

# LEGO® CHRISTMAS TREE 2-IN-1 #40573 LIGHT KIT INSTALLATION GUIDE



# **Light My Bricks**



# LEGO® CHRISTMAS TREE 2-IN-1 40573 INSTALLATION GUIDE

Hi There!

We're here to help you get started on the LEGO®

Christmas Tree 2-In-1 40573 Light Kit.

This PDF details the instructions for the LED light kit only. If you are wishing to purchase this product, please <u>click here</u> to view the product page.

If you run into any issues, please refer to the troubleshooting section towards the end of this guide.

Have fun and enjoy!







# **PACKAGE CONTENTS:**



2x Red 30cm Bit Light

2x Yellow 30cm Bit Light

2x Green 30cm Bit Light

2x Blue 30cm Bit Light

2x Pink 30cm Bit Light

8x Micro White 15cm Bit Light

5x Micro White 30cm Bit Light \*

1x 6-Port Expansion Board

1x 12-Port Expansion Board

1x Micro 4-Port Expansion Board

1x Micro 8-Port Expansion Board

1x Flicker Effects Board



EEEEE

2x 5cm Connecting Cable

2x 15cm Connecting Cable



2x USB Power Cable (Power Source not Included)

# **ASSORTED BRICKS:**

- 2x Round Plate 1x1 Trans Clear
- 4x Round Brick 1x1 Green
- 10x Round Brick 1x1 Trans Clear

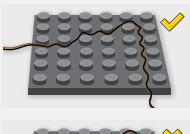
<sup>\*</sup> Indicates components which include spares



# **Contents**

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"Large Tree" Instructions	12
"Medium & Small Tree" Instructions	51
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# 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 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.

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





# **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.



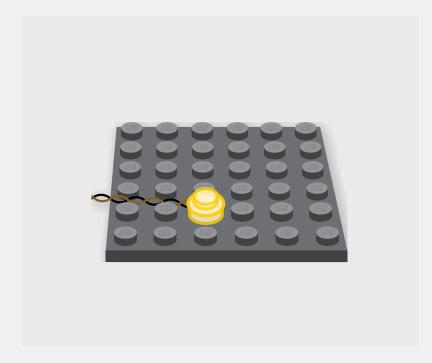
#### Connecting Micro Cable Connectors To Micro Expansion Board Ports

Take extra care when inserting the micro connectors to micro ports of Micro Expansion Boards. Connecting Micro Bit Lights to Micro Expansion Boards is similar to connecting lights and cables to Strip Lights. With the expansion board 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, do not force it. Use your fingernail to push the plastic part of the connector to the micro port.



#### **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.









#### The Symbols Used In This Guide

When going through the following guide you will come across symbols and formats that will assist with the installation of your light kit. Take notice of them as each has a specific purpose.

#### **Light Kit Component**

This is the most important image format as it indicates which part to use from the Light Kit. Make sure you pay close attention to which part is shown.



#### **Connect**

Used when you need to connect a LEGO piece or LMB component.



#### **Disconnect**

Used when you need to remove a LEGO piece/ section or LMB component.



#### **Directional**

Used to show where to route cables, place components, or move them.



#### **Bend/Pivot**

Used when a component needs to be bent, or part folded or pivoted.



#### **Turn/Flip**

Will be found in the top left corner when the set needs to be rotated or flipped.



#### **Twist/Braid**

Seen when a set of cables need to be grouped and twisted together.



#### **Power On Test**

Found at the end of a major step to test the lights. Will be located in the top left corner.



#### **Note**

Notes will be found alongside the instruction photos and explain what to do.





#### **Repeat Step**

Repeat the previous step eg.

Make a spotlight, then make a second spotlight.



#### **Connect Focus**

Used to highlight a hard to see area where a component is being connected.



#### **Disconnect Focus**

Used to highlight a hard to see area where a component is being disconnected.



#### **General Focus**

Used to highlight a hard to see area where a component needs to be acted on.



#### **General Note**

This is a sample note that is used anywhere in this guide. It will explain a difficult section where photos are hard to illustrate or easily confused.

#### **Connect Note**

The green coloured note is used when the topic focuses on a component being connected, like the shown Power Bank.

#### **Disconnect Note**

The red coloured note is used when the topic focuses on a component being disconnected or like here, the removed pieces.



#### NOTE

Take the 5cm Connecting Cable from the 4-Port Micro Expansion Board and route it into the "IN" port of the Flicker Effects Board





#### **NOTE**

Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)



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#### NOTE

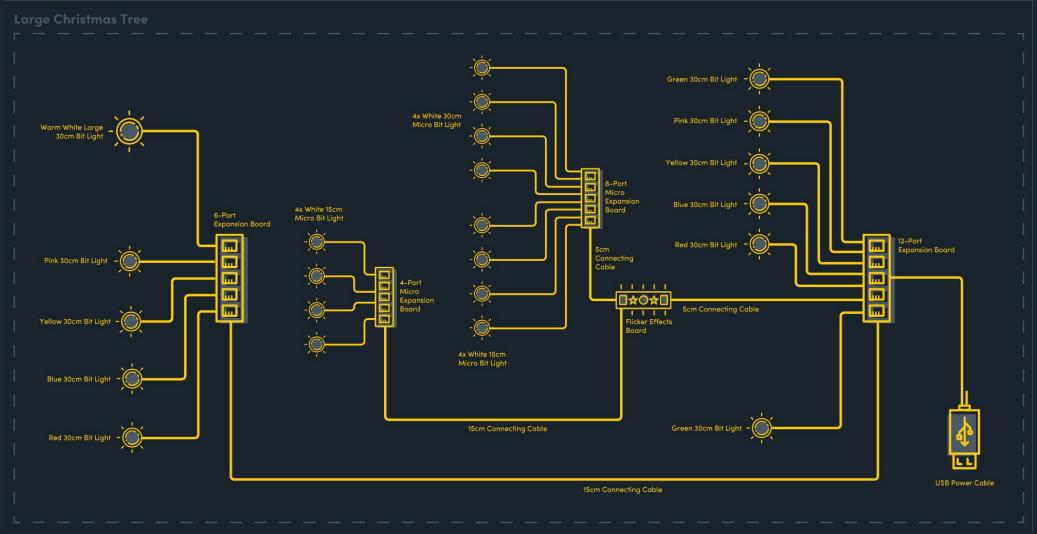
You should have these parts left over that were removed from the LEGO set







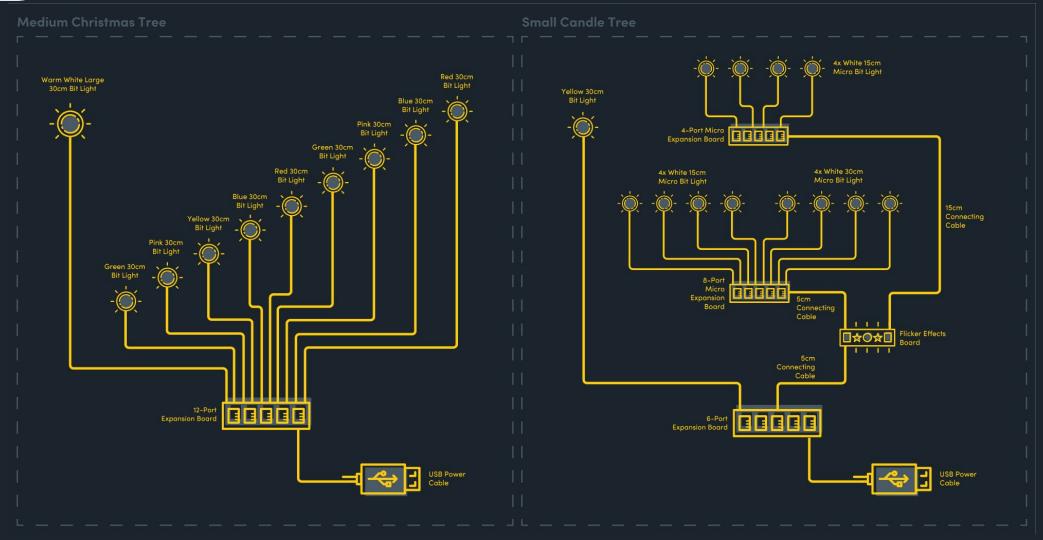
# **BLUEPRINT: Large Tree**







# **BLUEPRINT: Medium and Small Tree**



**BLUEPRINT** 





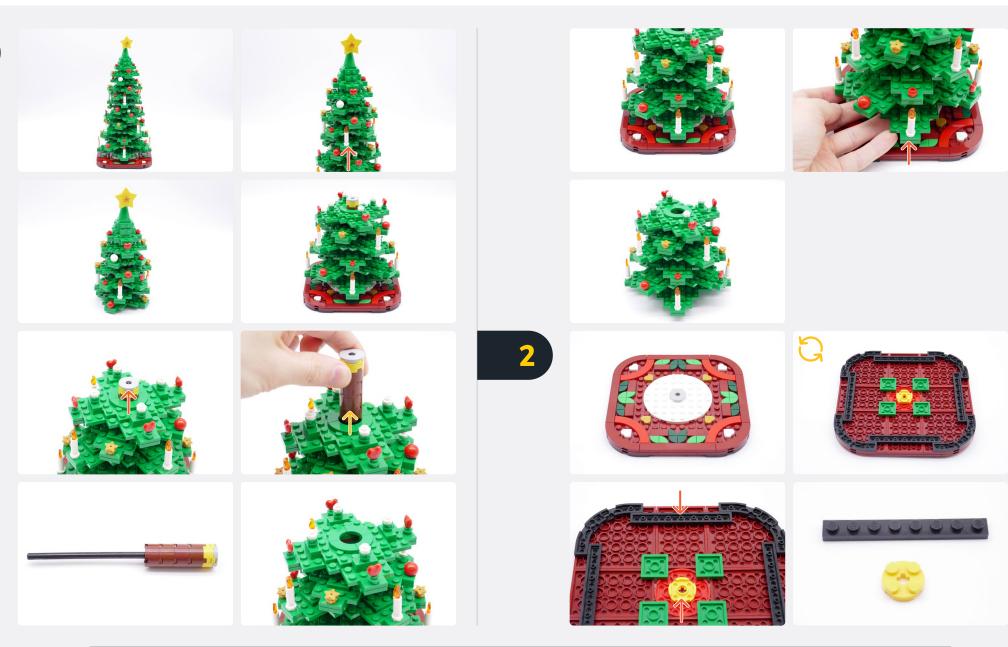
# **INSTRUCTIONS**

The following section is for the "Large Tree" variant. To light up the "Medium and Small Tree", skip to Page 51 or <u>click here</u>.

To ensure a smooth installation of your light kit, please read and follow each step carefully. If you run into any issues, please refer to the online troubleshooting guide.







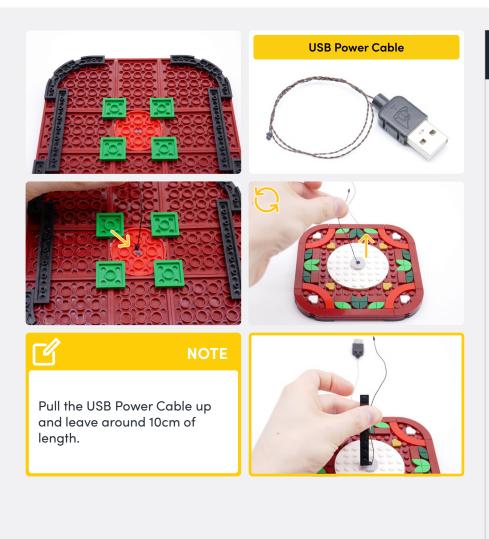












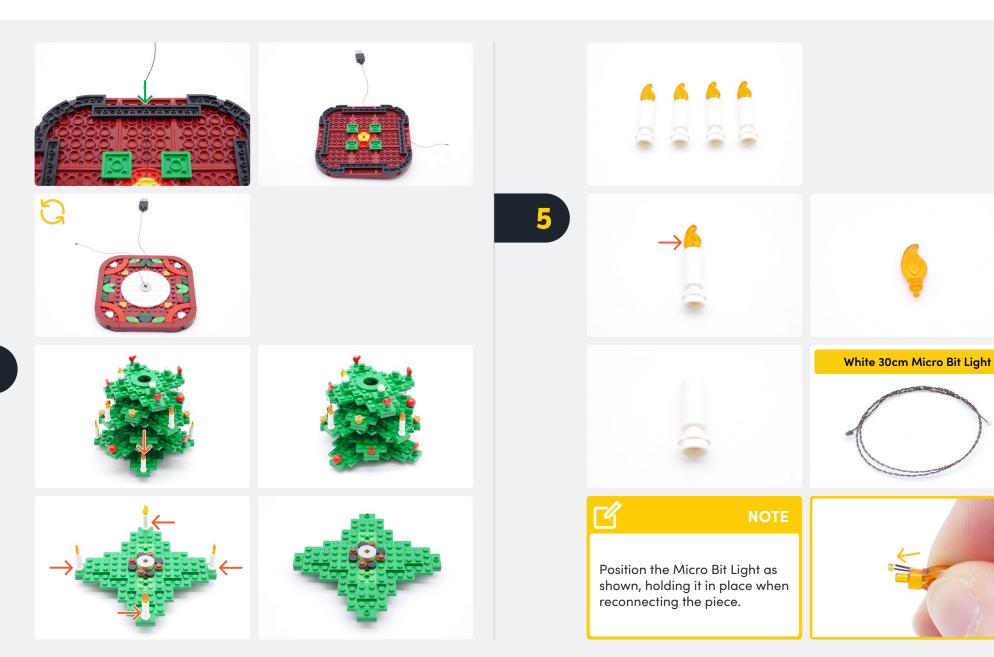




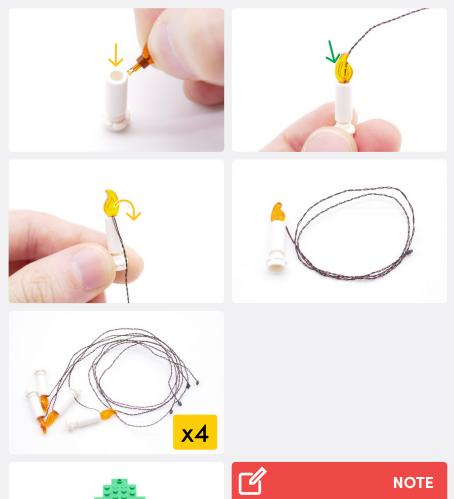


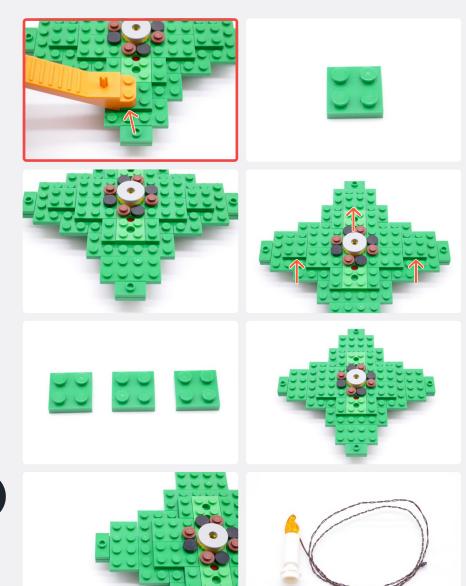
















Use the LEGO Brick Separator Tool to remove pieces like those shown.











Hold the cable against the Candle when connecting the green plate, to ensure the cable stays in place.













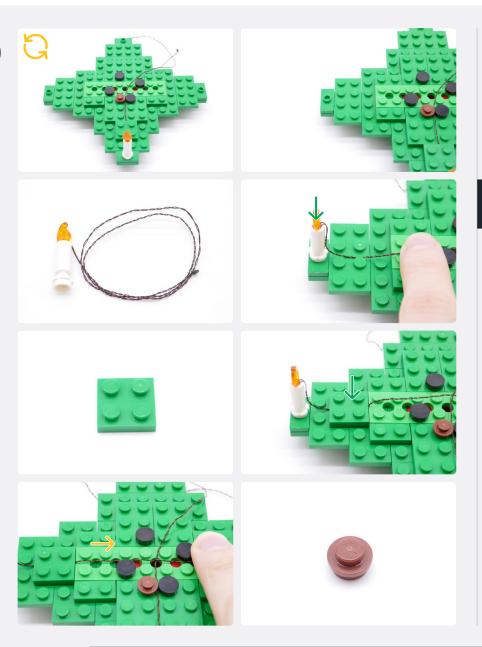


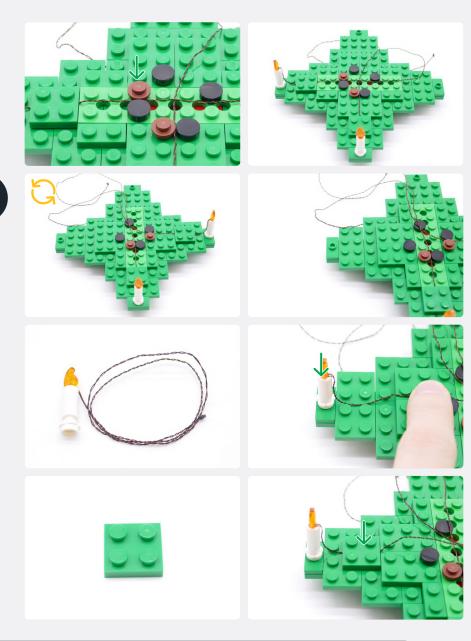
















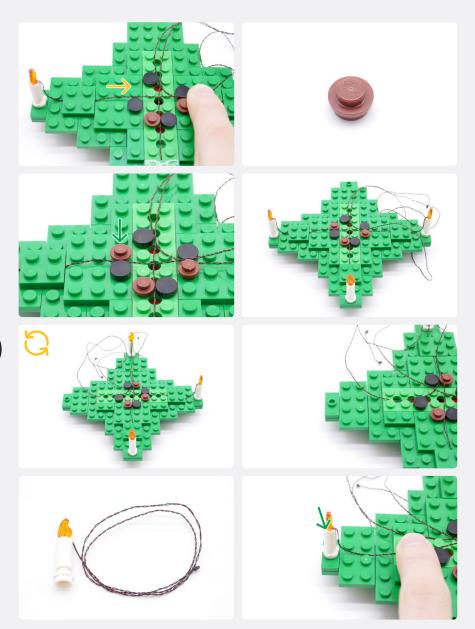


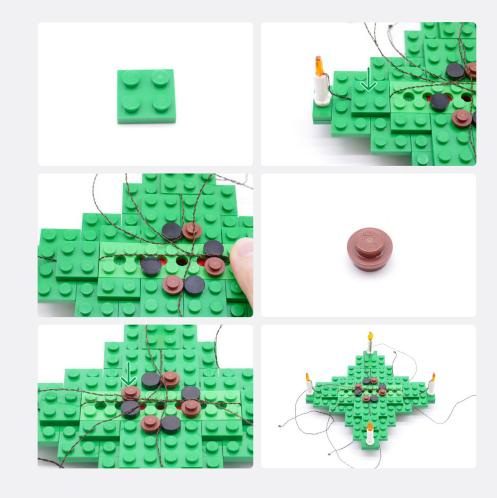


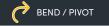










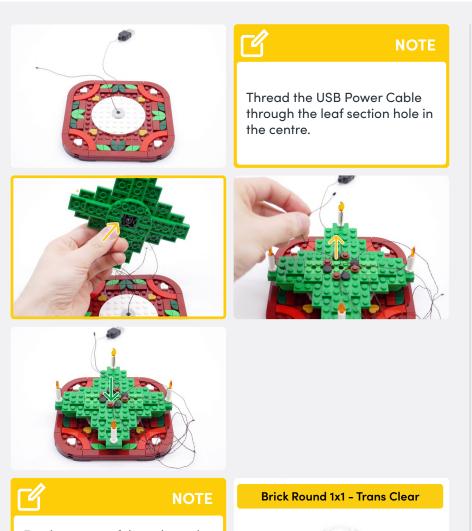


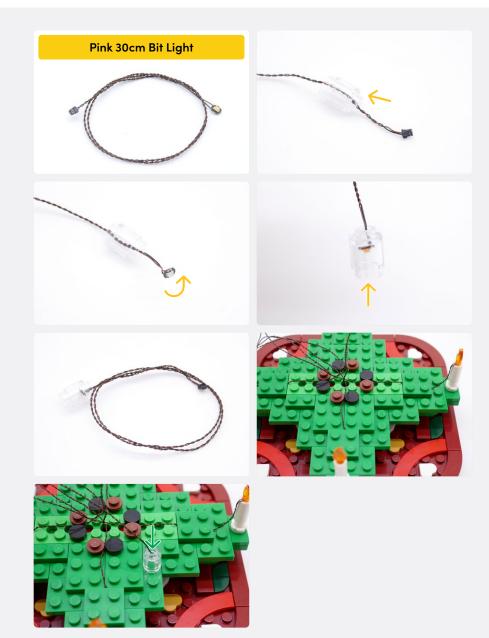












For the next 6 of the coloured "lantern" lights, you can choose to use any colour in any order. Follow the guide normally for the default look.

→ DISCONNECT

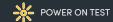






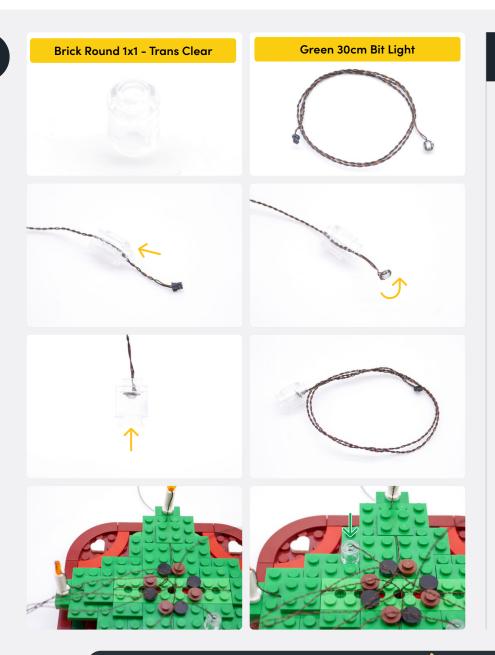














Take the 4 Micro Bit Light Cables and twist together, by holding them up as shown and twirling lightly.





#### NOTE

Take all of the cables and bunch them together by lightly twisting, and thread them through the circular piece.







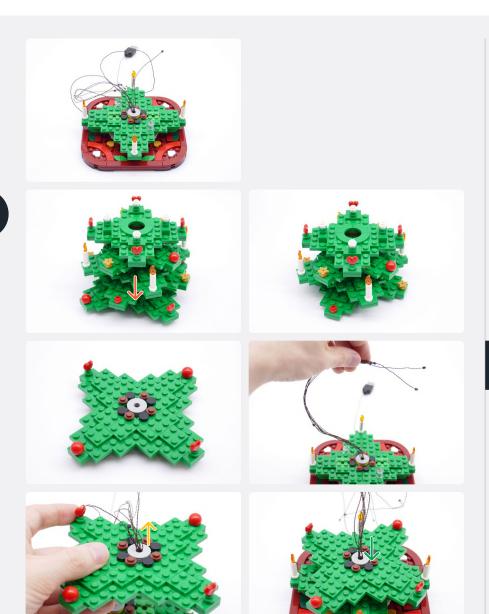


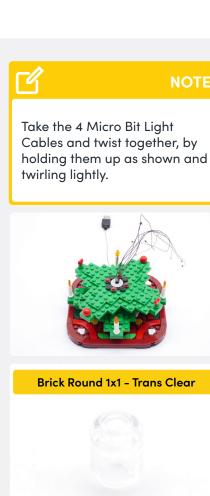


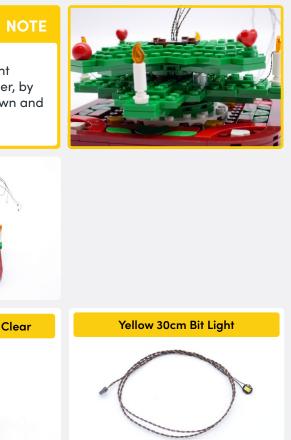








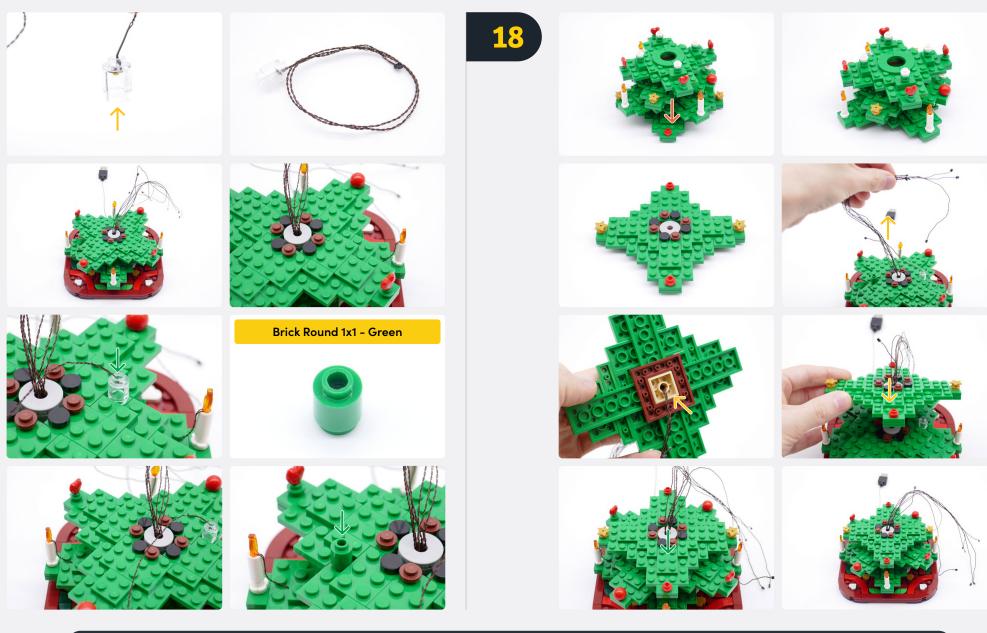












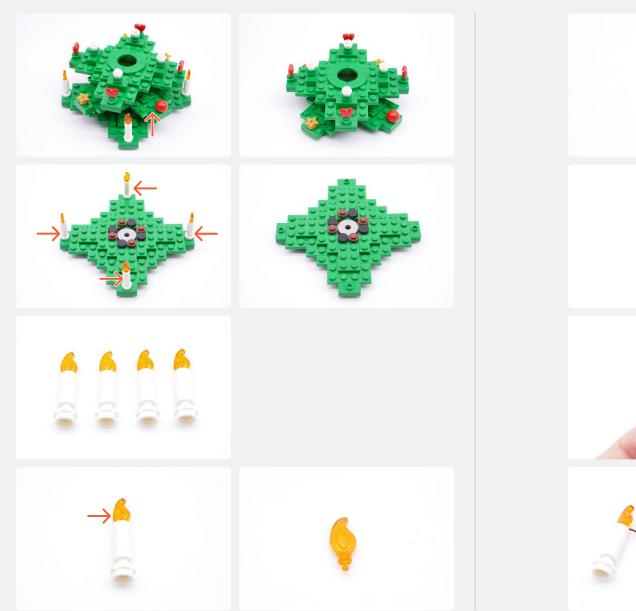


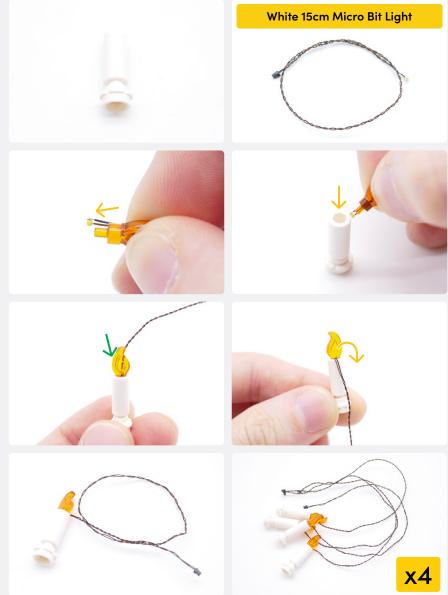








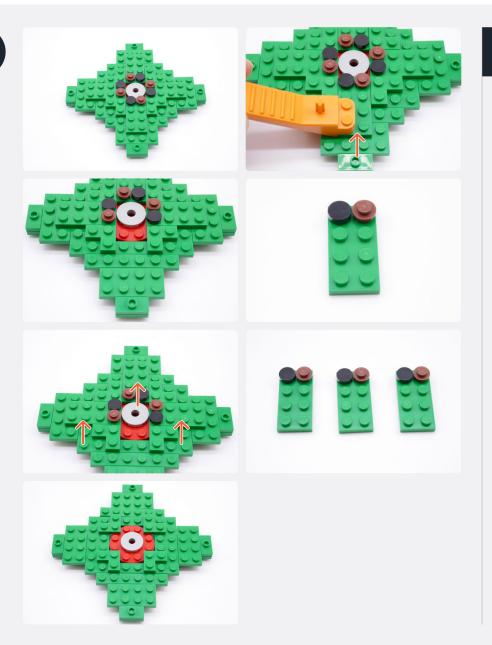


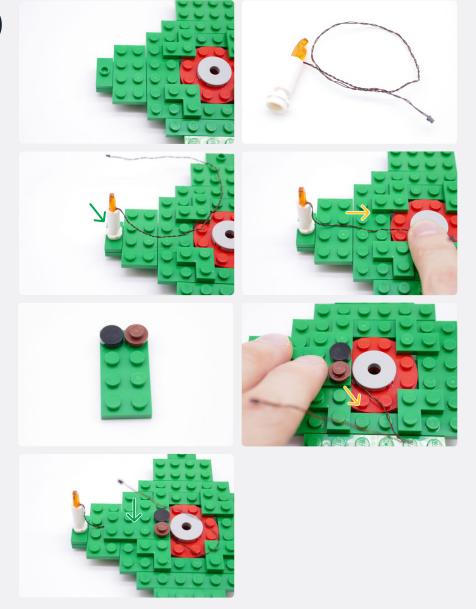










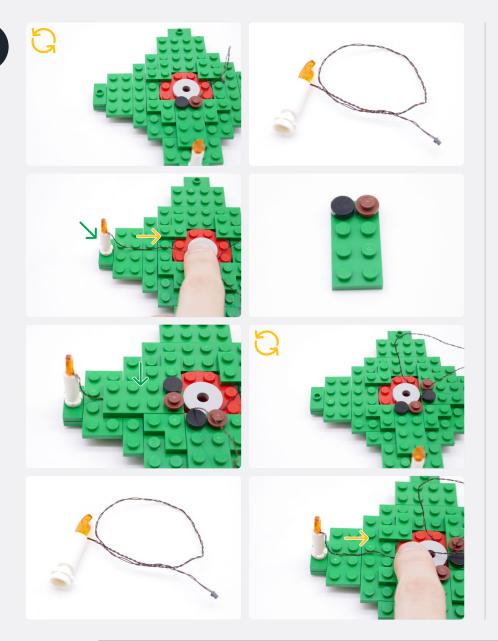


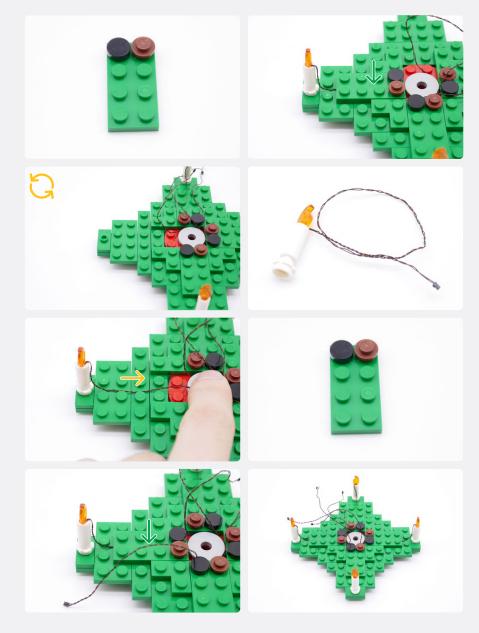












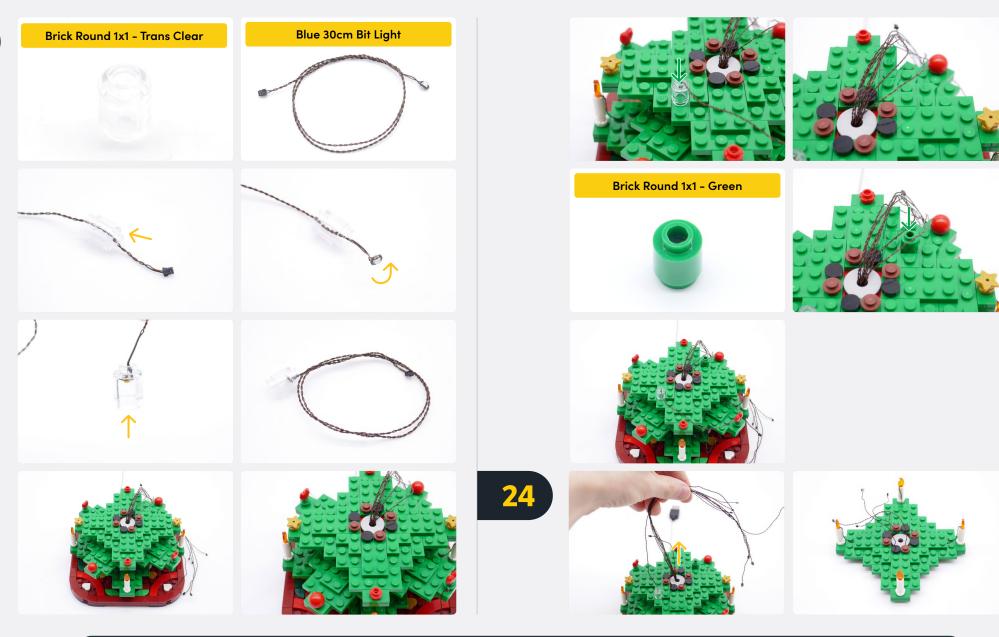








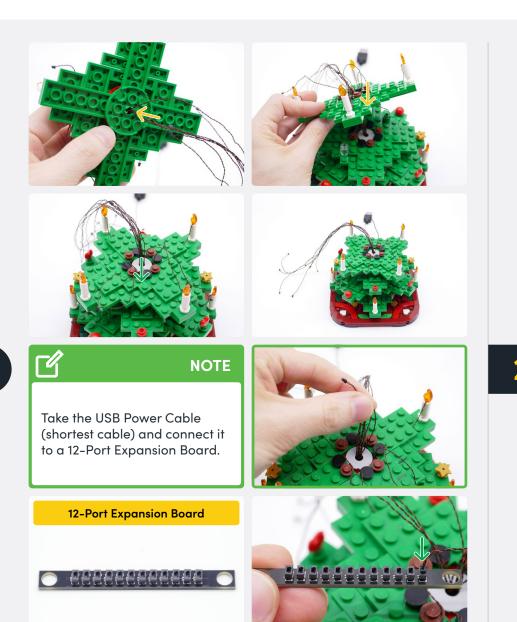


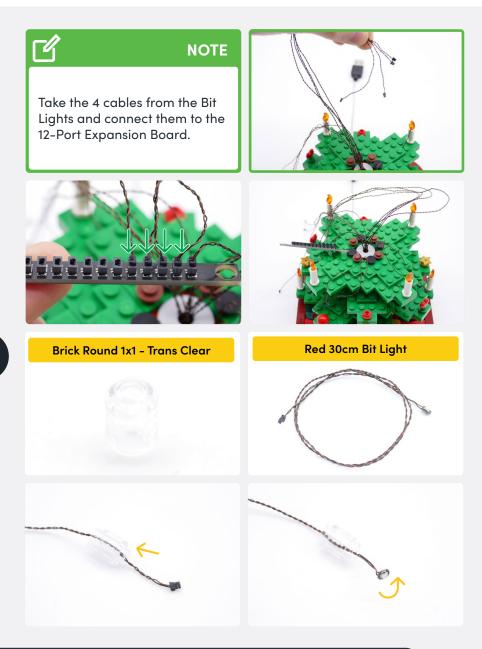










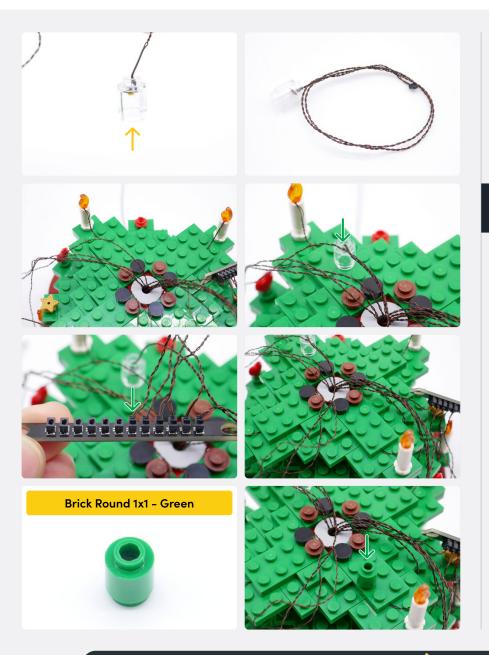












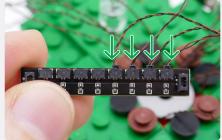


Take the 4 Micro Bit Light 15cm Cables from that level and connect them to an 8-Port Micro Expansion Board.



8-Port Micro Expansion Board





NOTE

Twist those cables by holding the board up as shown and lightly twirling it until it appears like in the following image.











Take the 4 Micro Bit Light 30cm Cables from the hole and connect them to the 8-Port Micro Expansion Board.

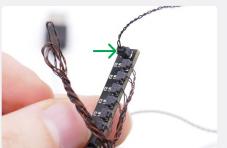










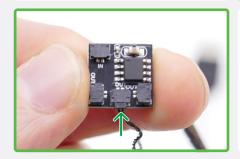


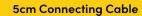
#### Flicker Effects Board



#### NOTE

Connect the 5cm Connecting Cable from the 8-Port Micro Expansion Board into the "OUT" port of the Flicker Effects Board









#### NOTE

Connect a new 5cm Connecting Cable into the "IN" port of the Flicker Effects Board





#### NOTE

Take the 12-Port Expansion Board and twist all of the cables from it together.















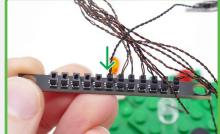




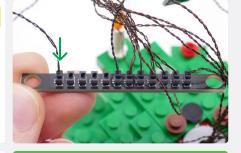
Connect the 5cm Connecting Cable from the "IN" port of the Flicker Effects Board, to the 12-Port Expansion Board.



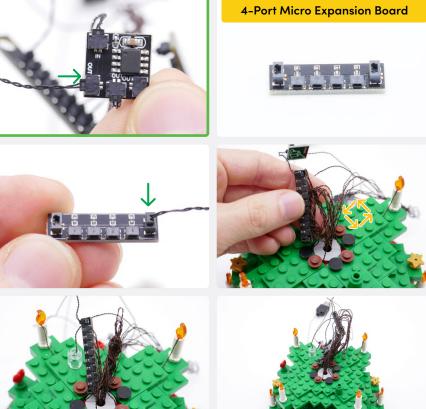
15cm Connecting Cable

















NOTE

Connect a new 15cm Connecting Cable into the "OUT" port of the Flicker Effects Board.









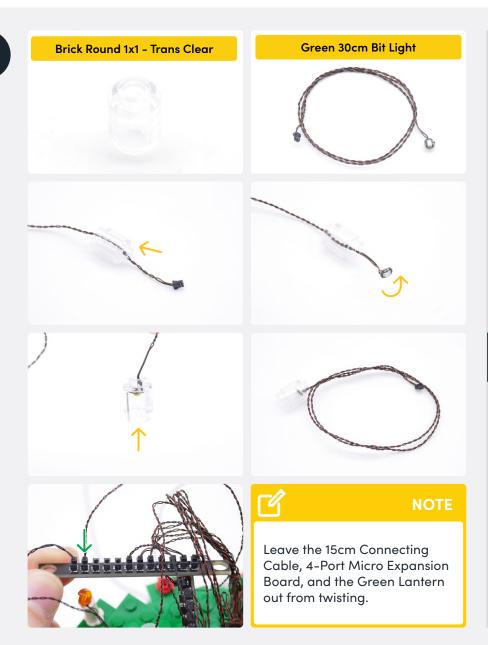




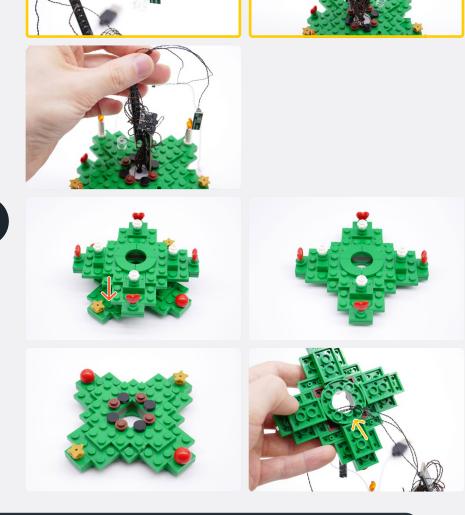




















Take care when threading through all of the Boards and Cables. Do not force it. If they don't go through at first, bundle them and try again.





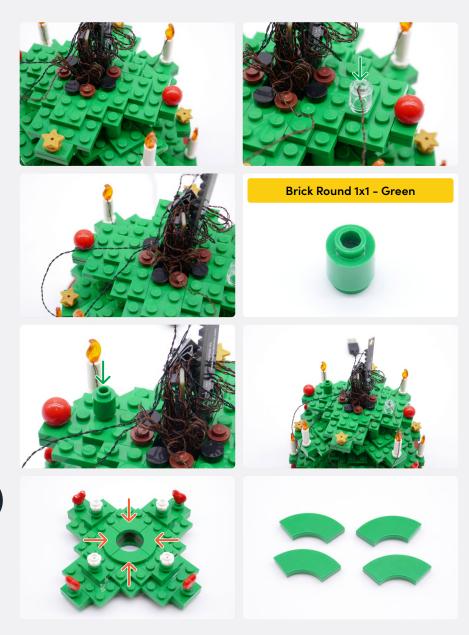










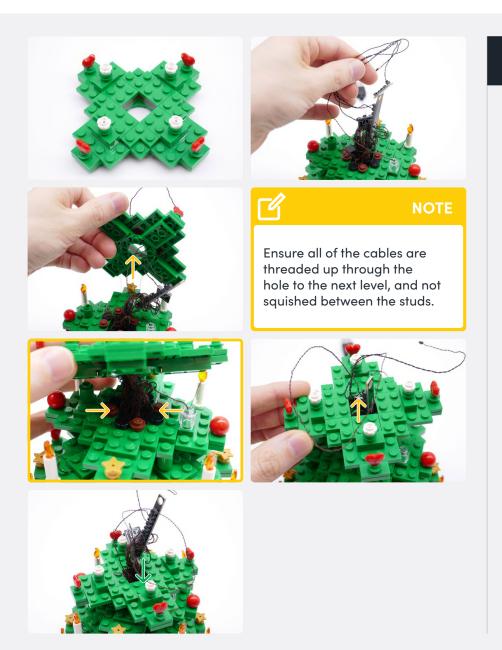


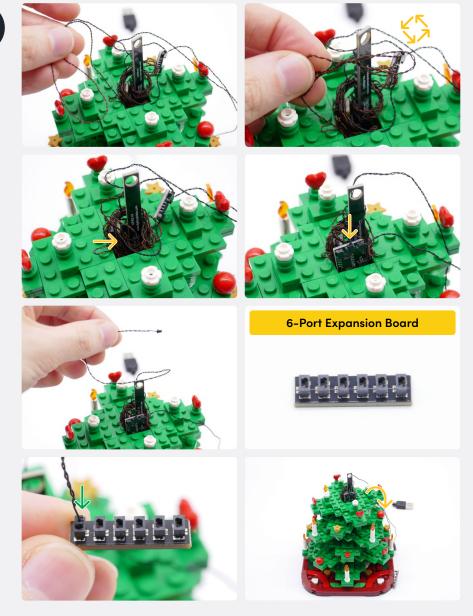
**INSTRUCTIONS** 

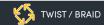












TURN / FLIP





Connect to a 5V USB Power Bank, 5V USB Wall Adaptor, or USB to AA Battery Pack (sold separately)













If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section.

















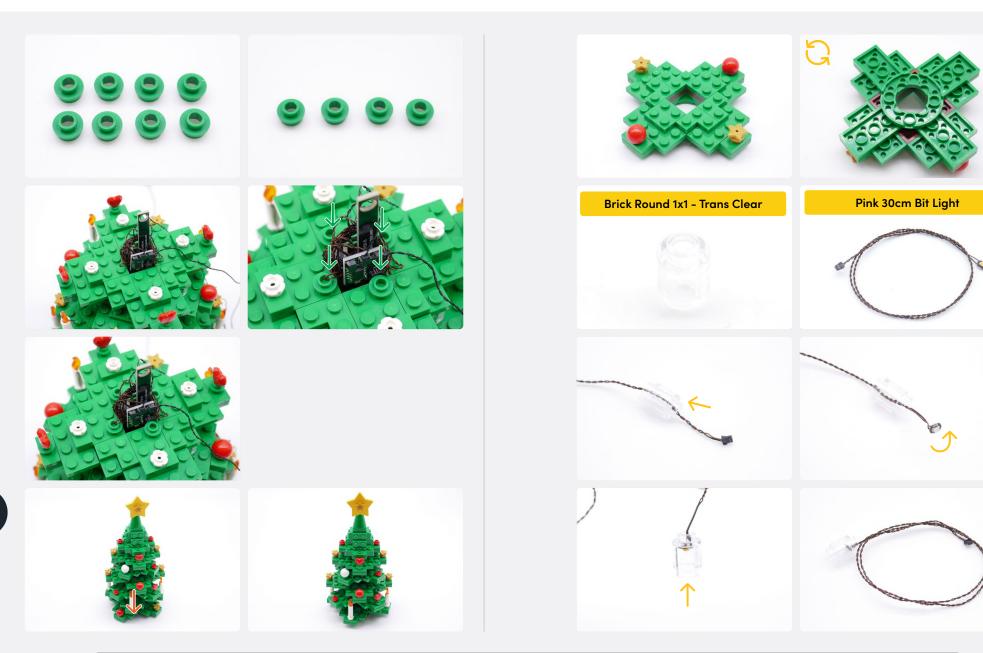










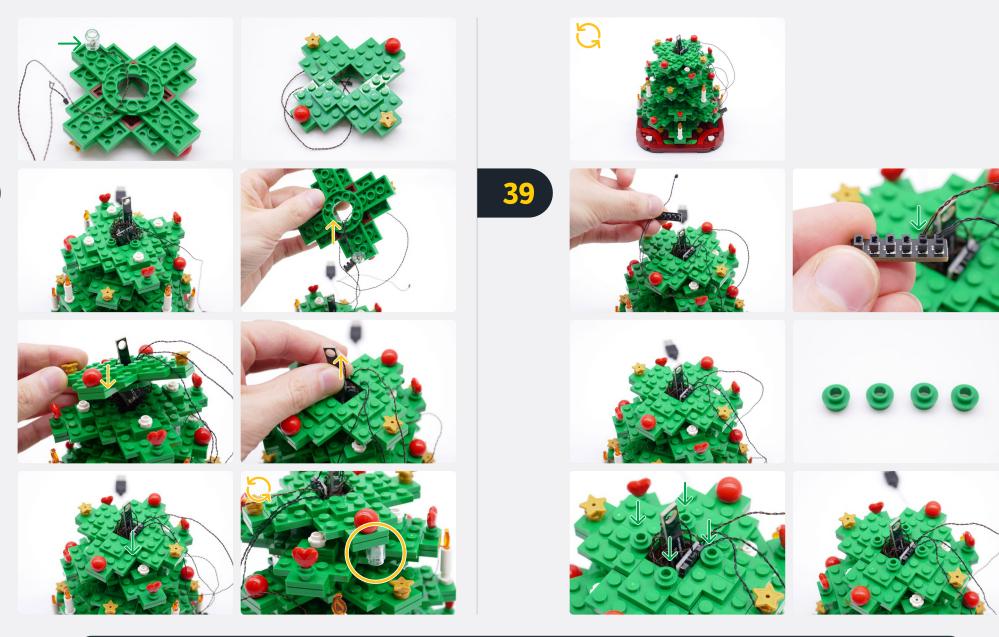




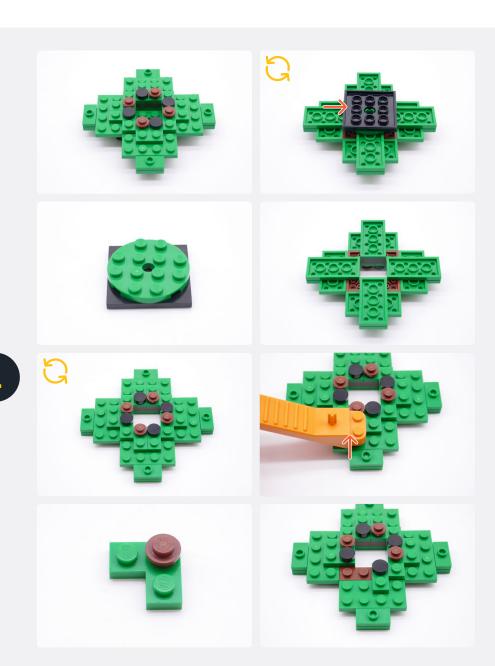
















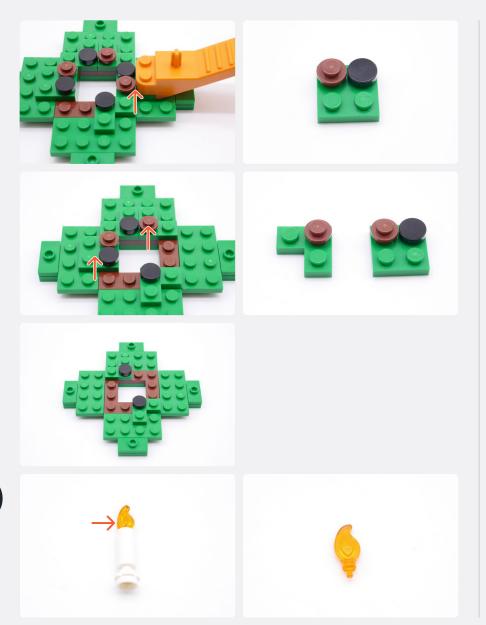


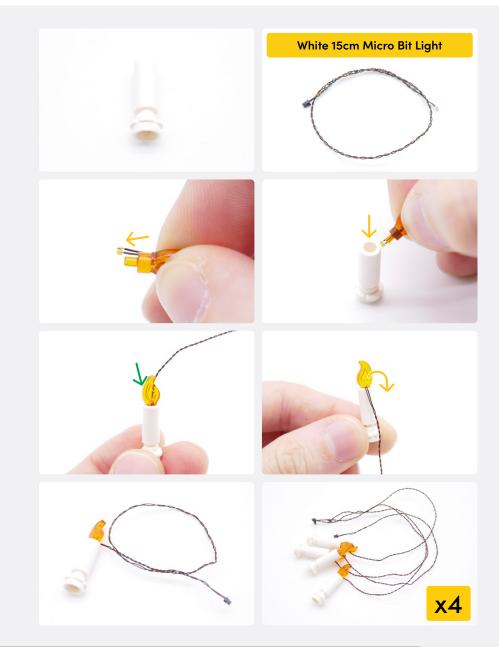








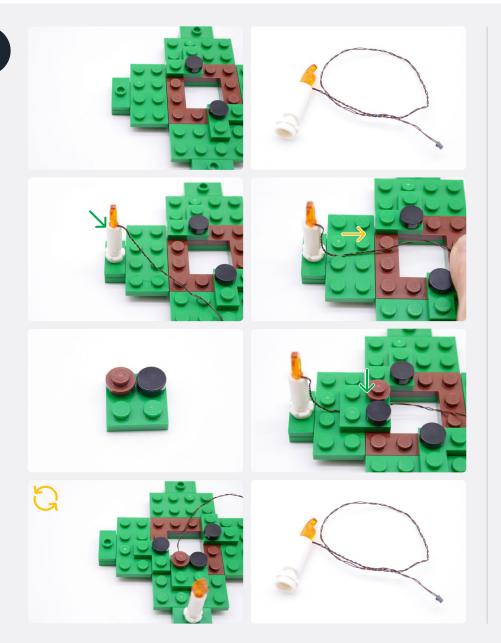


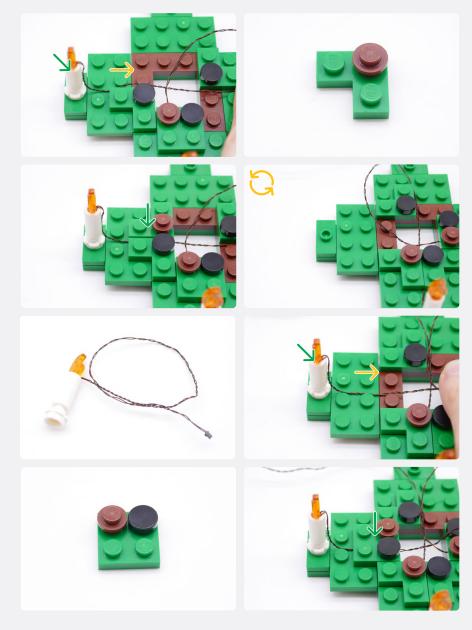


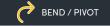




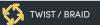






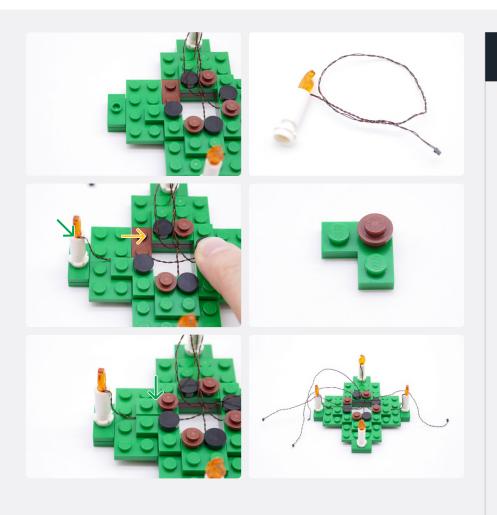


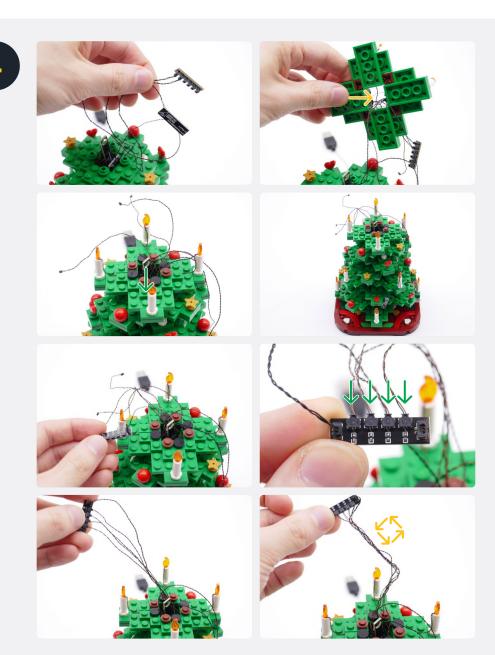














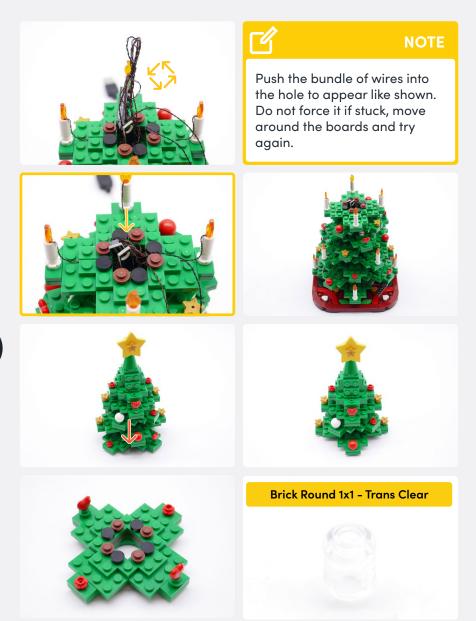


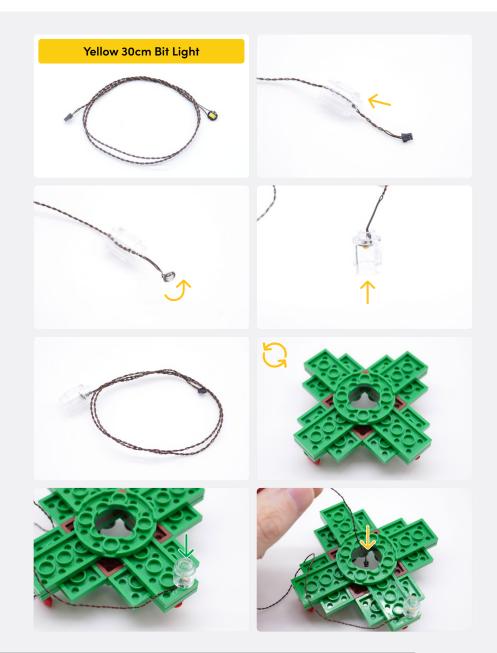




→ CONNECT











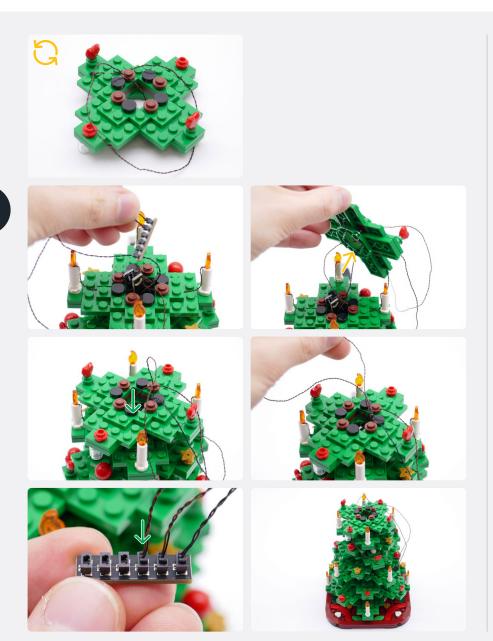






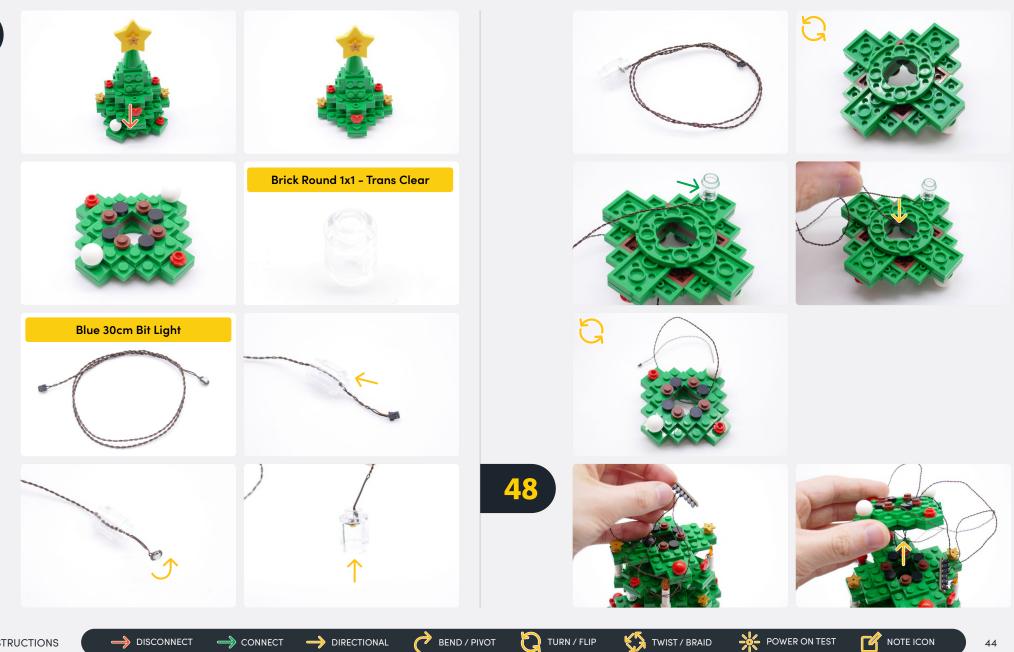




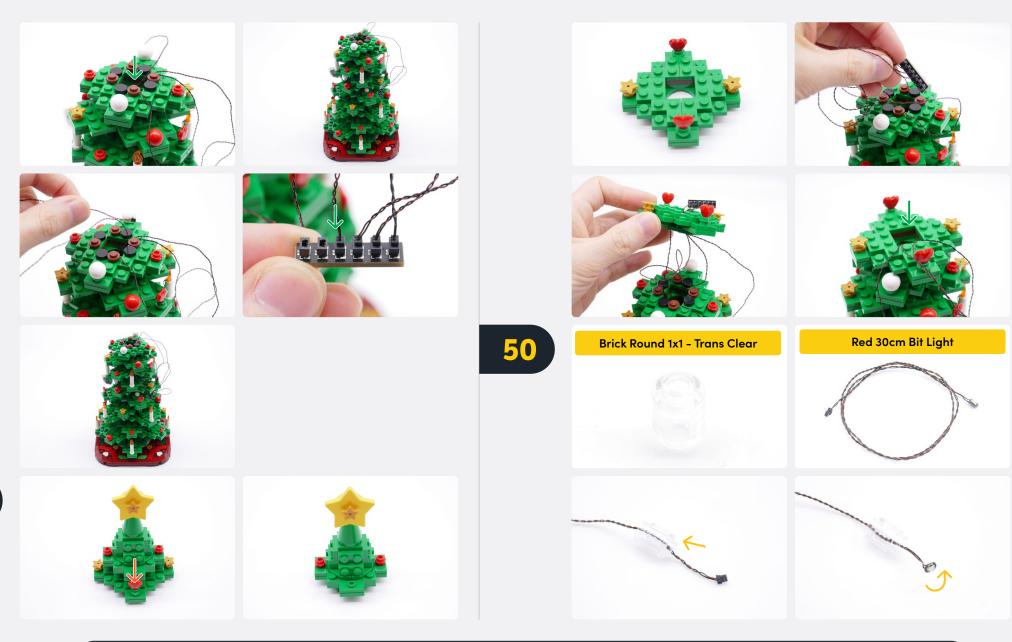










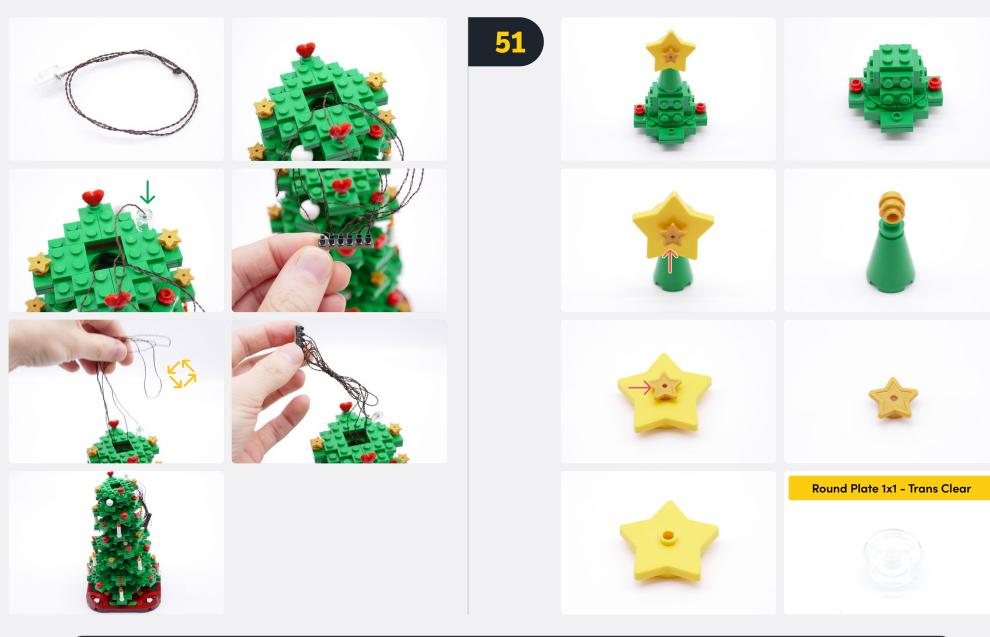










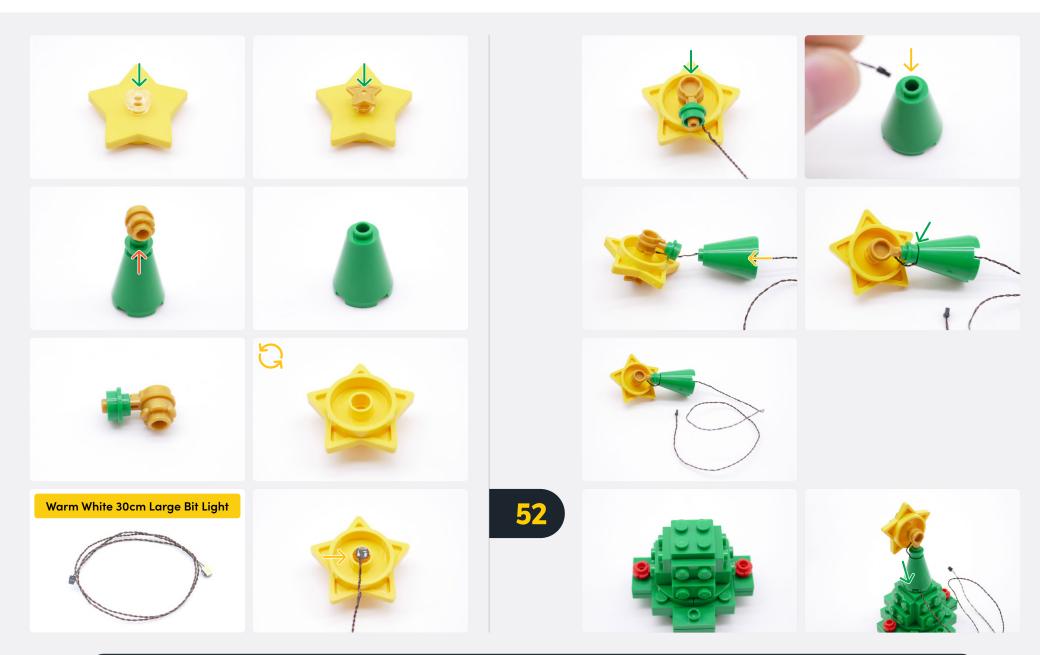










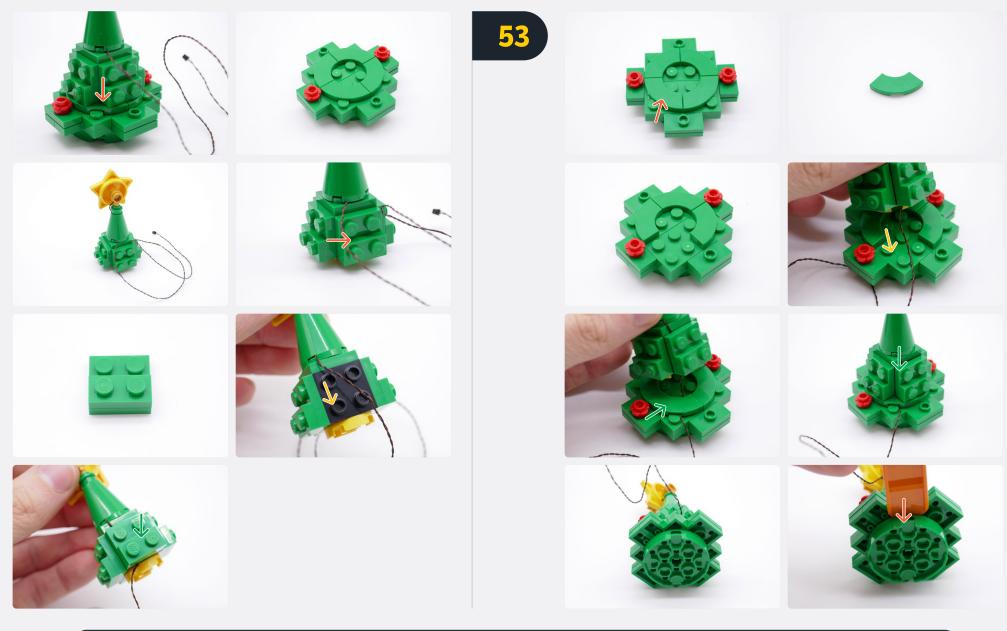














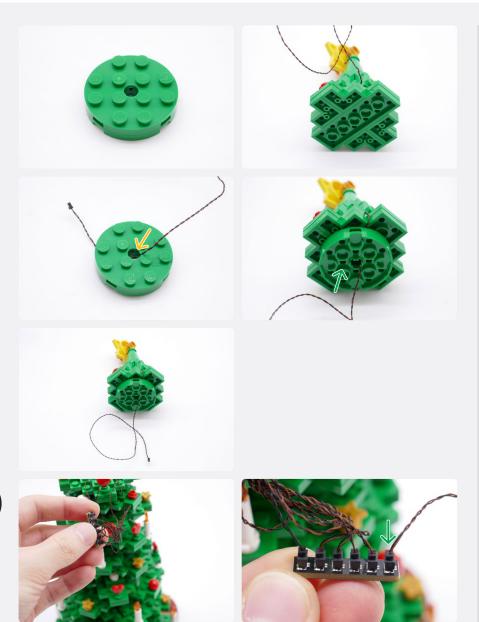












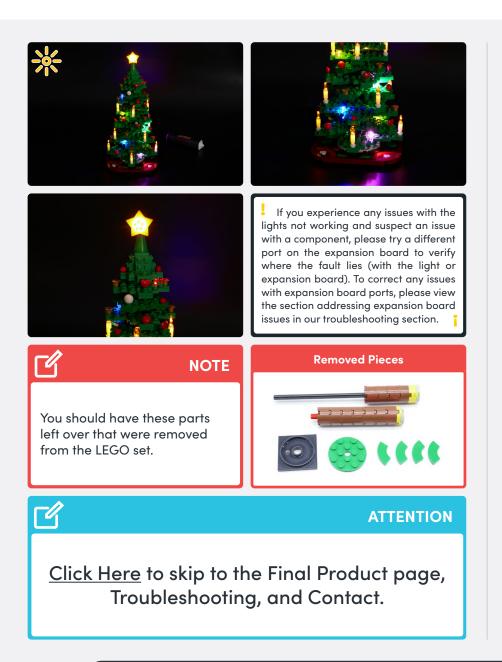


















BEND / PIVOT



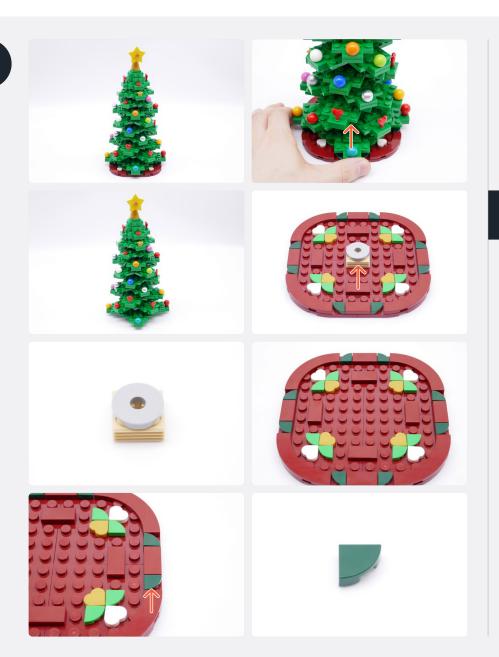


The following section is for the "Medium and Small Tree" variant. To light up the "Large Tree", go back to Page 12 or <u>click here</u>.

To ensure a smooth installation of your light kit, please read and follow each step carefully. If you run into any issues, please refer to the online troubleshooting guide.









**USB Power Cable** 





NOTE

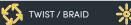
Place back down the tan brick but do not fully connect it yet.



NOTE

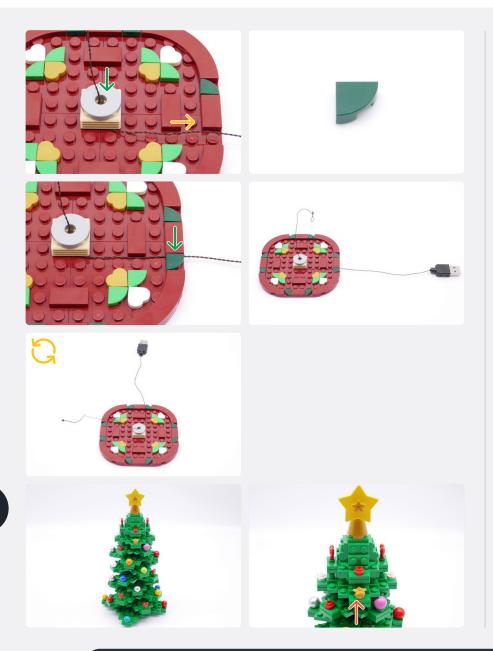
Pull the USB Power Cable up and leave around 10cm of length.

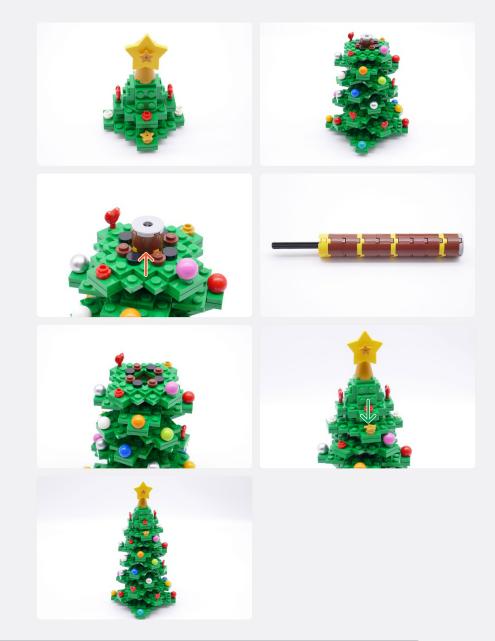






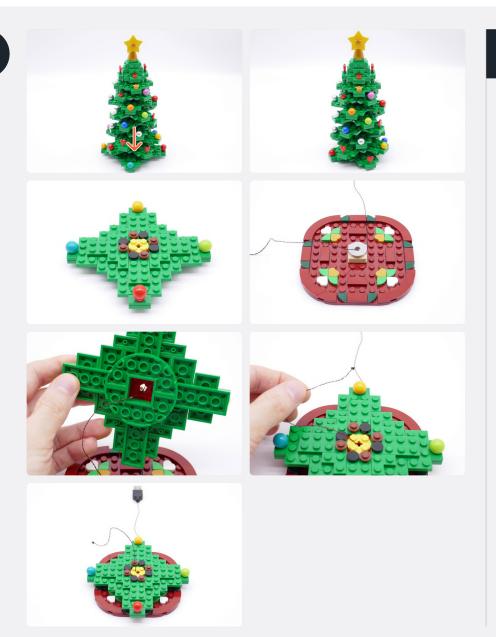


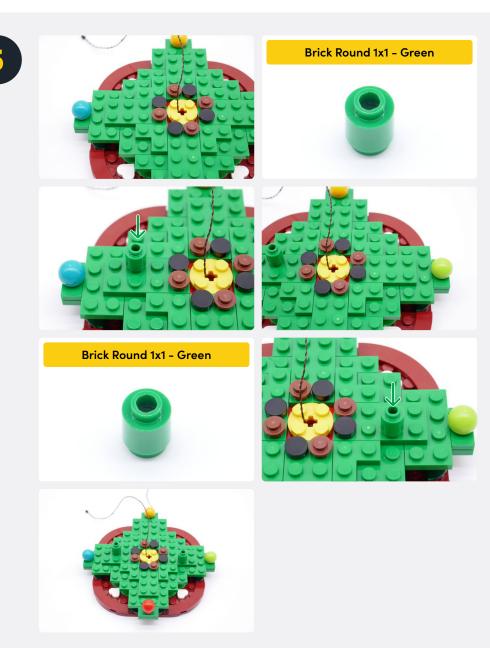




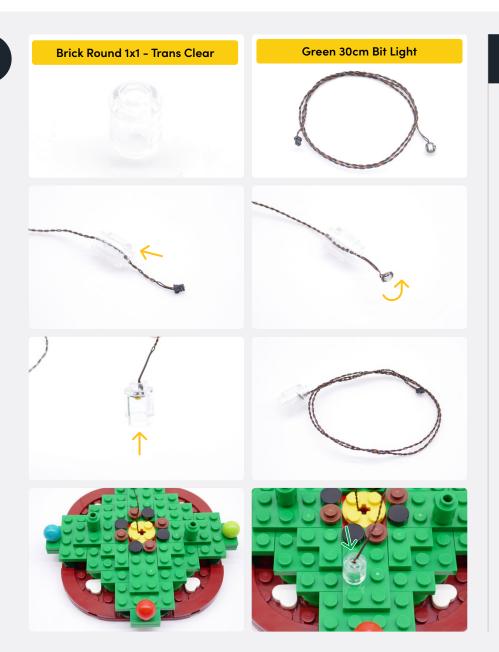
















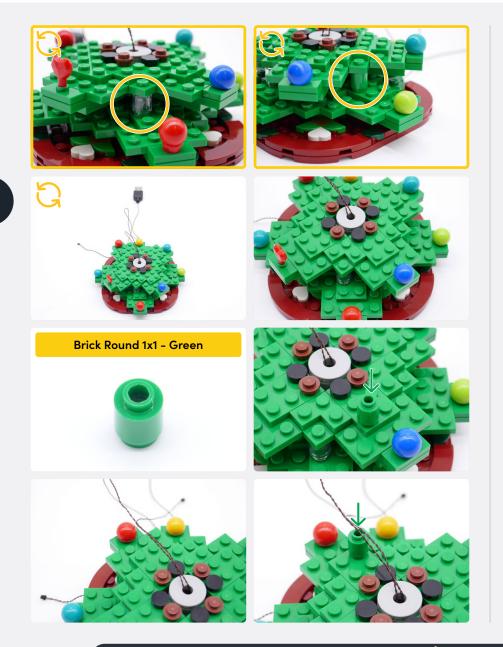


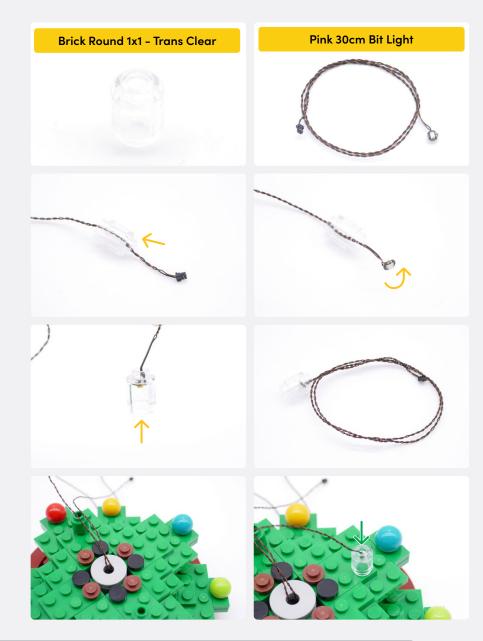




→ CONNECT











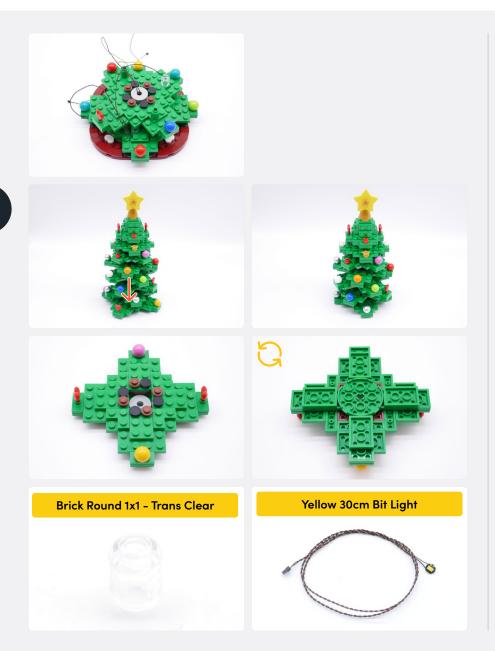


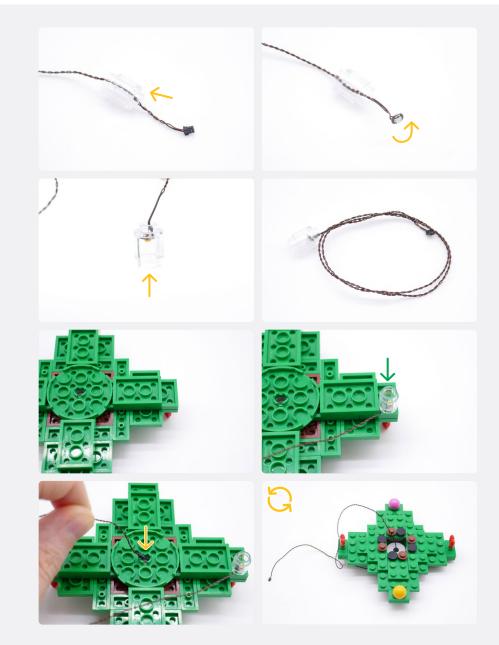










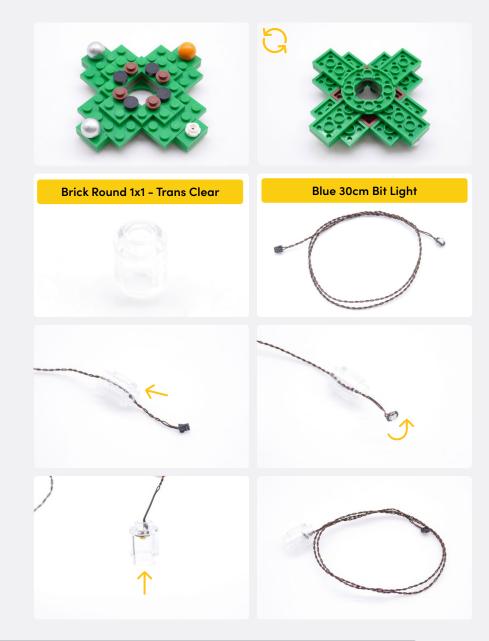










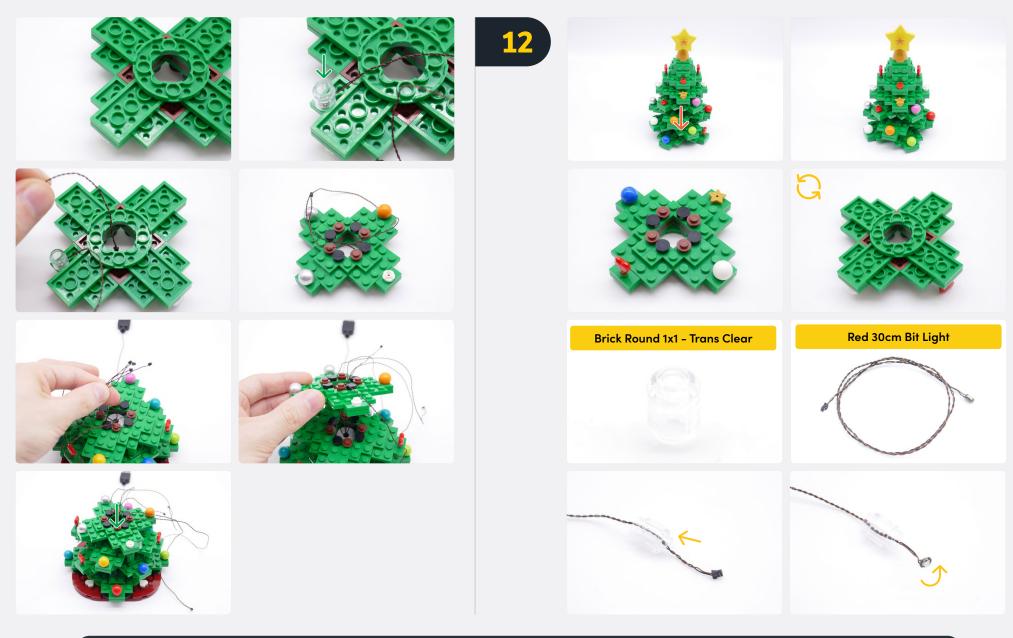












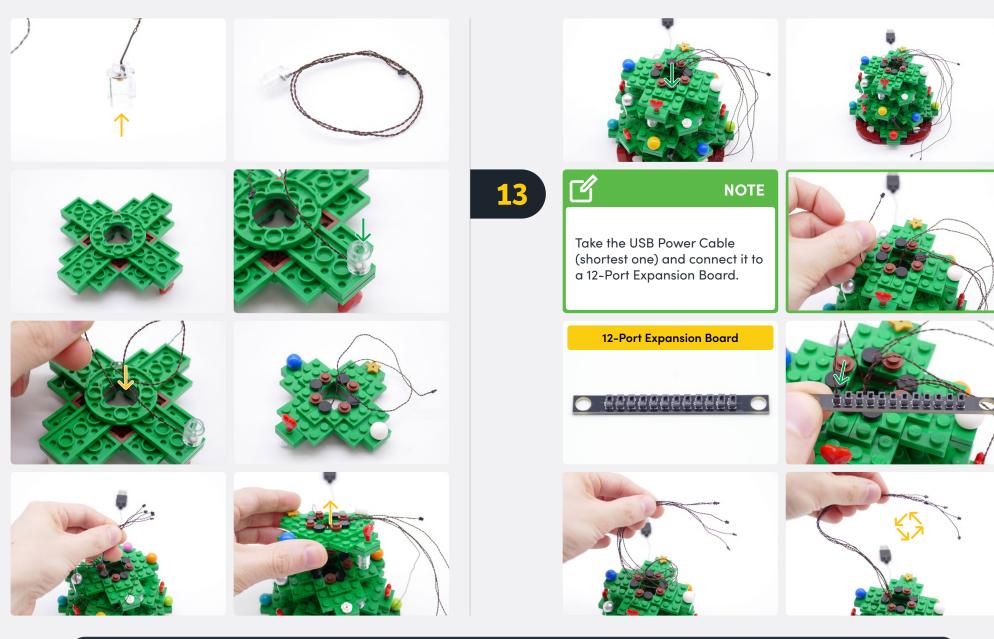










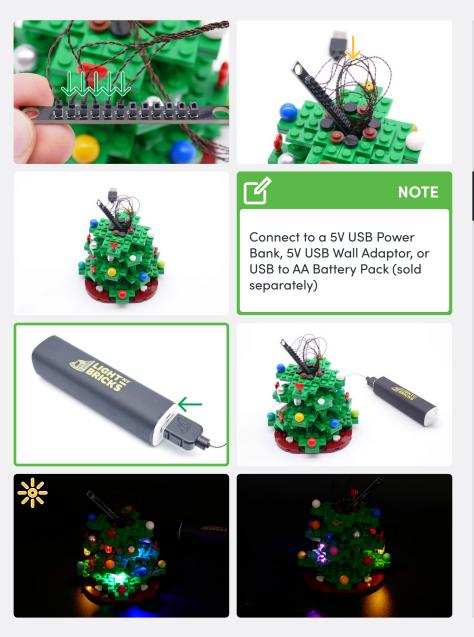












If you experience any issues with the lights not working and suspect an issue with a component, please try a different port on the expansion board to verify where the fault lies (with the light or expansion board). To correct any issues with expansion board ports, please view the section addressing expansion board issues in our troubleshooting section.



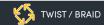






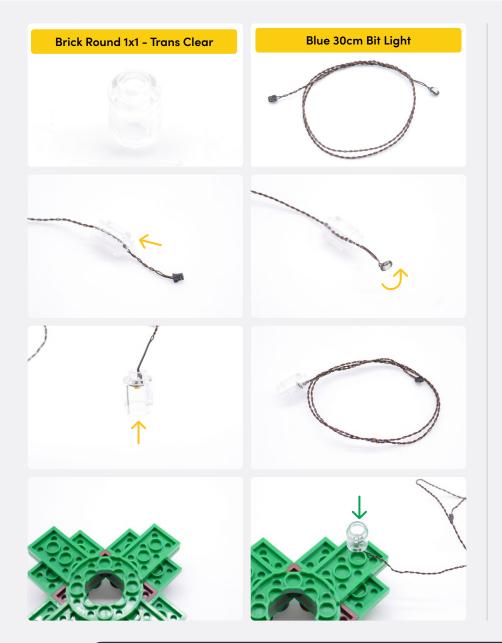










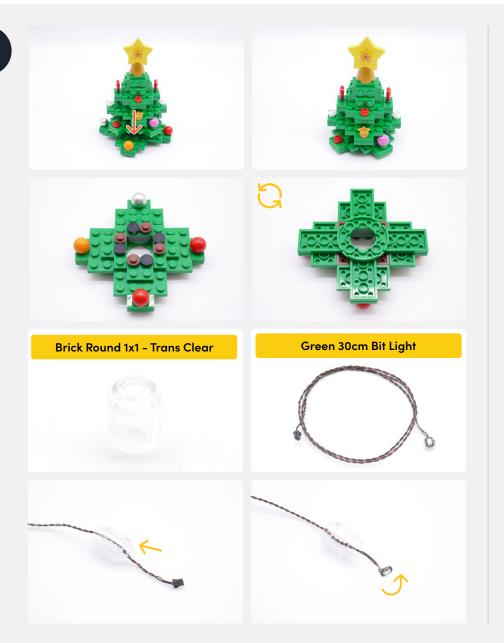


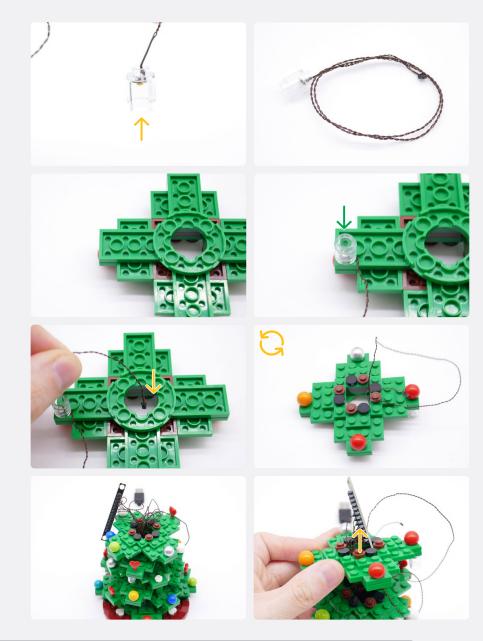












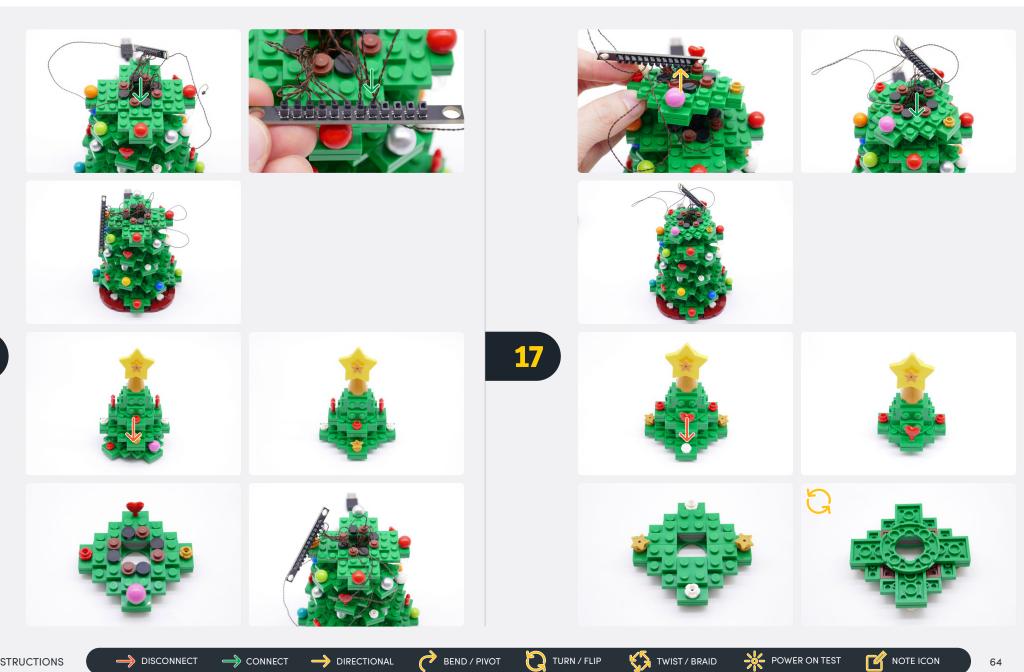












TWIST / BRAID

TURN / FLIP

INSTRUCTIONS

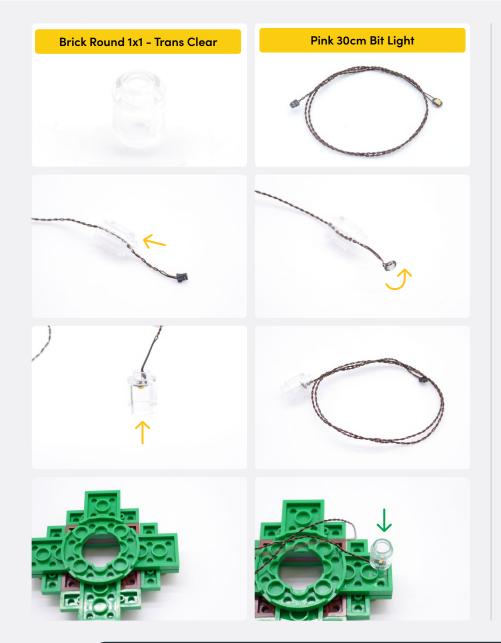
→ DISCONNECT

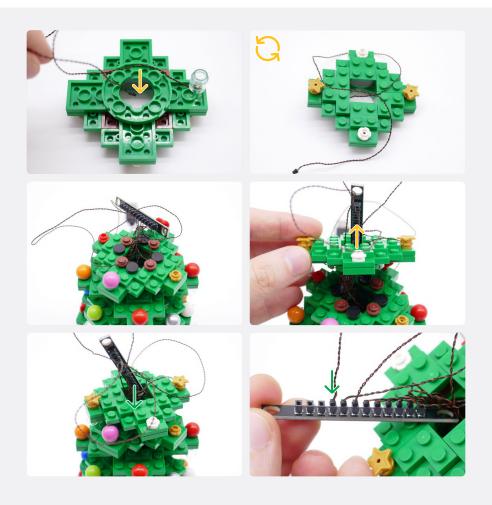
→ CONNECT

→ DIRECTIONAL

NOTE ICON









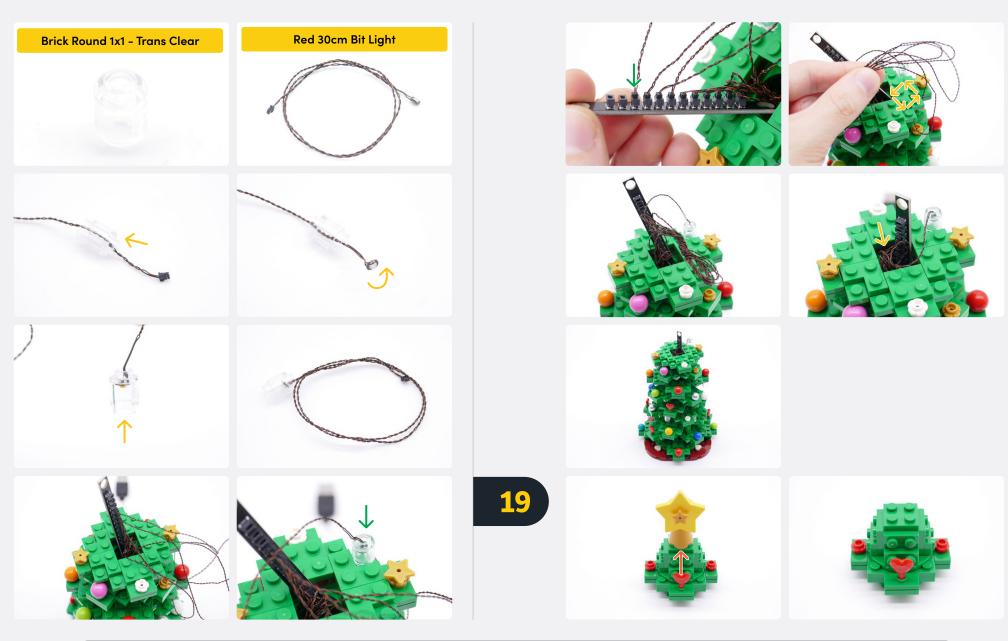










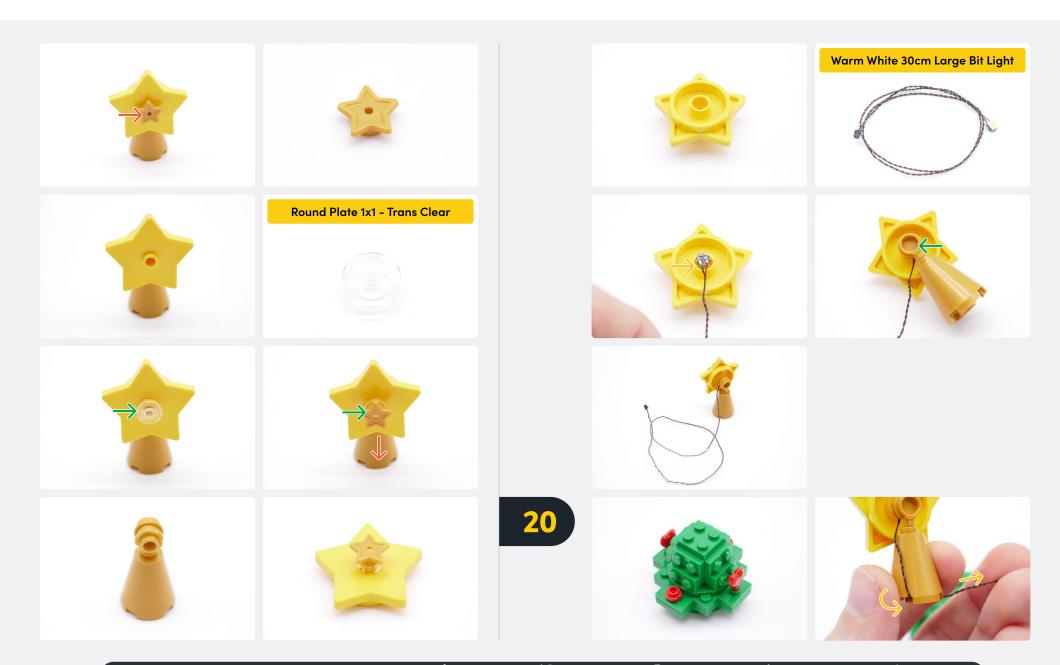












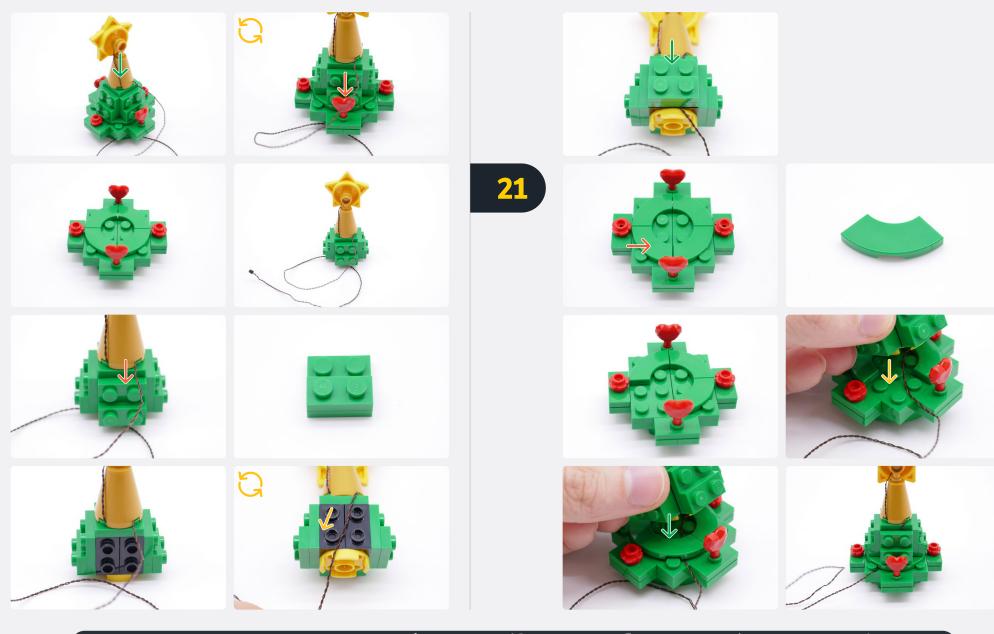










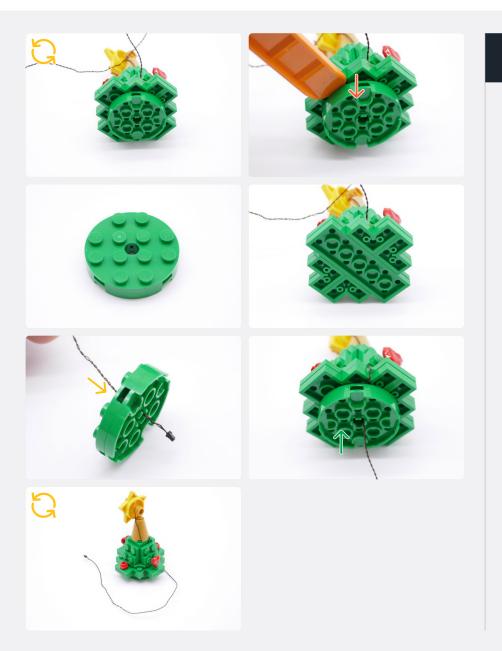


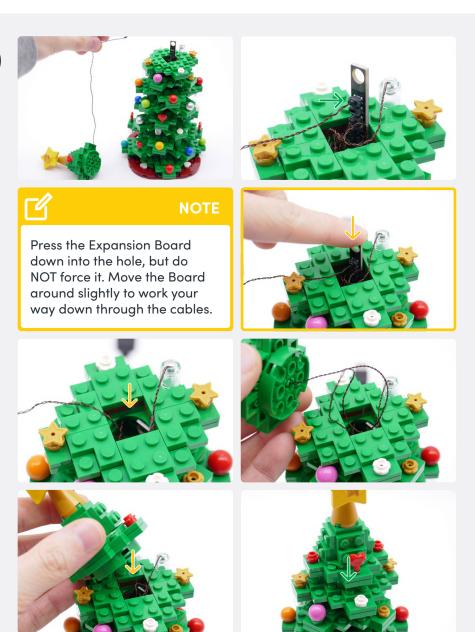






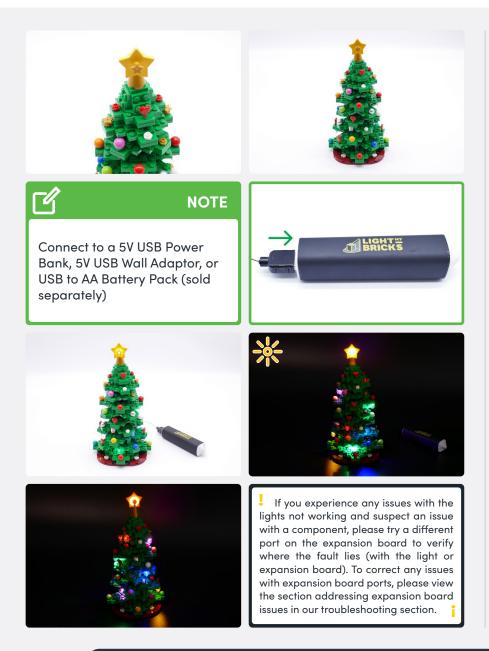














NOTE

You should have these parts left over that were removed from the LEGO set



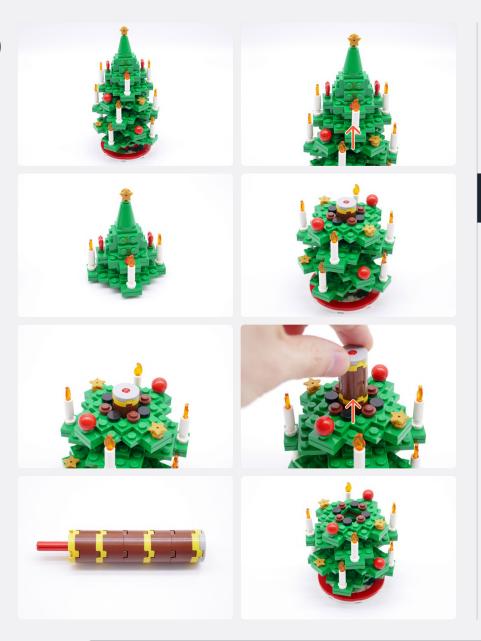


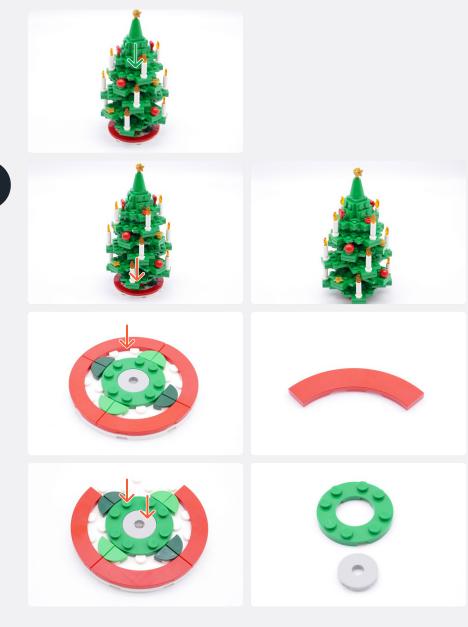






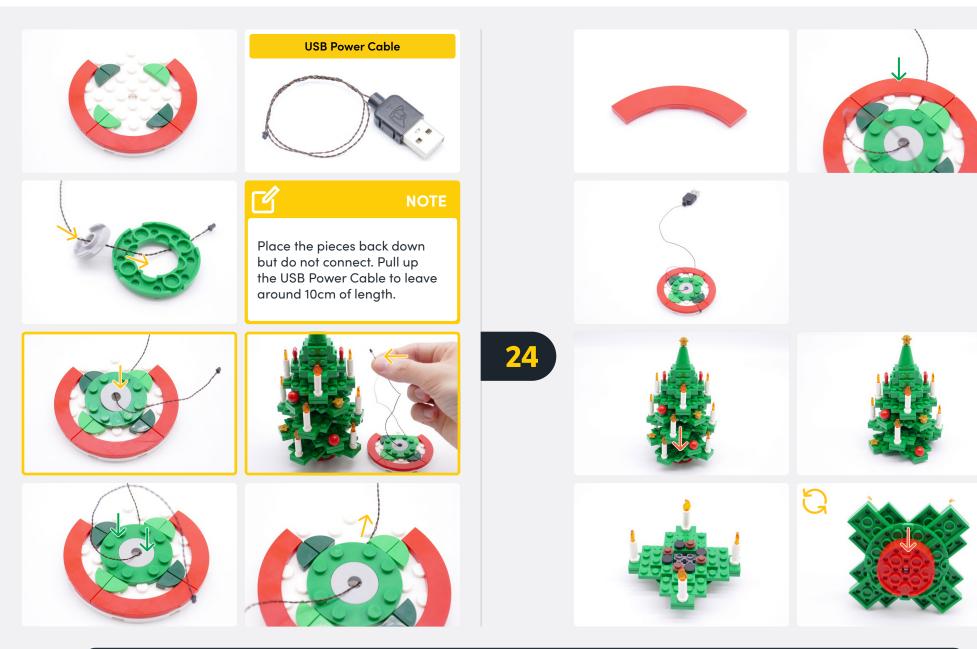










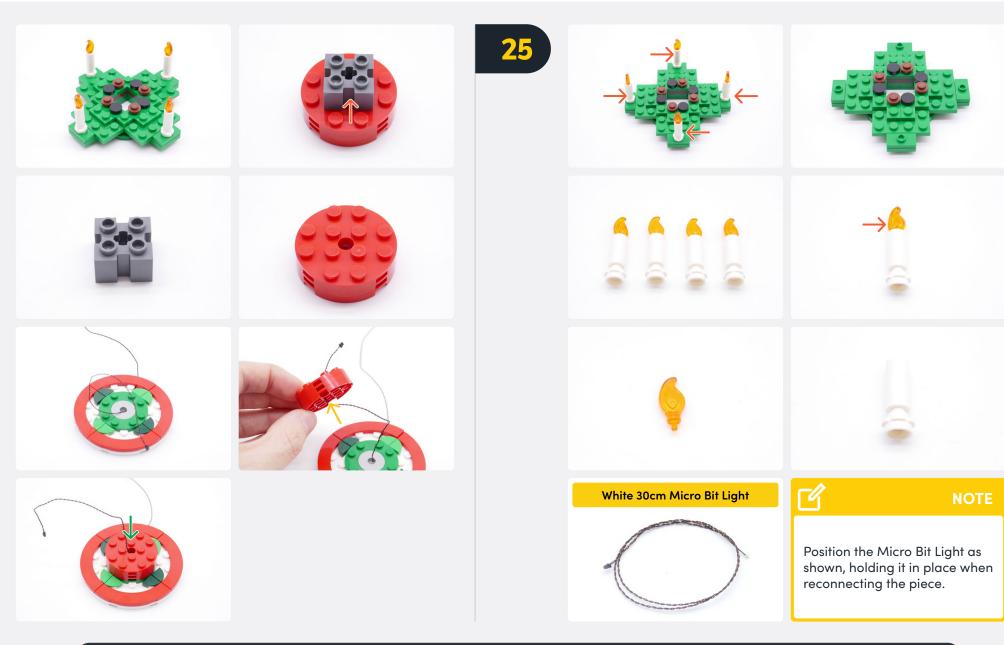














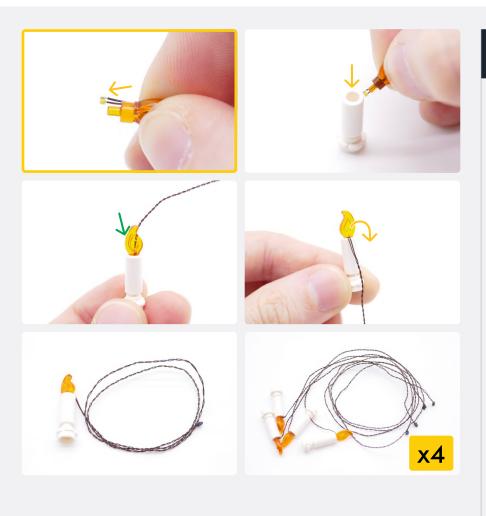


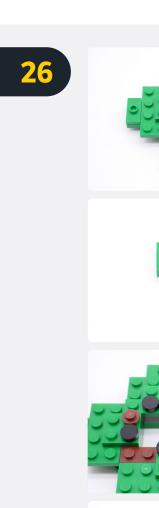




















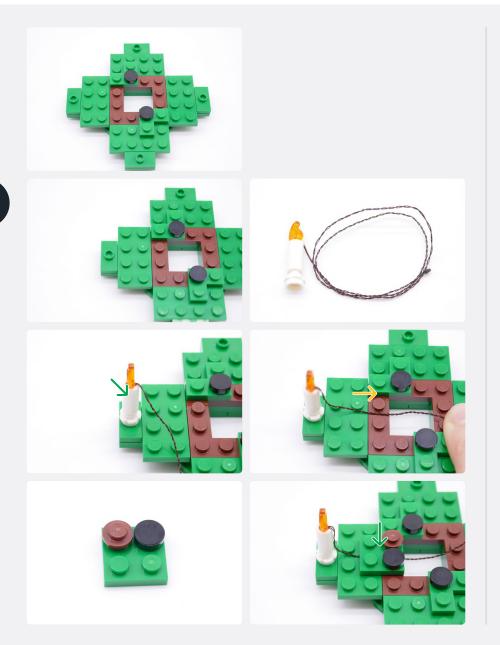


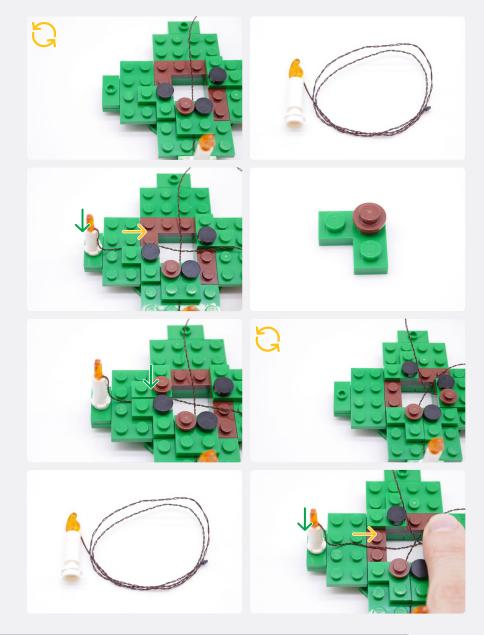














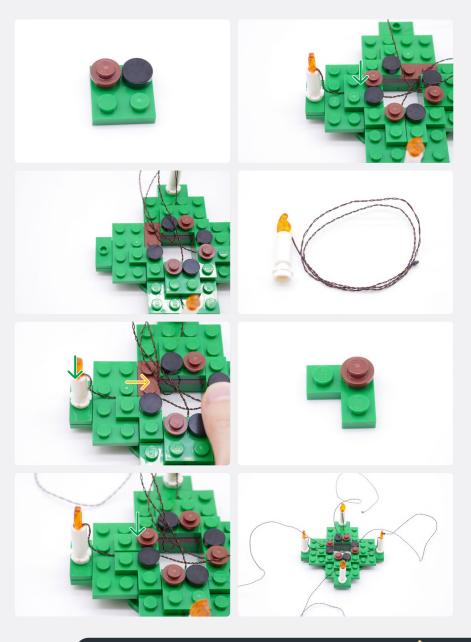






75





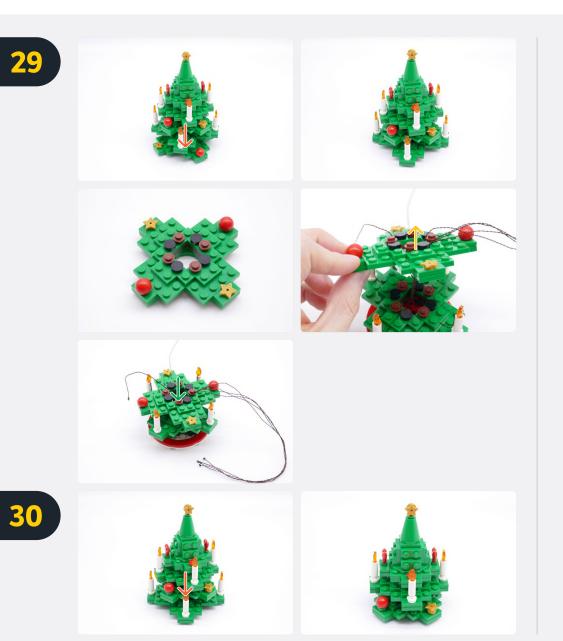


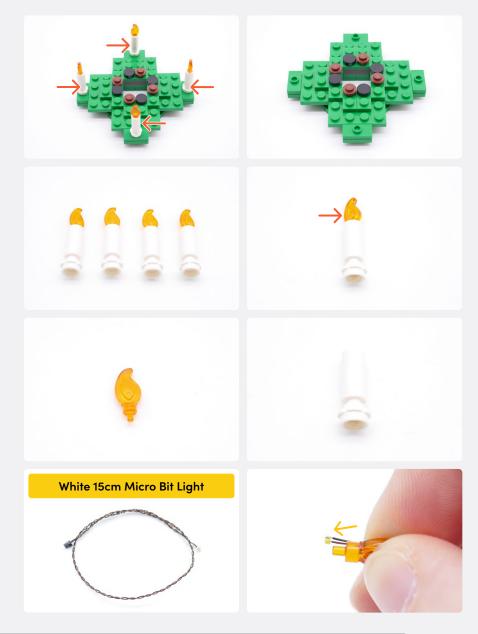










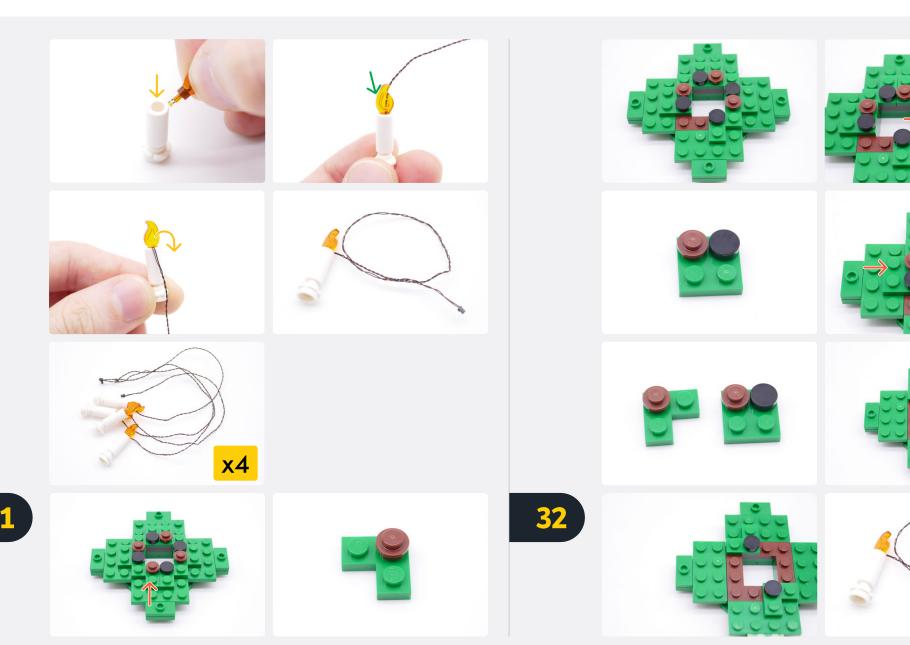












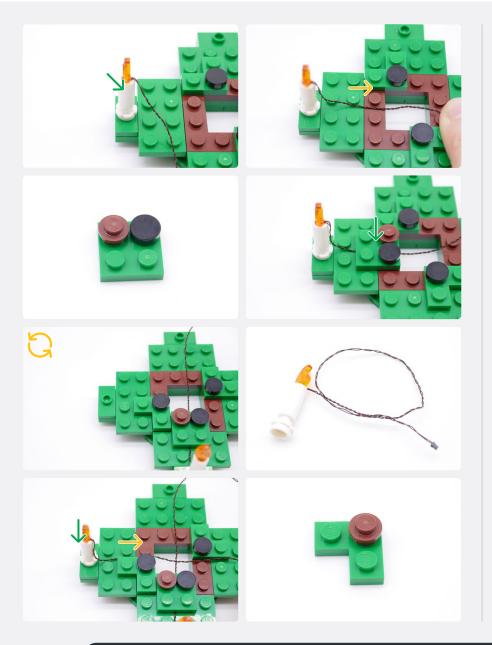


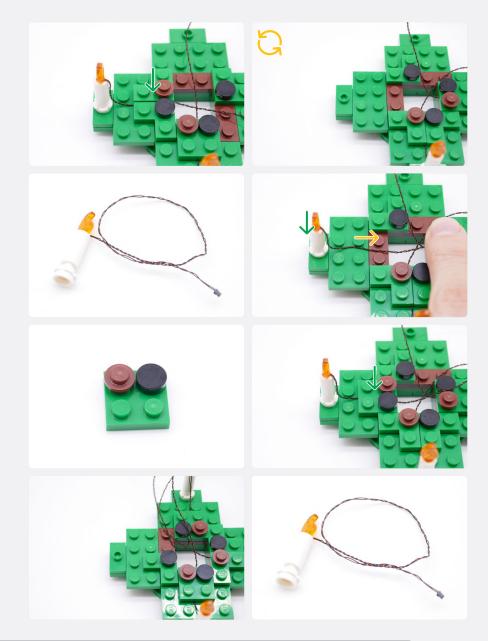


















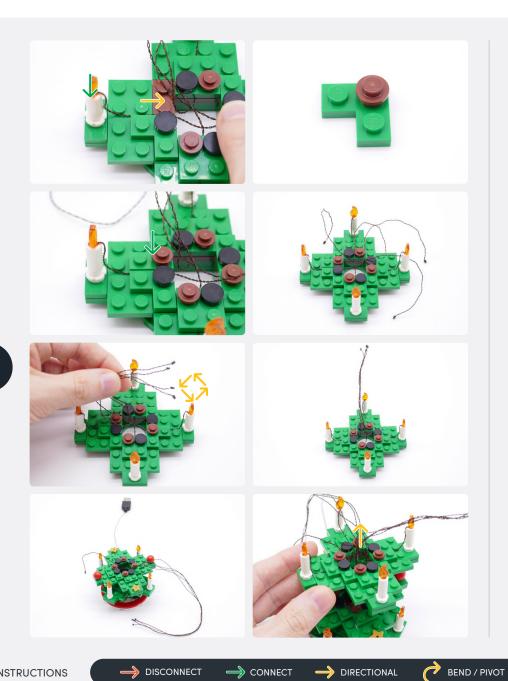


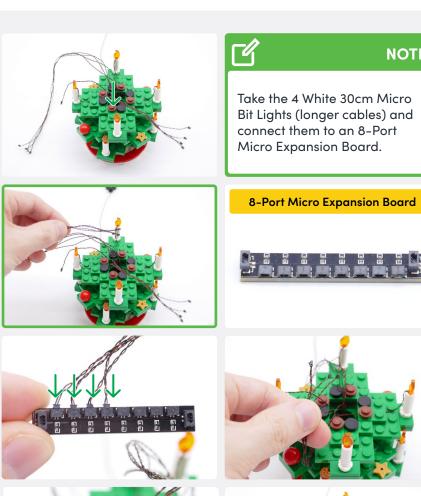


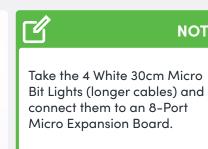














NOTE















NOTE

Push the Board into the hole, but do NOT force it. Move the Board around to get past the cables.













NOTE

Connect the 5cm Connecting Cable into 8-Port Micro Expansion Board.











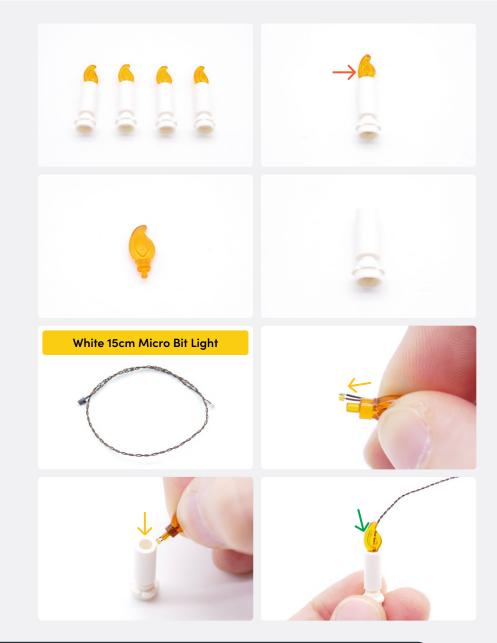




TWIST / BRAID



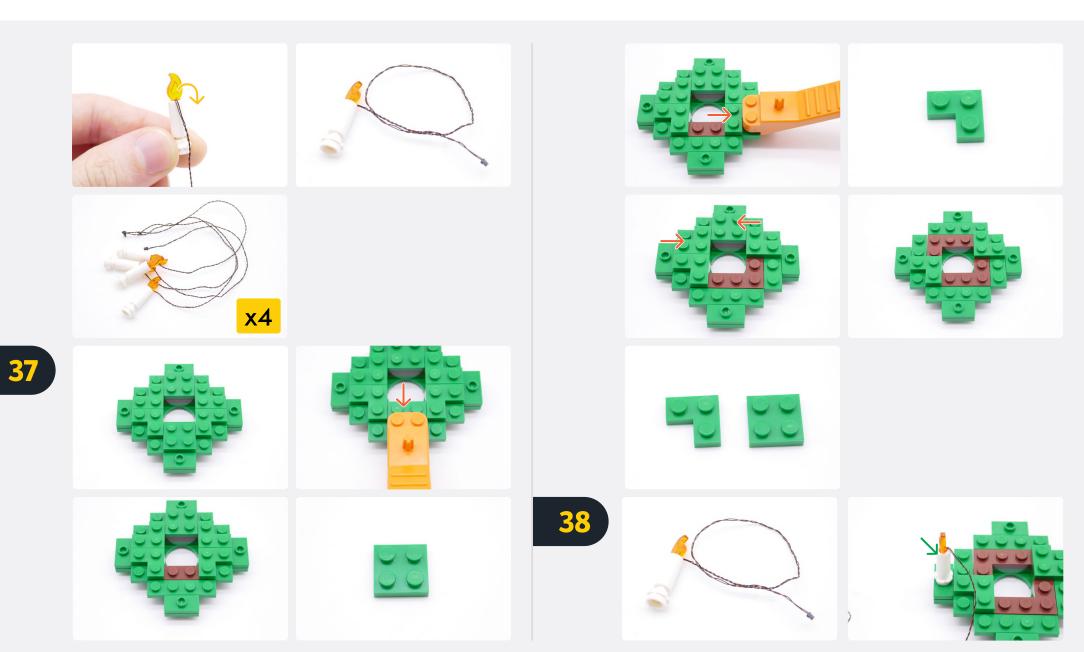














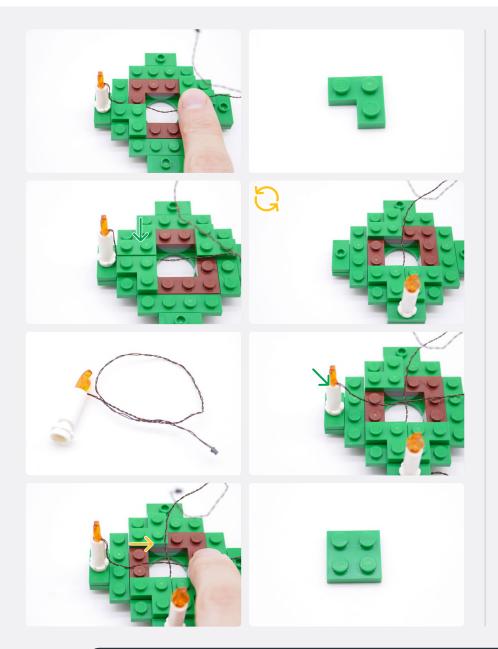


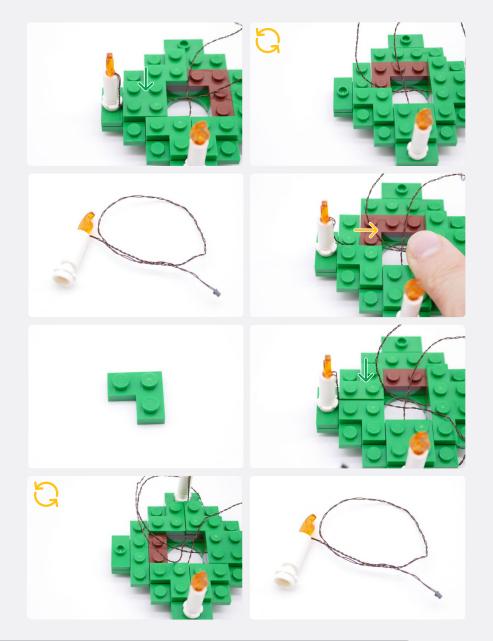


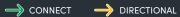












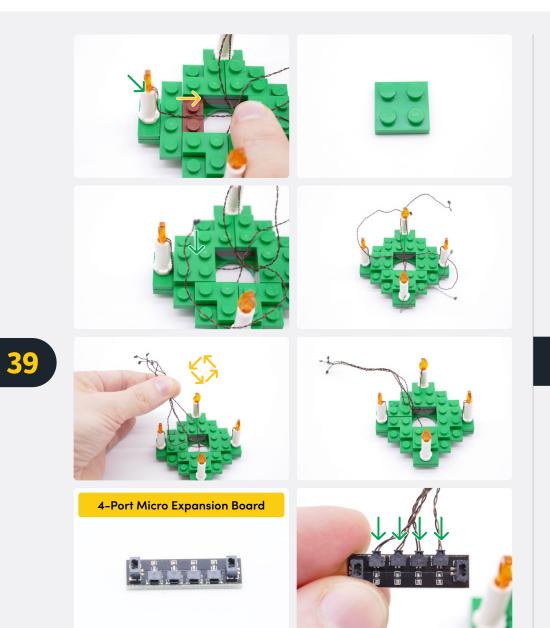






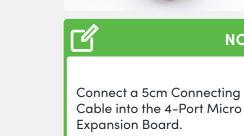




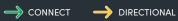




NOTE

















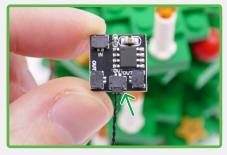


#### Flicker Effects Board



#### NOTE

Connect the other end of the 5cm Connecting Cable into the "OUT" port of the Flicker Effects Board.









#### NOTE

Take the 15cm Connecting Cable and connect it into the "OUT" port of the Flicker Effects Board.

**5cm Connecting Cable** 





### 

#### NOTE

Take a 5cm Connecting Cable and connect it into the "IN" port of the Flicker Effects Board.

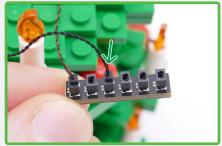






#### NOTE

Connect the other end of the 5cm Connecting Cable into the 6-Port Expansion Board.











#### NOTE

Push in the 6-Port Expansion Board but do NOT force it. Check if there is enough space, if not push down the other boards more then try again.









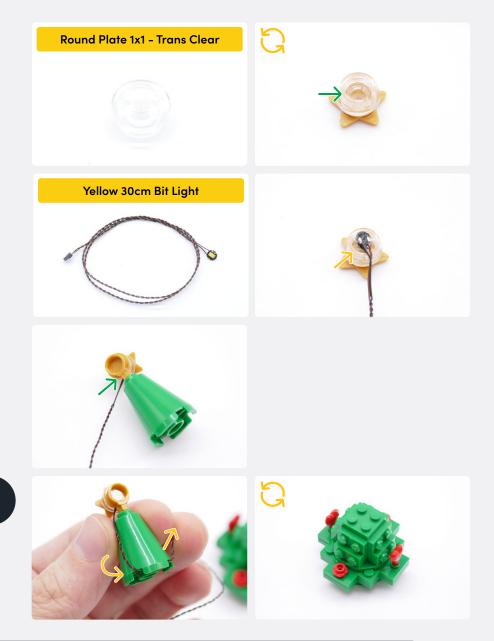






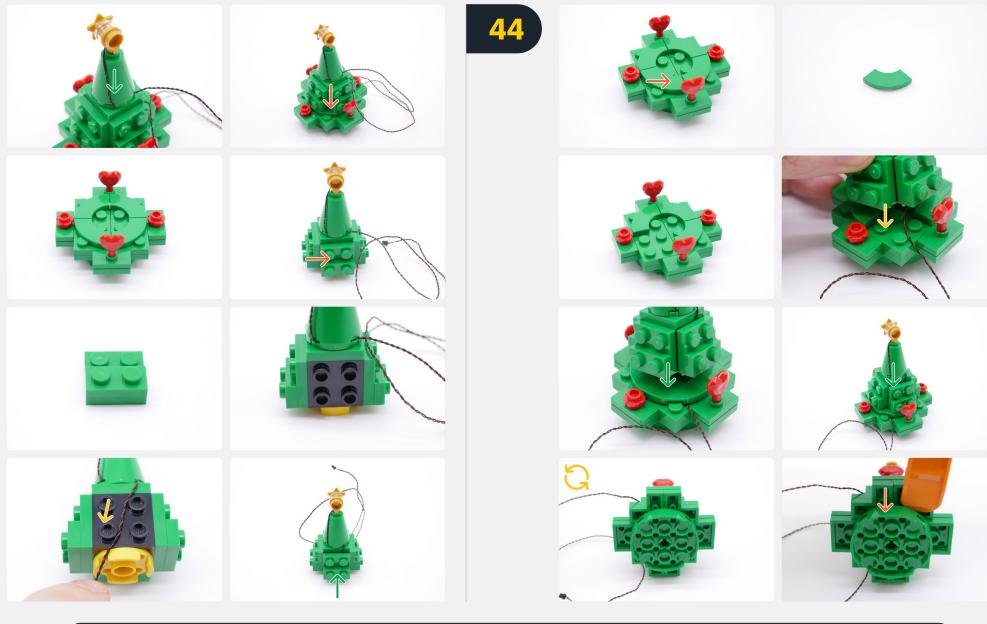






→ DISCONNECT











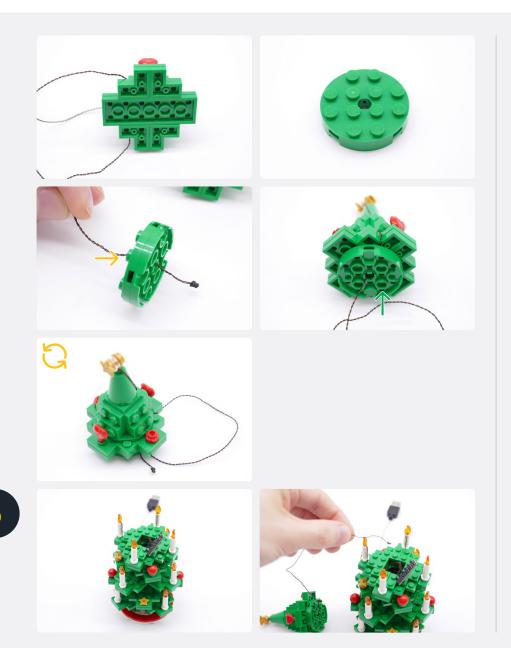


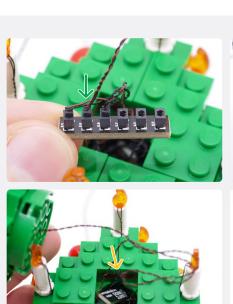




















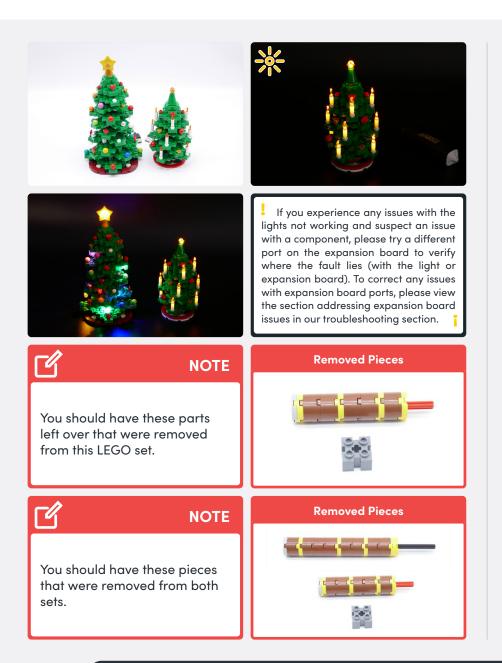




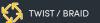


NOTE













### **FINAL PRODUCT**

This finally completes installation of the Light My Bricks

LEGO® Christmas Tree 2-In-1 40573 Light Kit.







### **TROUBLESHOOTING**

Light My Bricks lighting
kits contain individual
components that are very
small and can be easily
damaged if not handled
correctly.

To prevent unnecessary damage to components, we highly recommend that the User Guide section, "Important things to note" is read carefully. Follow the handling procedures in the User Guide to help prevent faults and damages to your Light My Bricks components.

If you are experiencing issues with your Light My Bricks set, watch our troubleshooting video here or read on for a list of common causes to help you troubleshoot.



### **Troubleshooting**

Firstly, ensure that the batteries have power using a battery charge gauge.

If the batteries have no power, replace the batteries.

If the batteries still have power, check to see if the batteries have been inserted correctly into the battery pack.

## **Check for AA batteries using the AA battery pack**

Inside the battery pack are symbols indicating which direction the AA battery should be inserted. The flat side of the battery should be paired with the spring side of the battery pack.

If the batteries have been installed correctly and your kit still isn't operating correctly, the next step is to check the wiring.







### **Troubleshooting**

#### **Check Your Wires**

In order for Light My Bricks components to fit in between and underneath LEGO® bricks, the components need to be very small. Due to this nature, Light My Bricks components can be easily damaged when not handled correctly.

Be careful when removing unpacked components out of the packaging and ensure not to forcibly pull at the wires as this can damage the soldering that attach the wires to the LEDs.

If the wiring is detached from the LED itself, the light will not operate.

When connecting lights to your LEGO® set, check that there are no pinched wires underneath or in between bricks and plates. When the wires are pinched and the exposed wires are touching each other, this can cause a crosswire and the lights to not function correctly.







### **Troubleshooting**

# Check Your Expansion Board Ports/ Strip Light Ports / Effects Board Ports

It is important to note that connectors can only be inserted to the expansion board, strip light, or effects board ports in one direction.

Forcibly inserting connectors in the incorrect direction will result in damaging the pins inside each of the ports on your component board.

Not only will a light connected to the damaged port not work, but if the pins inside the port are bent to a point they are touching each other, this can result in all other lights in the system to stop working. This is a short circuit.





A short circuit can also result in overheating of the board, cable or batteries. If you suspect a short circuit, DISCONNECT POWER IMMEDIATELY Batteries can fail, catch fire, or even explode if left connected to a short circuit for too long.

If you suspect you have a faulty component due to a bent pin, try the following steps:

If you look carefully inside each of the ports, each port contains 2 small pins that should be straight. You will be able to identify a faulty port if it has any bent pins.











### **CONTACT US**

If you have an enquiry regarding the online shop, our products or a general enquiry please refer to our Frequently Asked Questions webpage here.

Alternatively, you can contact our Customer Services team by visiting our online support portal here.

#### support.lightmybricks.com

We thank you for purchasing this product and hope you enjoy!



lightmybricks.com