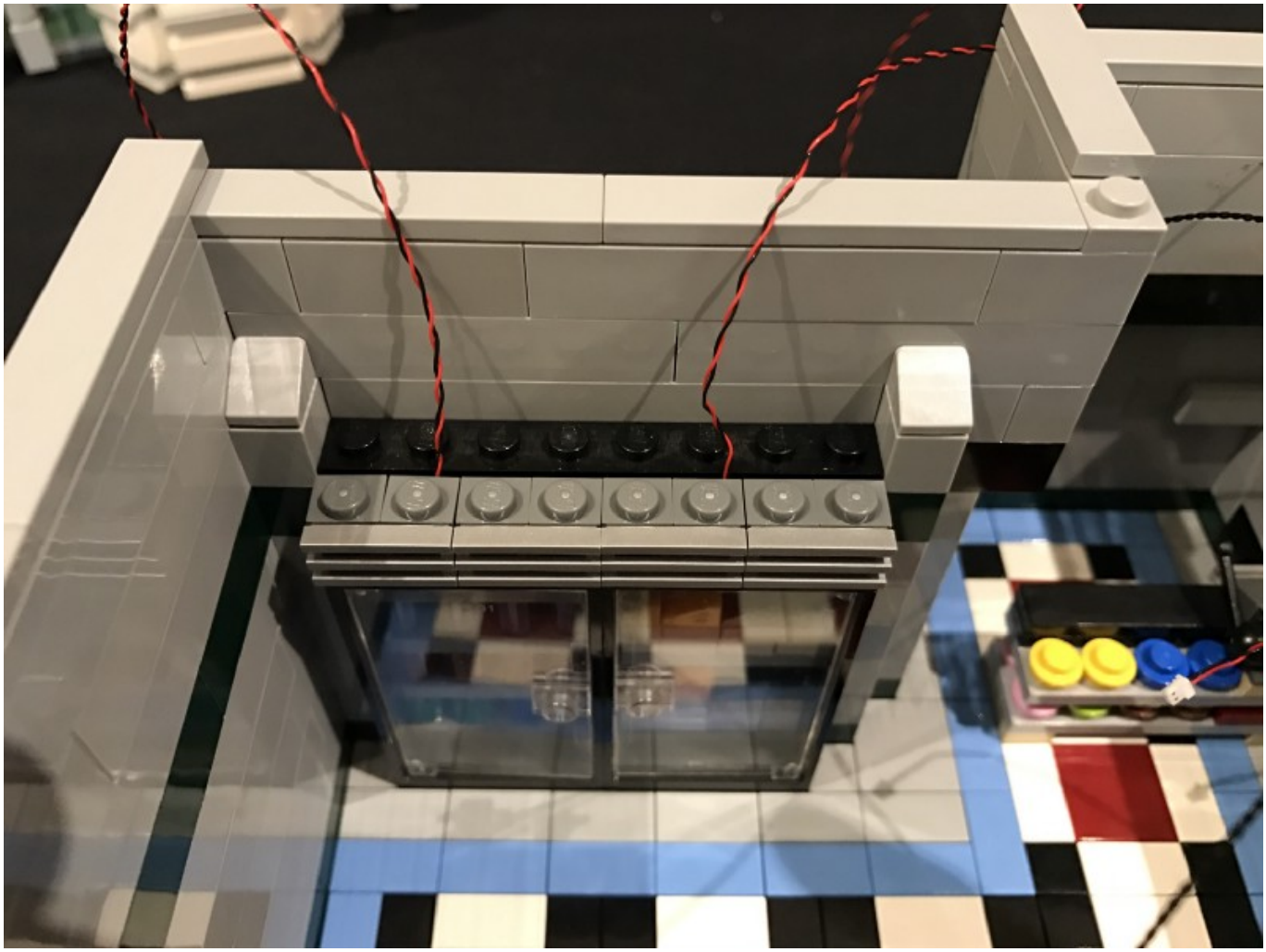




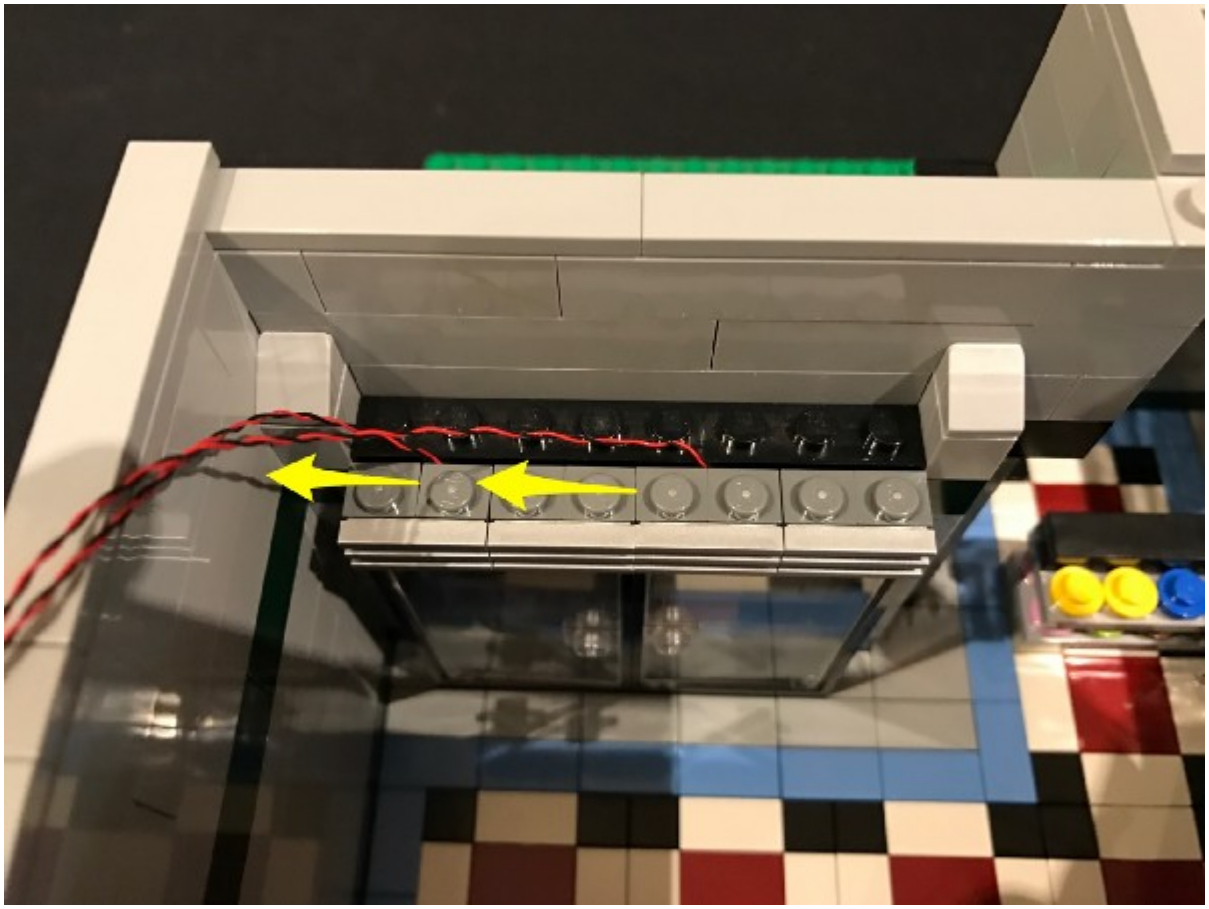




Reconnect these two sections back to the fridge ensuring the cables are pulled up.

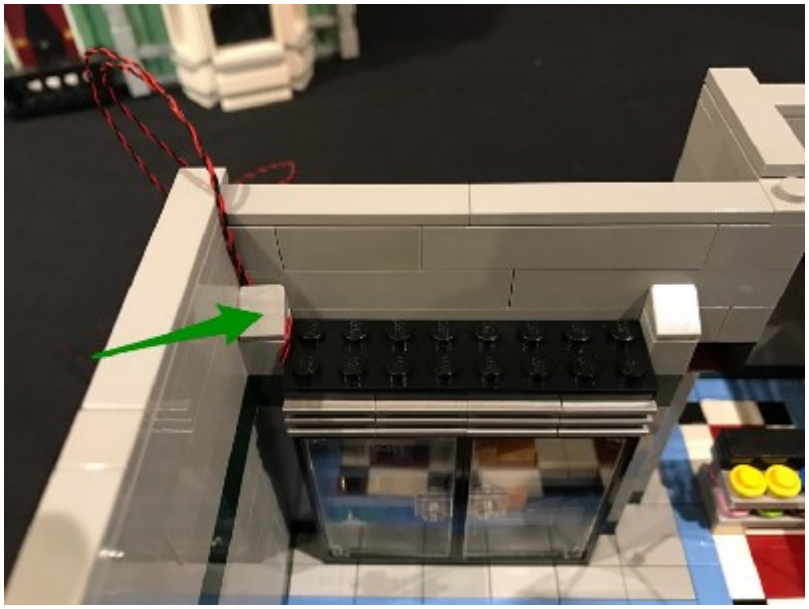


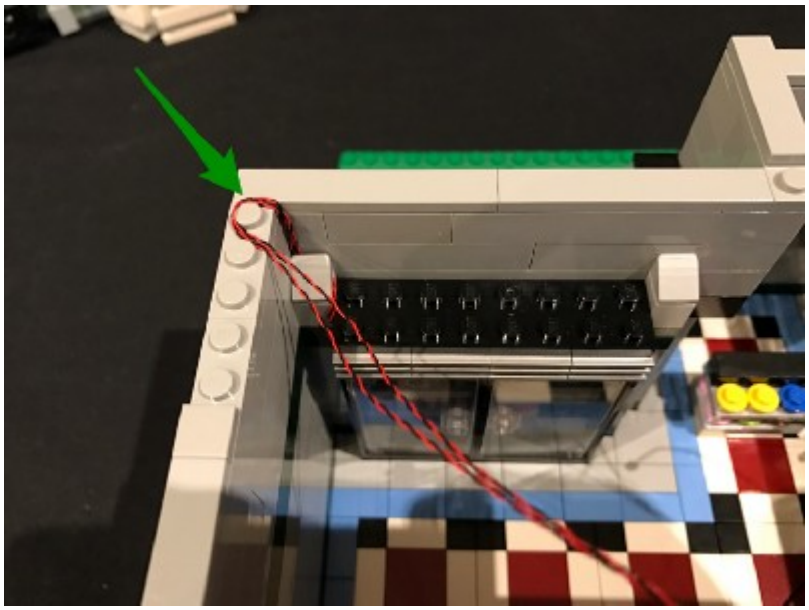
11.) Pull the two cables toward the left and lay them down in between studs before reconnecting the black 2×8 plate over the top.

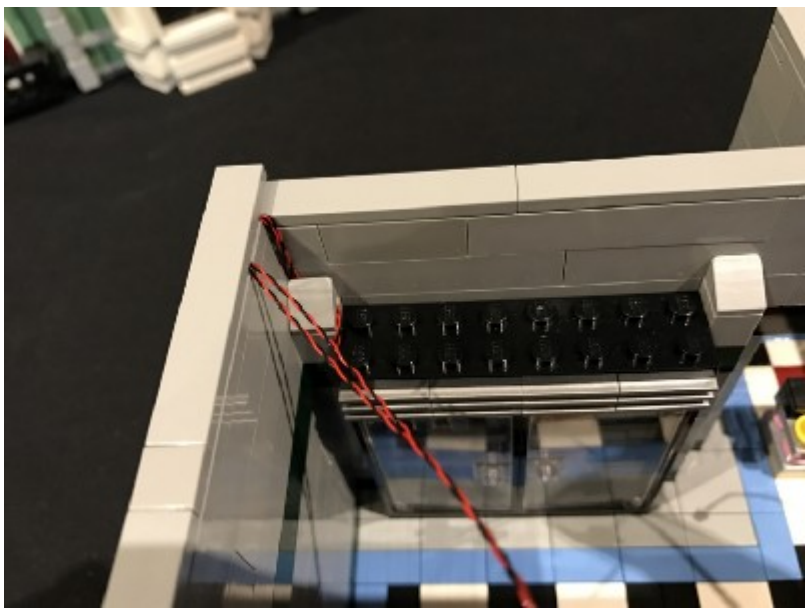


Lay the cables behind and underneath the grey triangular plate then disconnect the grey plate above to allow us to loop the cables around the first stud underneath.

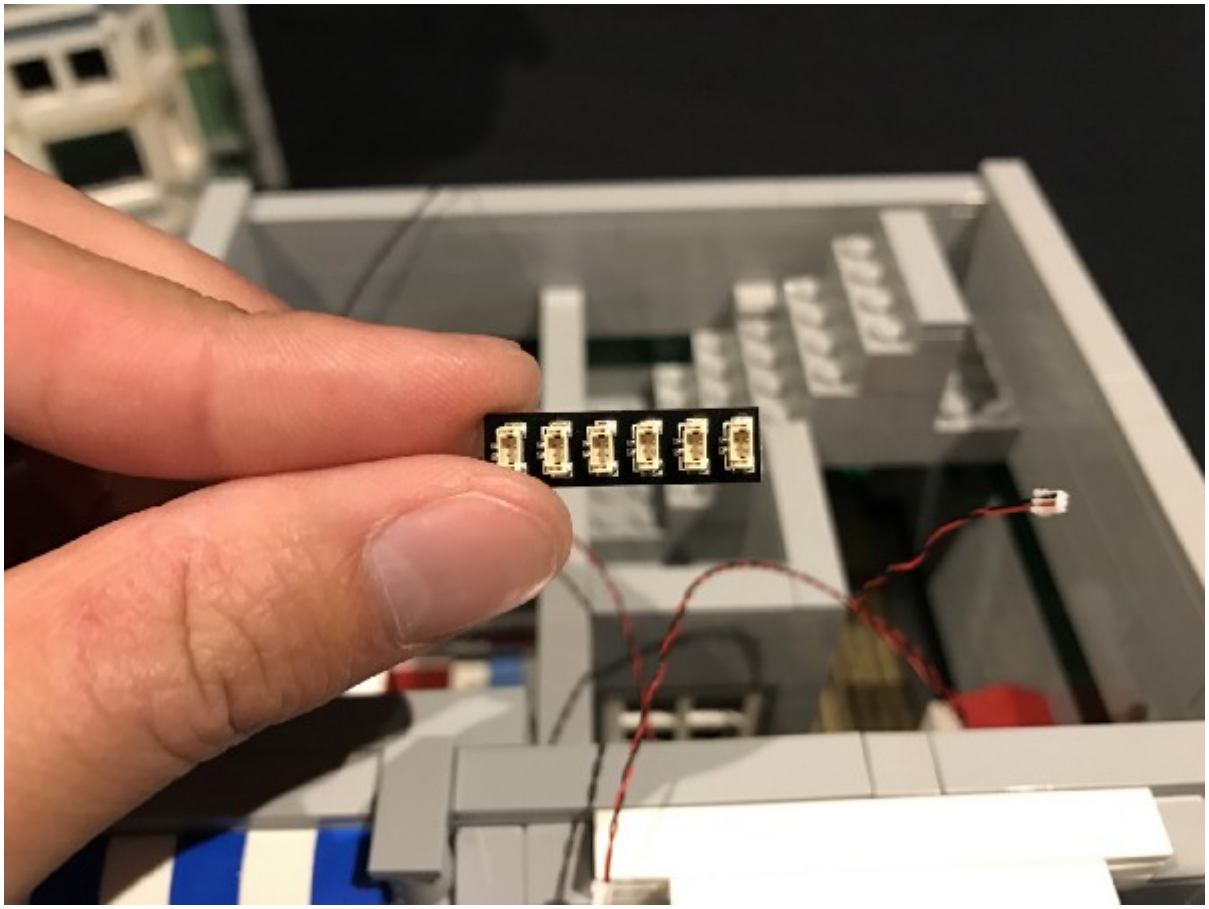
Reconnect the plate over the top of the cables.

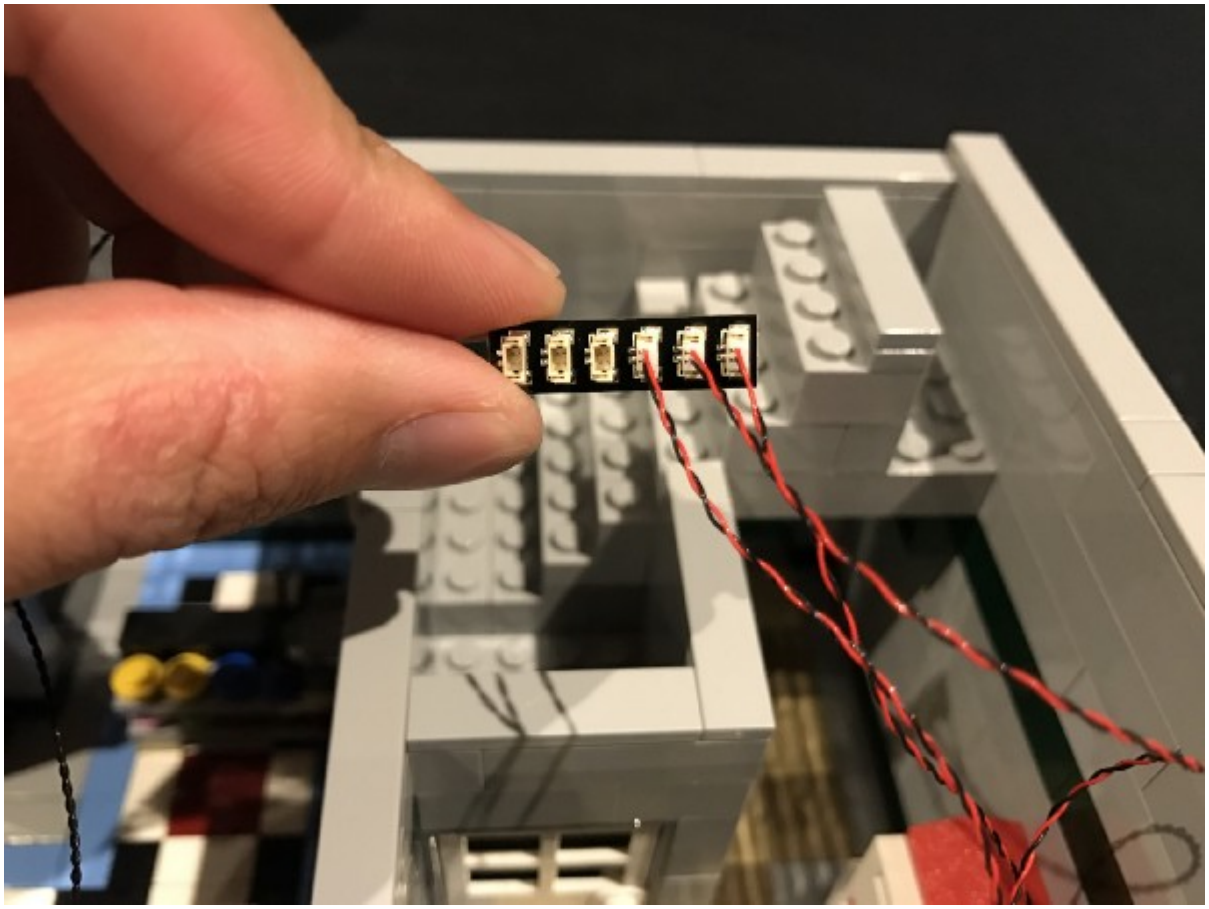


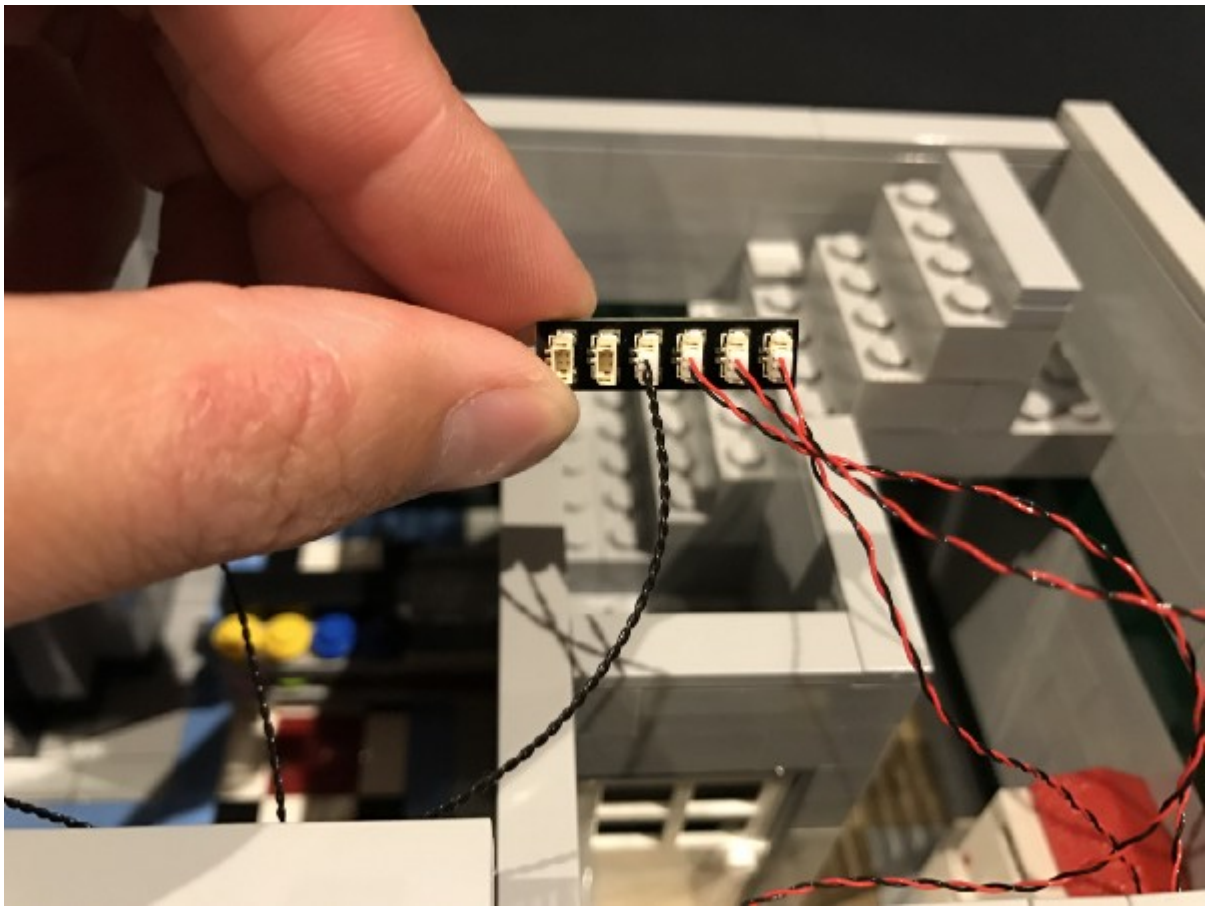


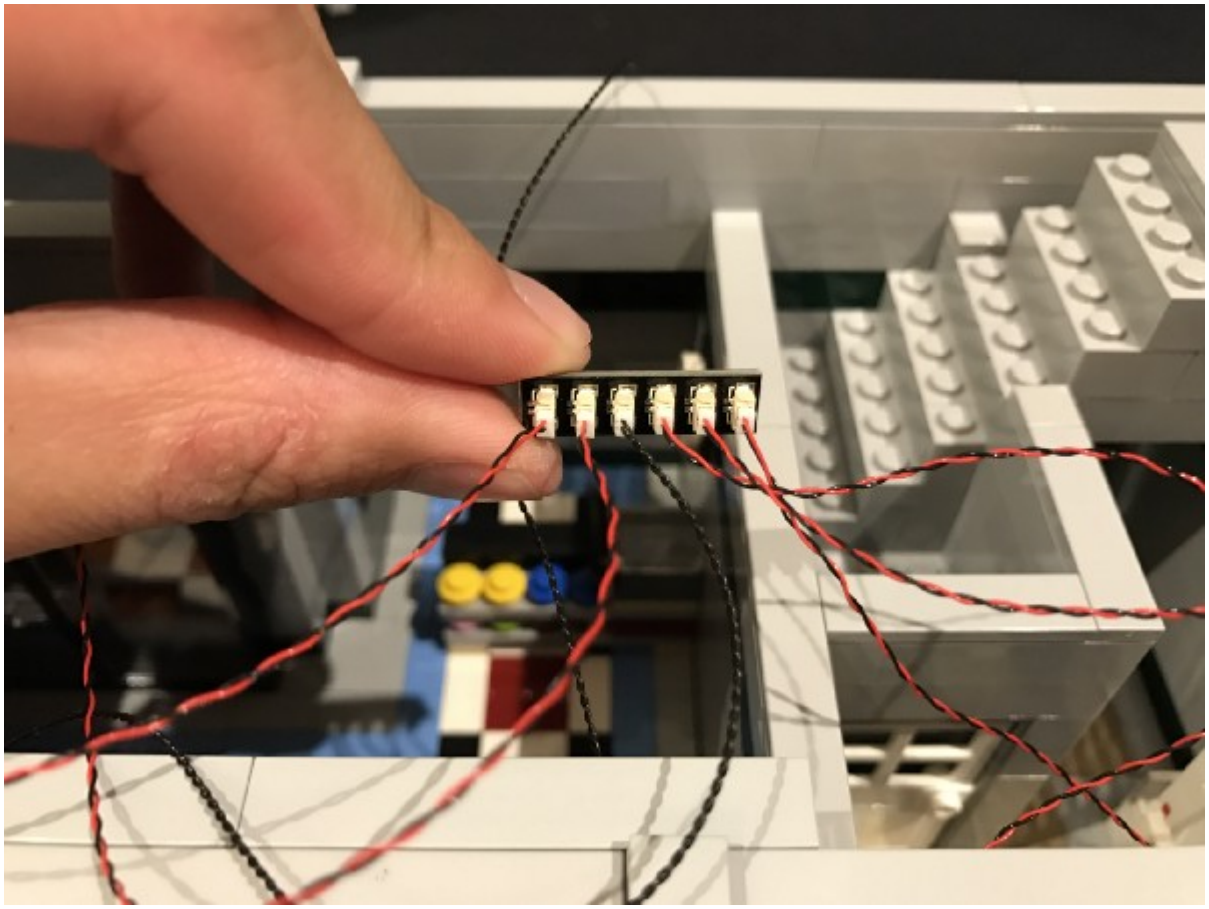


12.) Take a **6-Port Expansion Board** and then connect the lamp post cable and 2 front lamps to first available ports. Next, connect one of the connecting cables from striplight#1 as well as the two bit lights from the fridges to the remaining ports.

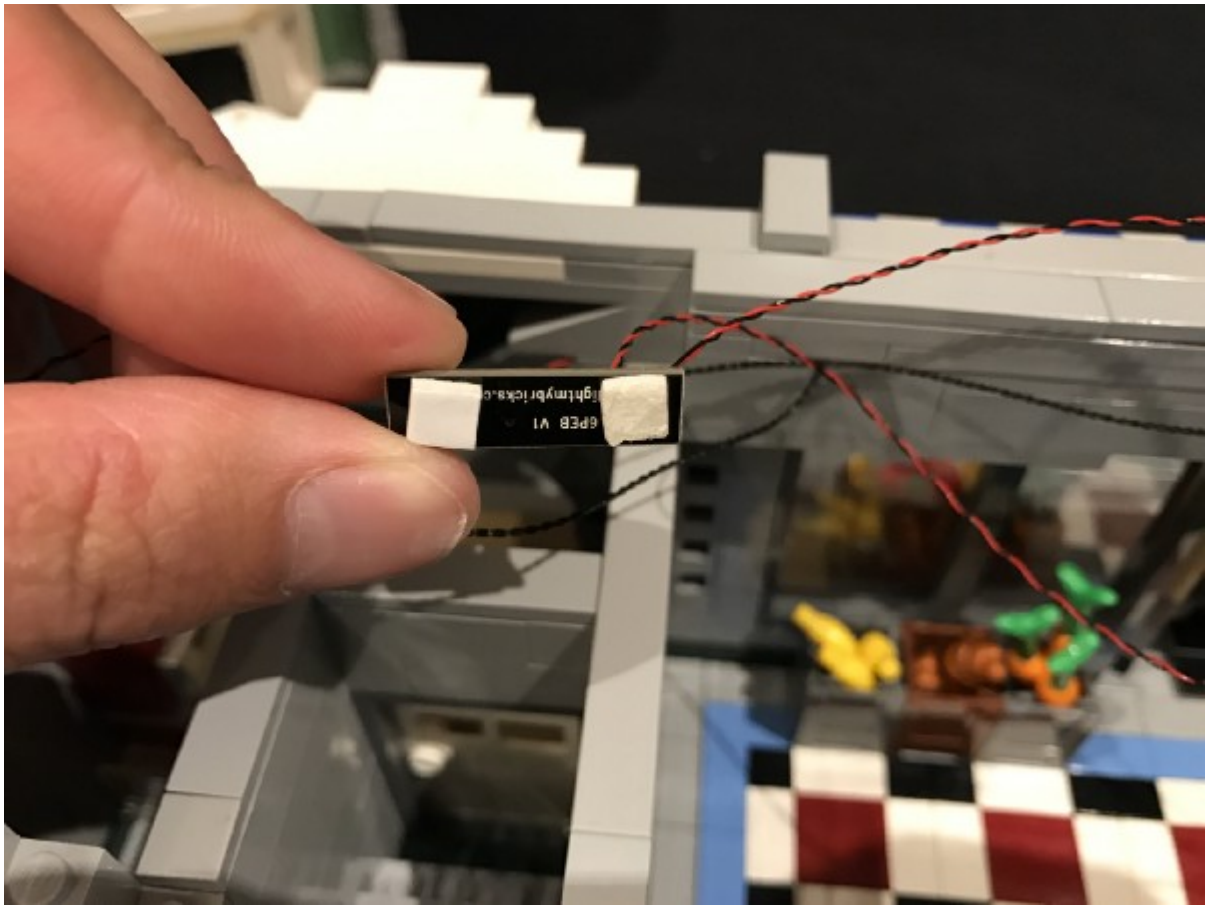


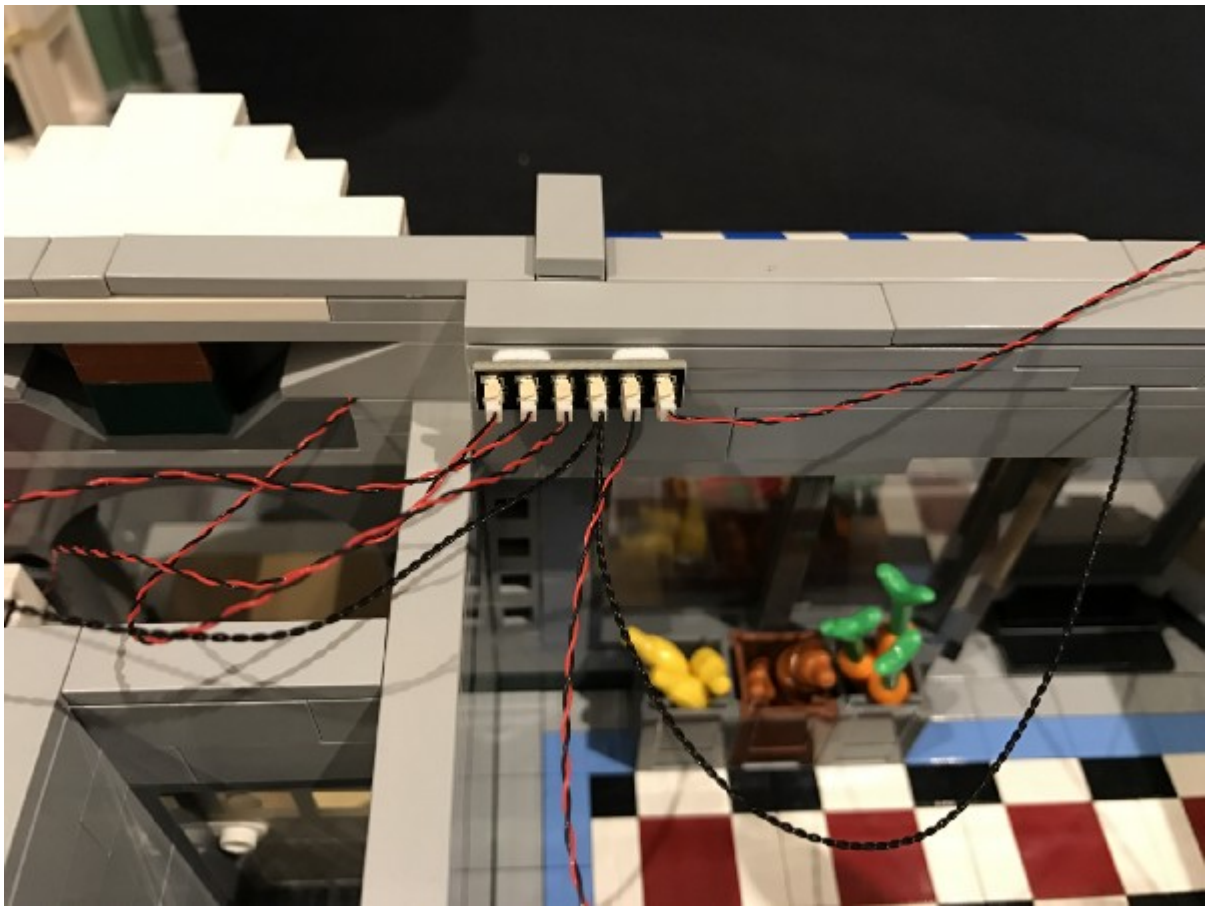






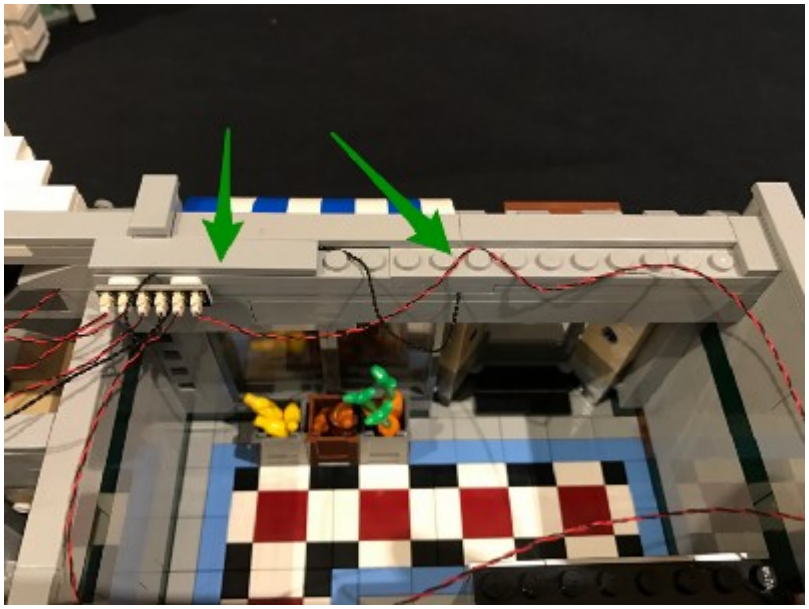
Use 2x **adhesive squares** to mount the expansion board to the top of the wall inside the building as per below.

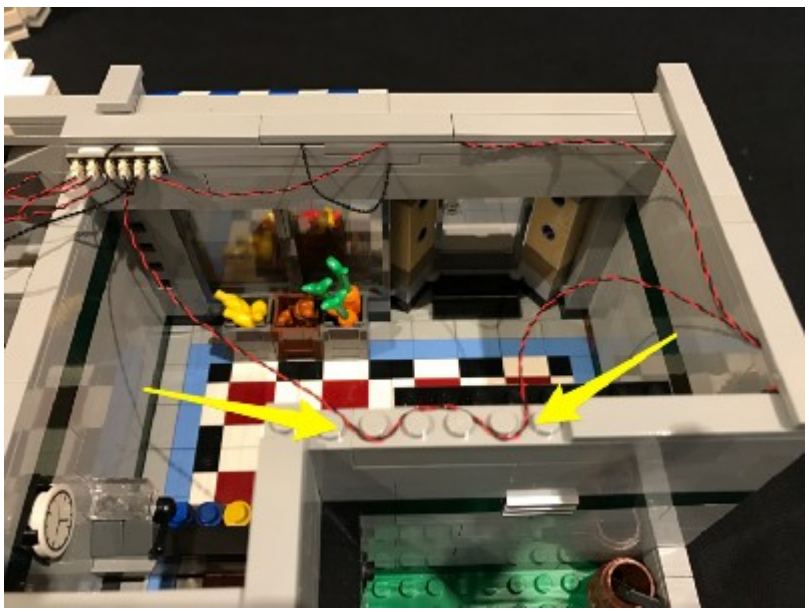




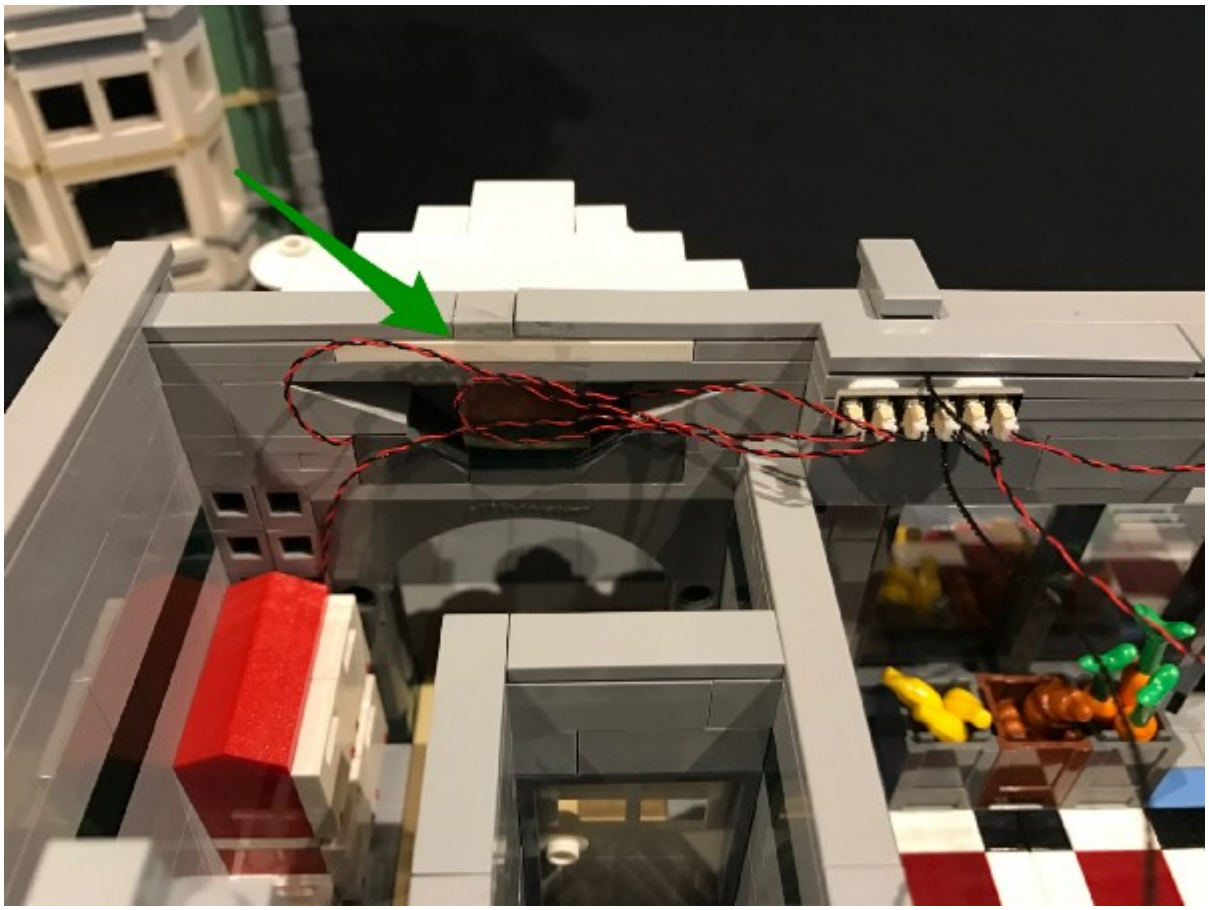
13.) It’s time to neaten up the cables. Follow the below images to lay excess cabling underneath the LEGO plates. The key here is to hide as much cabling and to prevent

them from being seen from the outside looking in through the windows.





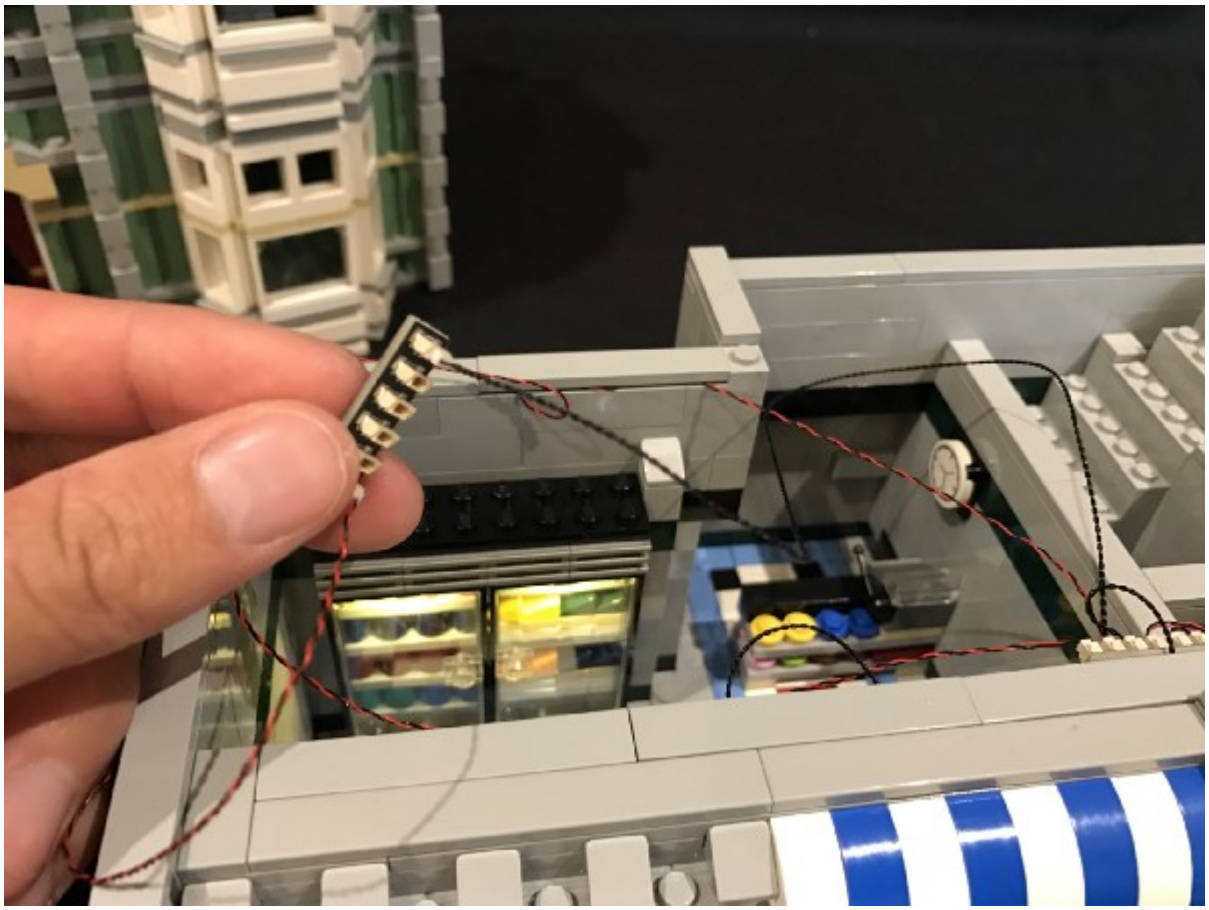
You can also use a bit of tape to secure down the lamp post cable and lamp cables, similar to what I have done below:

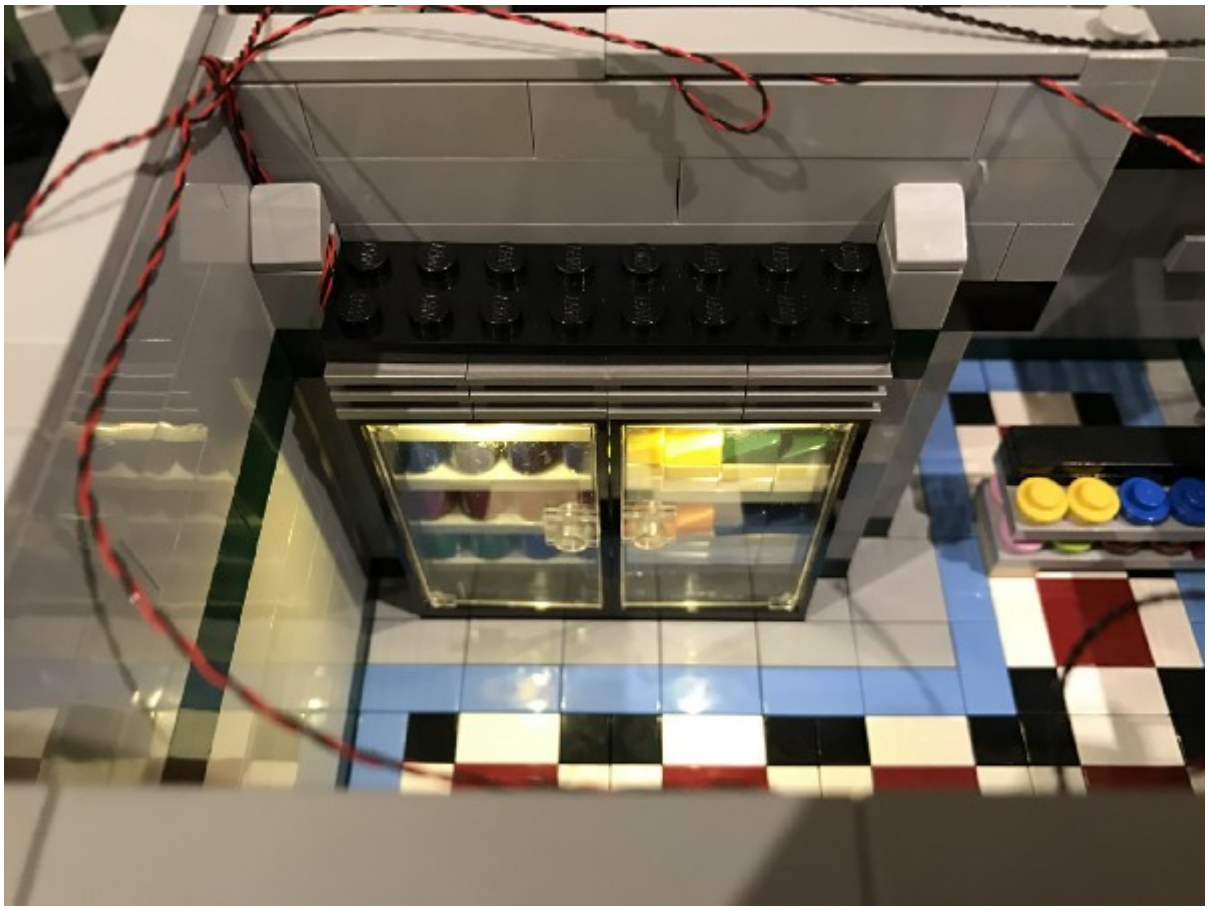


14.) Now is a good time to test the current lighting we have installed. To do so, take the **Battery Pack** and insert 3x AA batteries into it. Connect the battery pack cable into one of the ports of the spare **6-Port Expansion Board**. Take other end of the other connecting cable from striplight#1 and connect it to another port on the expansion board. Turn on the battery pack and confirm all is working OK

If you're using the **USB Power Cable**, connect this to the board this instead of the battery pack, and connect the other end to a **USB Power Bank** or **wall adaptor** (sold separately) and turn it ON to test the front lights are working OK.

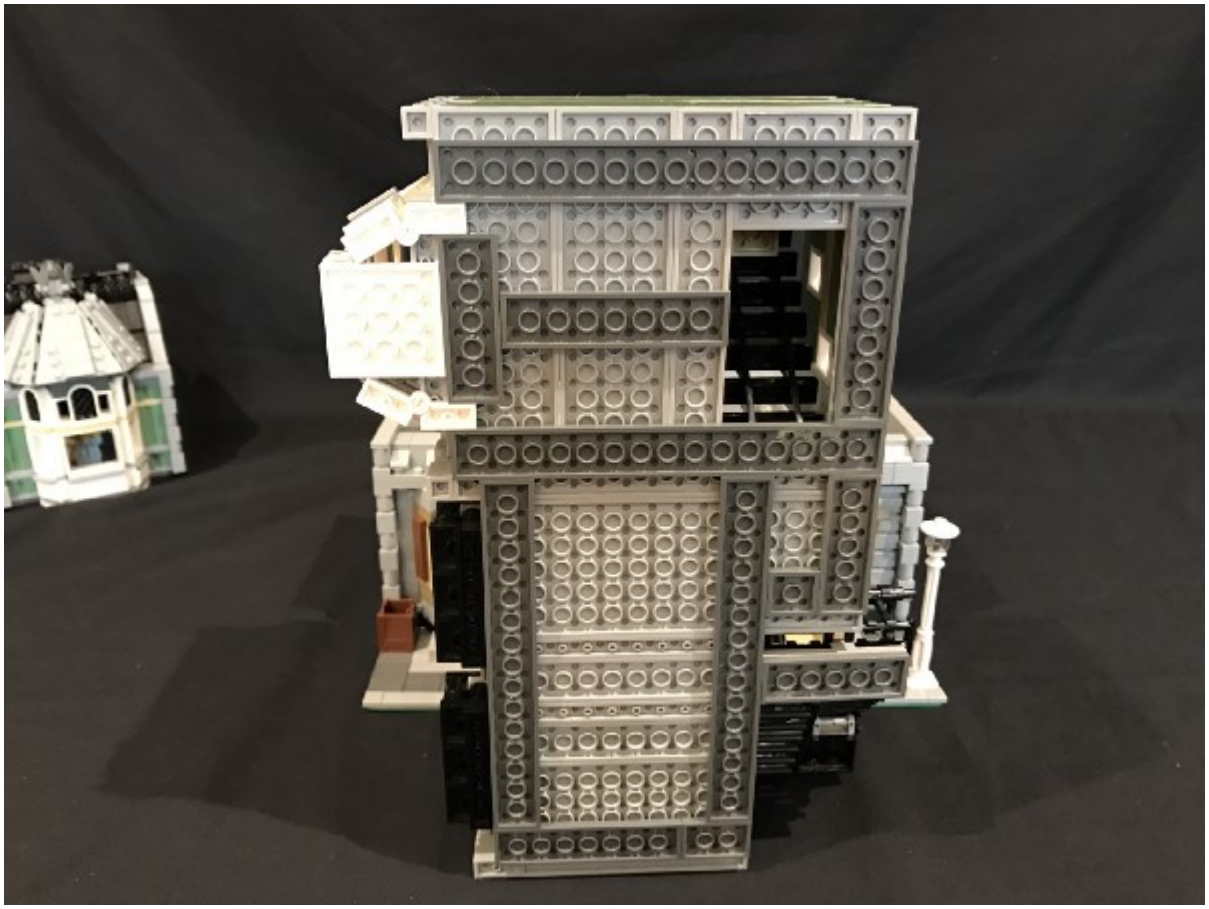
OFF ON



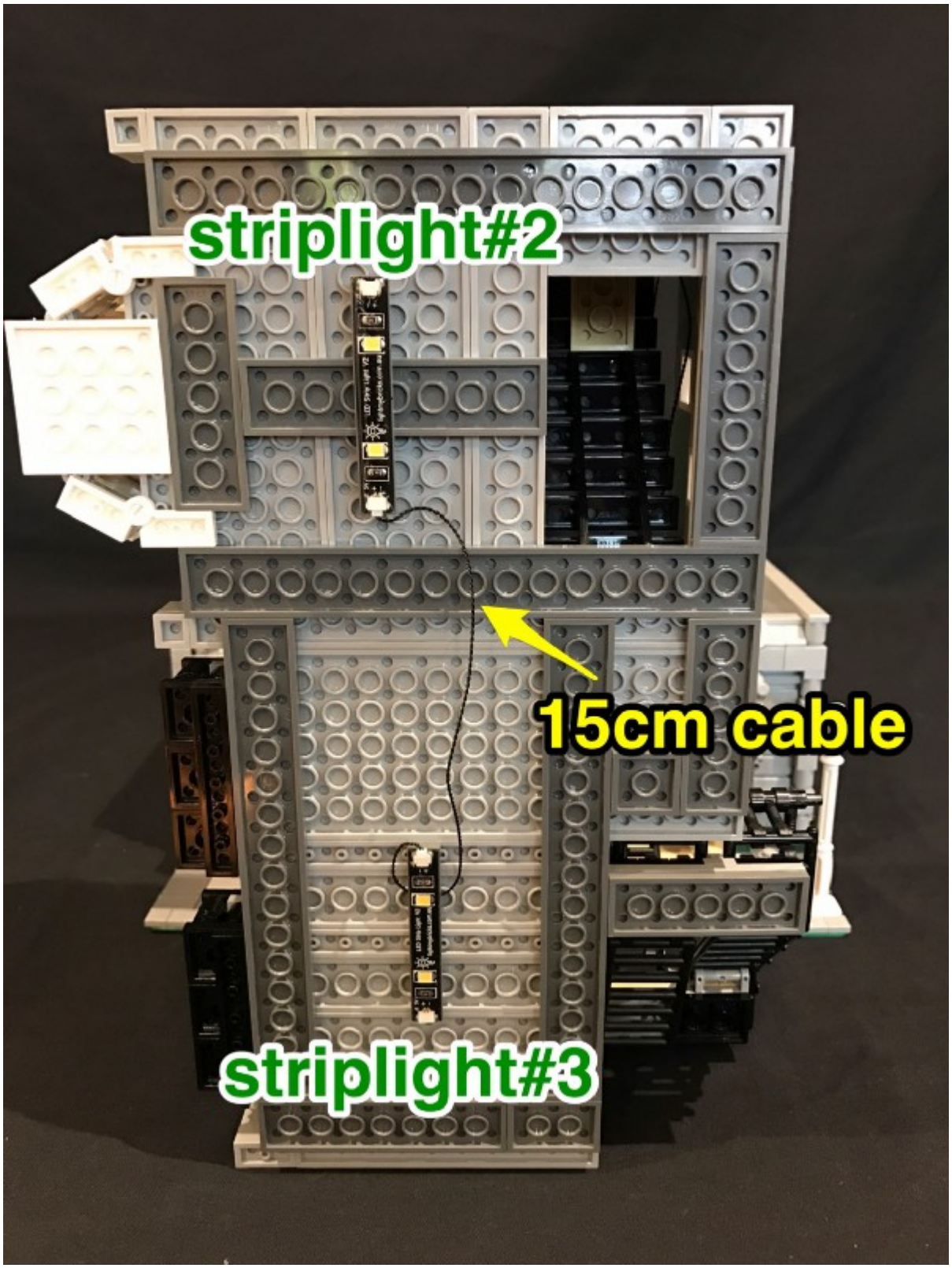


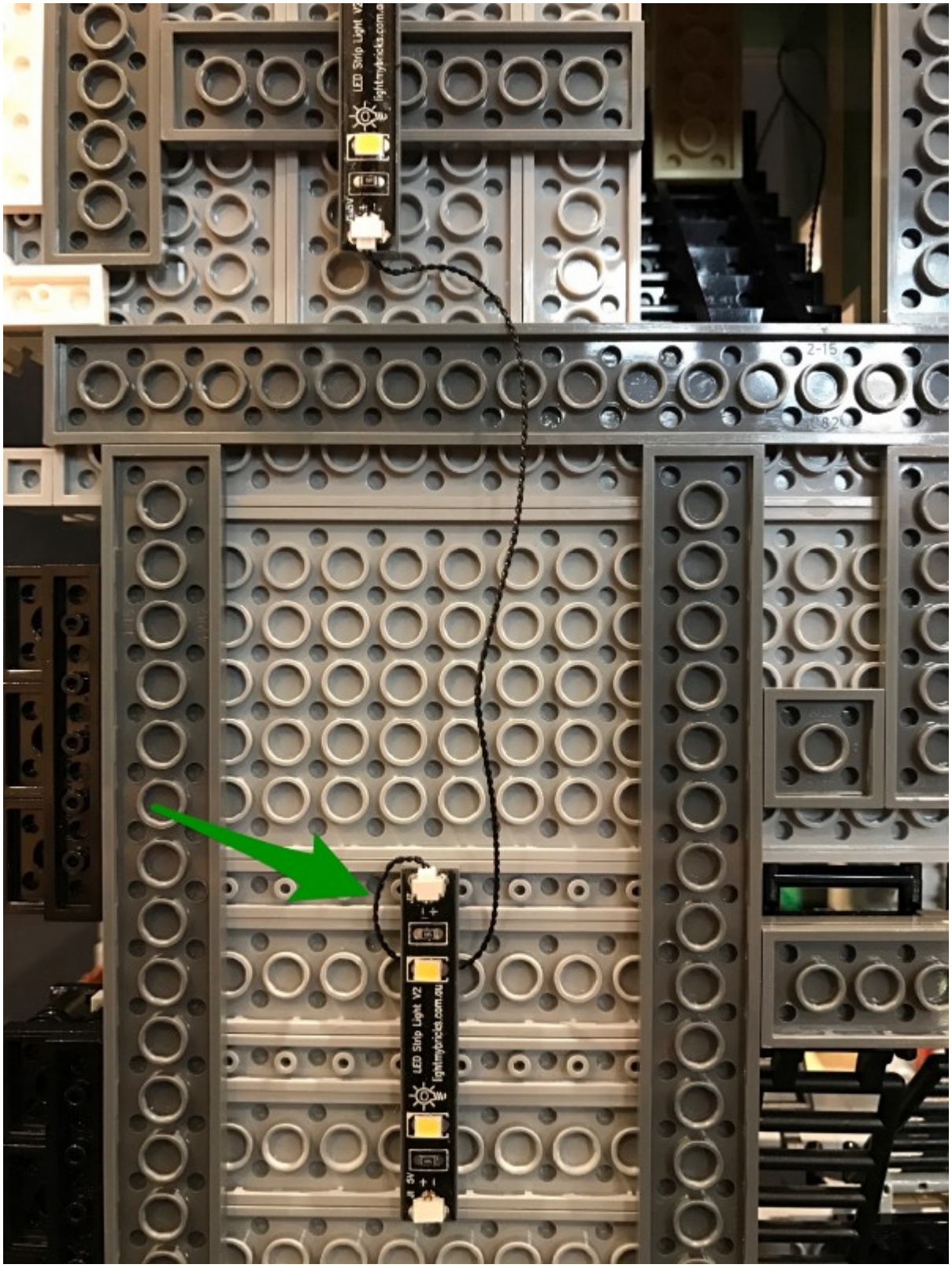
15.) Remove the battery pack/usb cable and expansion board and continue onto lighting the second floor. Take the second floor and turn it onto it's left side with the

bottom facing you.



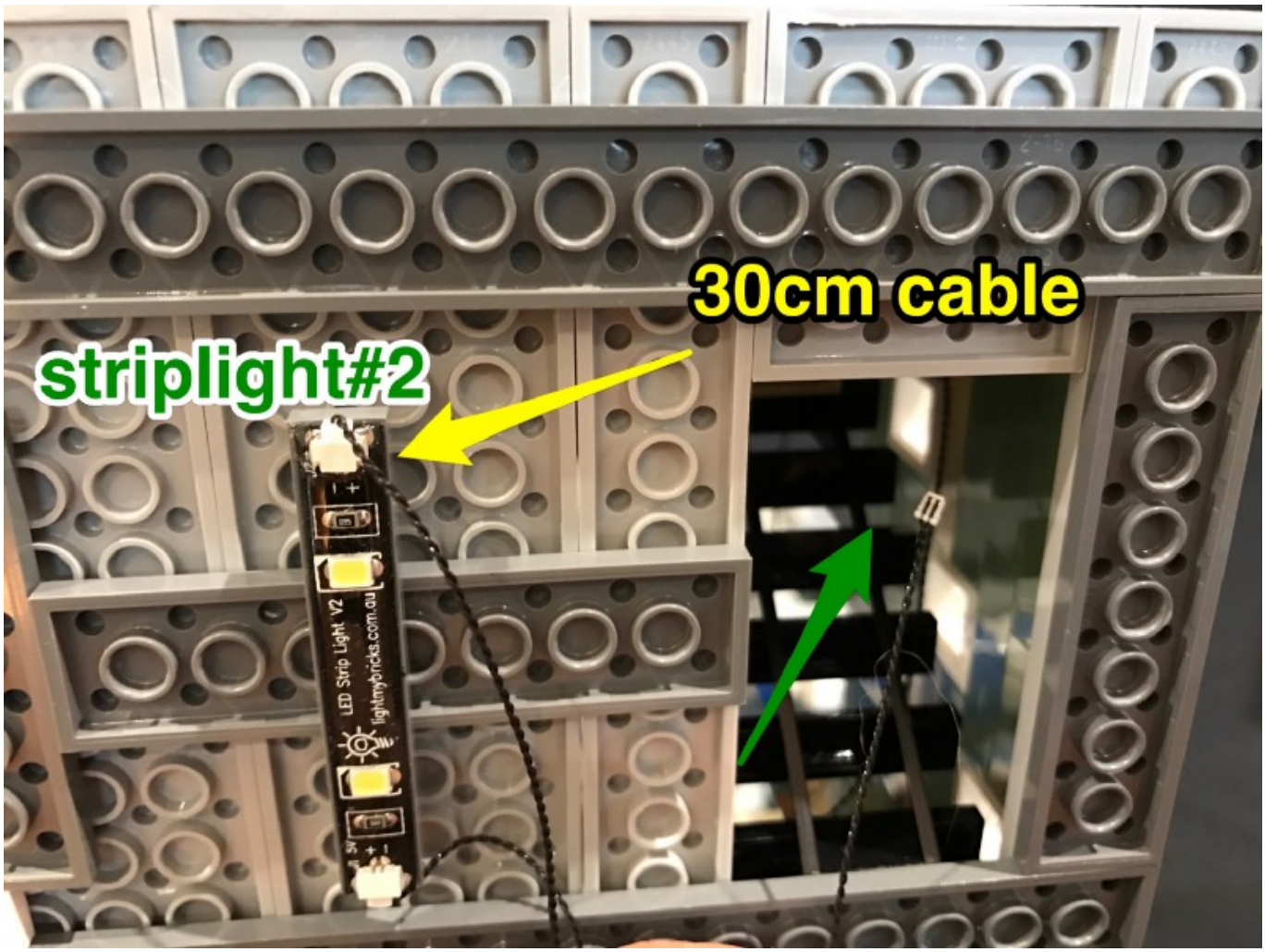
Take two **LED Strip Lights** and connect/stick them(depending on whether or not you choose to mount using lego 1×6 plates) to the following positions underneath the second floor (**striplight#2** and **striplight#3**). Join the to strip lights together with a **15 cm connecting cable**.



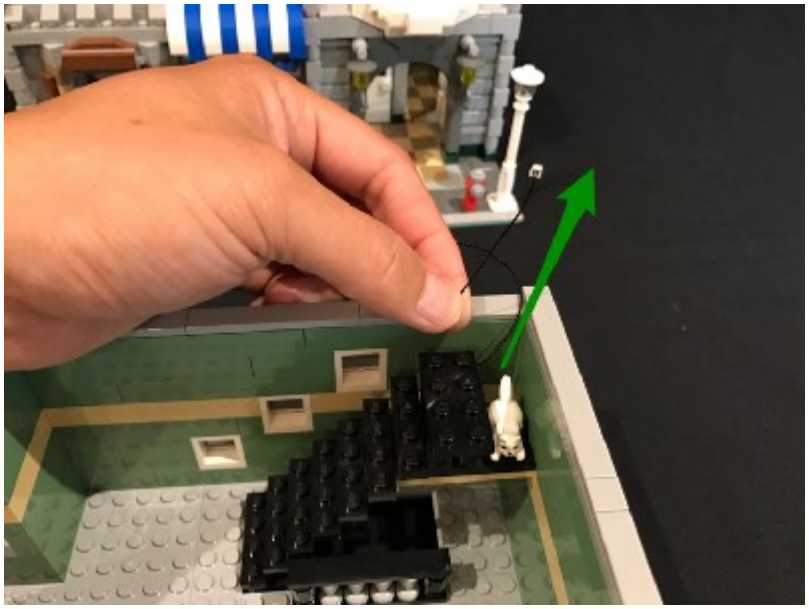


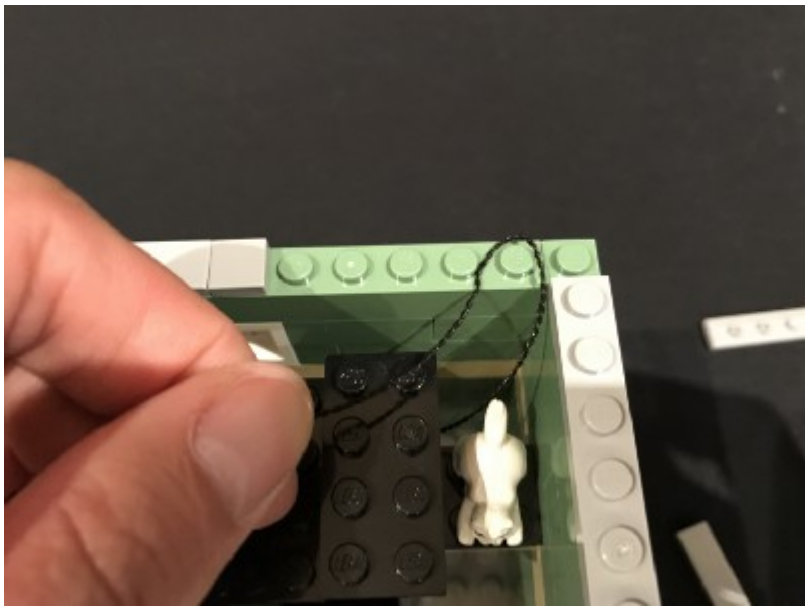

*If you are using LEGO plates to mount strip lights, you can prevent the cable from hanging down by looping them behind the strip light like what I have done here*

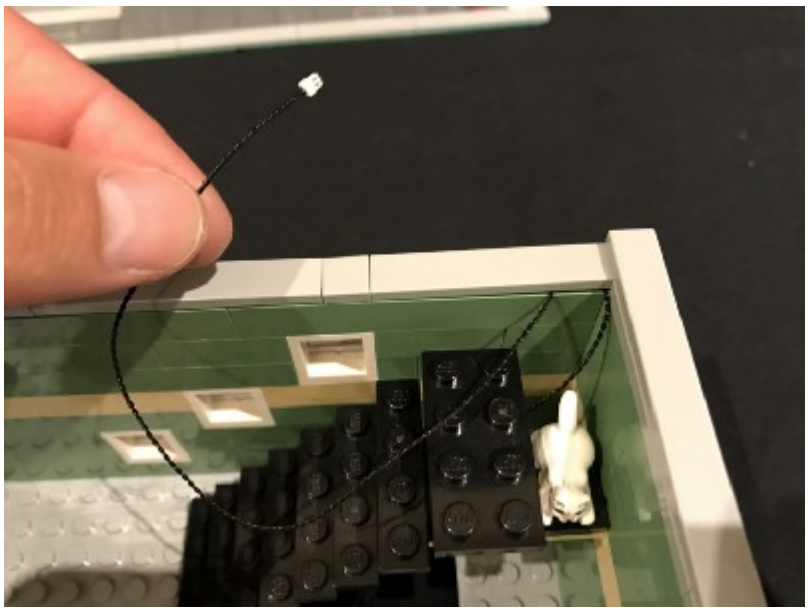
16.) Take a **30 cm connecting cable** and connect it to the other port on striplight#2 and then thread the other end of it up the space that leads above.



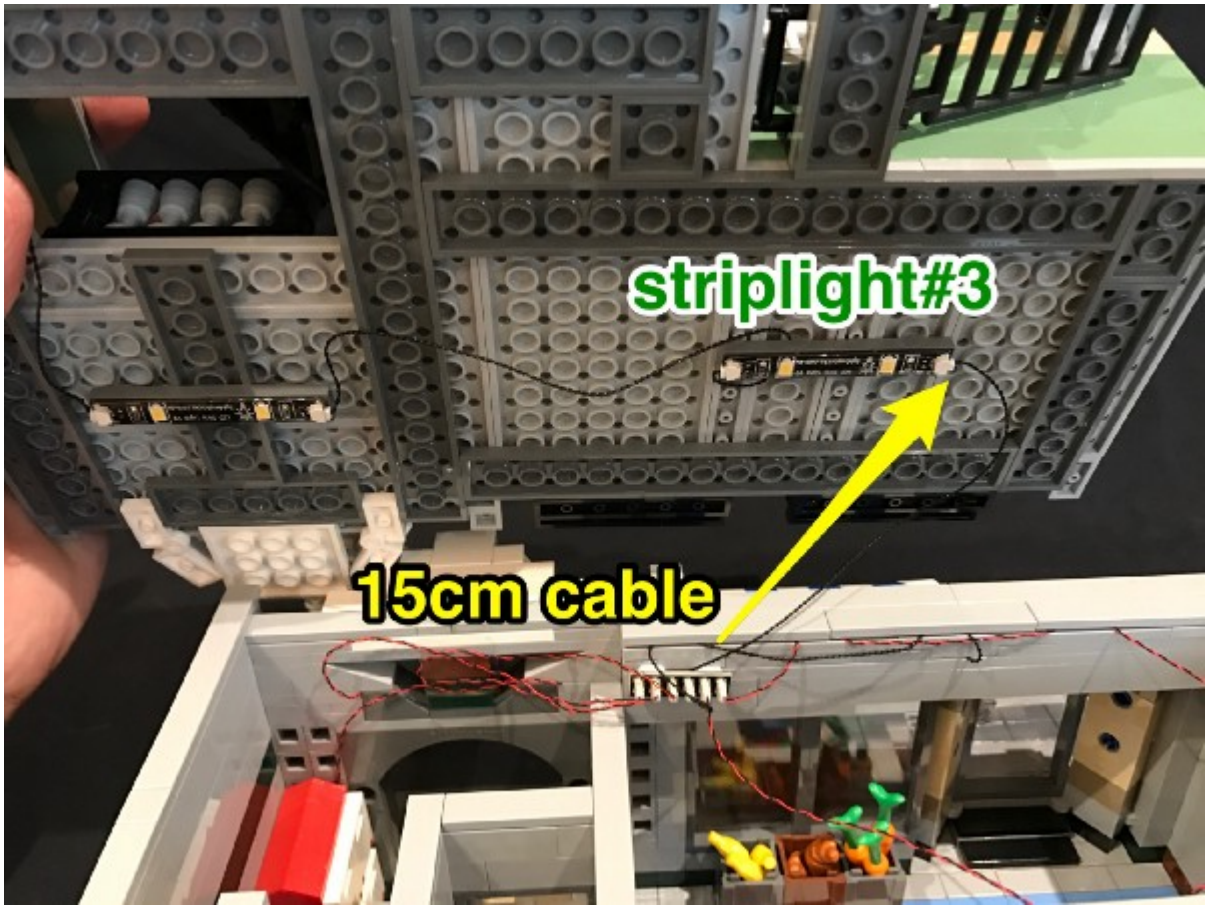

Turn the second floor over and then pull the cable up from underneath and behind the staircase. Secure the cable in place by laying it underneath the grey tile in between studs.







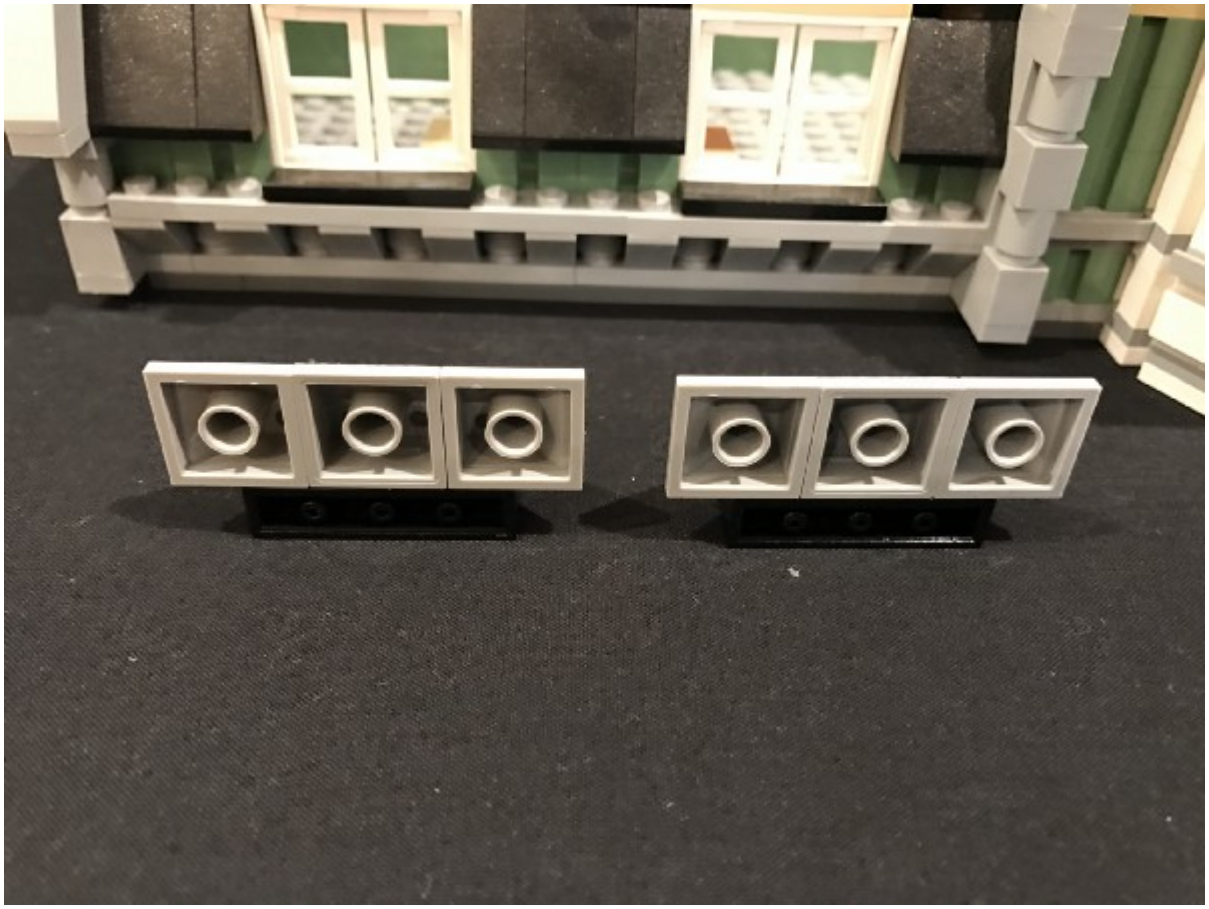
17.) Turn the building around and then take the second floor above the ground floor. Connect the spare 15 cm connecting cable from striplight#1 below into the spare port on striplight#3. Reconnect the second floor in place.

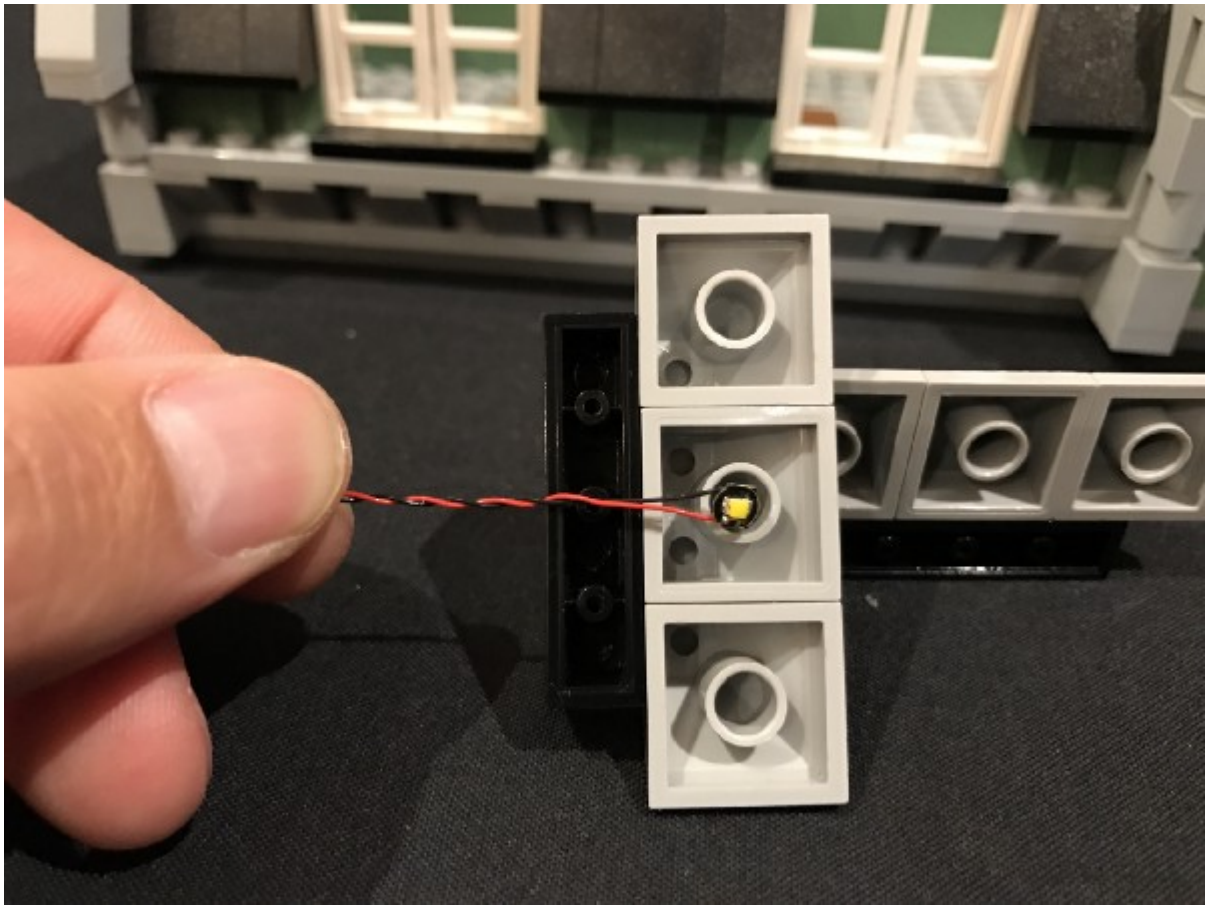


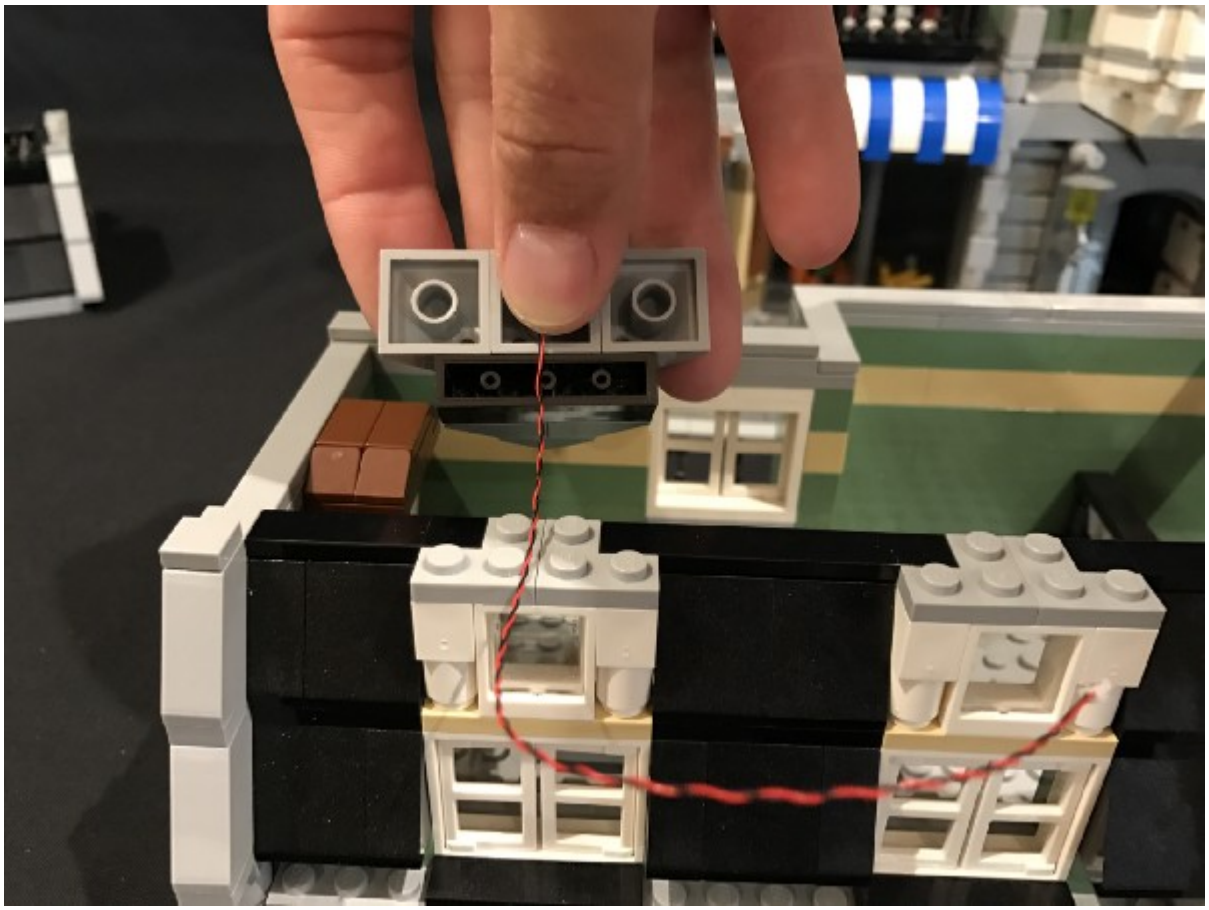
18.) Take the top floor and remove the roof. We will install lights on top of each window. Start by removing the sections above each window as per below.

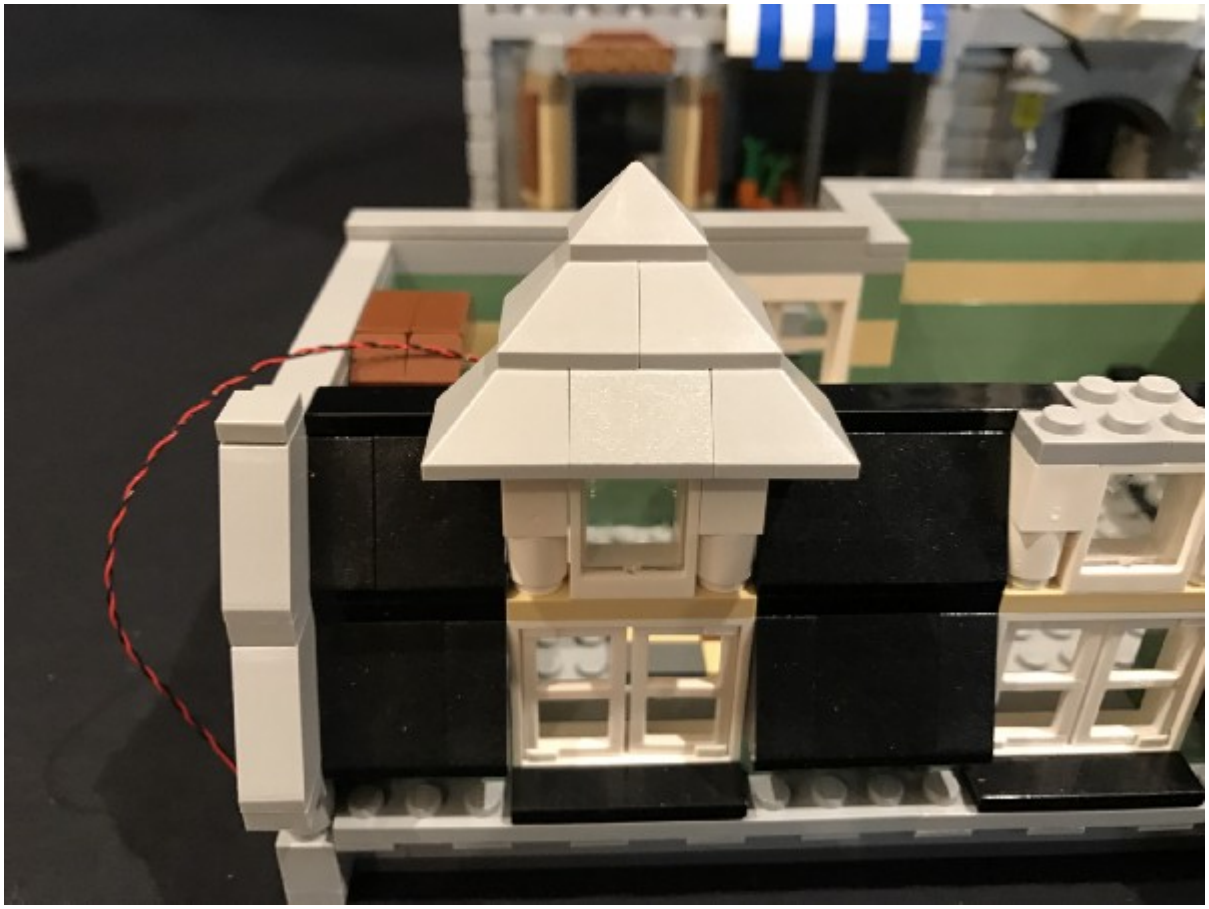
19.) Take a **White 15cm Bit Light** and place the LED Component at the middle hole underneath one of the sections. With the cable is facing toward the back of this

section, place a finger/thumb over the top of the LED to hold it in place and then turn this section over and reconnect it to the building. Ensure the cable is laid in between studs.

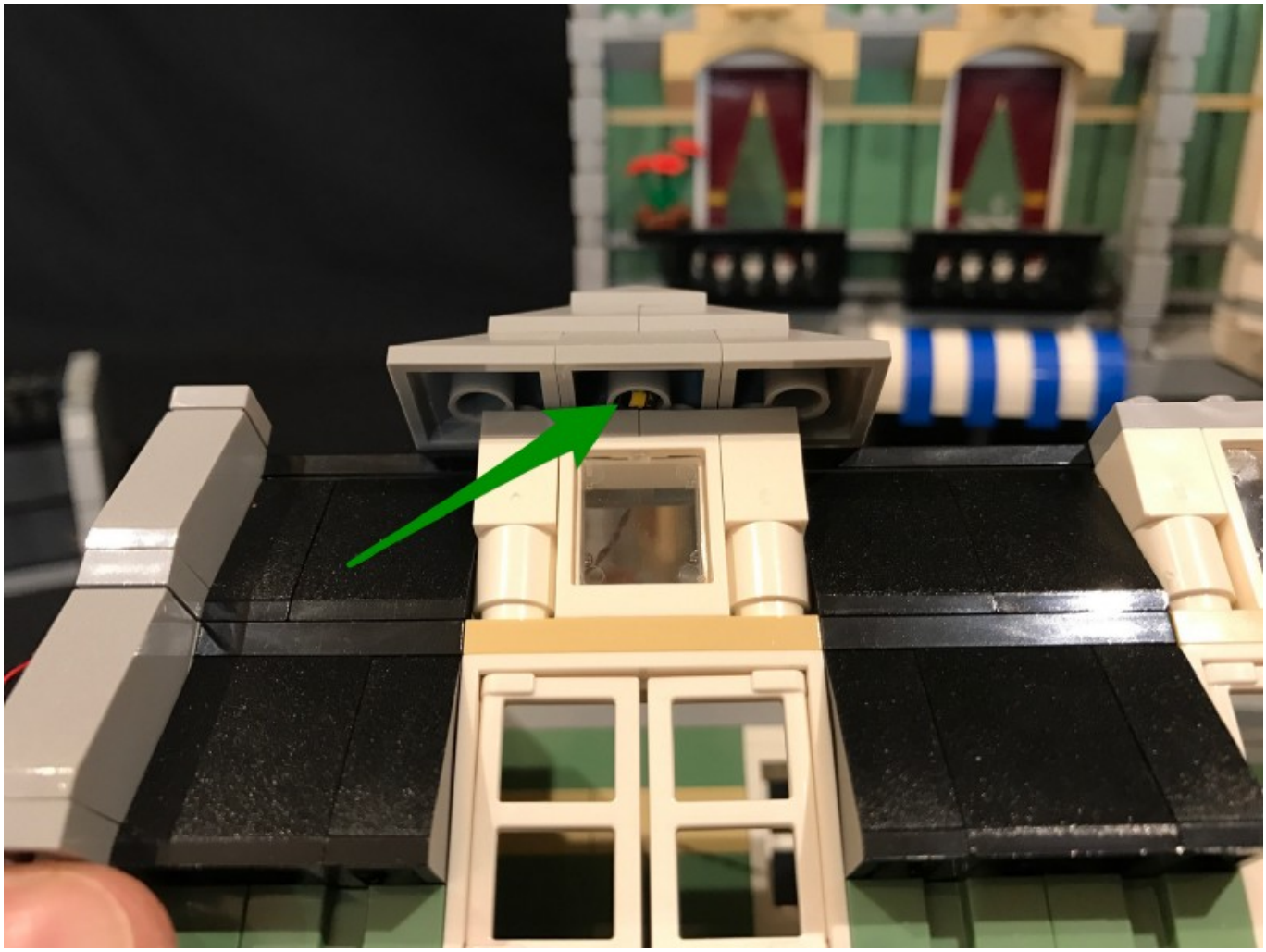




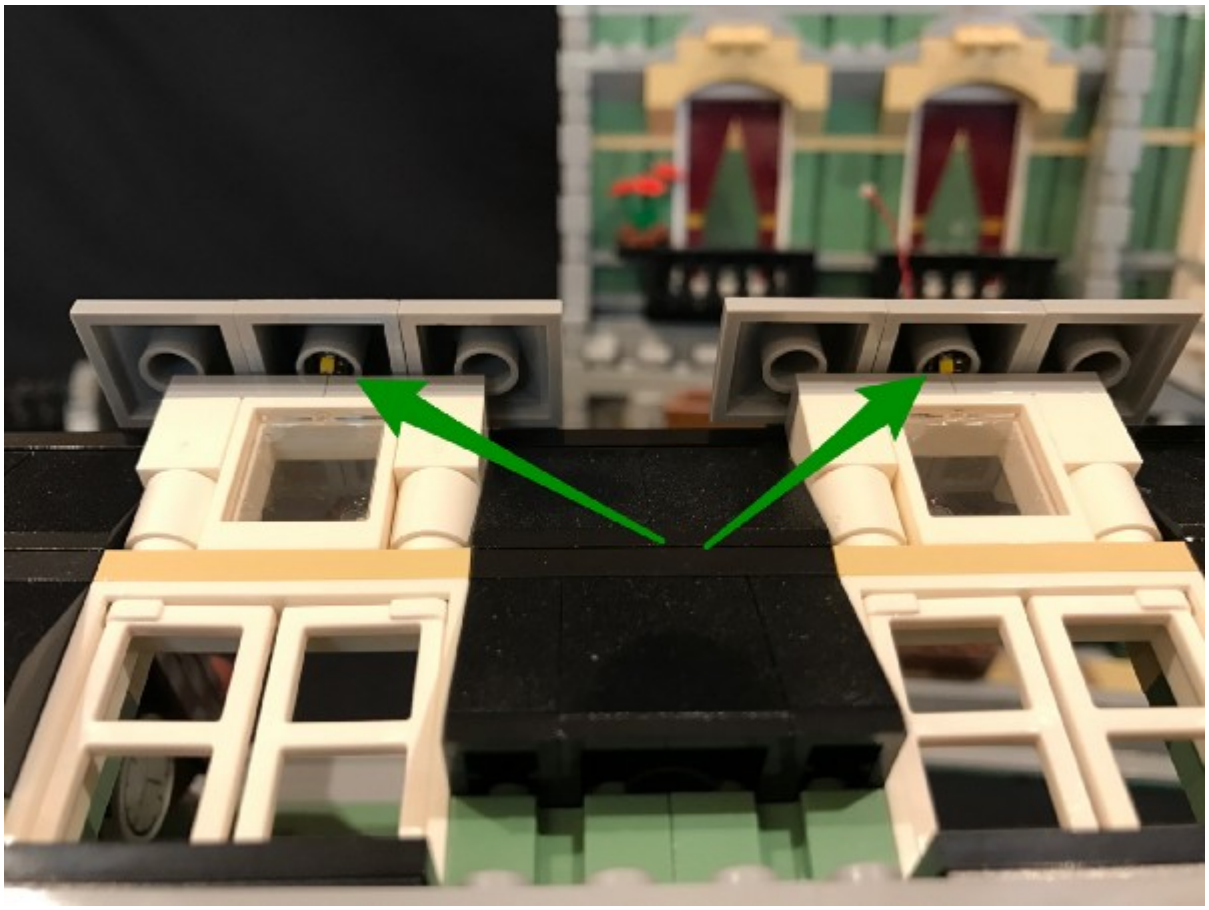




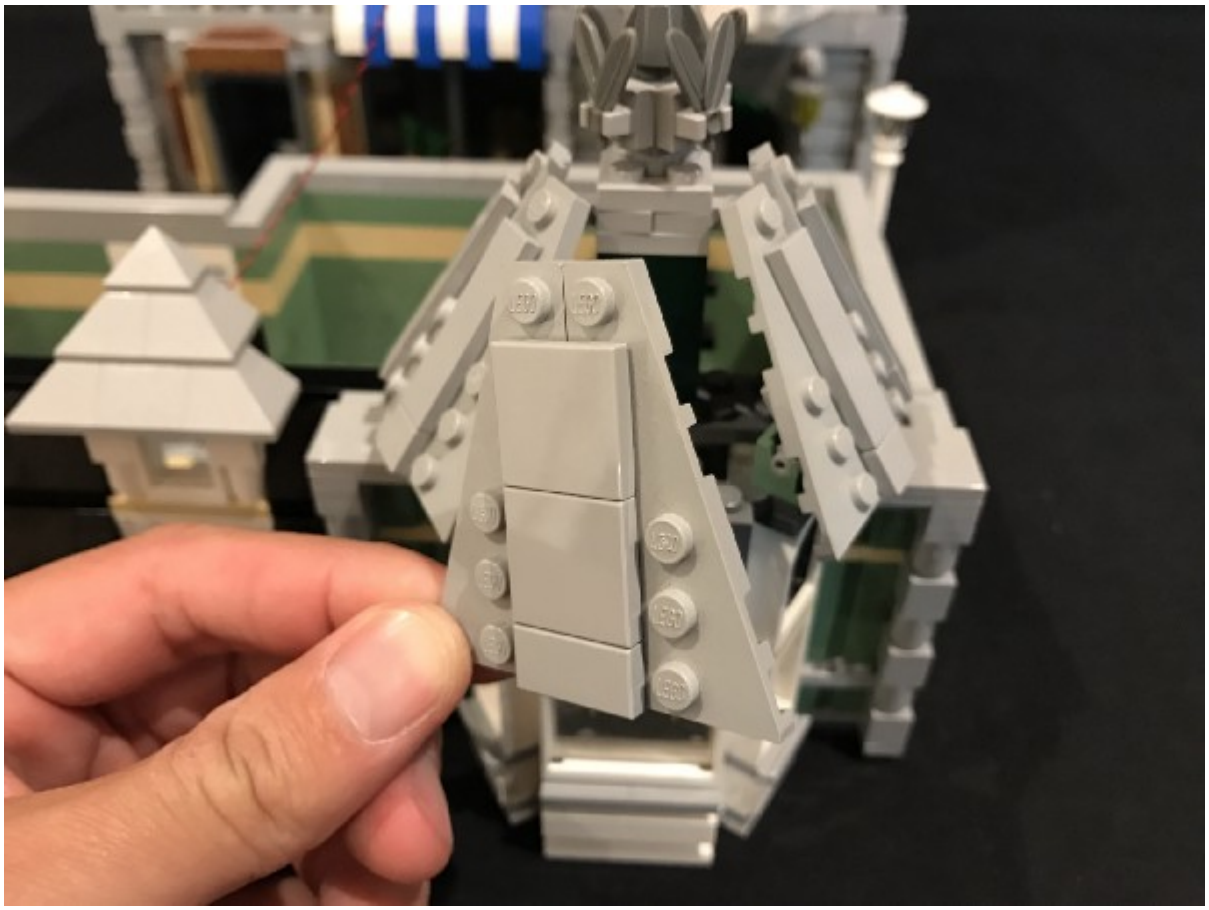
If you look from below up, you should be able to see the LED component peaking out. If you don’t, this means the Bit Light has not been installed properly.

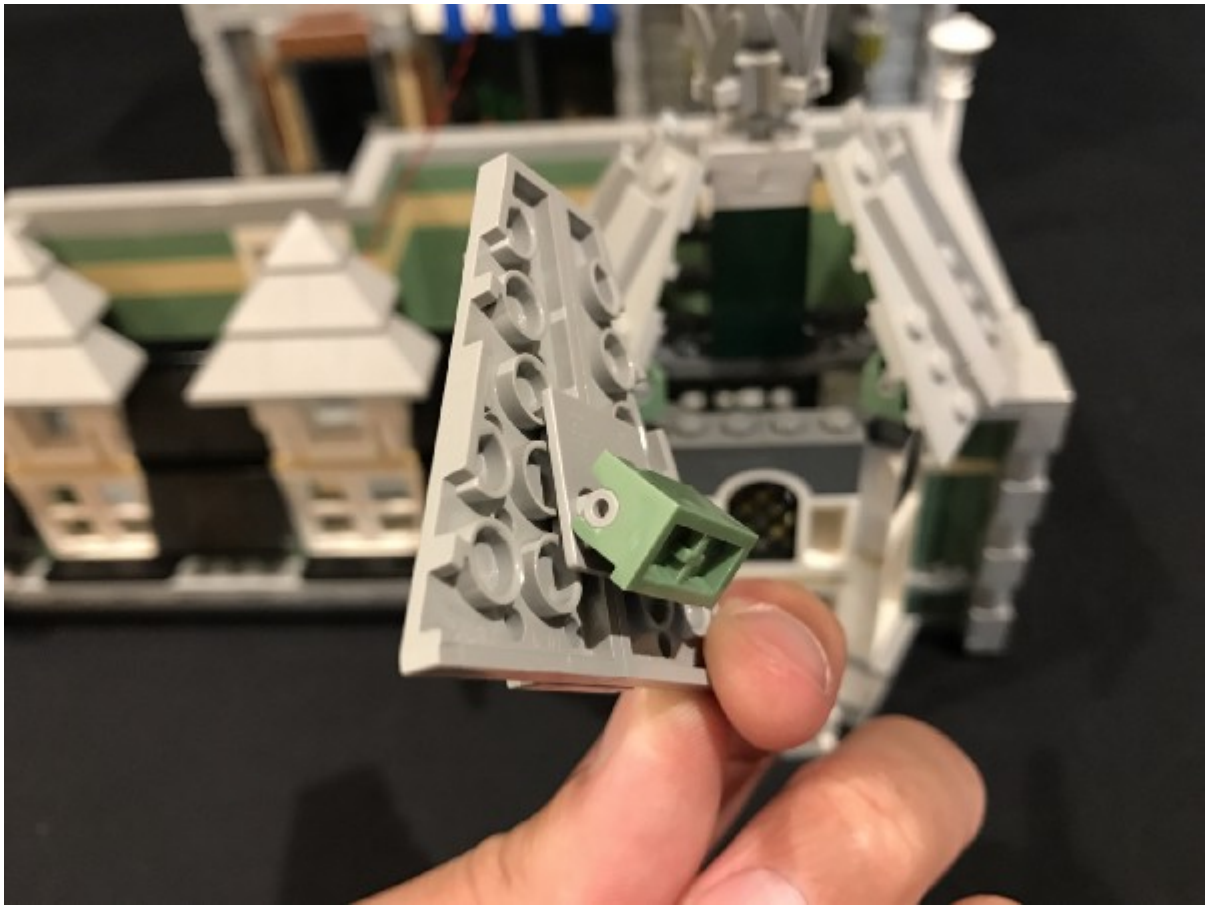


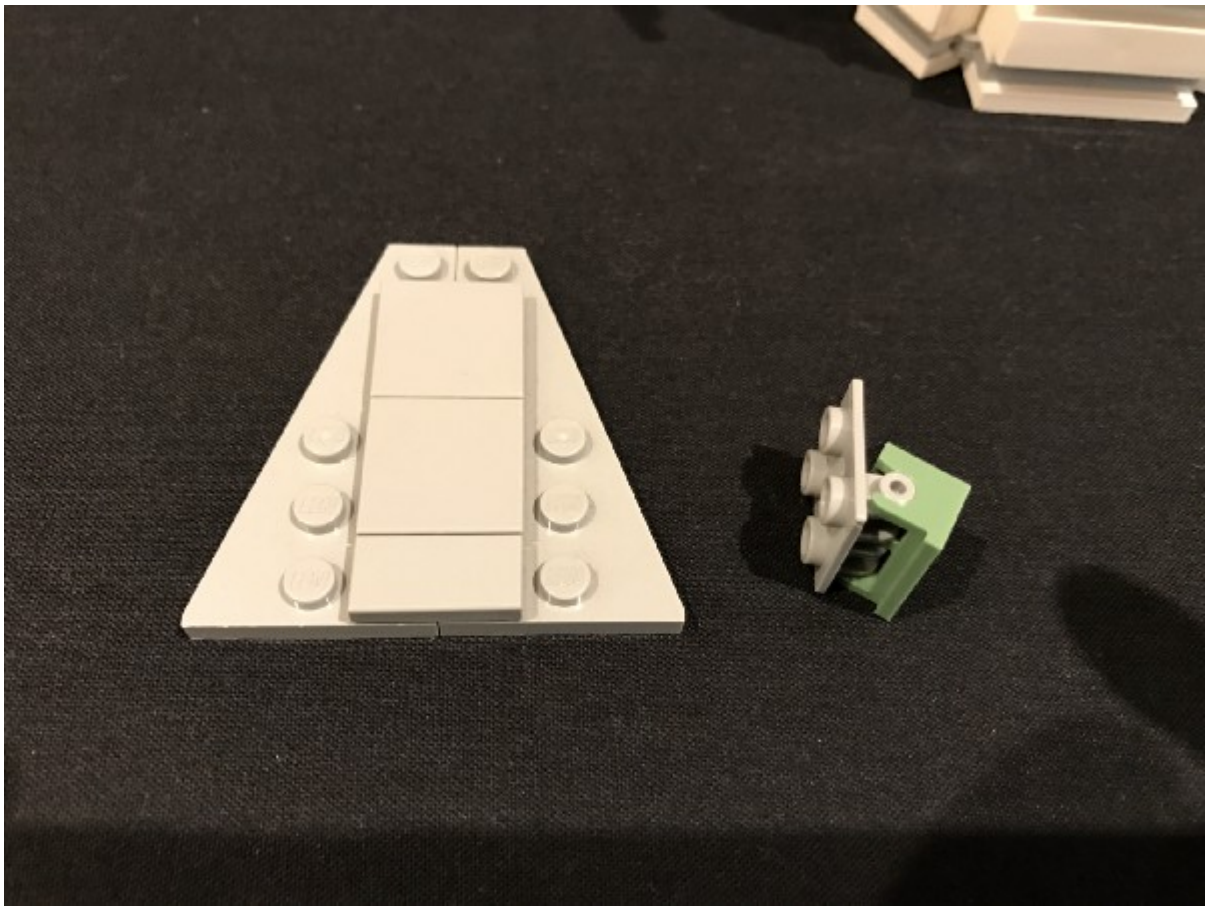
Repeat this process to install another **White 15 cm Bit Light** above the next window.



20.) We will now install a light above the right window. First remove the roof piece in the middle and disassemble as per below

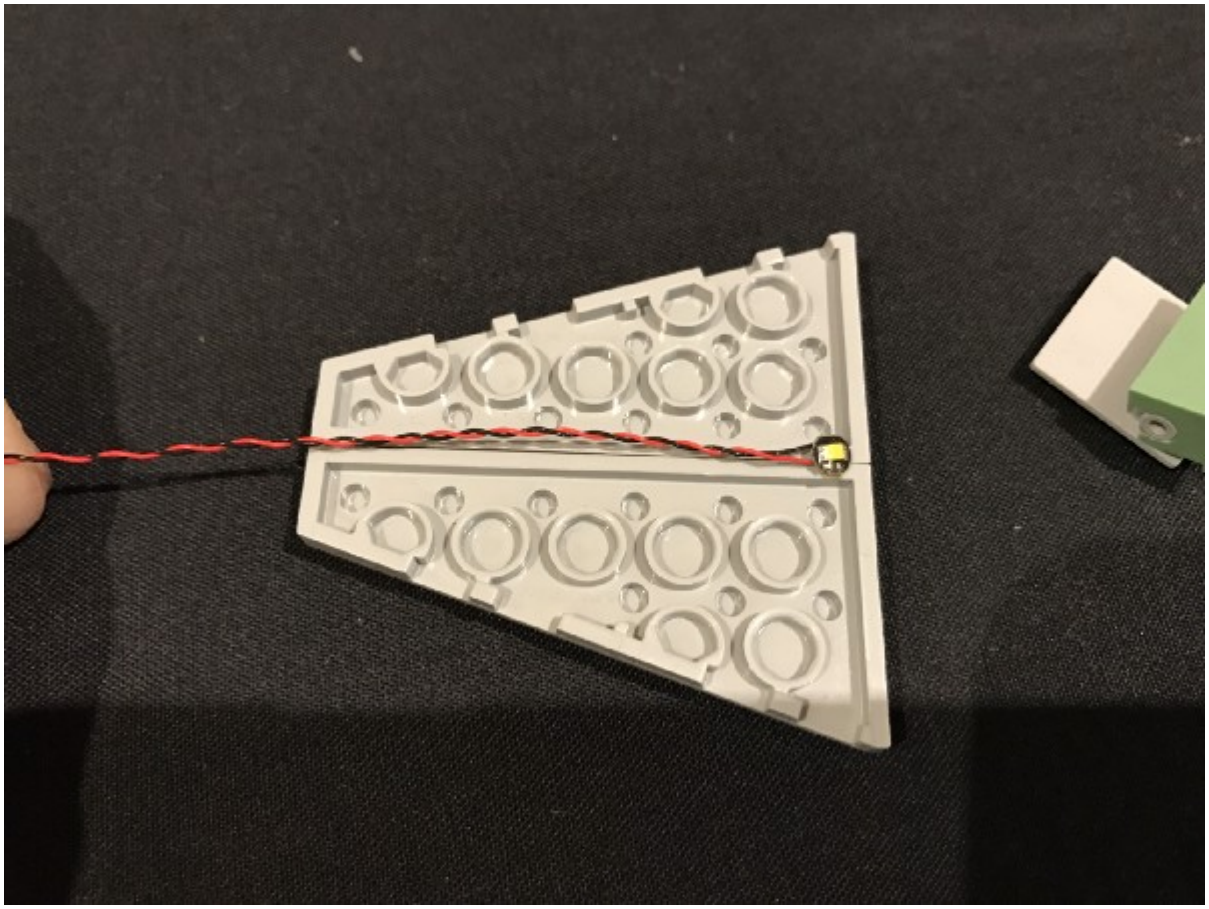


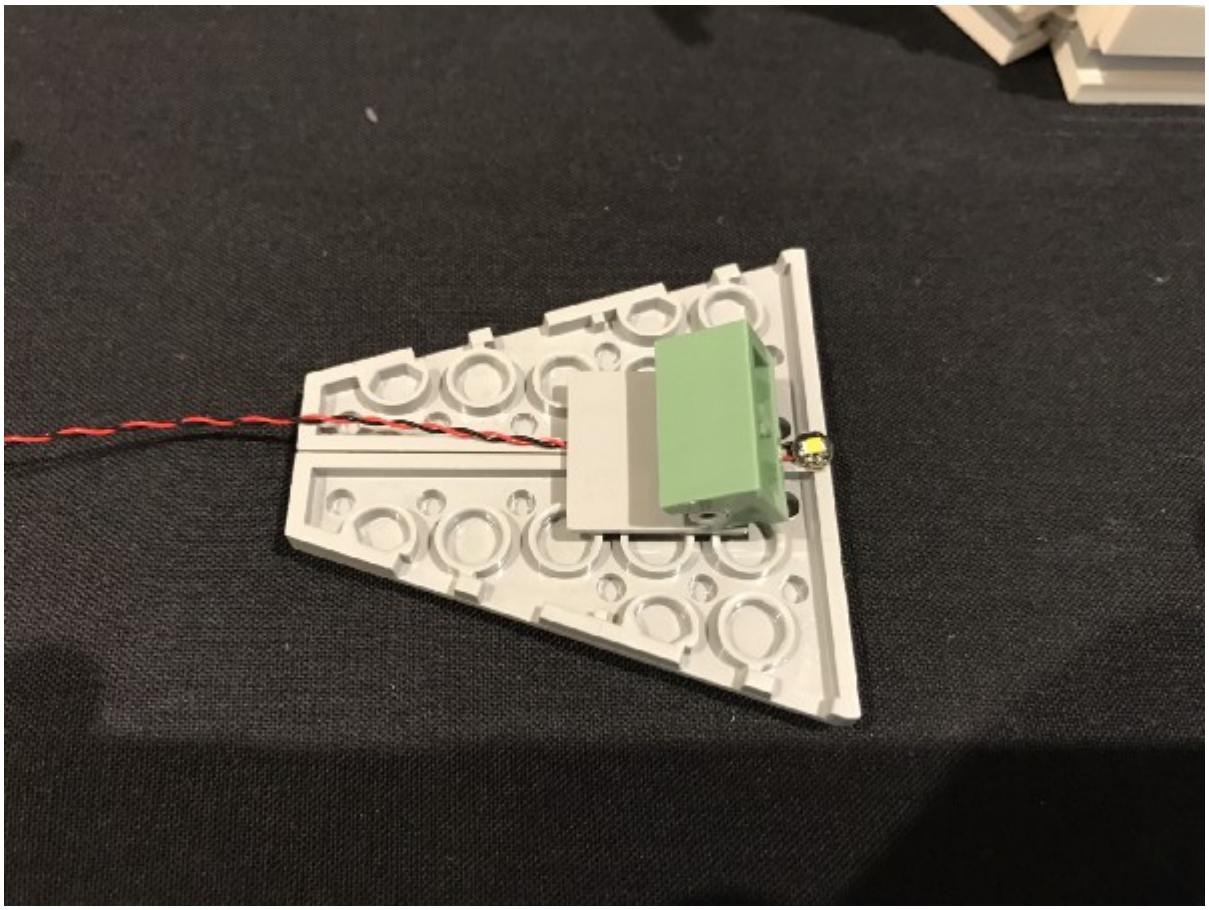




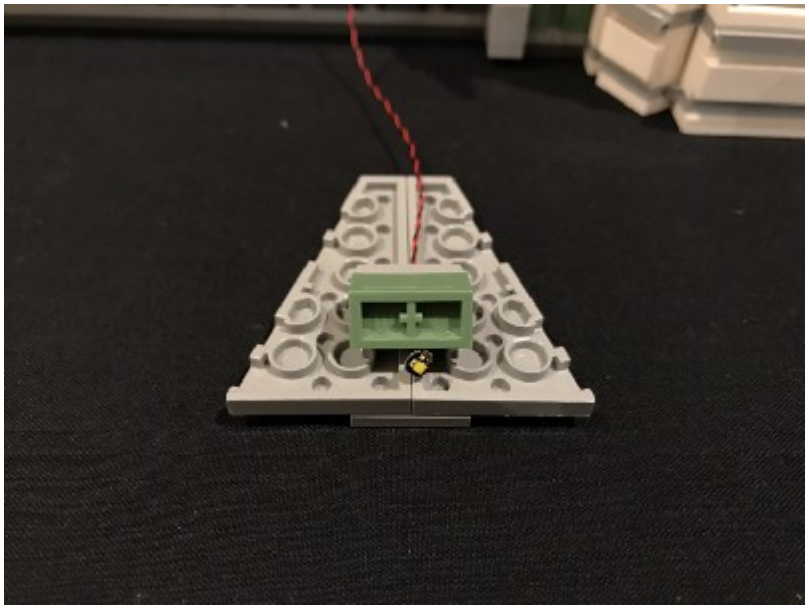
21.) Take another **White 15 cm Bit Light** and place the LED component underneath the plate towards the bottom. Secure it in place by reconnecting the LEGO piece we

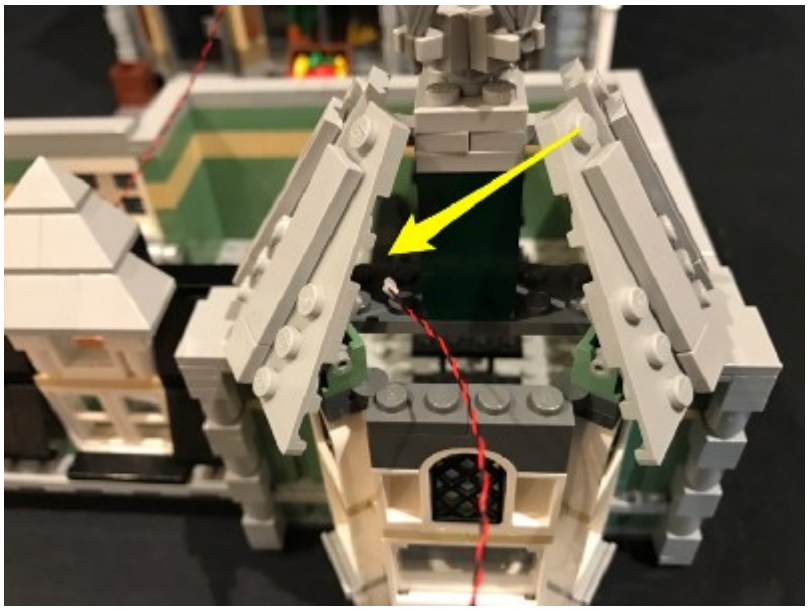
removed earlier ensuring the cable is in between studs.

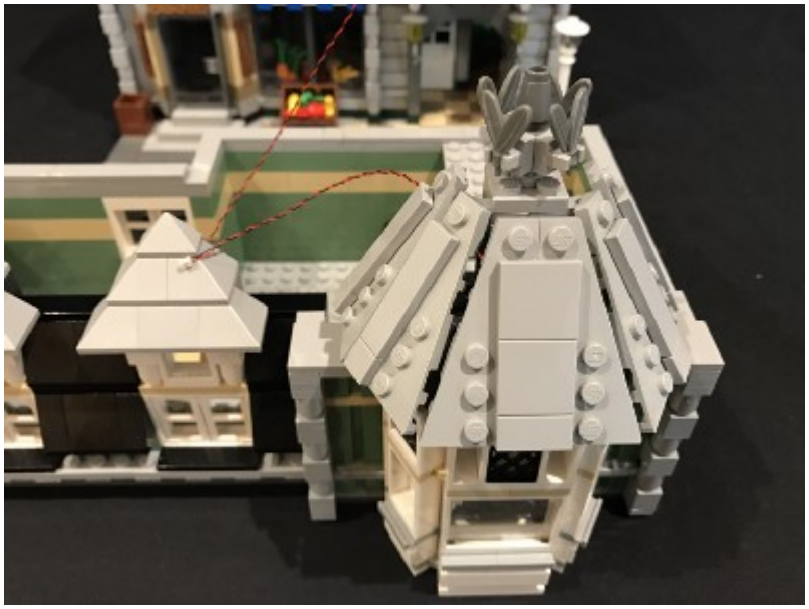




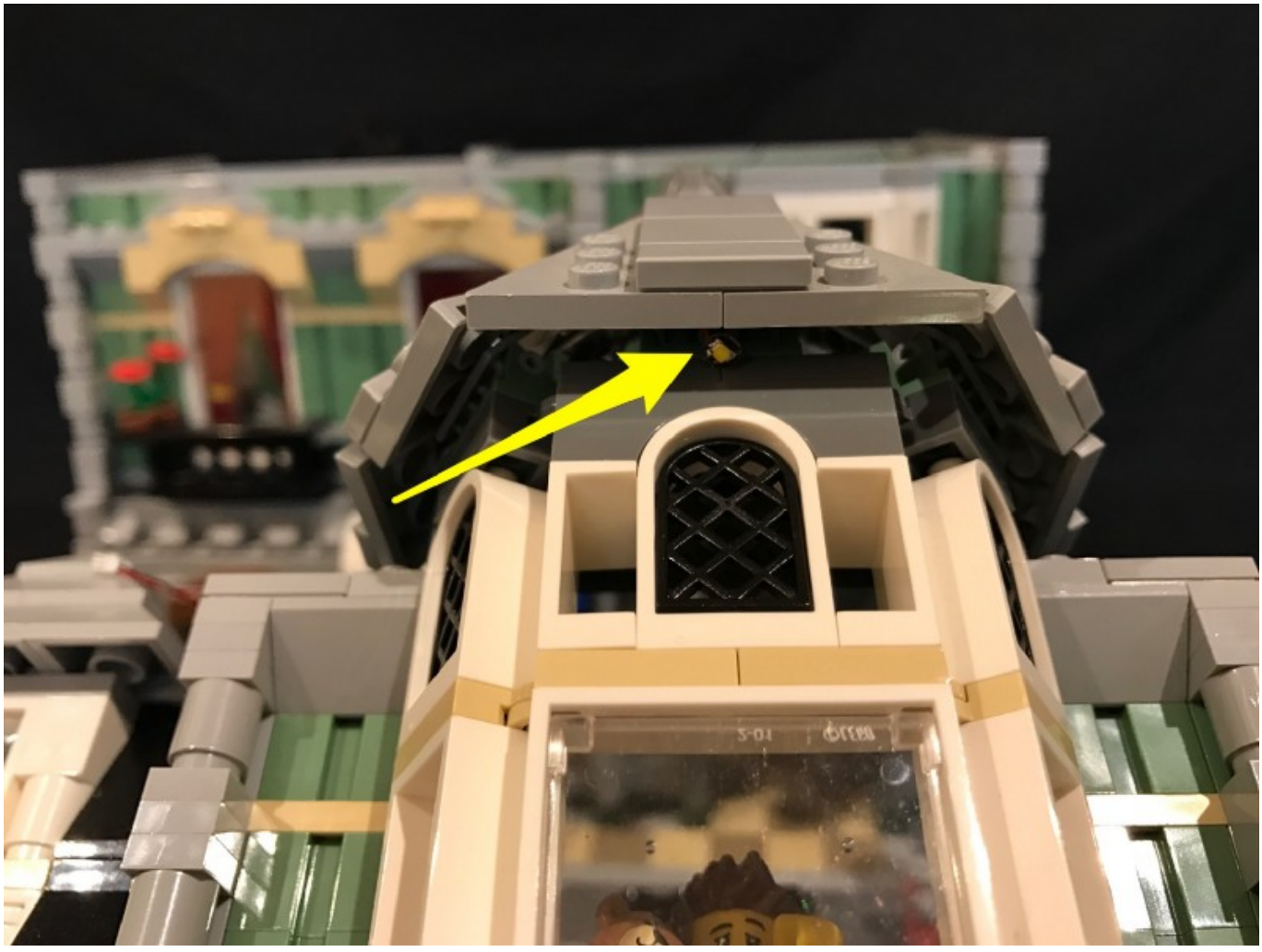
Twist/bend the LED component so that it is facing down and then reconnect this section back to the building ensuring the cable is first threaded below into the space which leads inside.



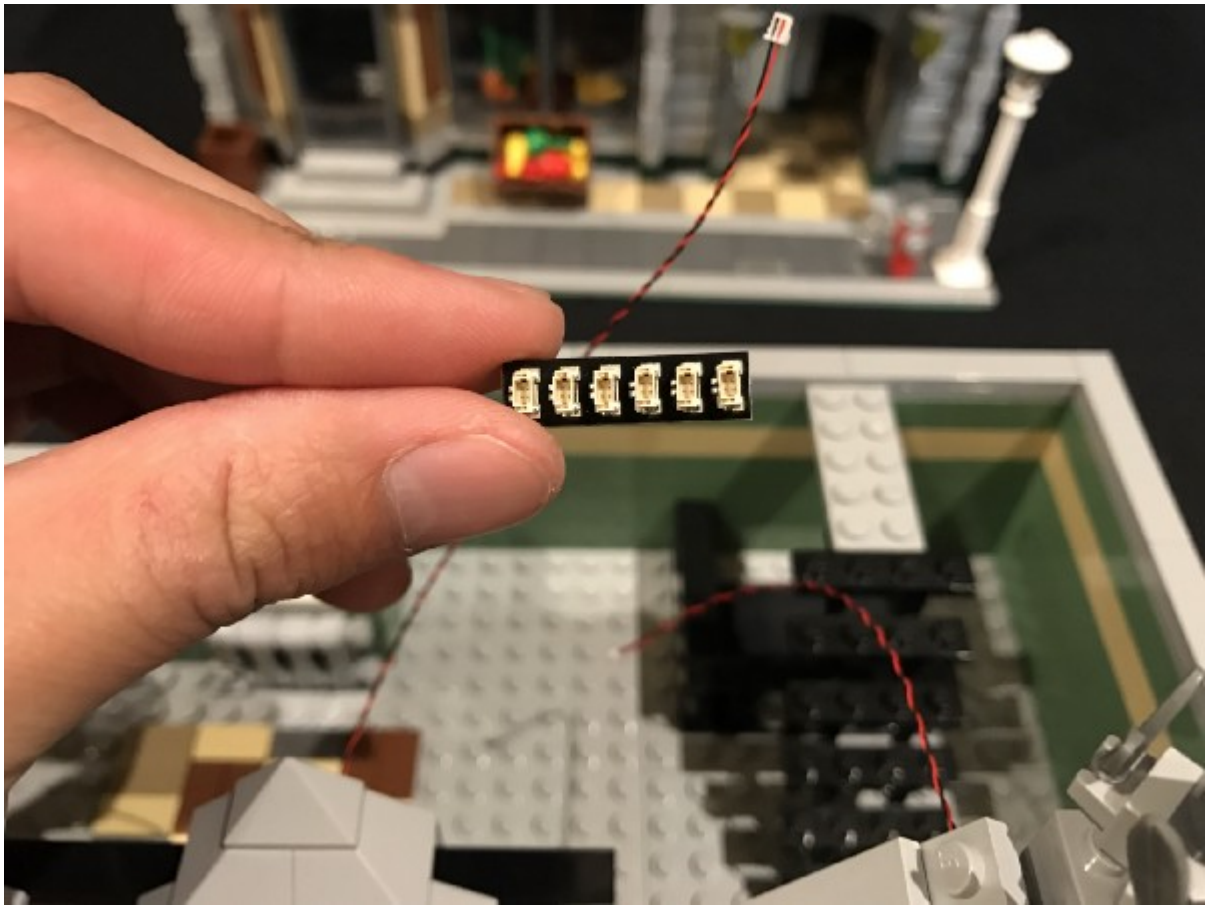


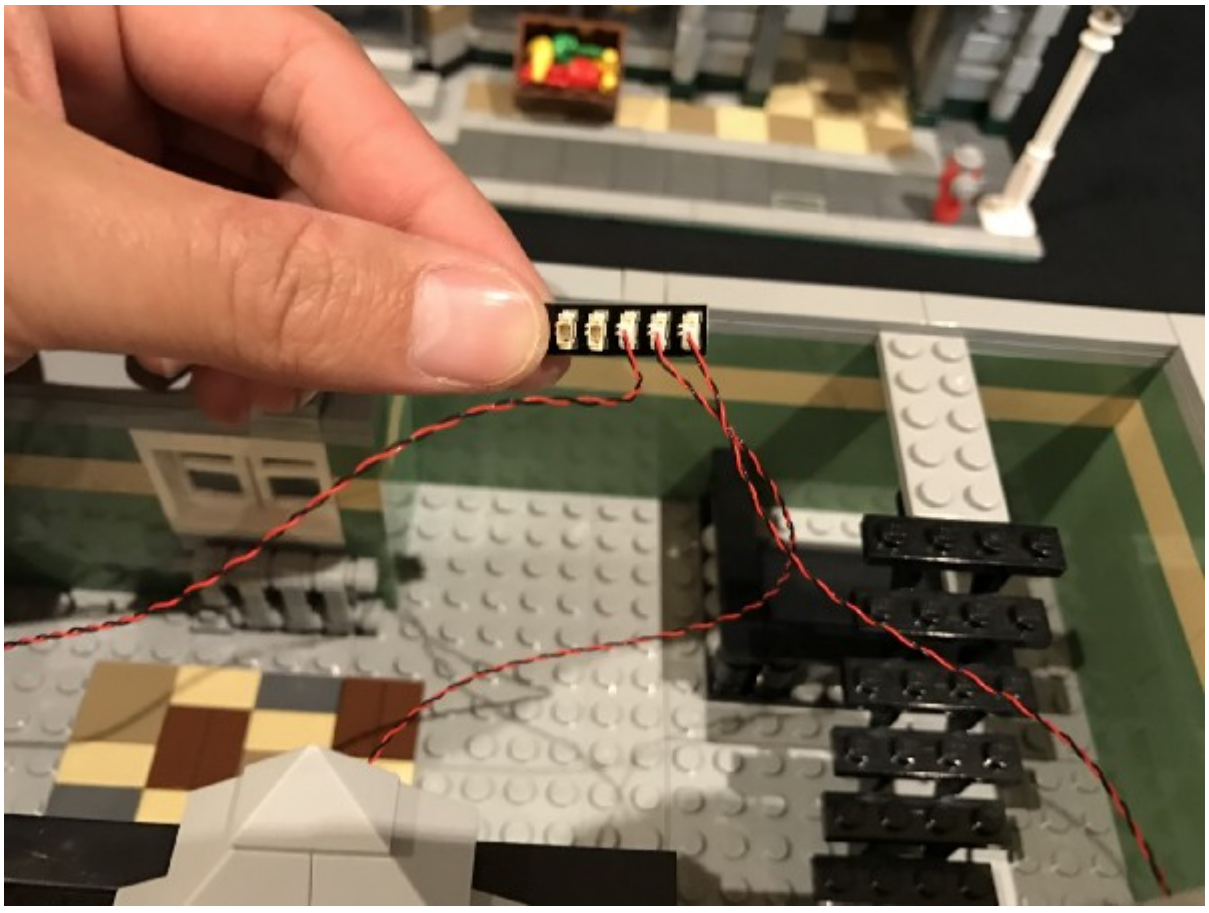


The Bit Light should be visible if you look from below up.

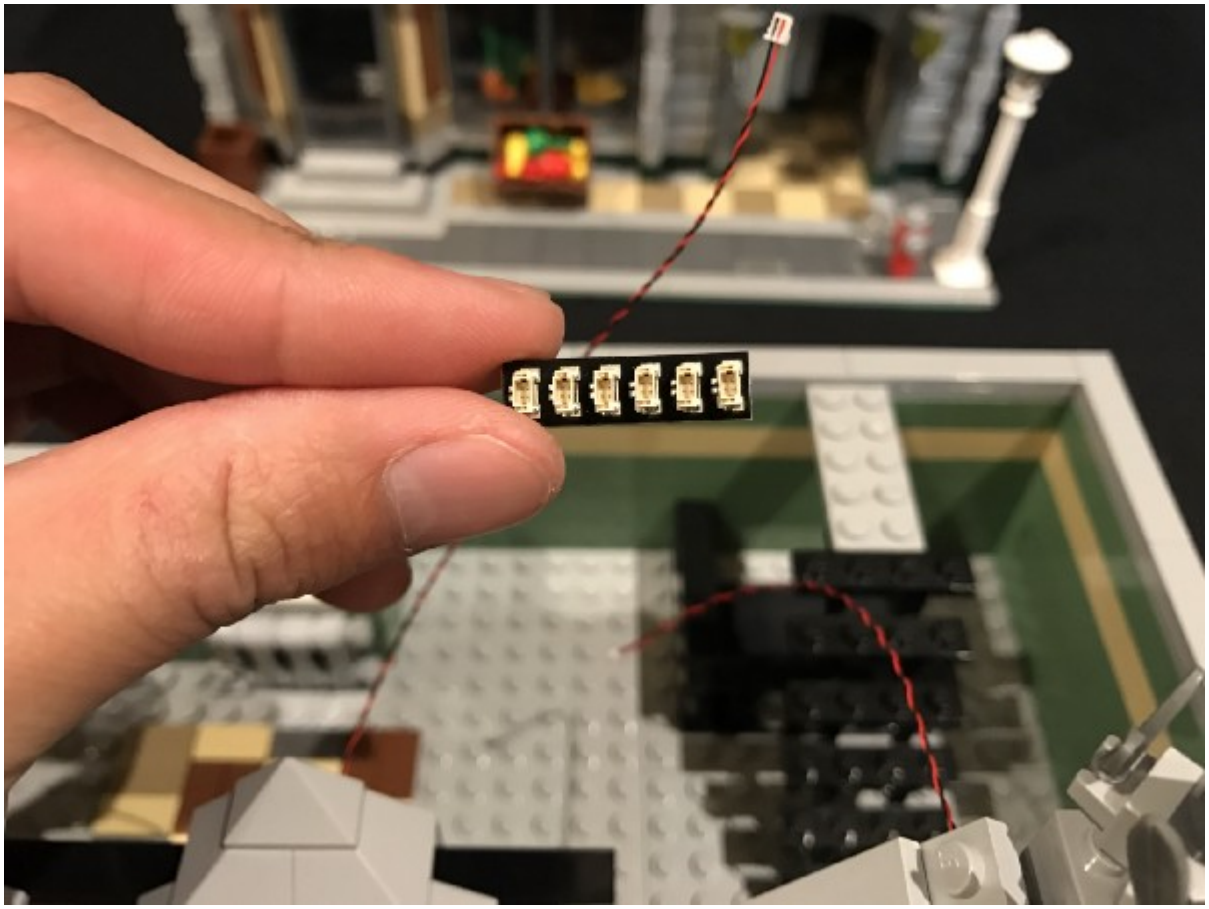


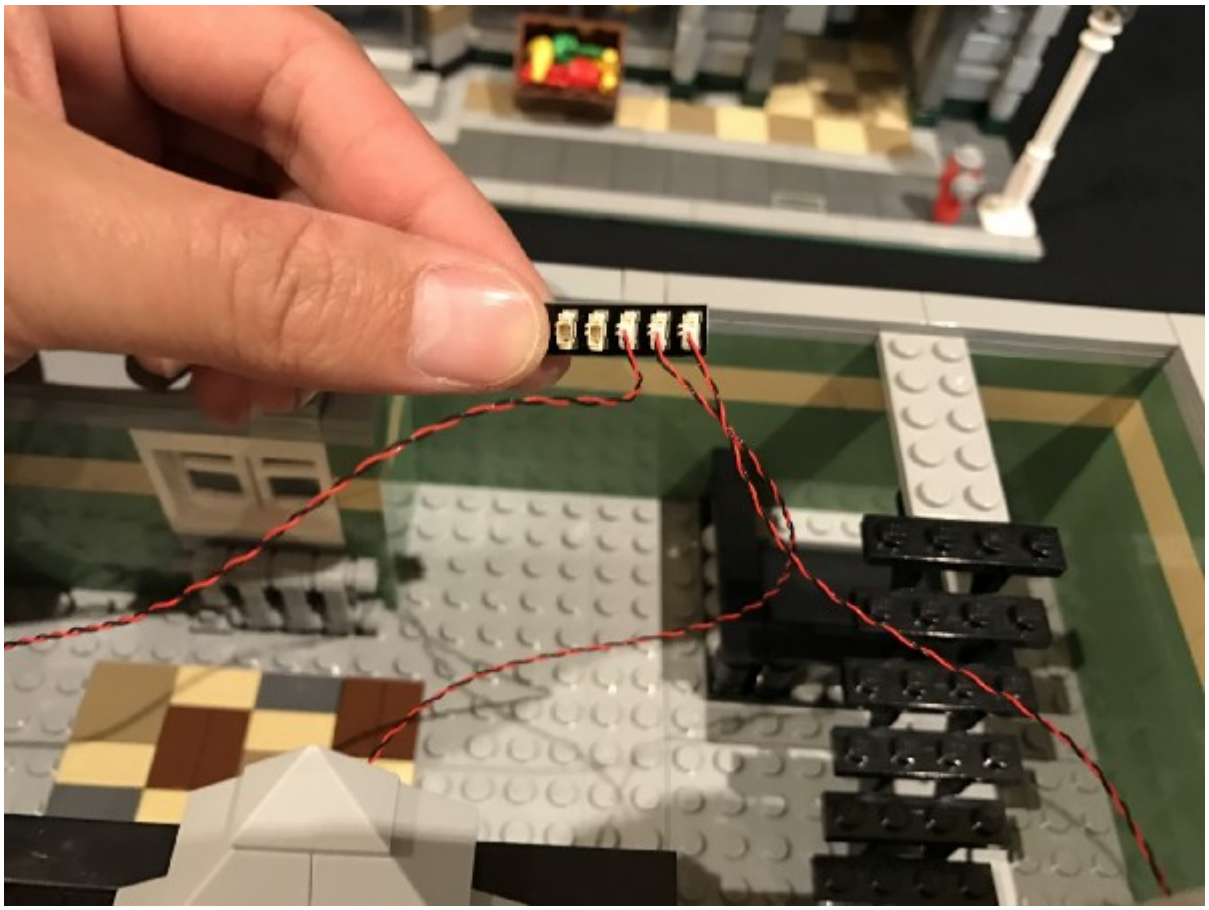
22.) Take the spare **6-Port Expansion Board** and connect all 3 cables from the lights we just installed into the available ports.

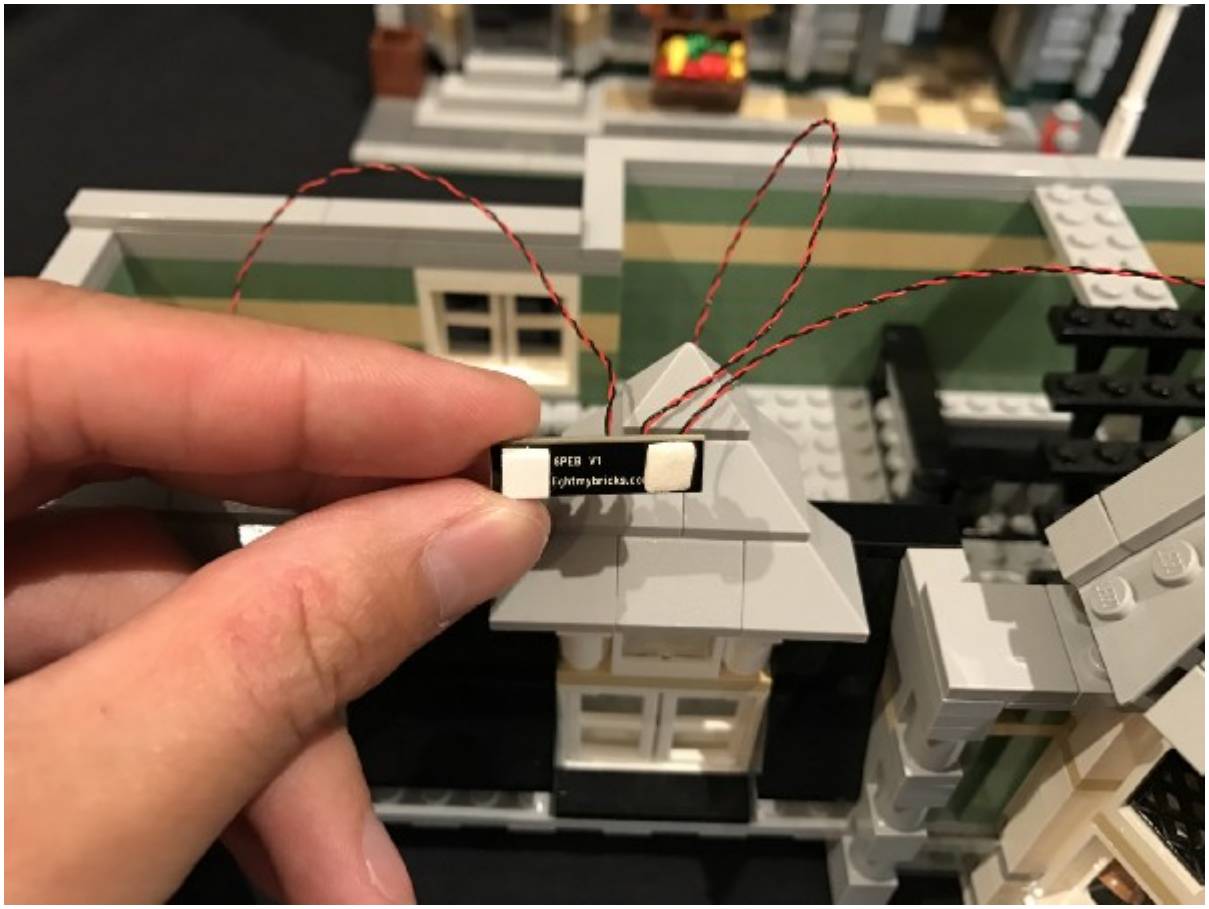


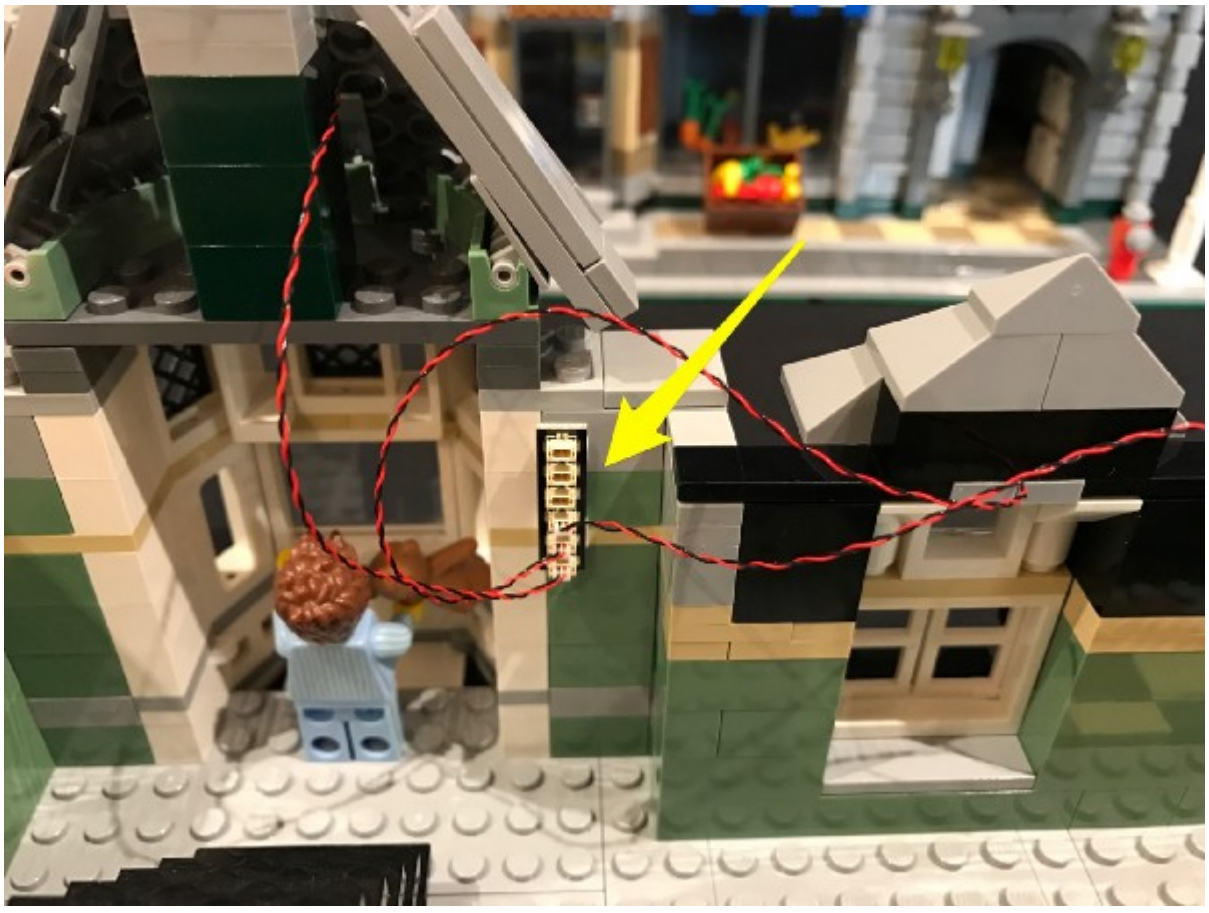


Use another **2x adhesive squares** to mount the expansion board vertically to the top of the wall inside the building.



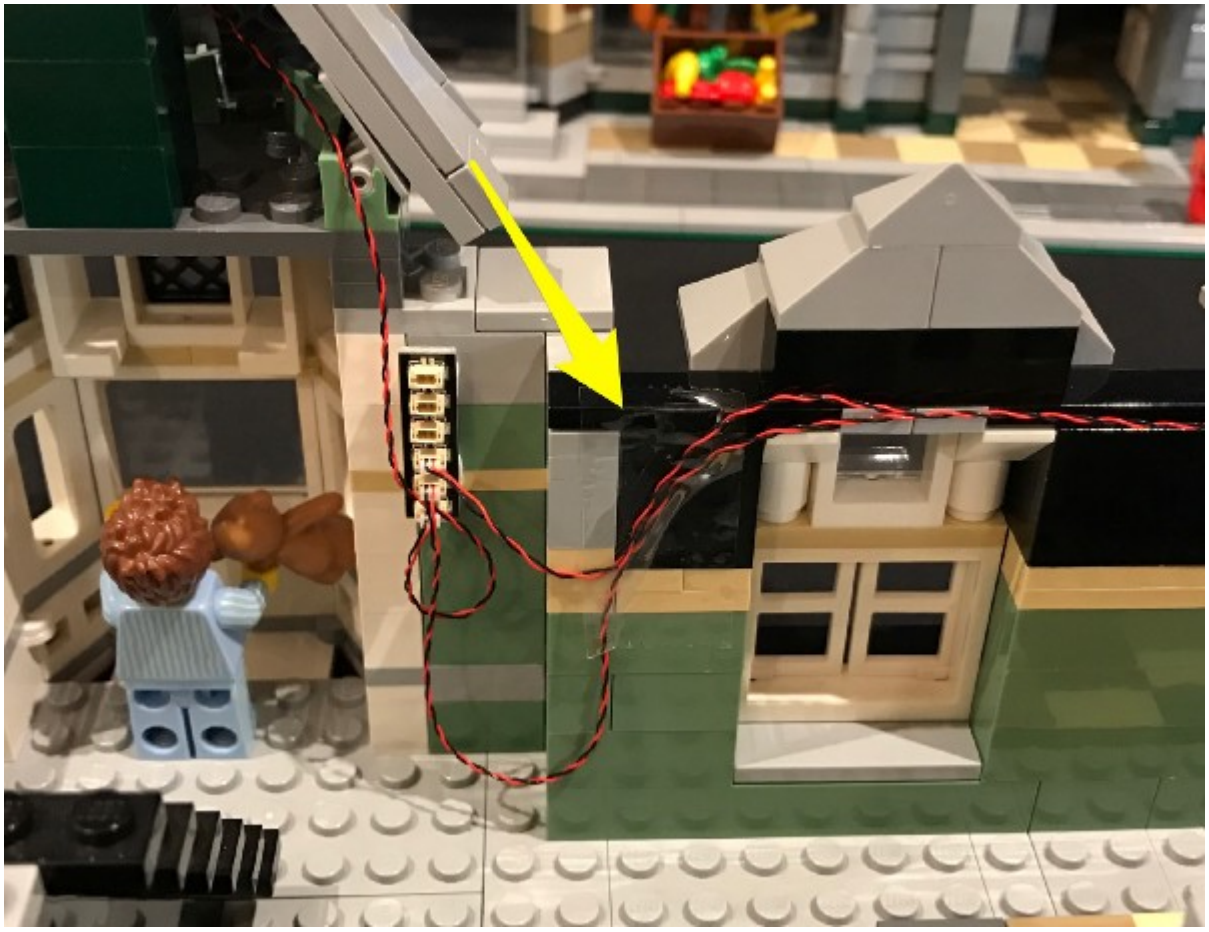




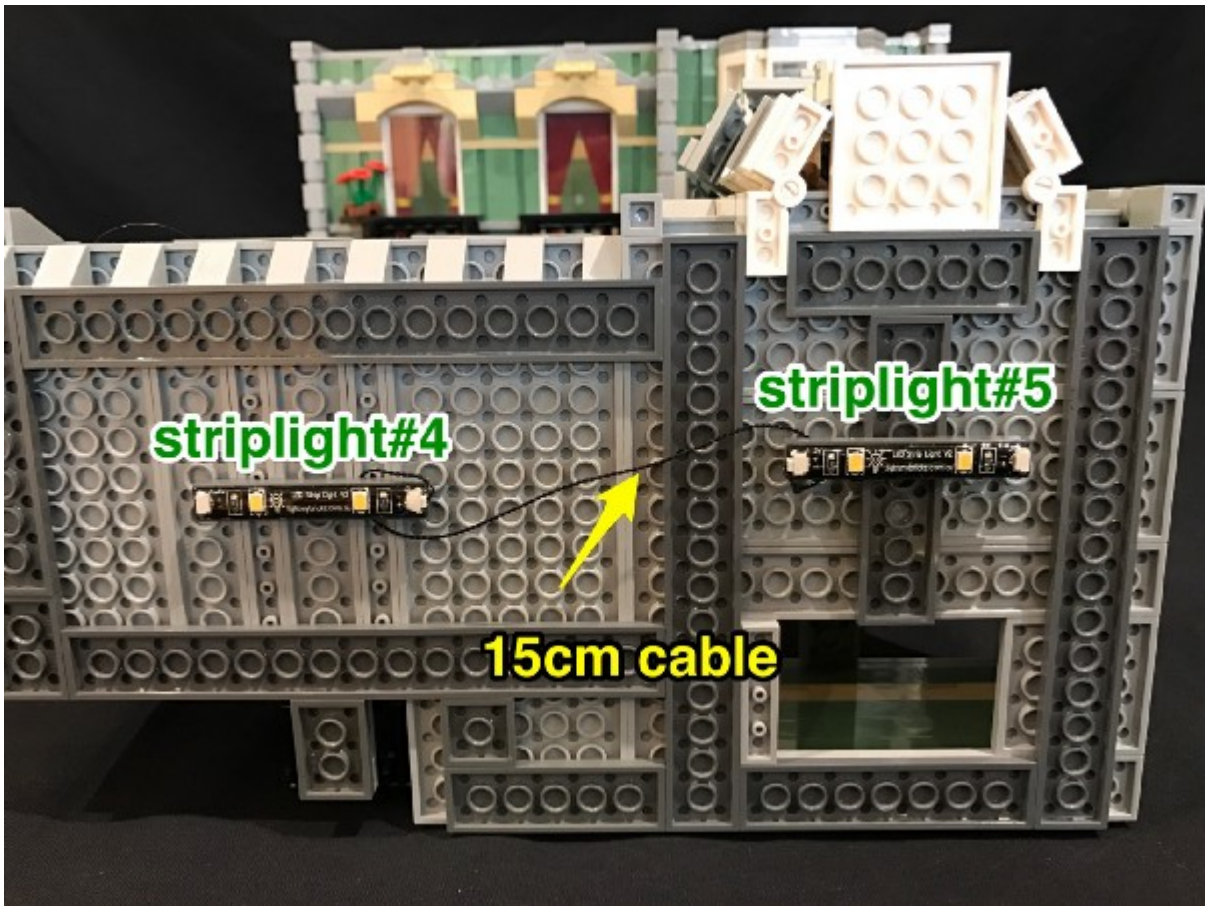


Neaten the cables and do your best to hide them from being seen from the outside looking in. You can also use tape to secure the cables to the wall similar to what I

have done below.

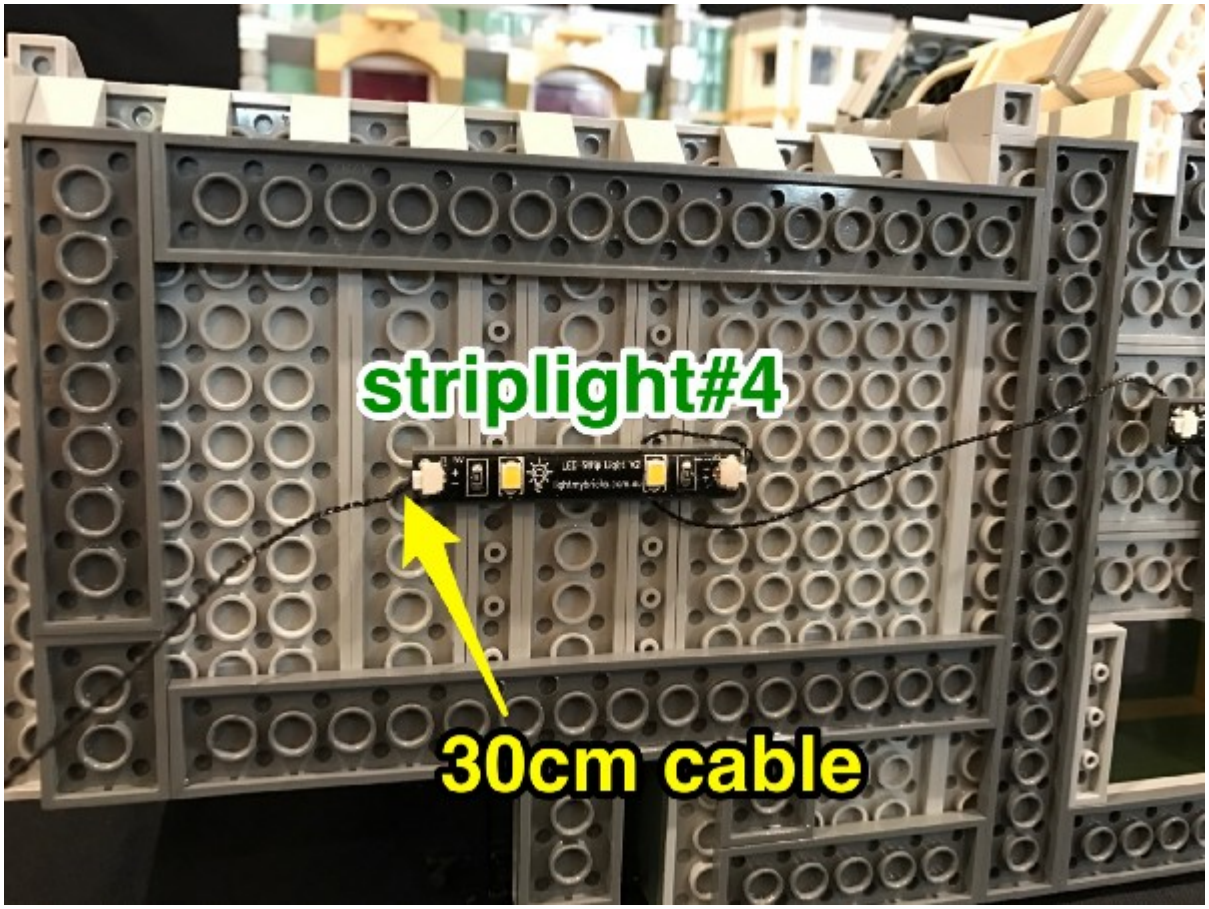


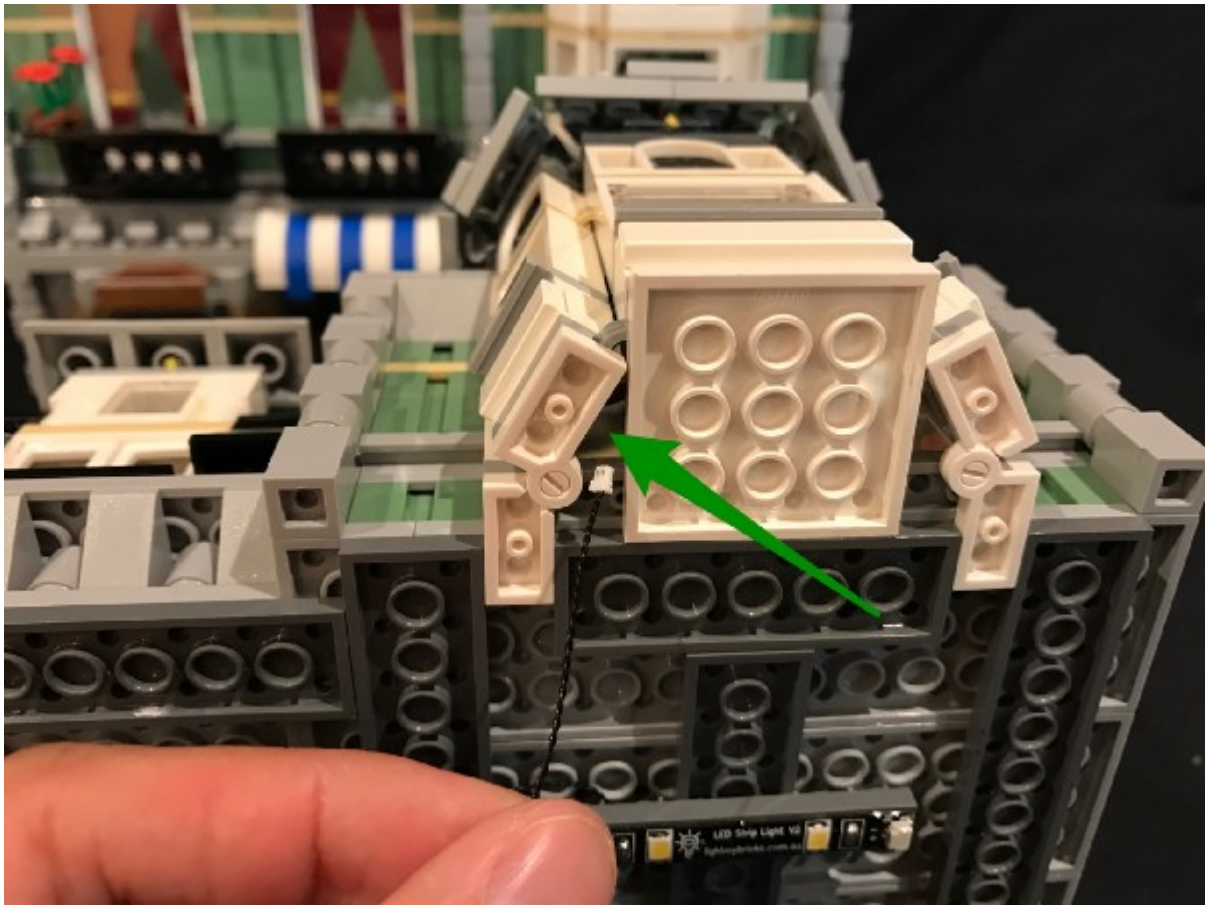
23.) Turn the 3rd floor on to its back with the bottom facing toward you. Take another two **LED Strip Lights** and connect/stick them to the following positions (**striplight#4** and **striplight#5**). Join them together using another **15 cm connecting cable**.


striplight#4
striplight#5
15cm cable

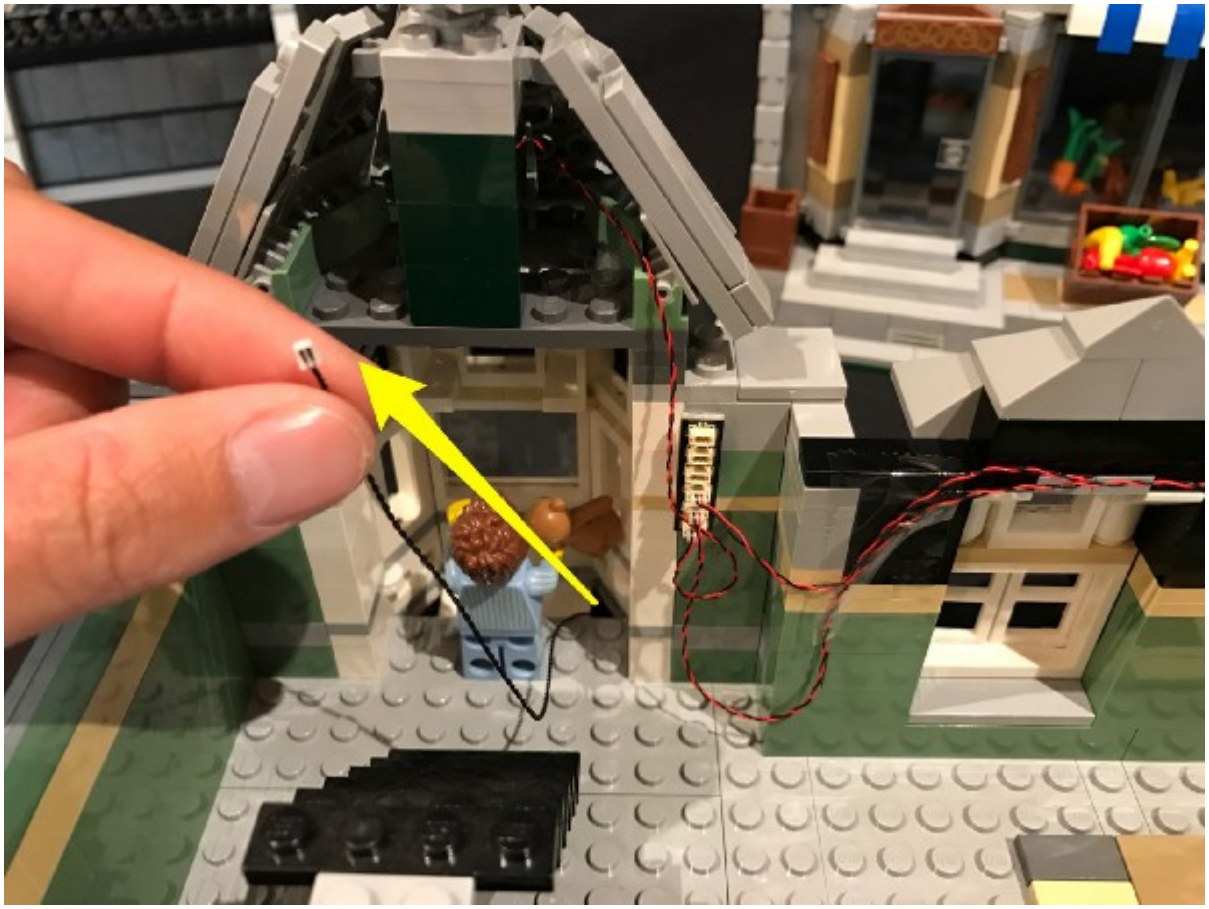
*If you are using LEGO plates to mount strip lights, you can prevent the cable from hanging down by looping them behind the strip light like what I have done here*

24.) Connect a **30 cm connecting cable** to the right port on striplight#4 and then thread the other end of the cable up through the following gap which leads above.

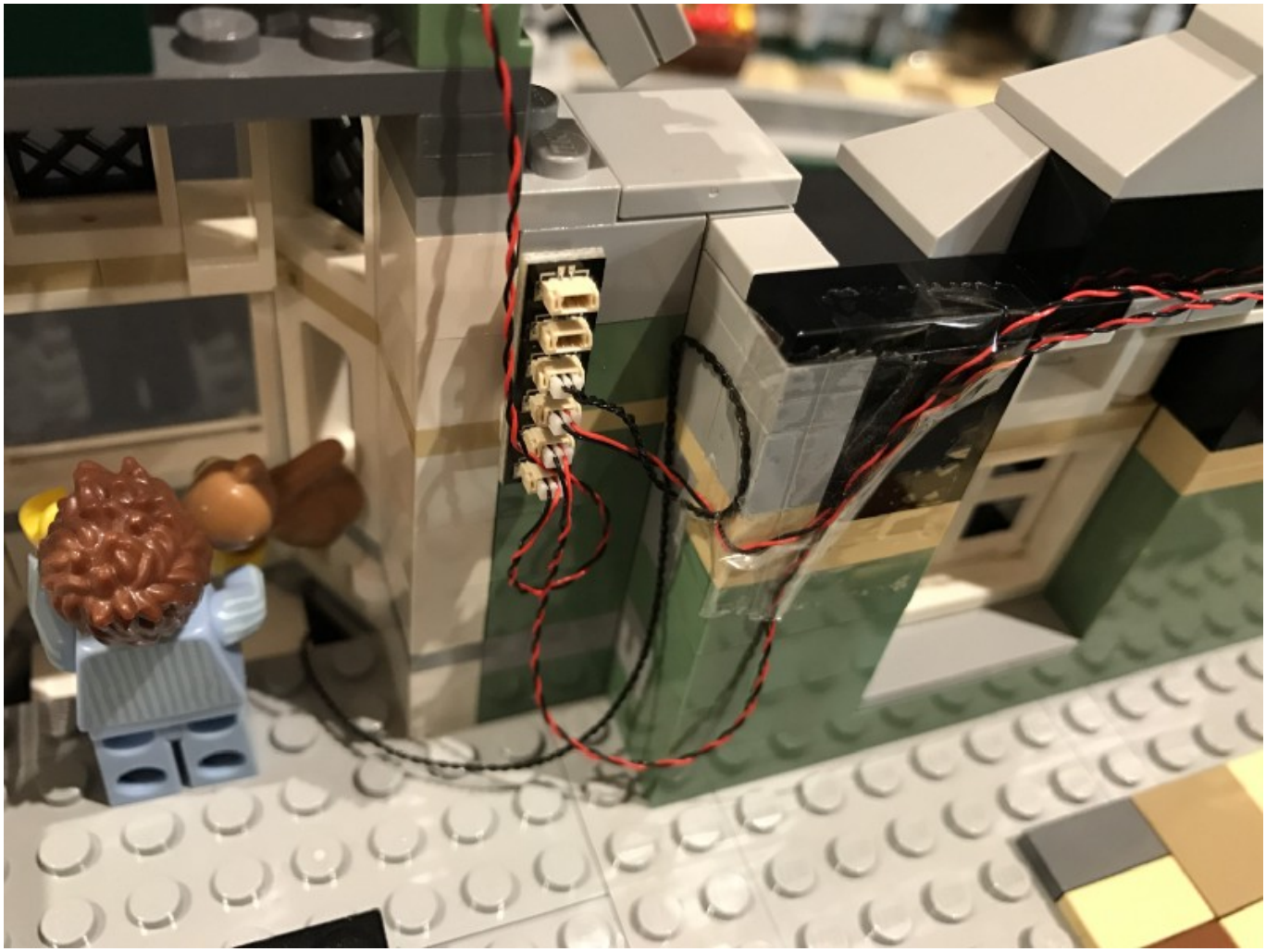




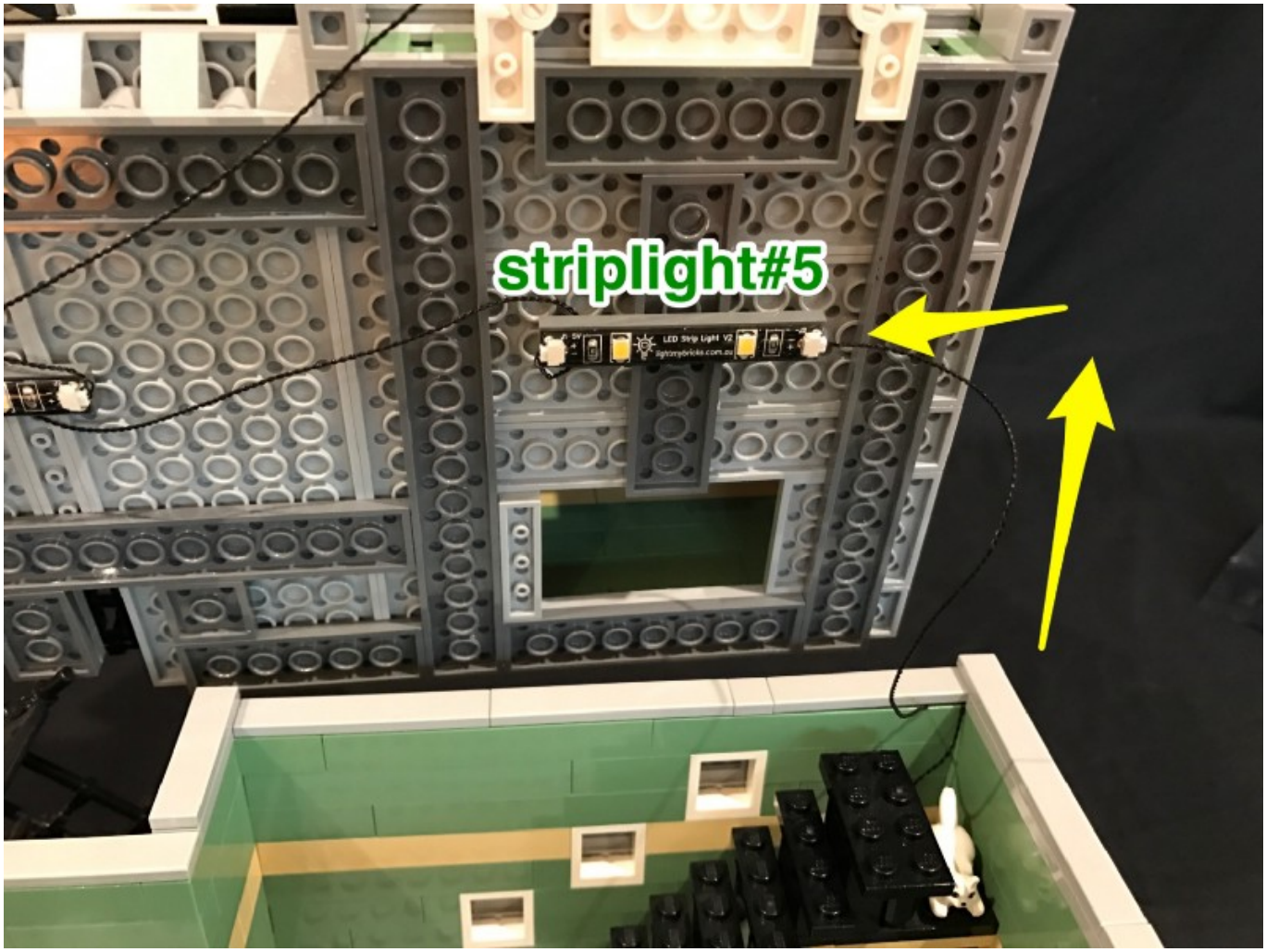
Turn the third level over and pull the cable up from the inside of the floor. Connect the cable into a spare port on the expansion board.



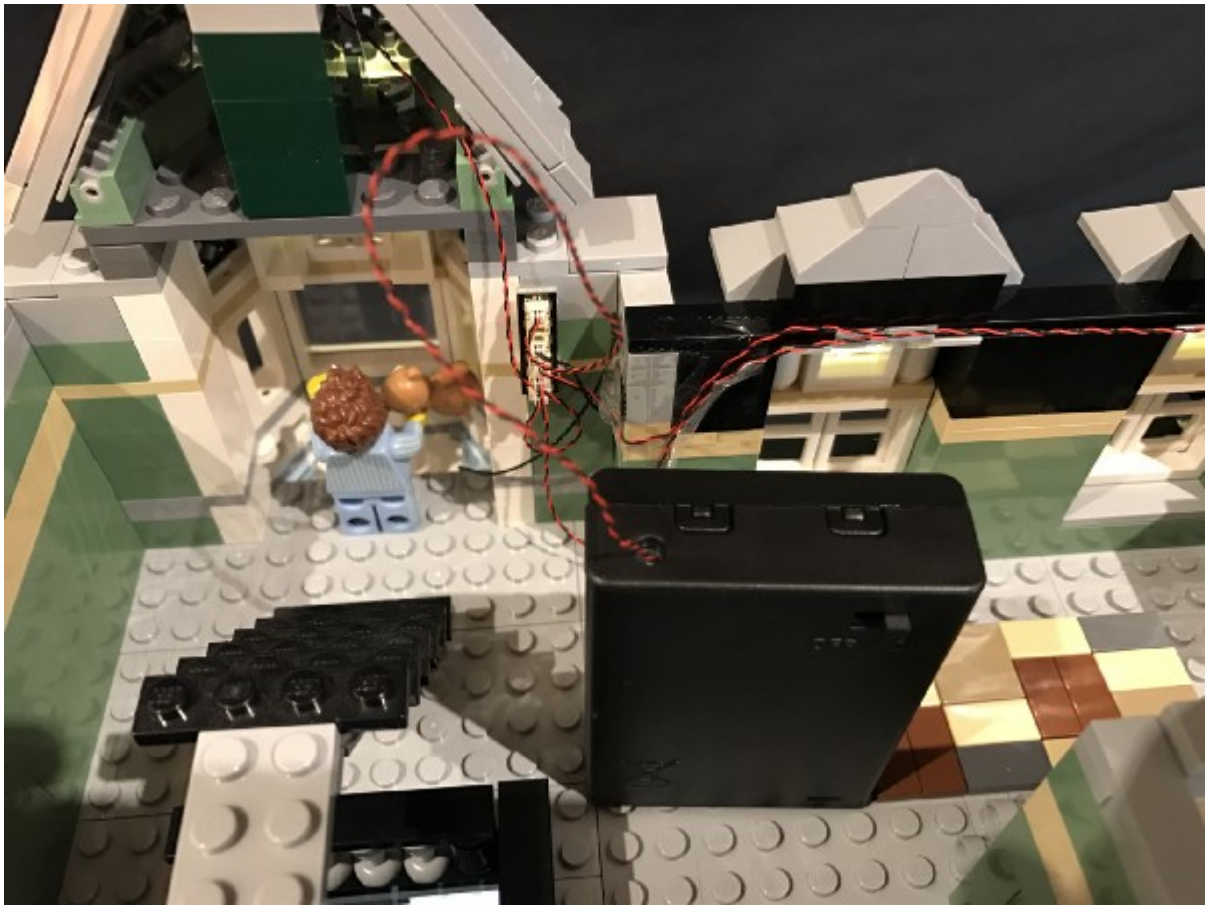
Use some more tape to secure this connecting cable down to the wall and to prevent it from being visible from the outside looking in.



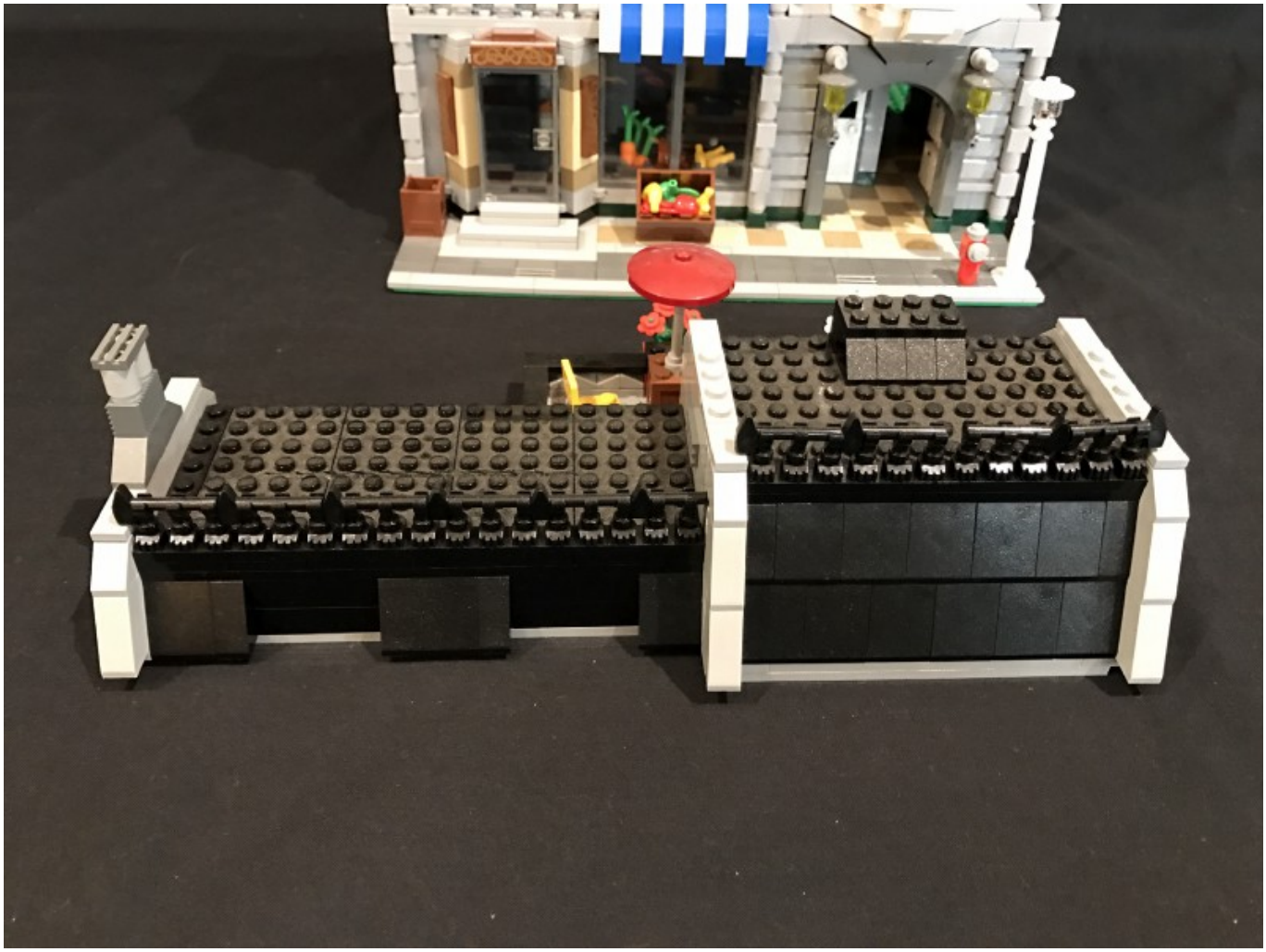
25.) Take the third floor above the second floor and connect the 30 cm cable from underneath into the spare port on striplight#5. Reconnect the third floor in place.



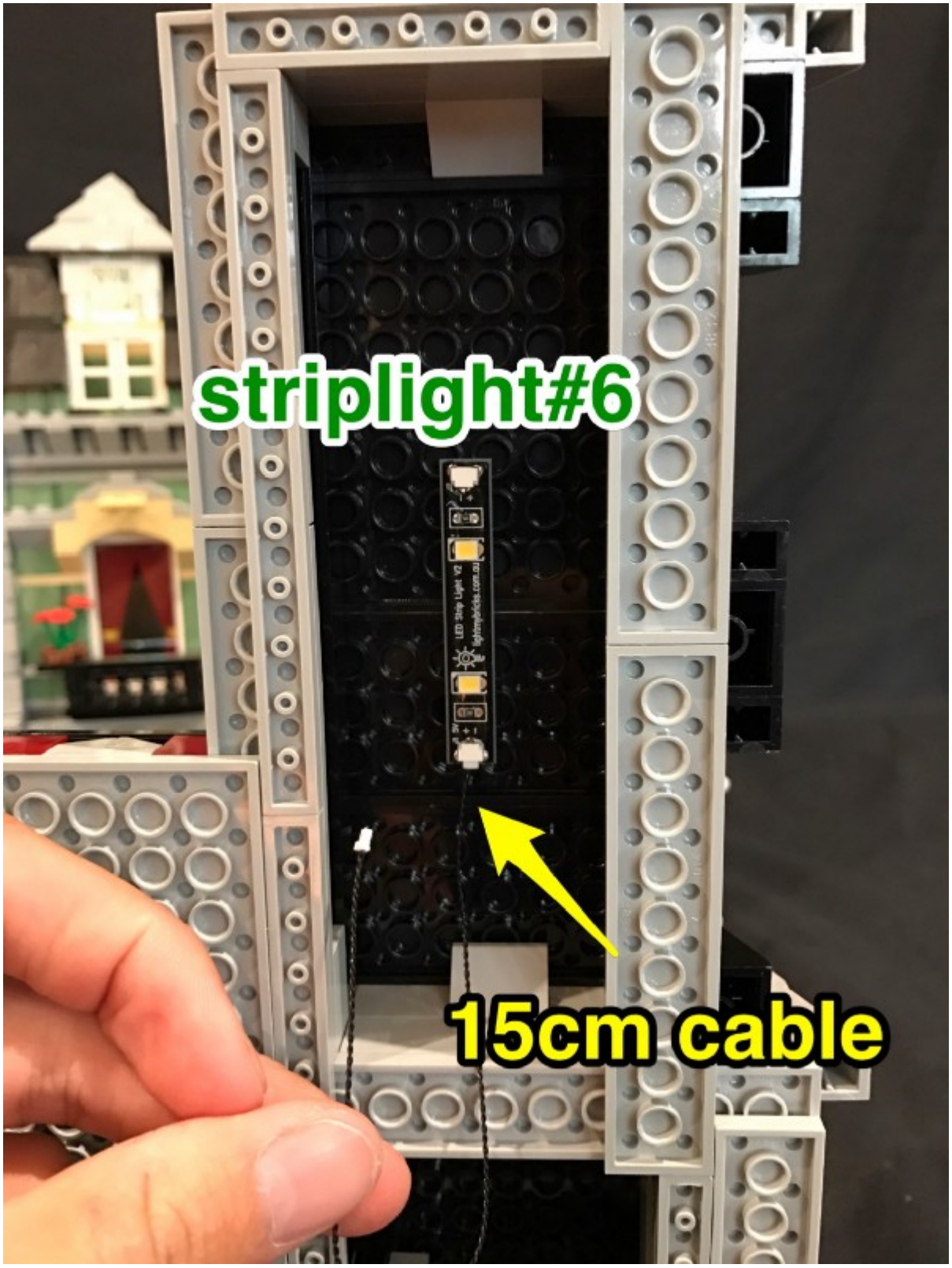

Test the lights we have installed so far by connecting the battery pack / usb cable into a spare port on the expansion board on the third floor. Ensure all lights are lit and are working OK.

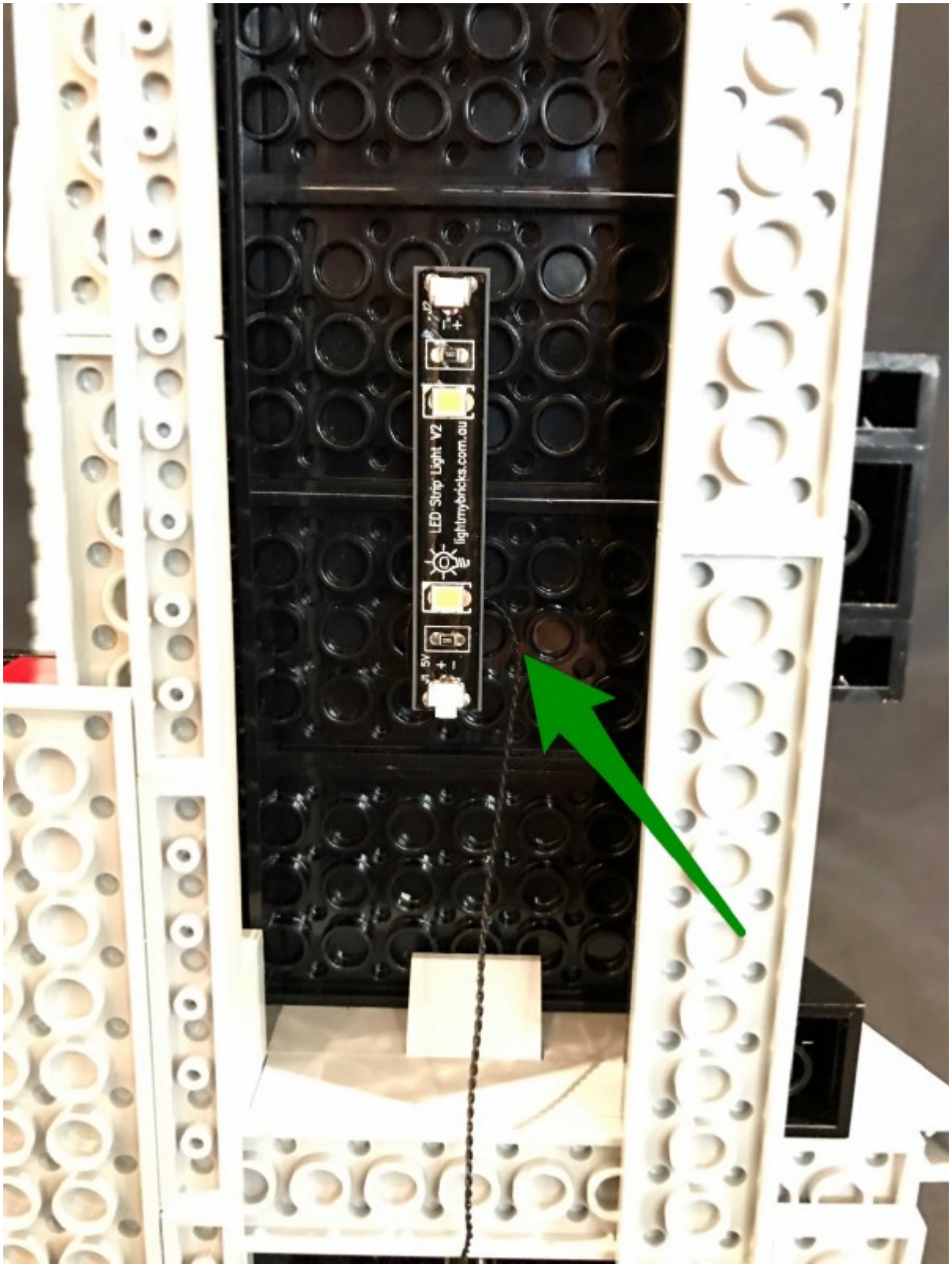


26.) Take the roof of the building and turn it onto its right side with the bottom facing toward you.



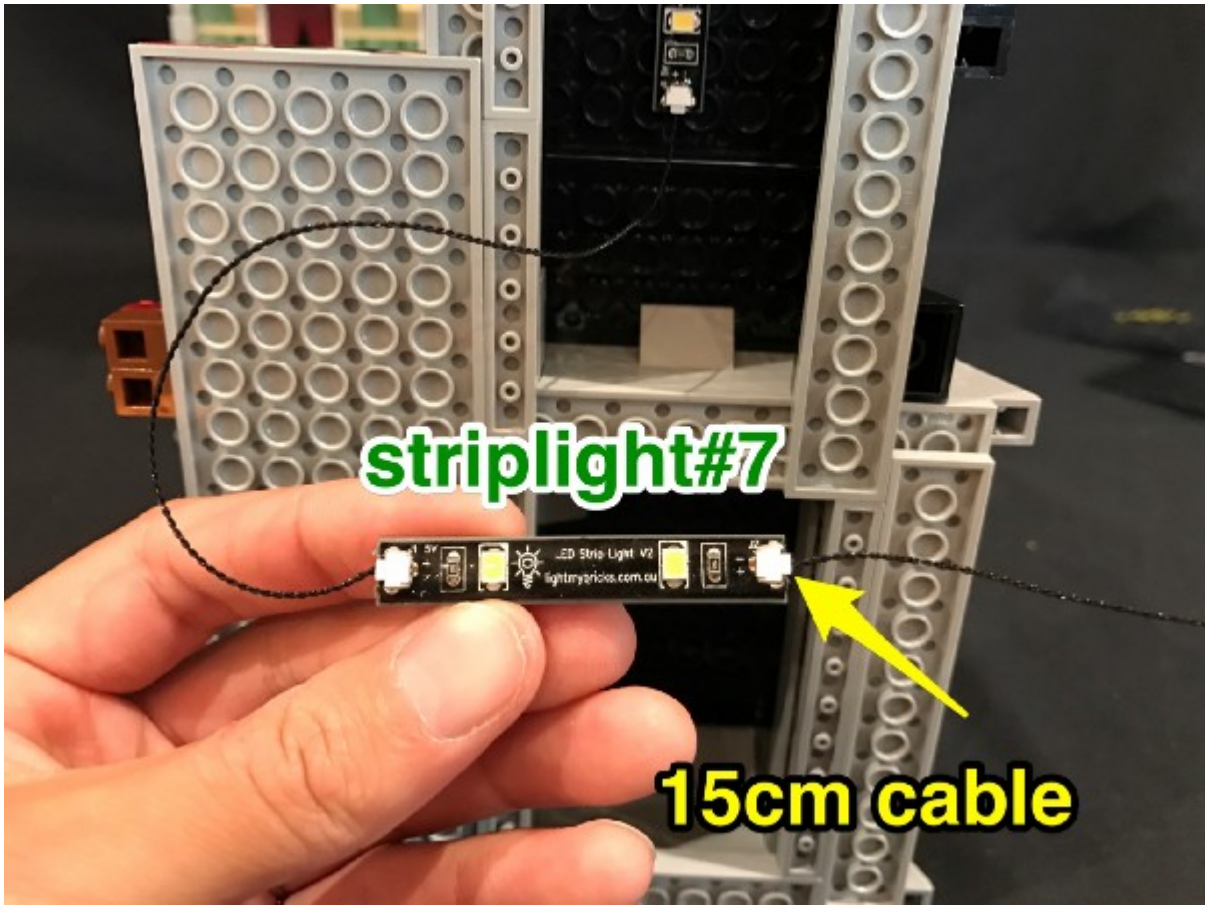
Take an **LED Strip Light** (**striplight#6**) and connect a **15 cm connecting cable** to the bottom port. Connect/stick this strip light to the following position.

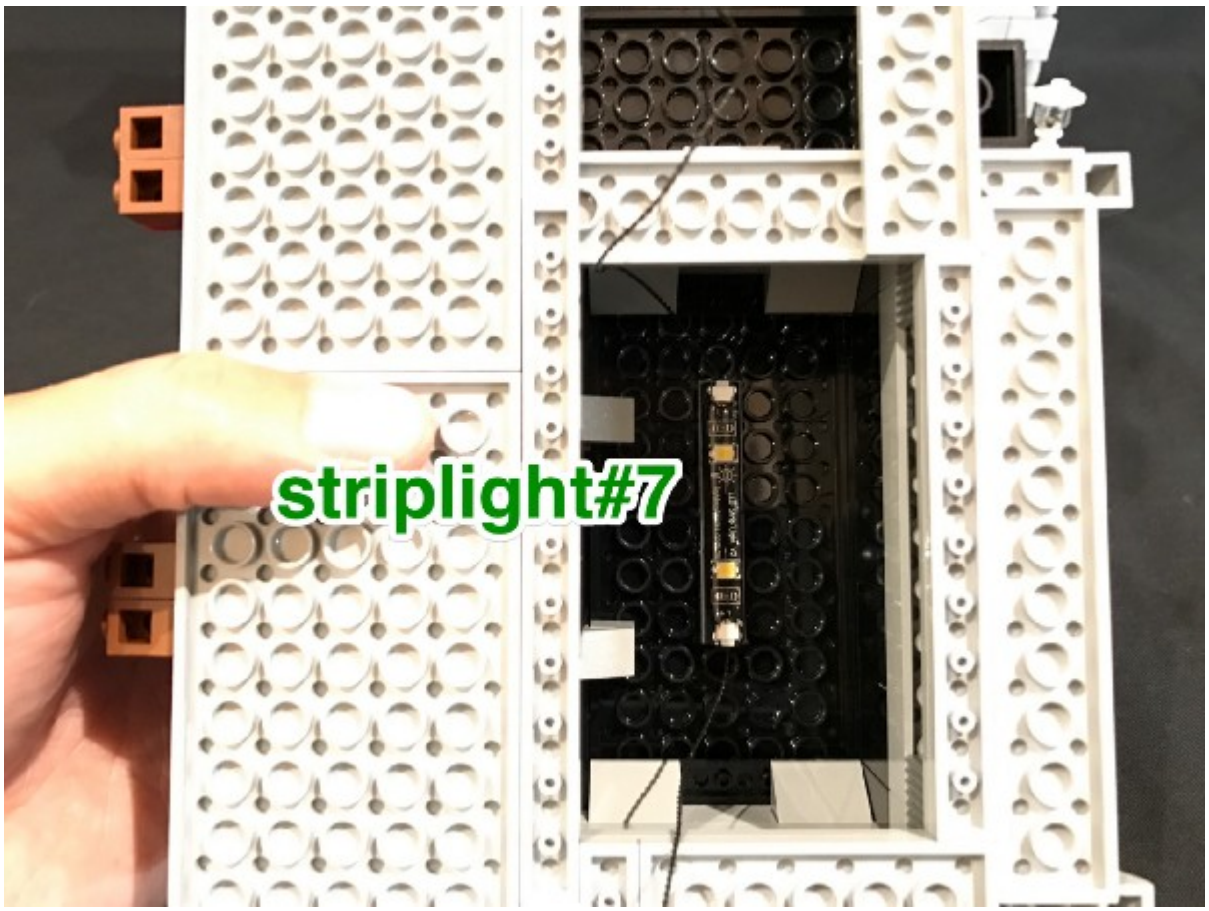

striplight#6
15cm cable

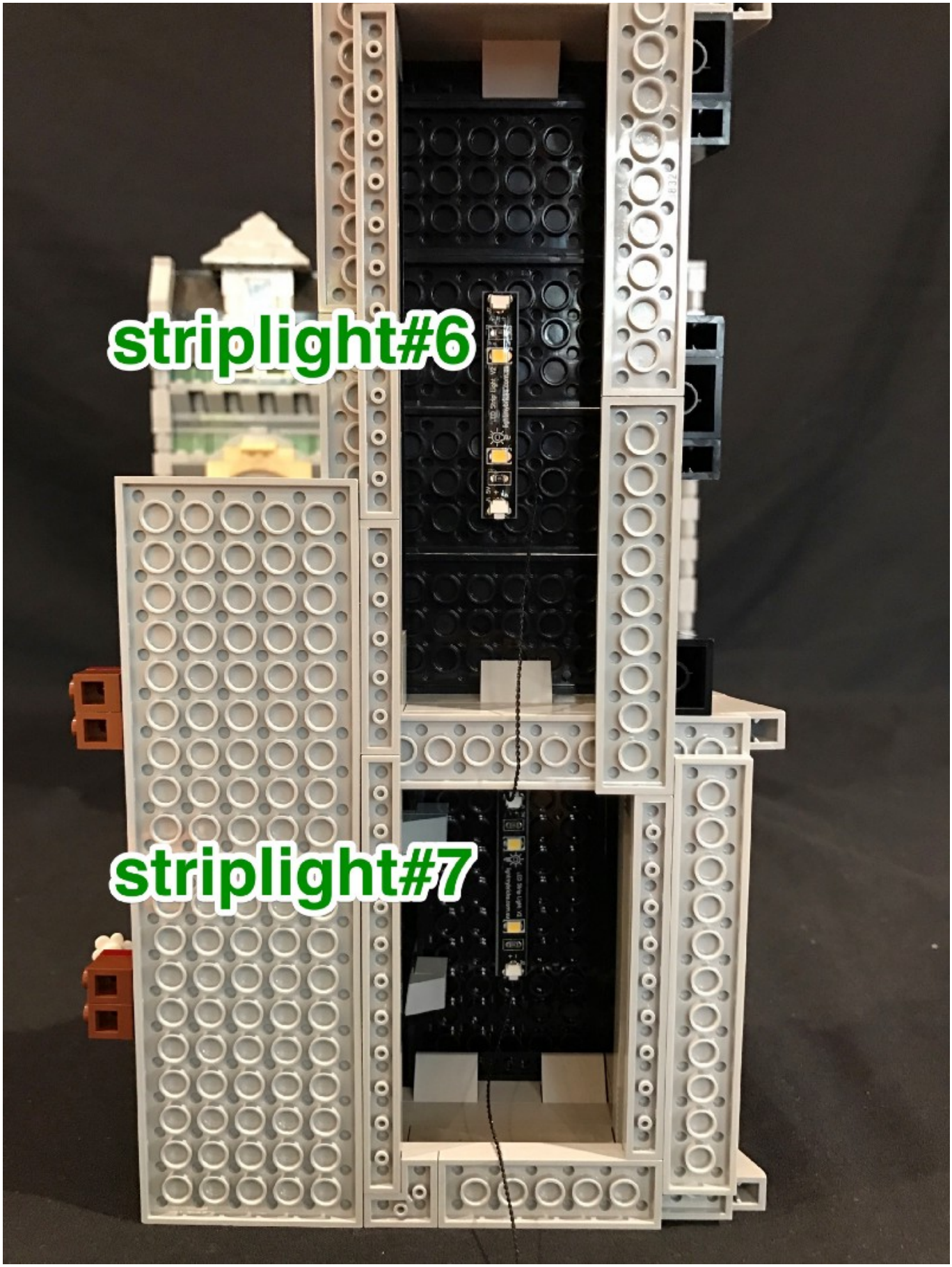



*If you are using LEGO plates to mount strip lights, you can prevent the cable from hanging down by looping them behind the strip light like what I have done here*

27.) Take another **LED Strip Light** (**striplight#7**) and connect the 15 cm connecting cable from striplight#6 to the left port. Connect another **15cm connecting cable** to the right port and then connect/stick it to the following position.

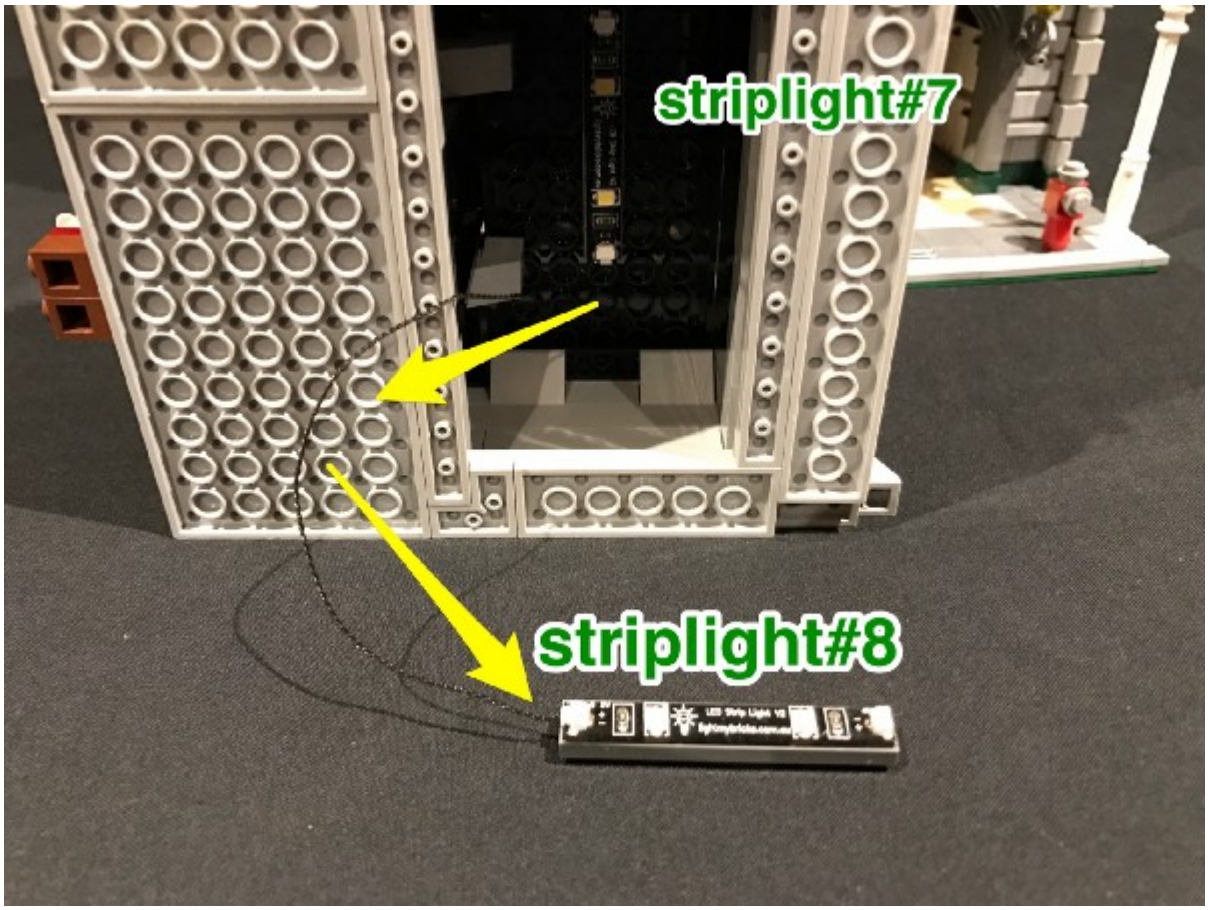


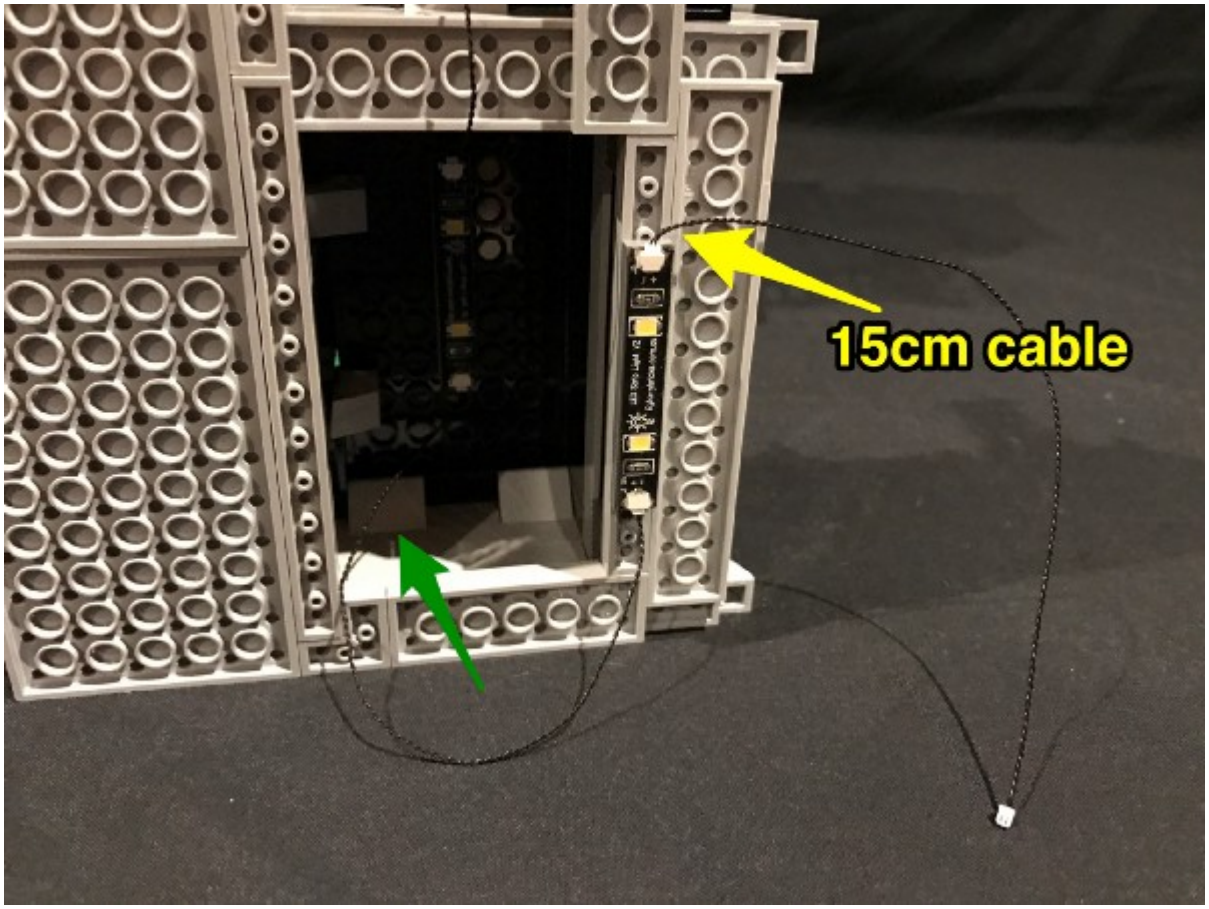

striplight#7



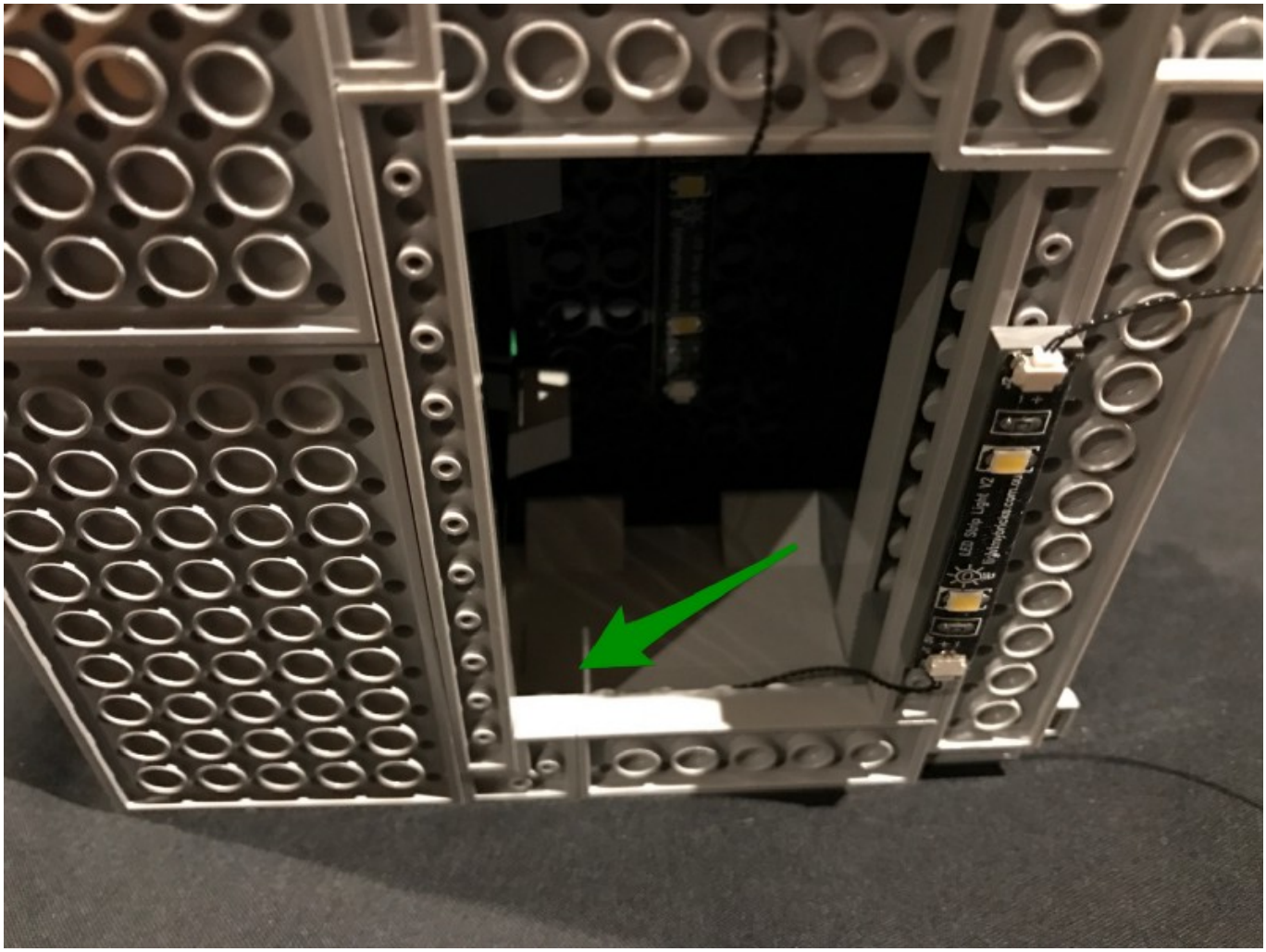

28.) Take another **LED Strip Light** (**striplight#8**) and connect the other end of the cable from striplight#7 to the left port. Connect another **15 cm connecting cable** to

the other port on striplight#8 and then connect/stick it to the following position below.

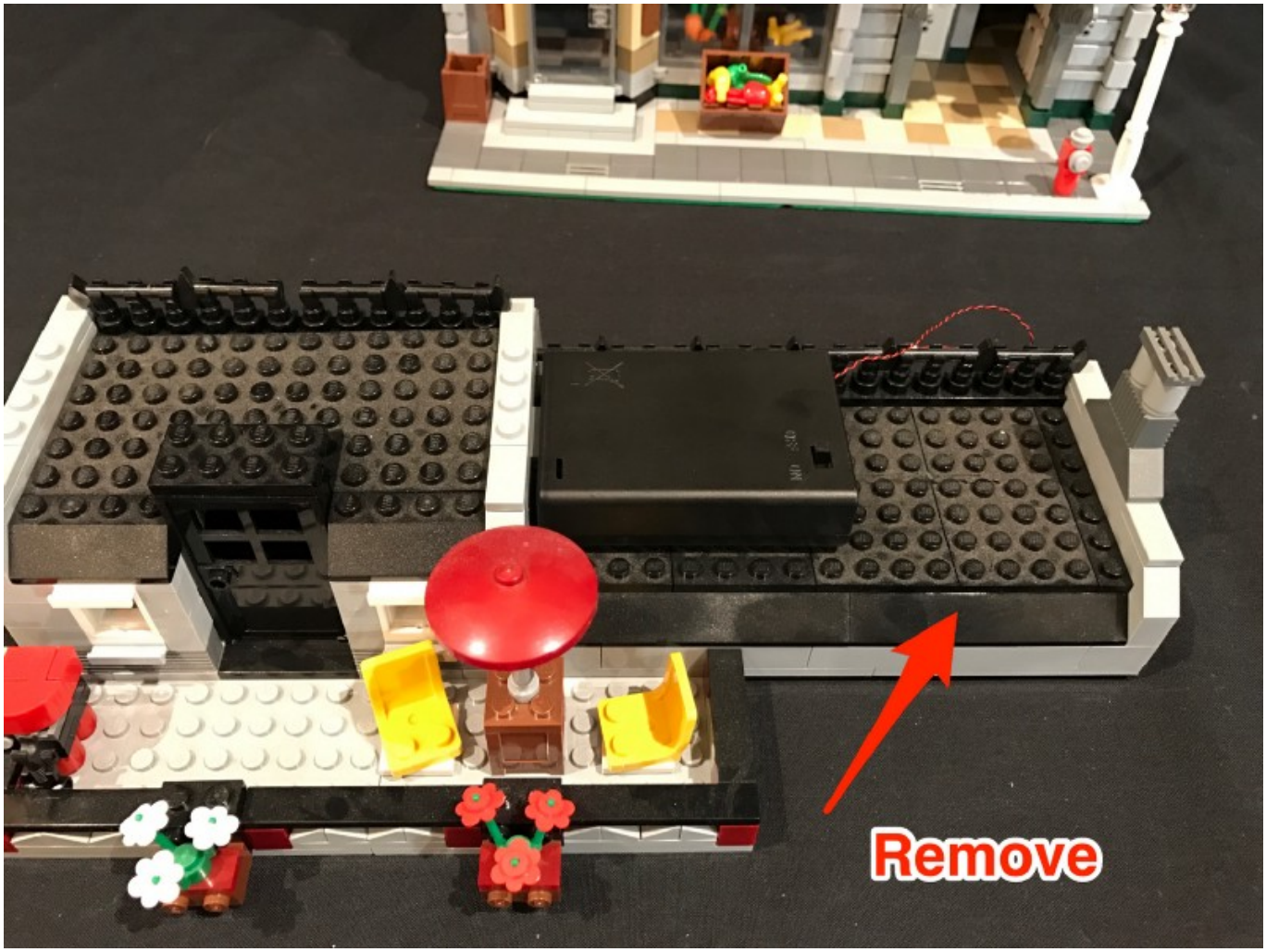




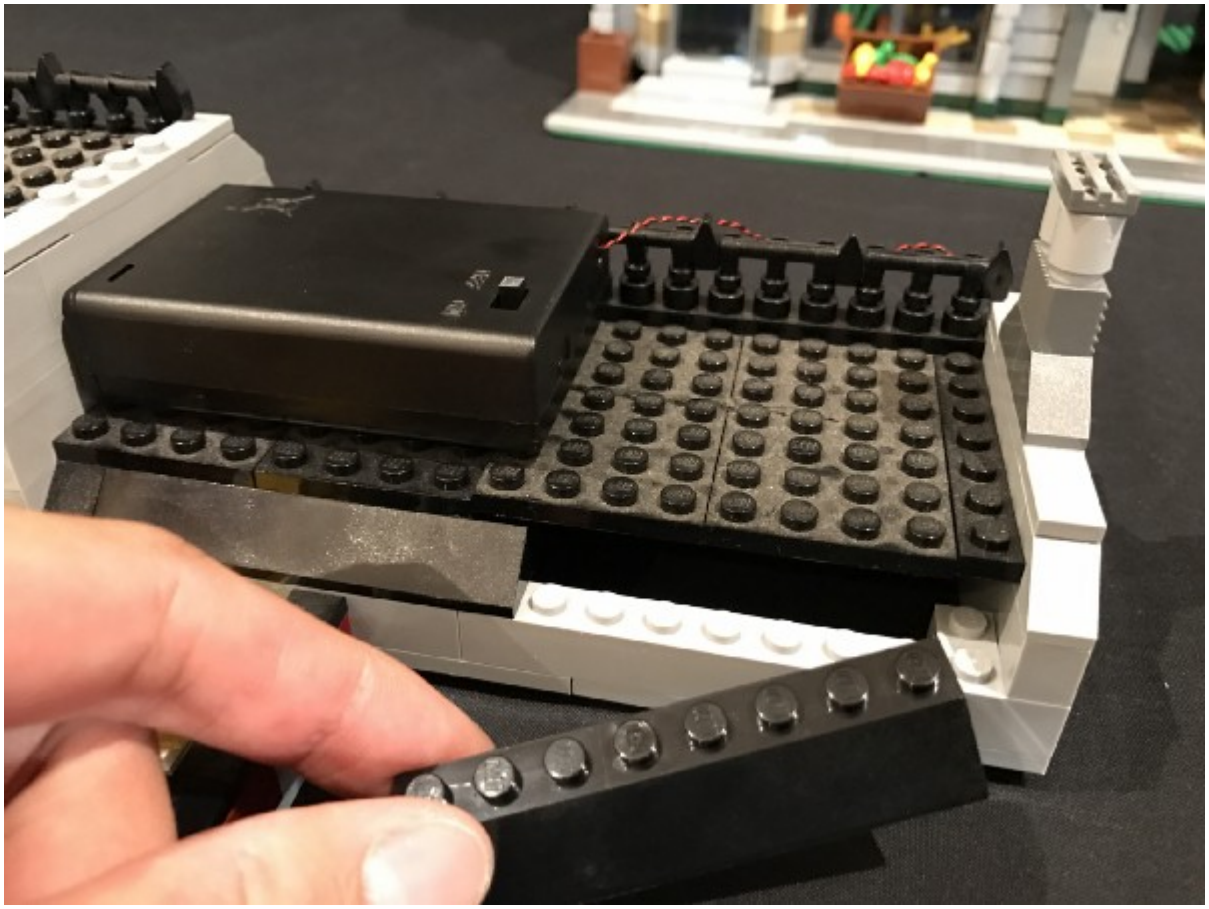

Hide the 15cm cable between striplight#7 and striplight#8 by tucking it in in the space above.

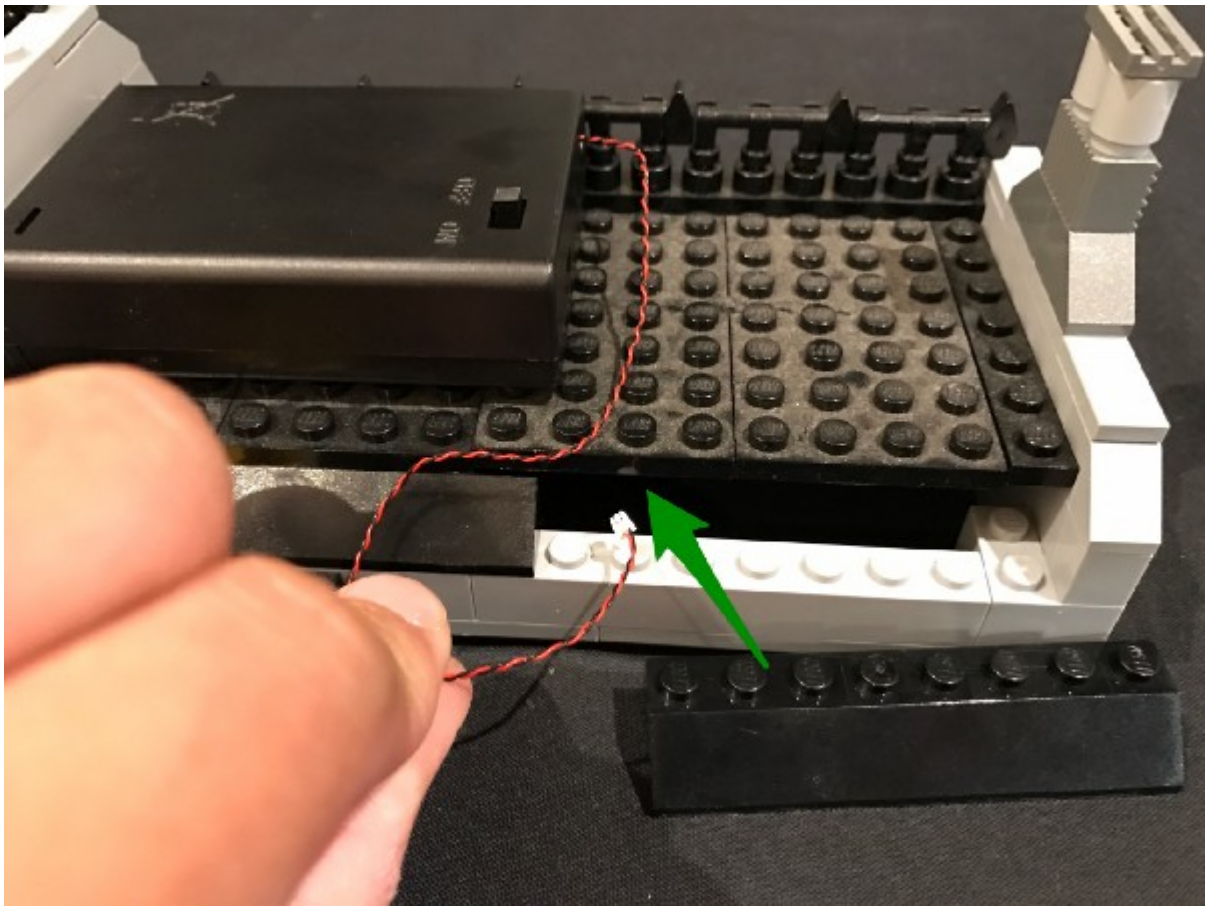


29.) Place the Battery Pack / usb cable on top of the roof in the below position ensuring the ON/OFF switch is facing up.

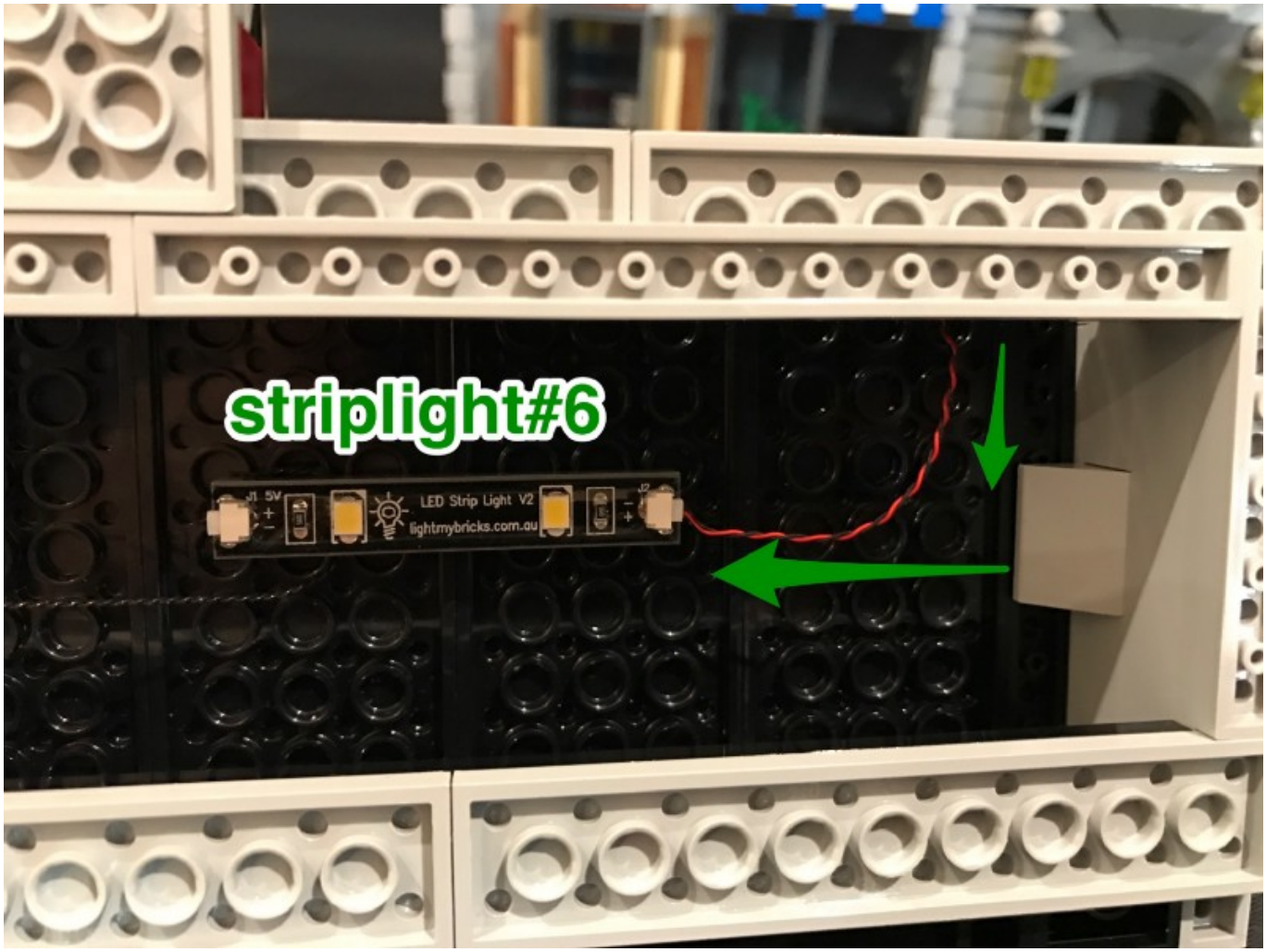



Remove the brick underneath to allow us to thread the battery pack /usb cable through to the inside.

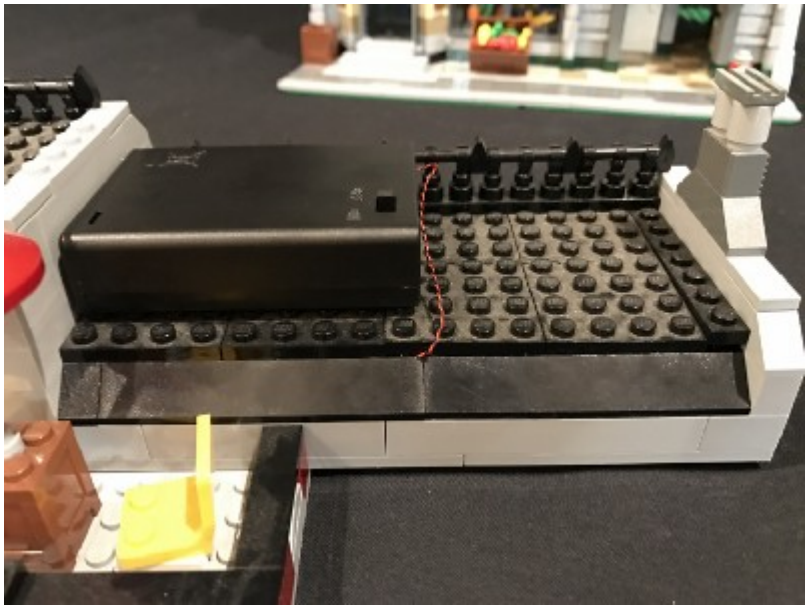


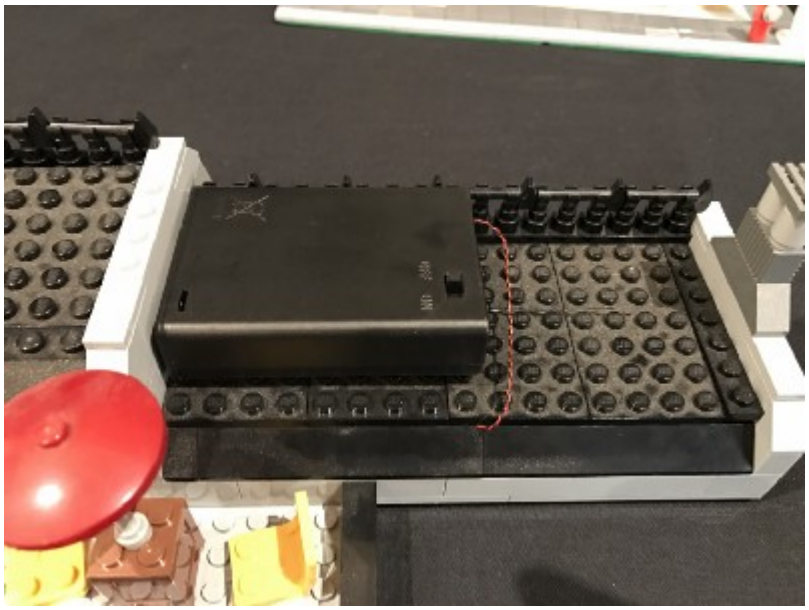


Pull the cable through from the inside of the roof and then connect it to the spare port on striplight#6

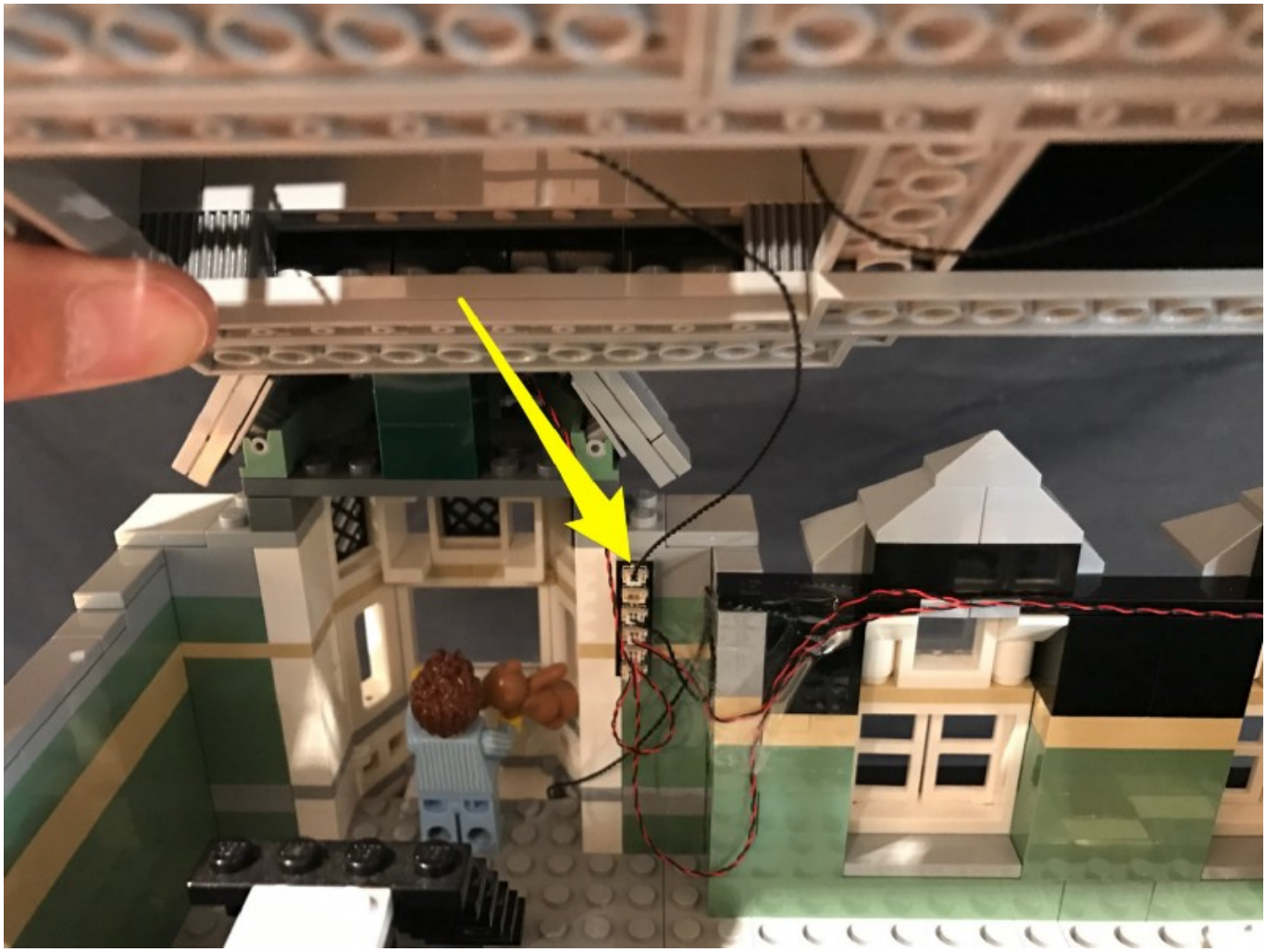



Reconnect the piece we removed earlier and then secure the battery pack to the roof using two **adhesive squares**.

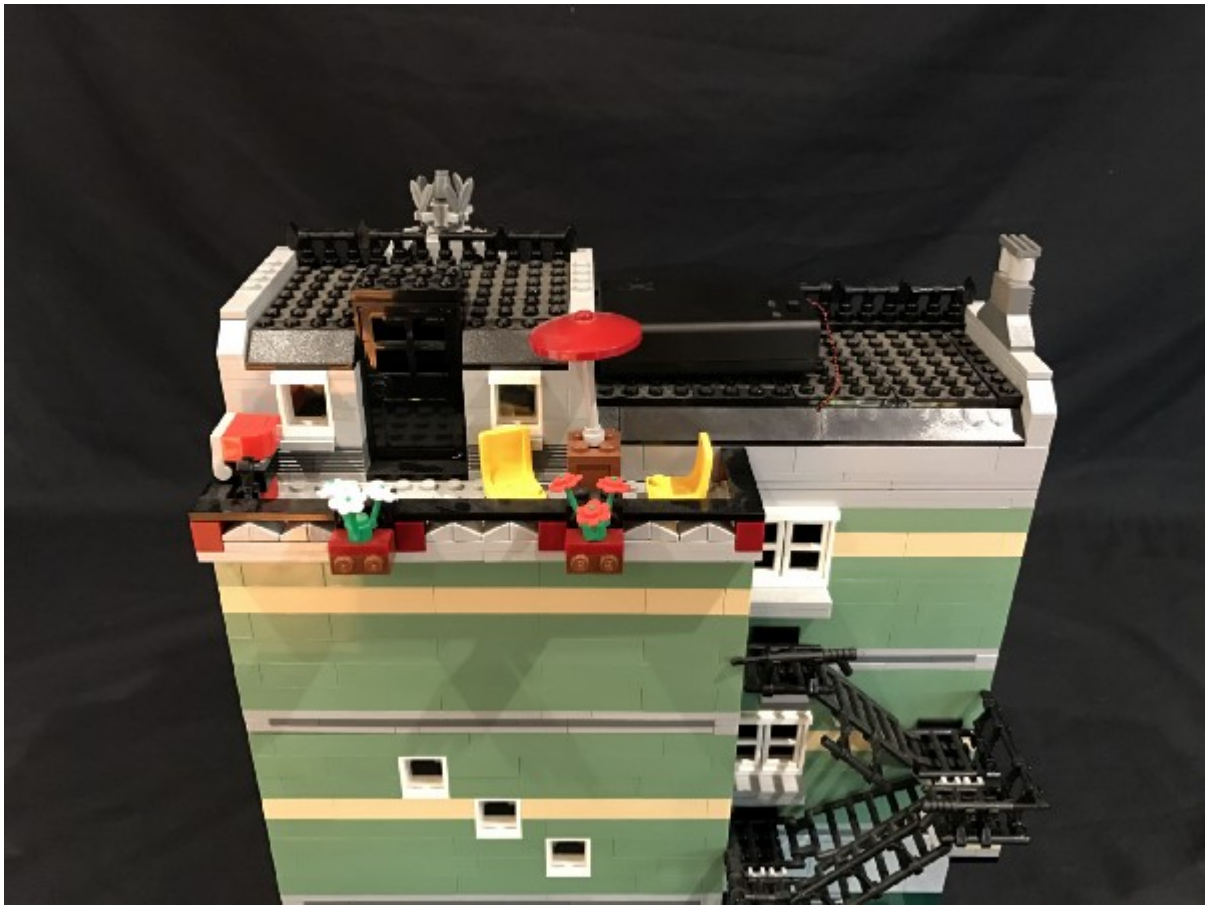




30.) Take the roof above the third floor and then connect the other end of the 15 cm cable from striplight#8 into an available port on the expansion board below.



Reconnect the roof in place



This now completes installation of the Green Grocer LED Lighting Kit. Turn ON the battery pack and ENJOY!

Light My Bricks

Light My Bricks