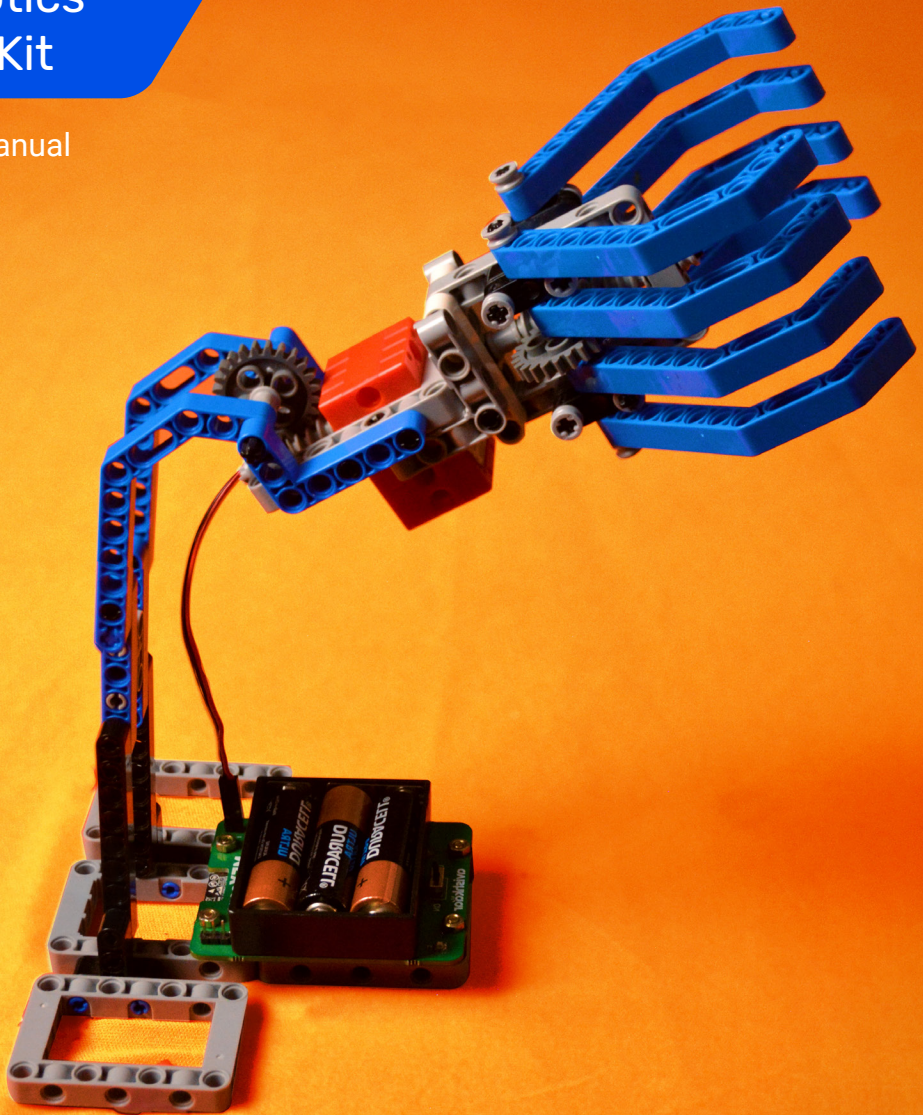


avishkar

MEX

Robotics
Arm Kit

User Manual



Make the Most Out of Your Kit

Innovate - - - - -



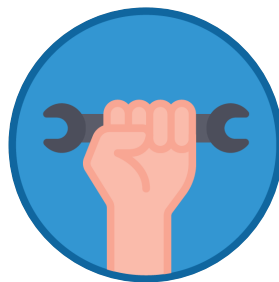
Take the Innovator's Oath

Take the innovator's oath mentioned on page 6 and understand what it means to be an innovator.



Learn using Manual/Videos

Follow detailed instructions in the manual and learn how to build exciting robots with your kit.



Build, Code & Control

Build innovative projects using your kit, and control the Robots using Avishkaar Remote and Code using Avishkaar Maker Studio.

-----> **Share** -----> **Win**



Join Let's Avishkaar

Join our FB community - connect with innovators and get latest updates on webinars.



Upload Projects

Upload projects on www.avishkaar.cc and share them with innovators globally.



International Competitions

Participate in weekly, monthly and annual competitions and win glory globally.



Innovator's Oath

Take the Innovator's Oath below to pledge yourself to lifelong commitment towards Innovation and Problem Solving. Share a photo on the Let's Avishkaar FB Community.

I (write your name)

*solemnly swear that, since I am
now on the path of innovation,
I will not give up until my
innovation, my project is ready.
I will hone my skills and tools
and use them well. Innovation
and I will be inseparable.
I will always share my
innovations with other
innovators and learn with them.*

Your Signature

Welcome to Avishkaar

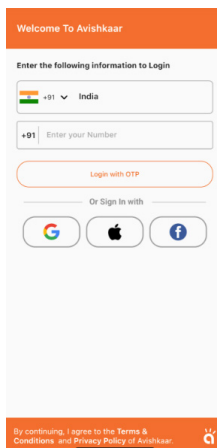
Download the Avishkaar App

Download the Avishkaar App by scanning the QR codes below:



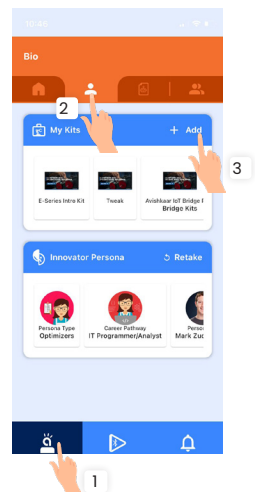
1 Create an Account

Open the app and follow the on-screen steps to make an account.



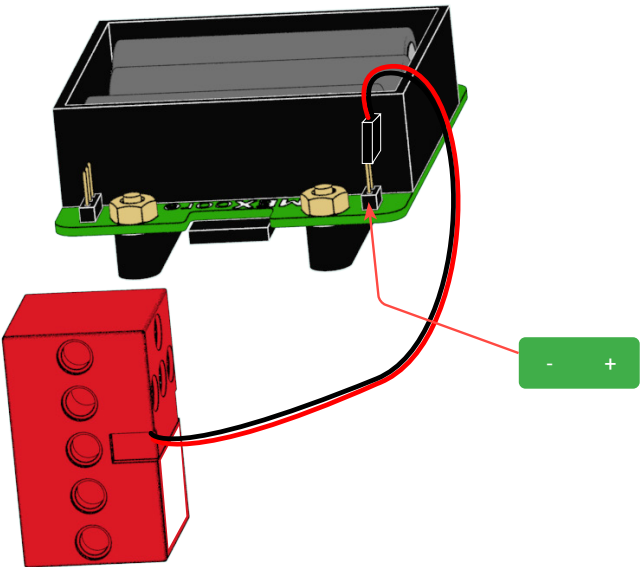
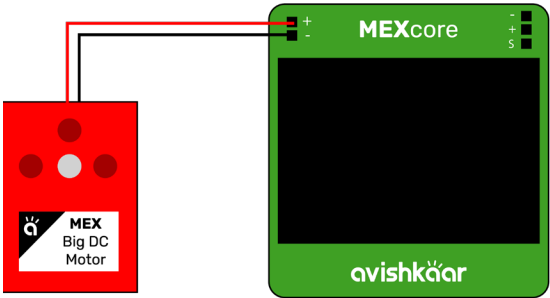
2 Register your Kit

Go to the 'Profile' section in the app and click on '+ Add More' in the 'My Kits' section to register your kit. This step is important to control your robot later.



Product Registration
Sticker

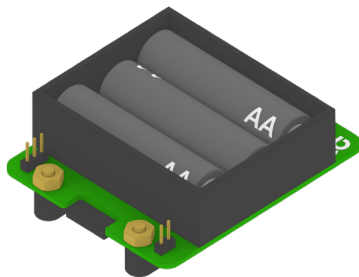
How to connect the motor to MEXcore



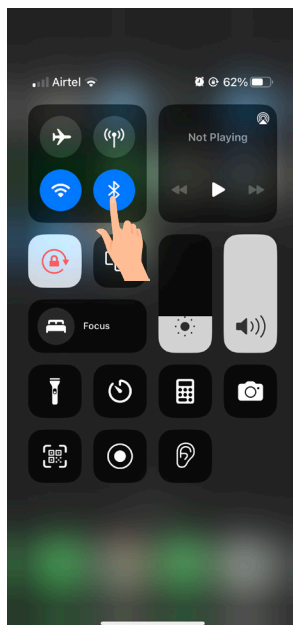
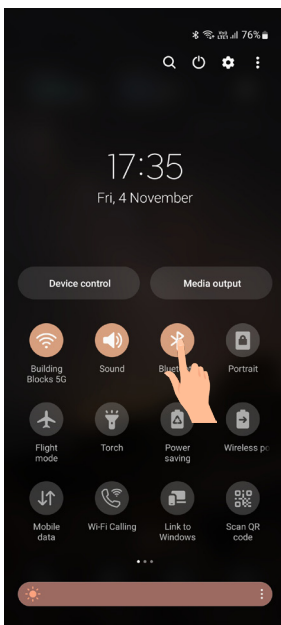
App Control

- 1 Insert the batteries in the MEXcore and turn it ON. You will notice the MEXcore LED blinking in green color.

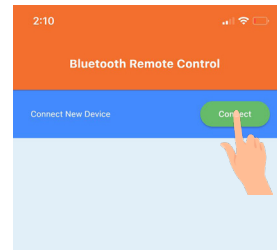
Note - Use AA alkaline cells only. (Any other type of cells can damage the MEXcore.)



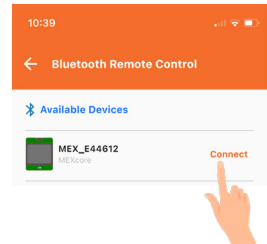
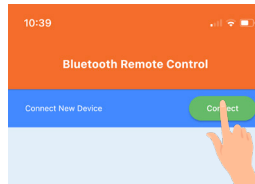
- 2 Turn ON the bluetooth on your phone.



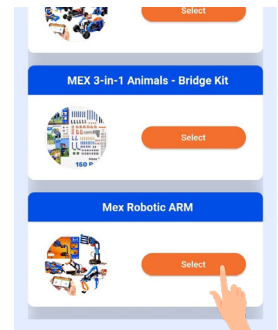
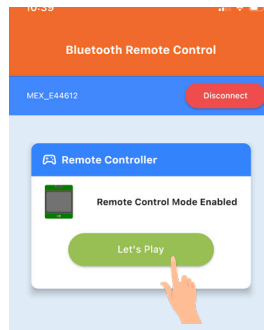
- 3 Open the Avishkaar App and click on the 'Play' button inside the 'Home' section.



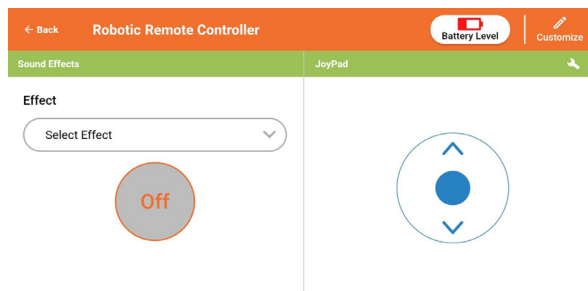
- 4 Click on 'Connect'. Your app should be able to find your MEXcore if it is turned ON. Click on 'Connect' once your app detects your MEXcore.



- 5 Click on 'Let's Play' and select 'MEX Robotics Arm kit' in the kit selection menu.



- 6 The remote control screen will open up which will allow you to control Motor.

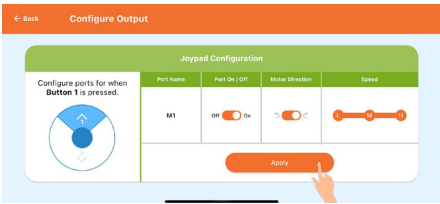
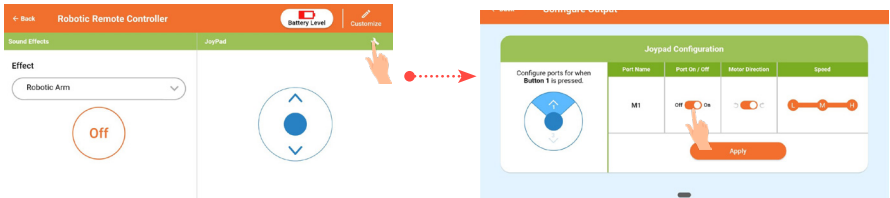


Configure

Sound effects

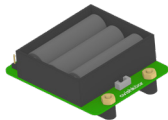


Joystick



Armour Check

Box 1 (Electronics)



Avishkaar
MEXCore
x 1



MEX big DC
motor
x 1

Box 2 (Construction parts)

BEAM



15H Beam
x 1



13H Beam
x 1



11H Beam
x 1



3H Beam
x 4



9H Beam
x 2

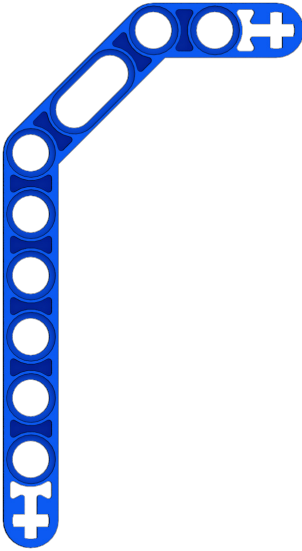


5H Beam
x 2

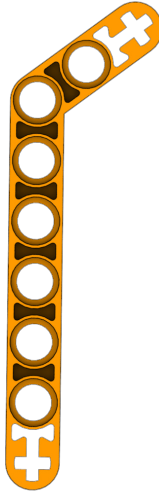


7H Beam
x 4

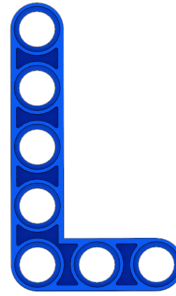
Note: 'H' stands for holes. Eg. 15H beam means beam with 15 holes.



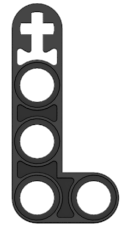
2Cx10H Double
Bend Beam
x 10



2C x7H Single Bend
x 2



7H L-Beam
x 5



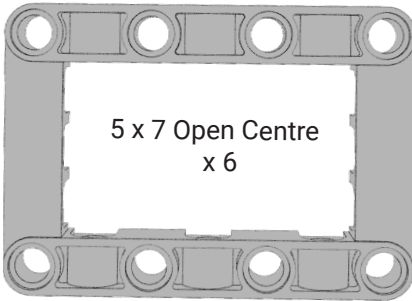
1Cx4H L-Beam
x 3



2Cx1H
Thin-Beam
x 1



5H T-Beam
x 2



5 x 7 Open Centre
x 6

FILLERS

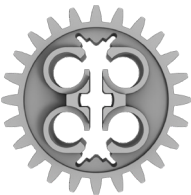


Axle Filler- Big
x 16



Axle Filler- Small
x 16

GEAR



Spur Gear-24T
x 3



Spur
Gear-16T
x 2



12T Double
Bevel gear
x 2

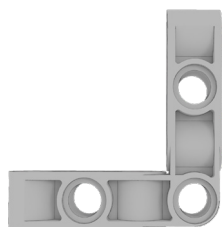


20T Double
Bevel gear
x 1

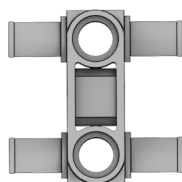


Worm Gear-Big
x 3

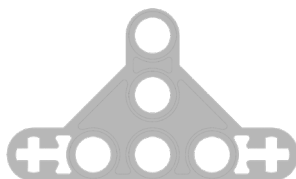
CONNECTORS



4 x 4 Perpendicular L
connector
x 2



3Hx4 Pin
Connector
x 1



2C x 5H Triangle
x 2



1C x 1H
Perpendicular
Connector
x 2



Axle Triple Pin
Perpendicular Connector
x 1



Axle Angle
Connector-180
x 2



Axle Angle
Connector -135
x 2



2C x 1H
Perpendicular
x 4

PINS



Long Pin-Blue
x 13



Long Pin-Yellow
x 1



Medium Pin-Black
x 22



Medium Pin-Grey
x 2



Medium Axle
Pin-Blue
x 2

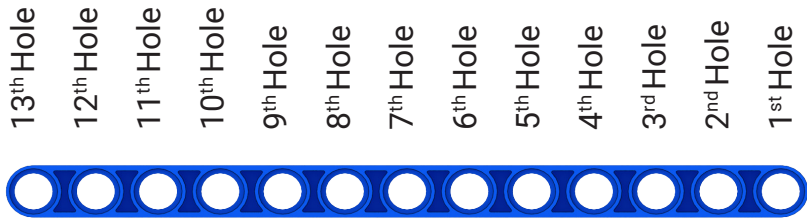


Short Pin-Yellow
x 2

Note: 'Note: 'C' stands for 'Cross'. Eg - '1CX4H L-Beam' has one cross and four holes.

All About Axles

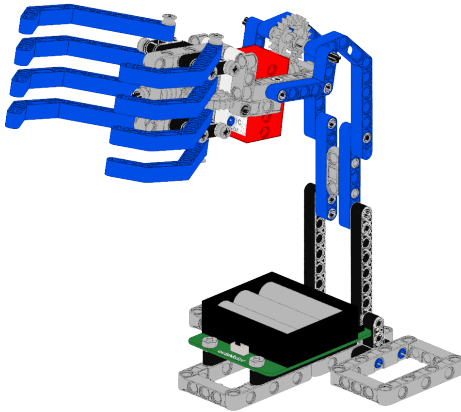
NOTE : The axles are in 1:1 with the imprinted slots (**XH Axle**) in manual.



3H Axle (3)	4H Axle (2)	5H Axle (1)	5H capped Axle (2)	6H Axle (4)	7H Axle (1)	8H Axle (3)	10H Axle (1)	13H Beam
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Project 1: MEX Grabber

Let's Build!



Things we need



9H Beam
x 2



7H Beam
x 2



5H Beam
x 2



7H L-Beam
x 2



3H Beam
x 4



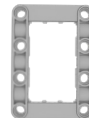
2Cx10H
Double Bend
Beam
x 10



5H T-Beam
x 2



4 x 4 Perpendicular
L Connector x 2



Open centre
x 6



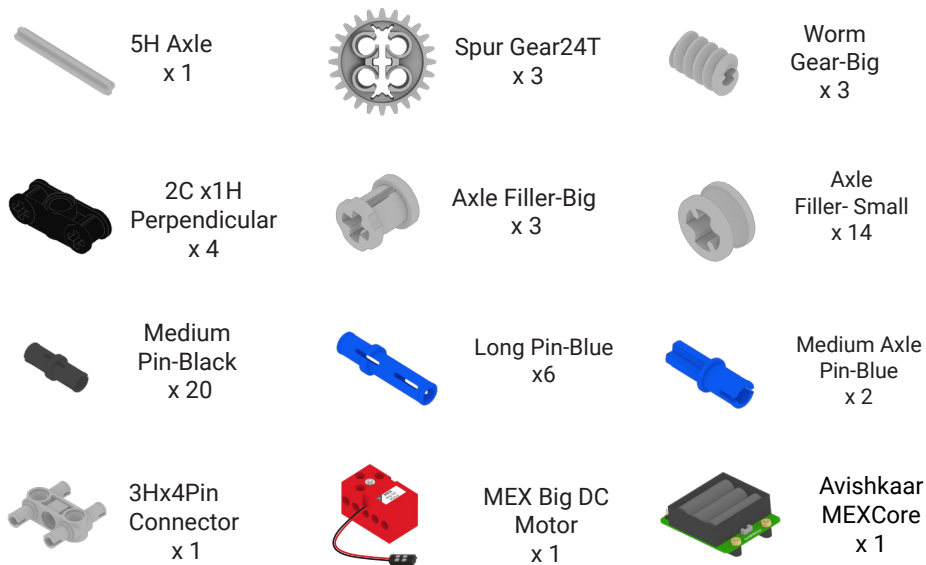
10H Axle
x 1



8H Axle
x 3

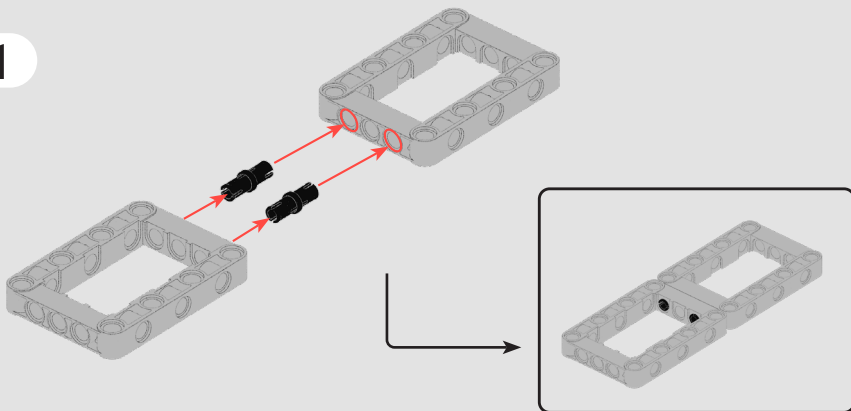


6H Axle
x 4



Steps

1



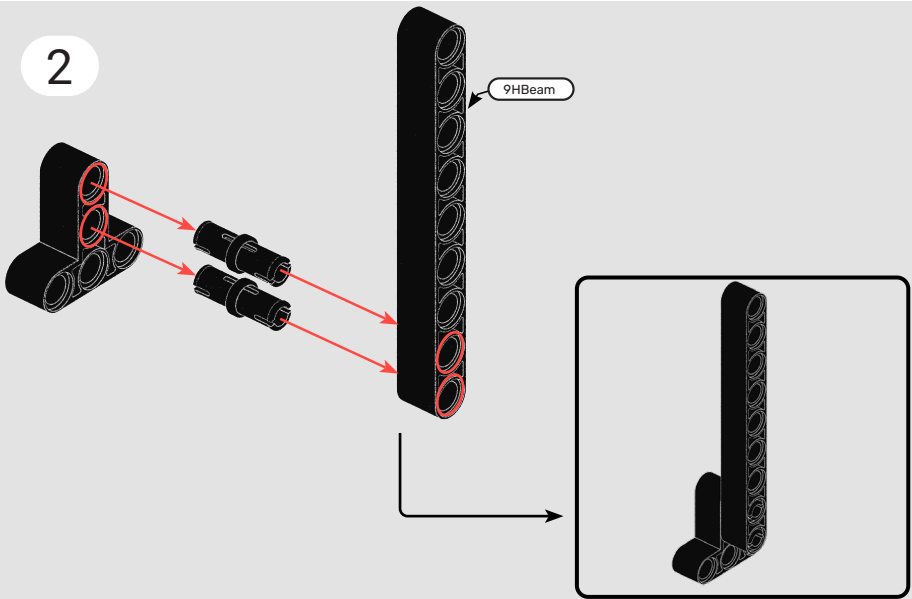
Build Tip



Black Medium Pins can be a little tough to insert!
But don't worry. Push it through and make sure the joint is firm. They can take a little force. :)

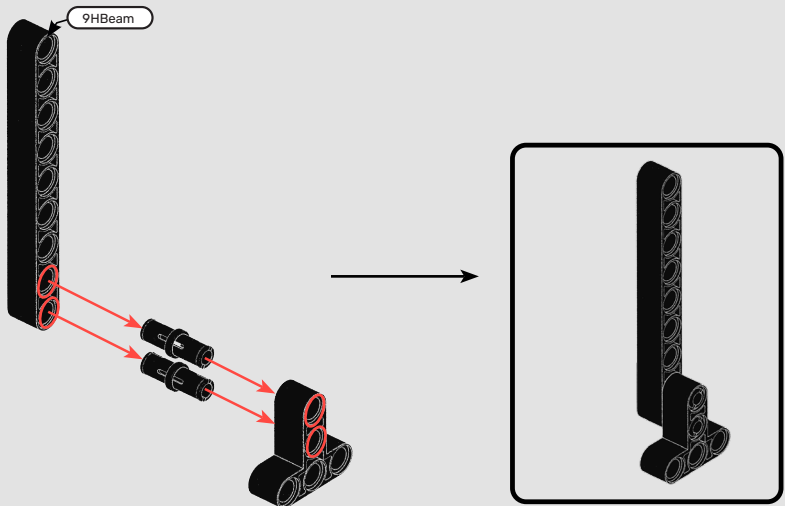


2

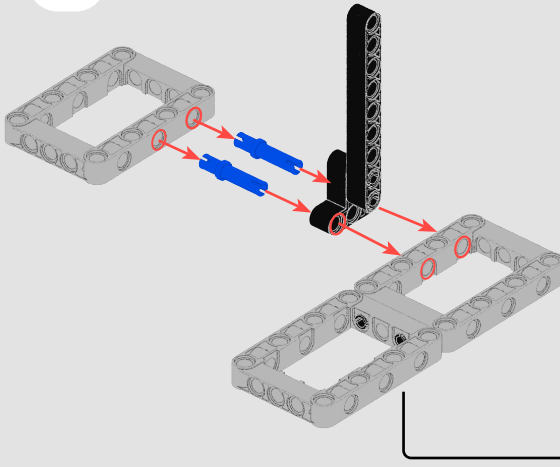


3

Let's make the another side.



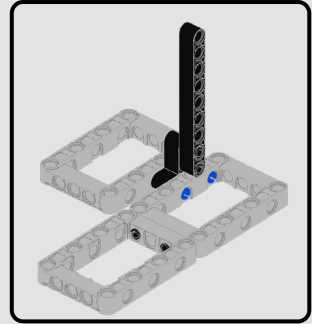
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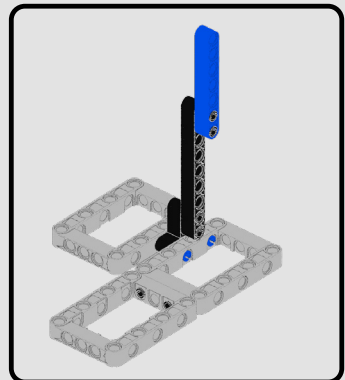
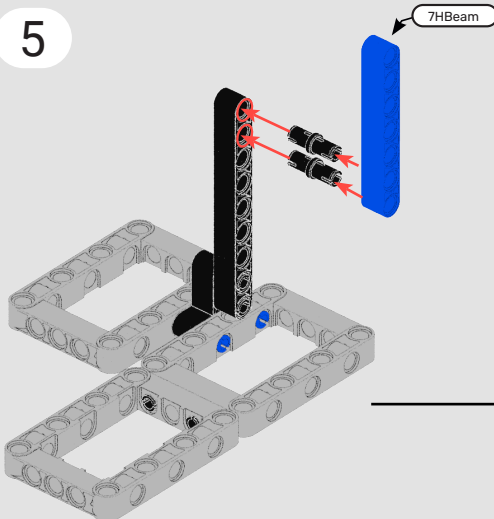
1:1



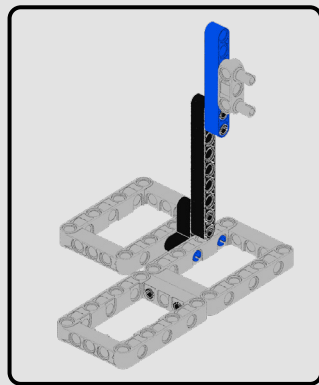
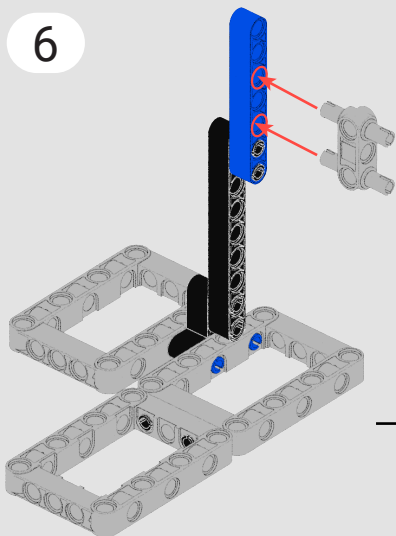
Long Pin Blue



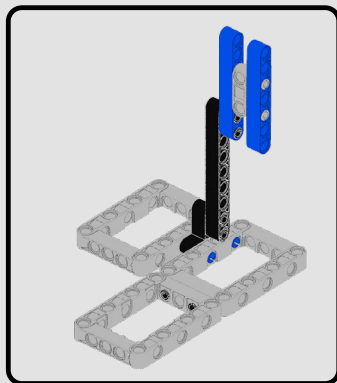
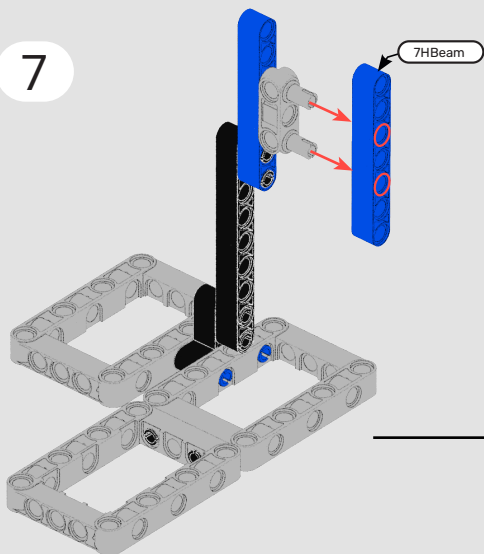
5



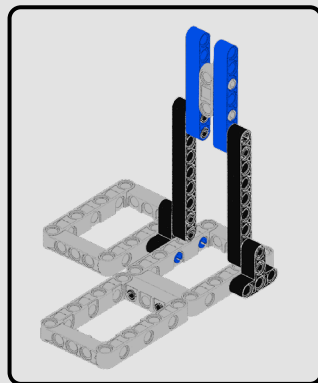
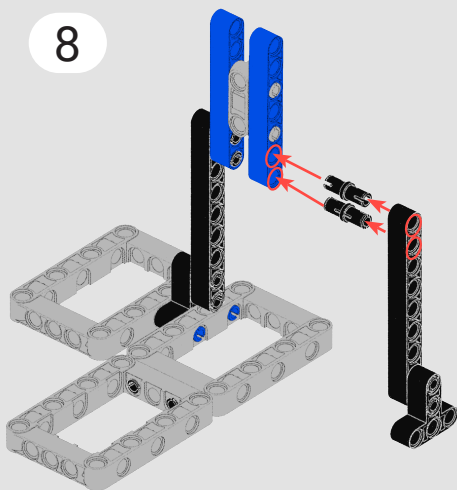
6



7



8

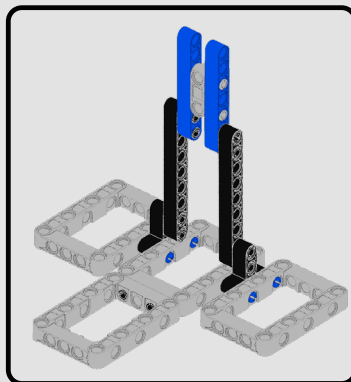
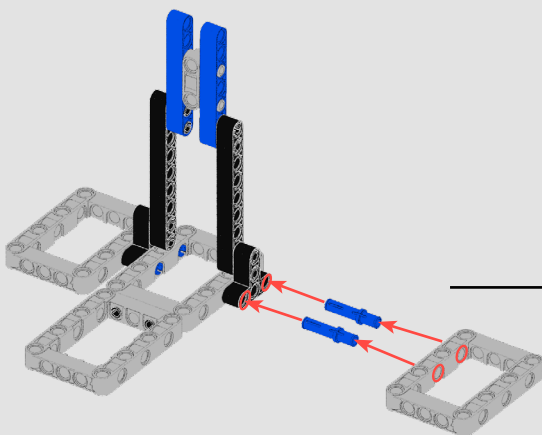


9

1:1



Long Pin Blue

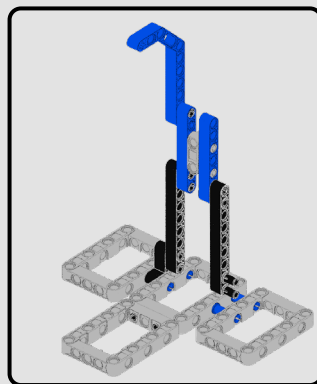
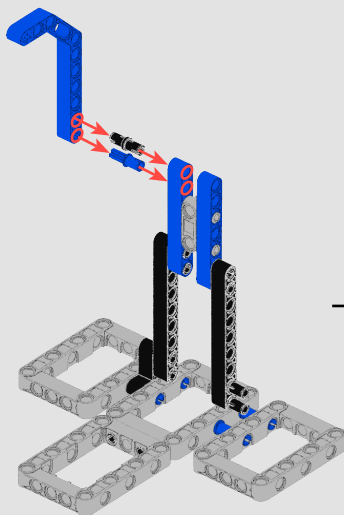


10

1:1



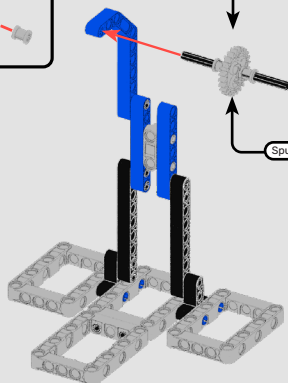
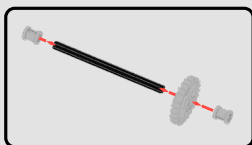
Medium Axle Pin Blue



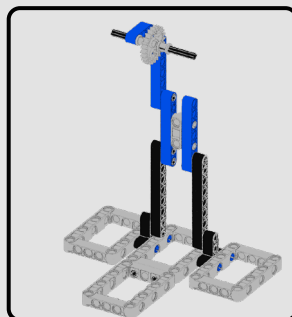
11

1:1

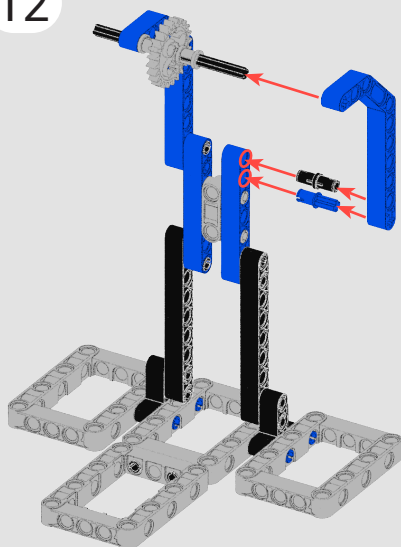
8H Axle



Spur 24T spur gear



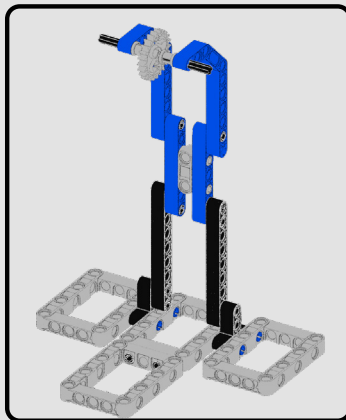
12



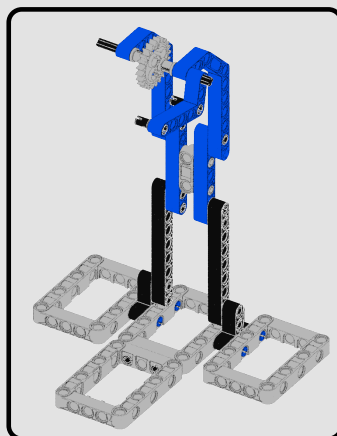
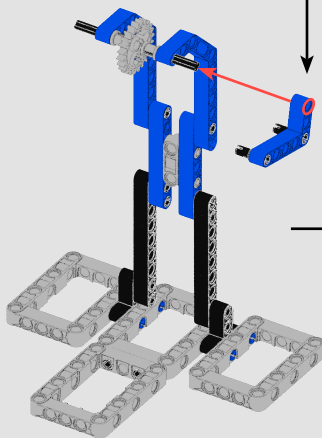
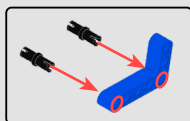
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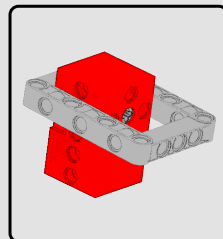
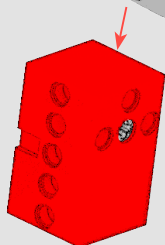
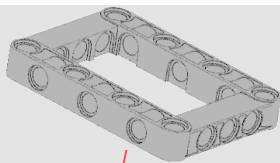
Medium Axle Pin Blue



13



14



Build Tip



Black Medium Pins can only be inserted on one side of the motor!

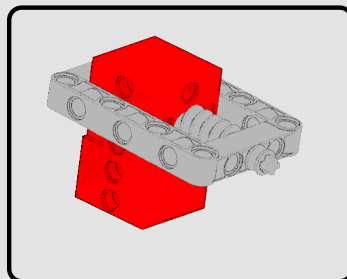
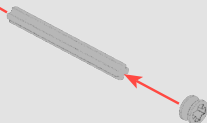
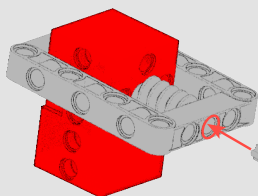
The black pins can only be inserted on the side of the motor with the white sticker. On the other side with no sticker - only small yellow pins can be used.



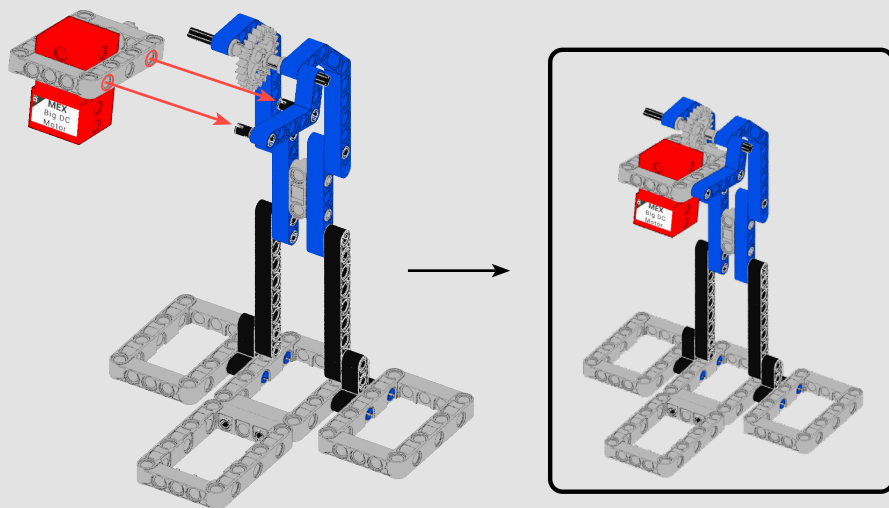
15

1:1

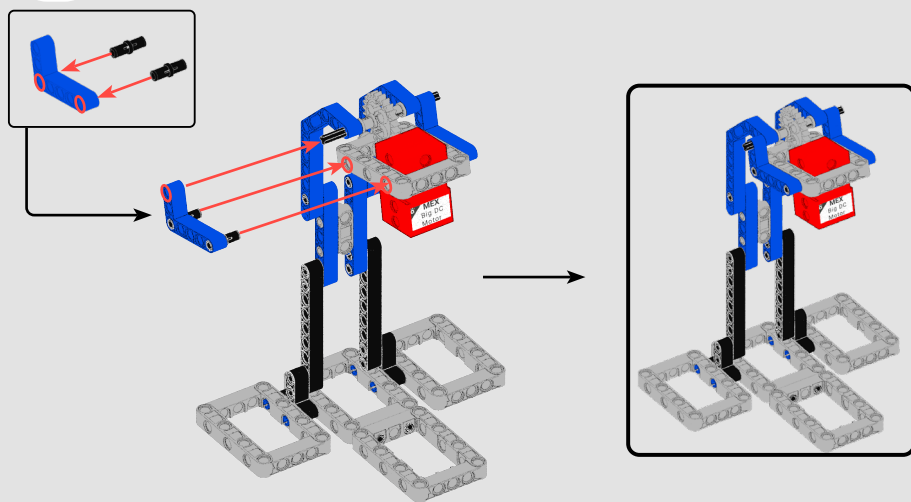
5H Axle



16



17



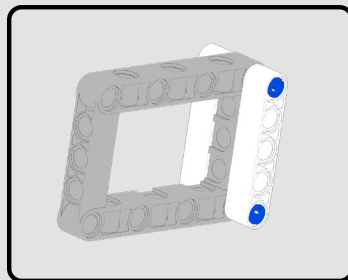
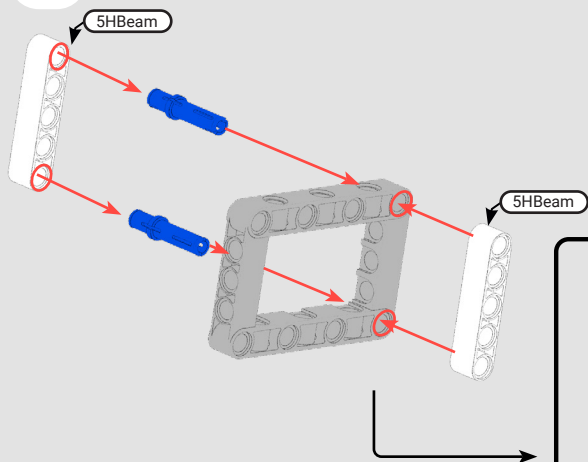
18

Let's make the Claw.

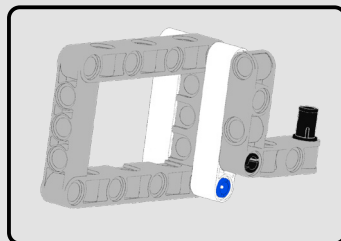
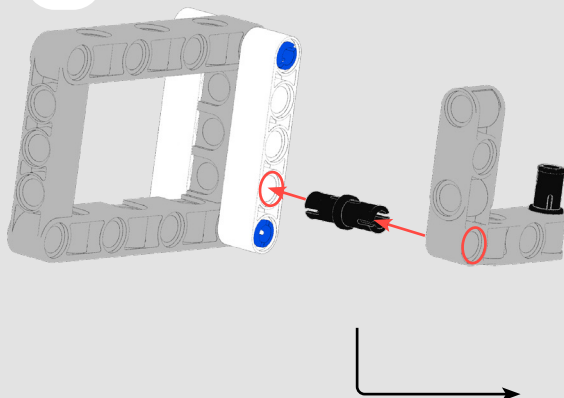
1:1



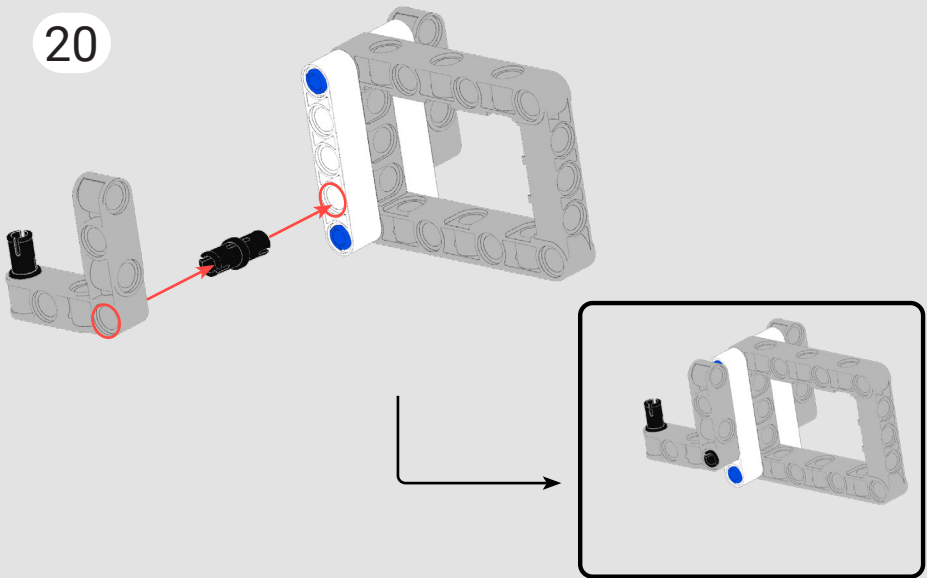
Long Pin Blue



19



20

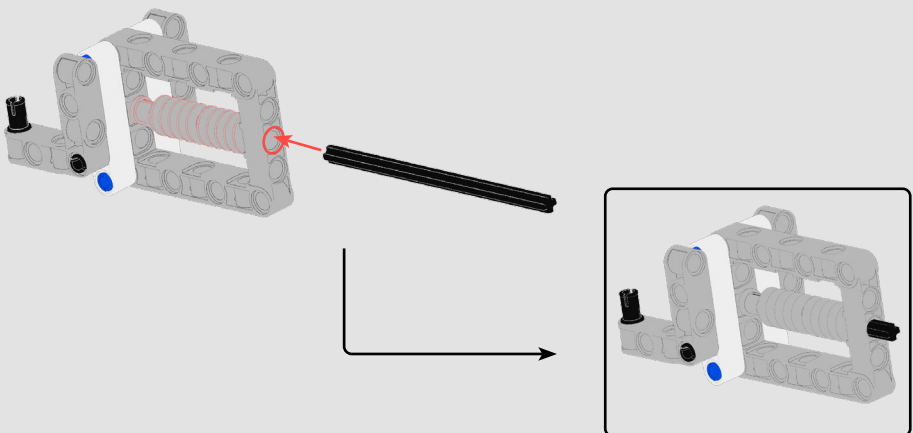


1:1

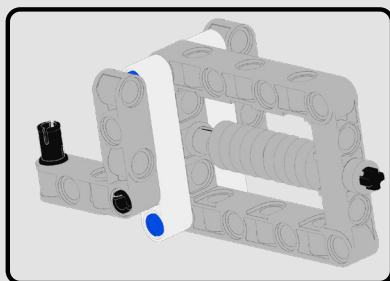
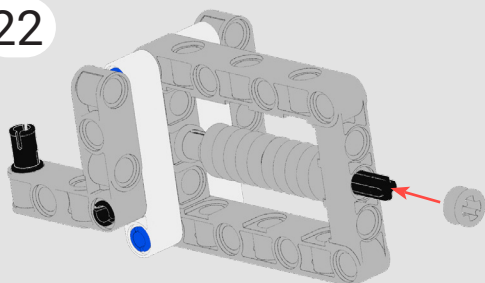
10H Axle

21

Note: using two Worm Gear-Big.



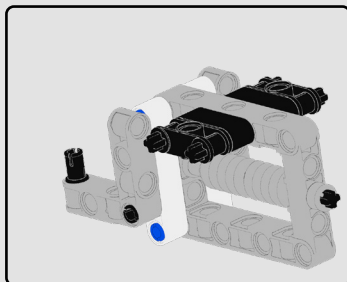
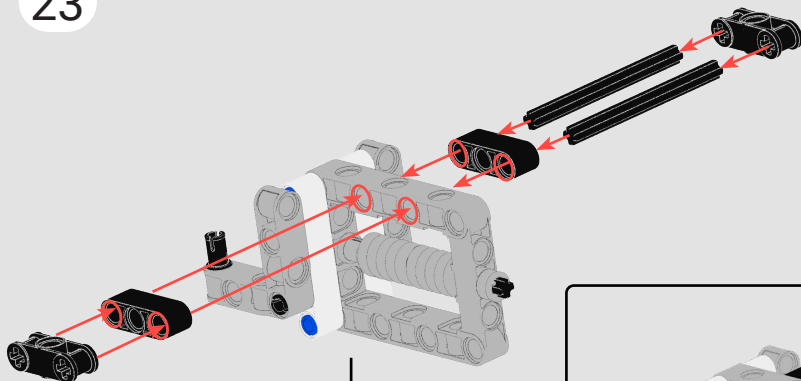
22



23

1:1

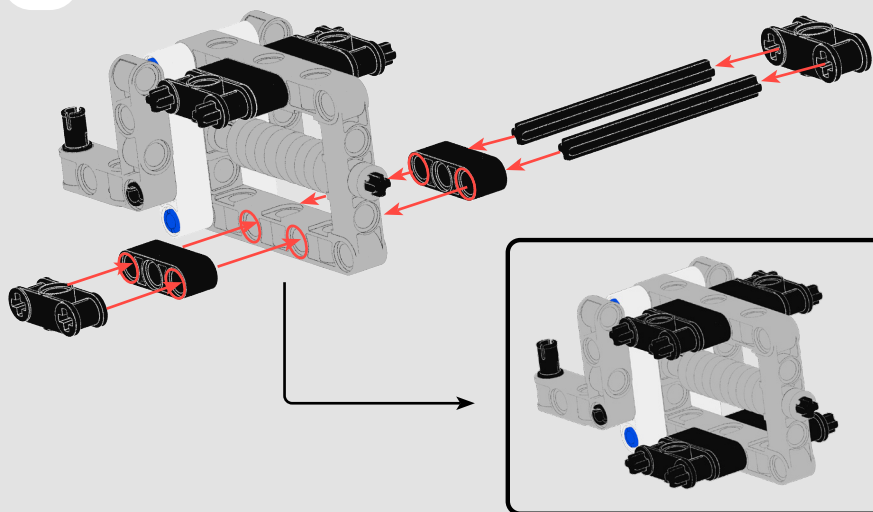
6H Axle



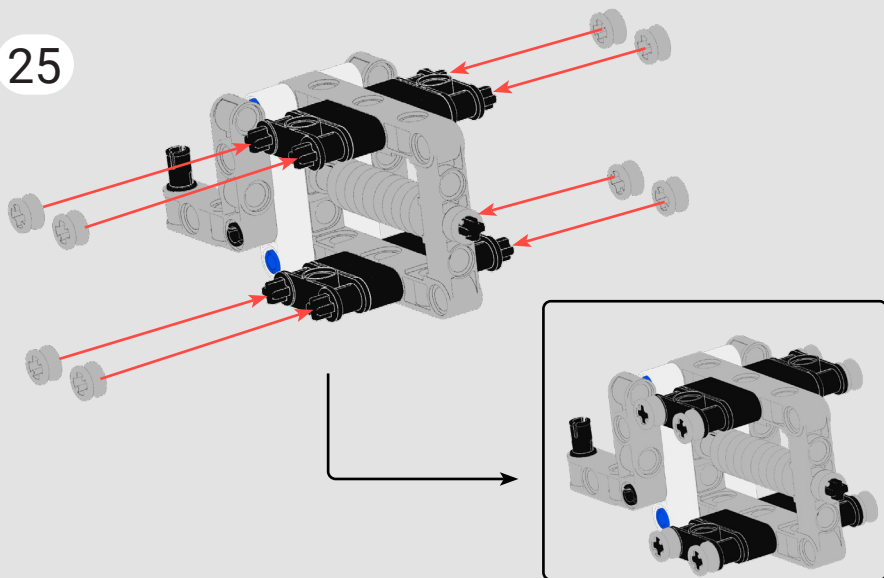
24

1:1

6H Axle



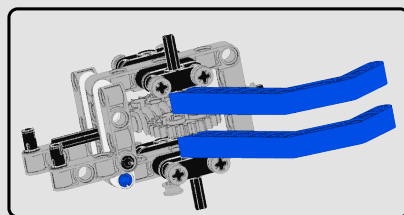
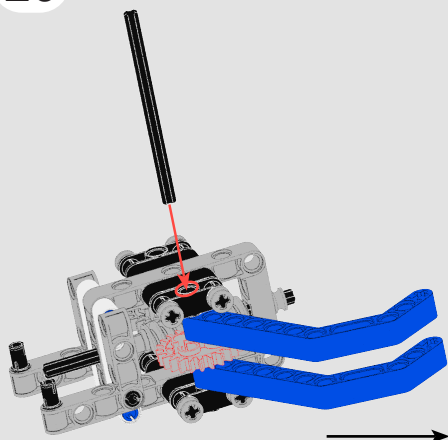
25



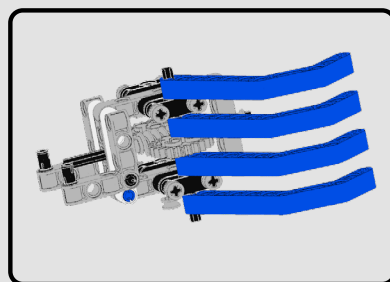
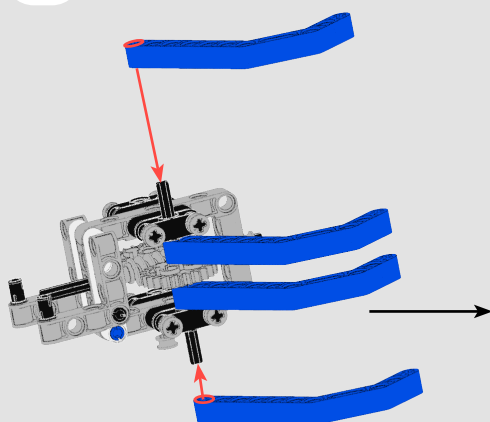
26

1:1

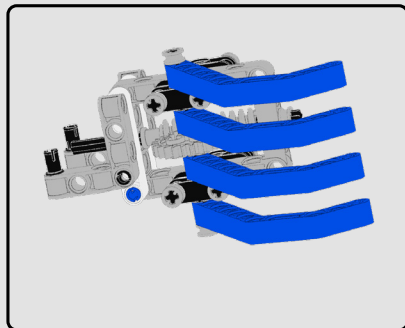
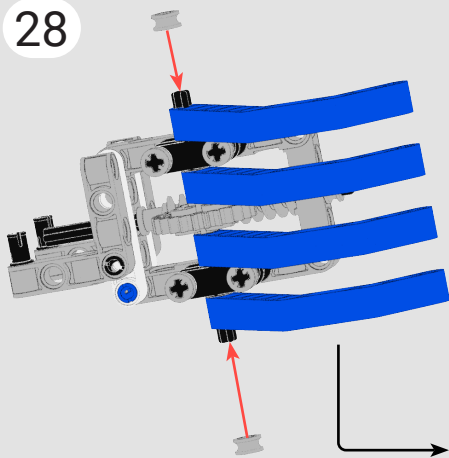
8H Axle



27



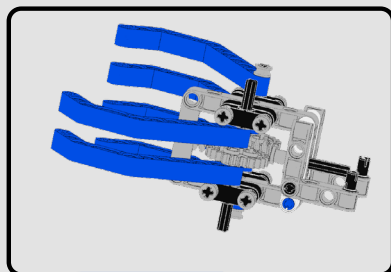
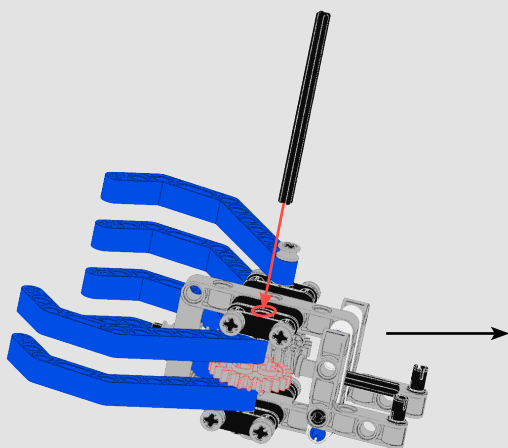
28



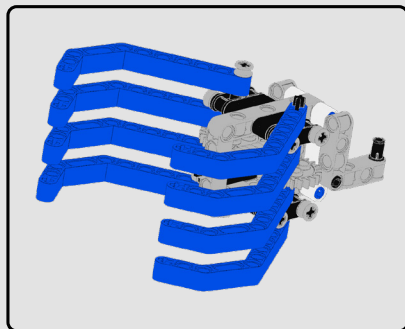
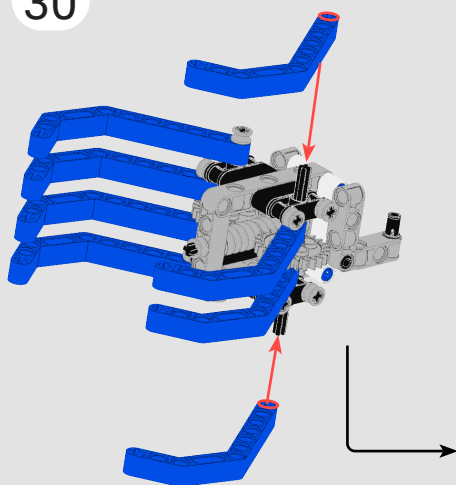
29

1:1

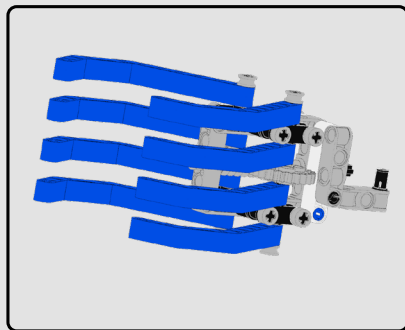
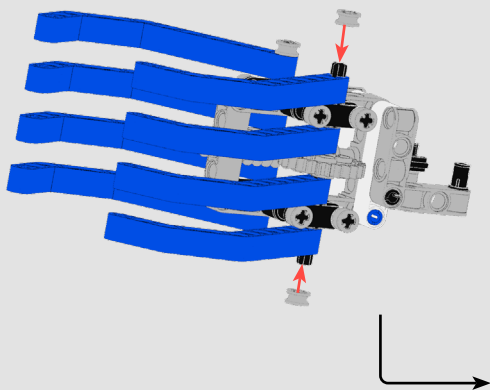
8H Axle



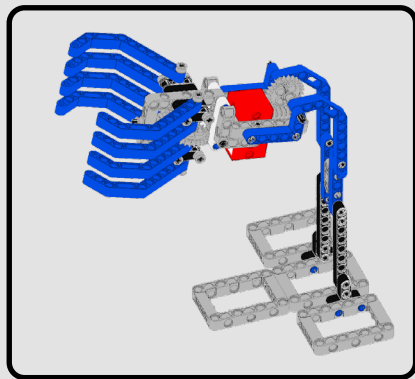
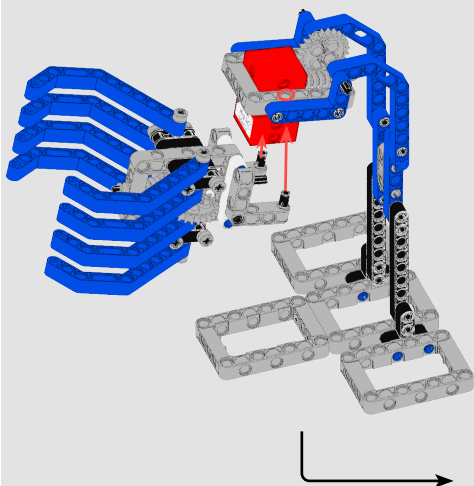
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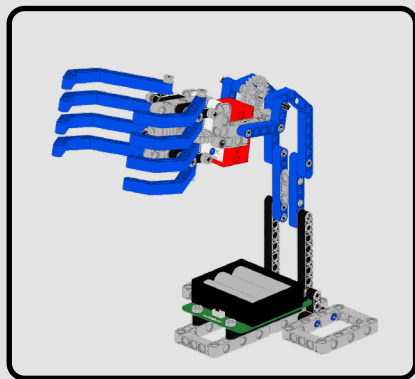
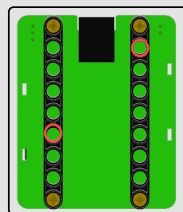
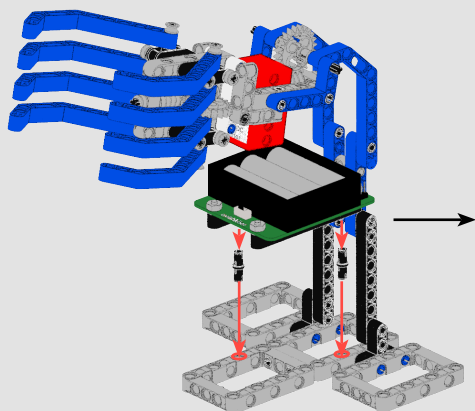
31



32



33



Congratulations on Completing this Project!

Excited to play with it using the avishkaar mobile app?

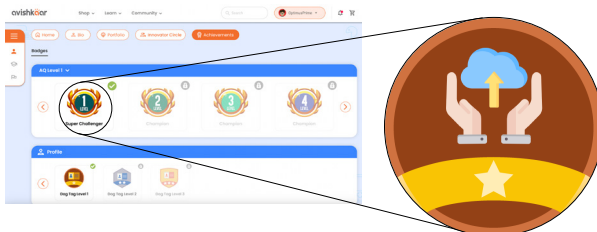
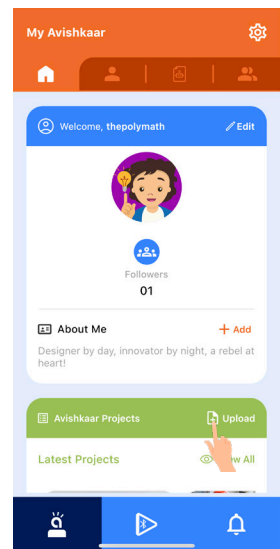
Go to Pg 8 about the detailed instructions on how to download the app and control your bot using it.



Share your Creation with the World and Win the 'Scratch the Surface' Level 1 Badge

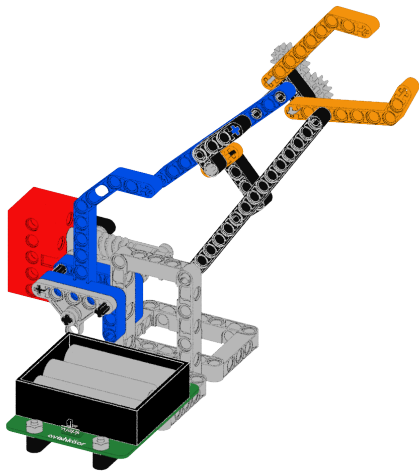
Upload photos or videos of your project using the project section of the Avishkaar App to win the 'Scratch the Surface' Level 1 Badge.

See all your collected badges in the achievement section of your profile on www.avishkaar.cc. Explore all other badges to be collected and win them all!



Project 2 : MEX Cyber Claw

Let's Build!



Things we need



15H Beam
x 1



11H Beam
x 1



3H Beam
x 1



7H L-Beam
x 2



1Cx4H L-Beam
x 3



2Cx10H
Double Bend Beam
x 1



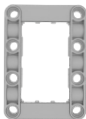
2C x 7 H
Single Bend
Beam
x 2



5H T-Beam
x 1



2Cx1H
Thin-Beam
x 1



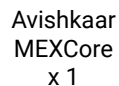
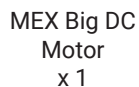
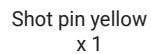
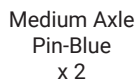
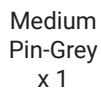
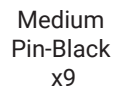
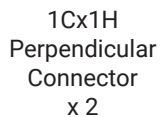
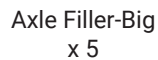
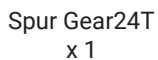
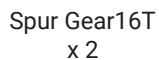
Open centre
x 3



2C x 5H
Triangle
x 2



Worm
Gear-Big
x 1

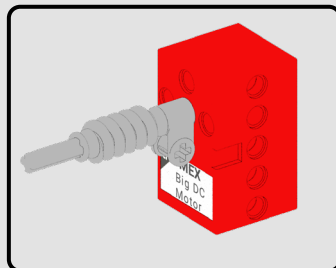


Steps

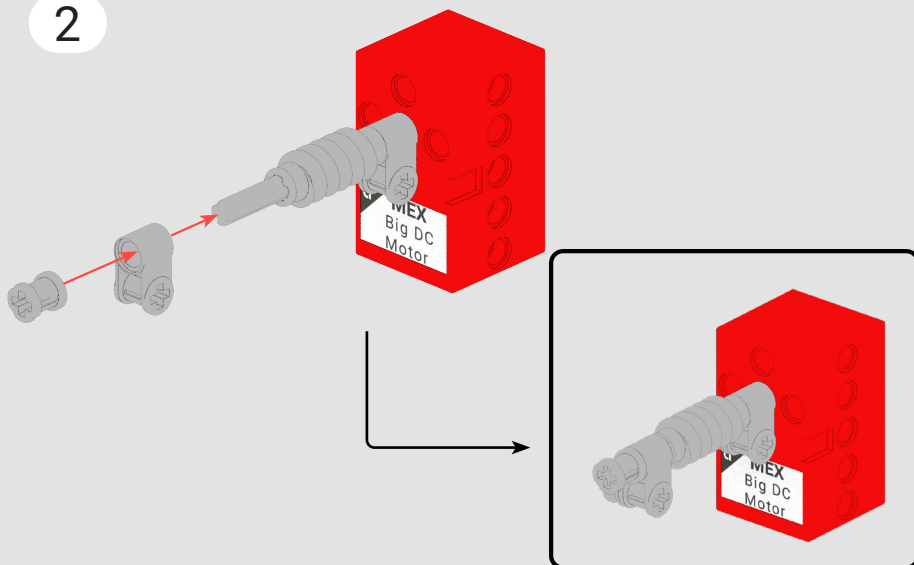
1:1

7H Axle

1



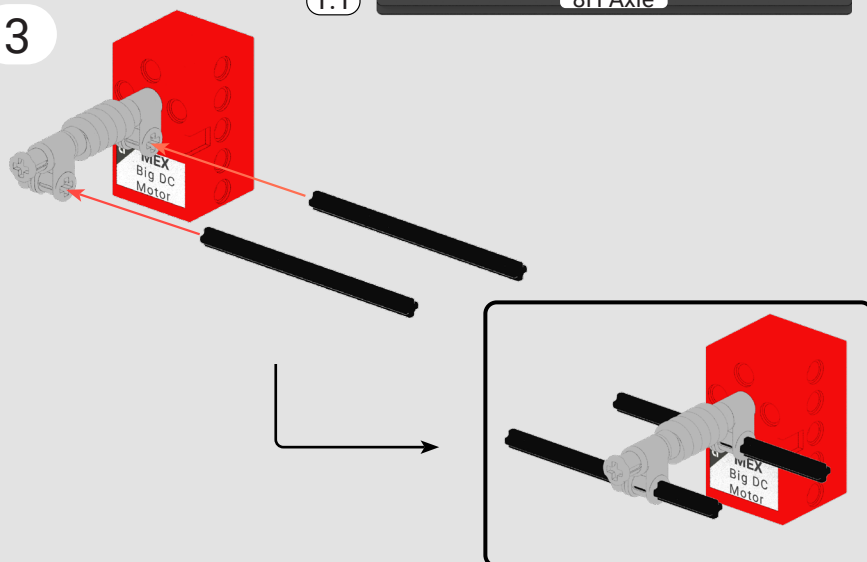
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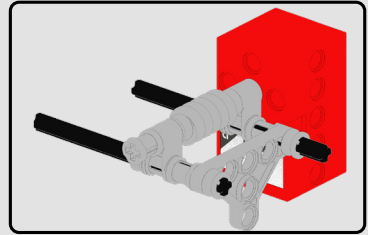
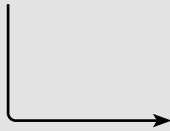
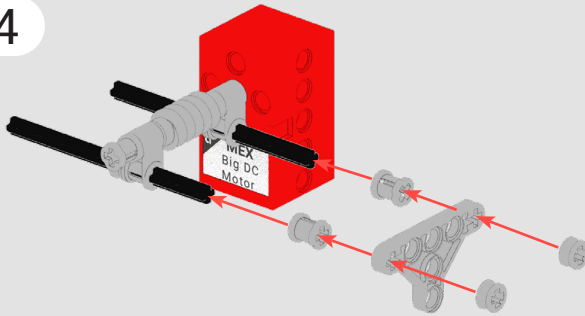
3

1:1

8H Axle



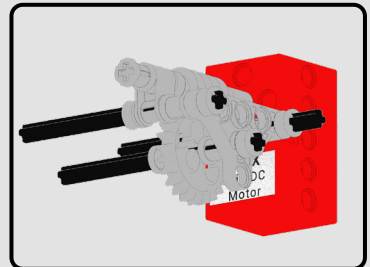
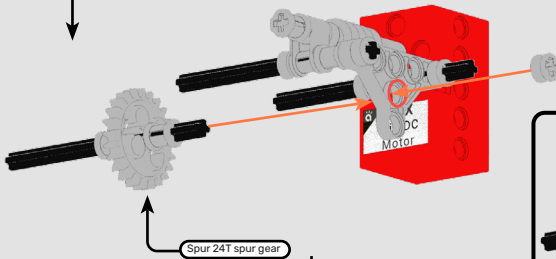
4



5

1:1

8H Axle

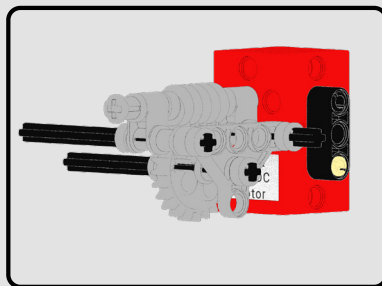
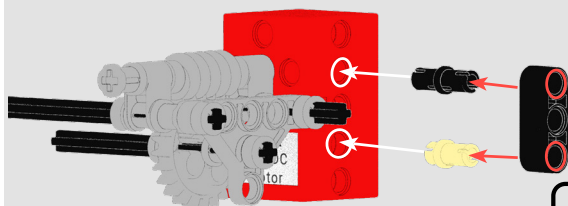


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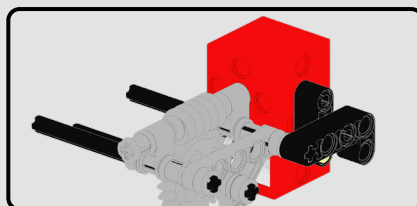
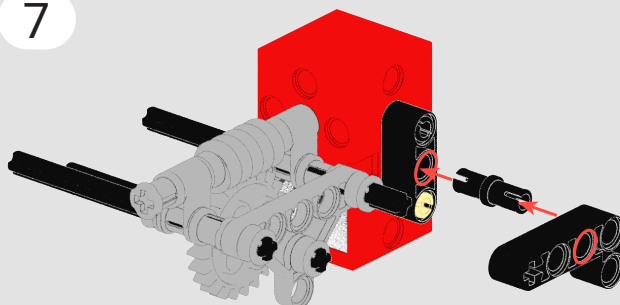
1:1



Short Pin Yellow



7



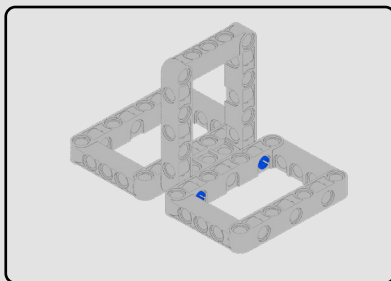
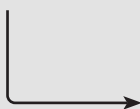
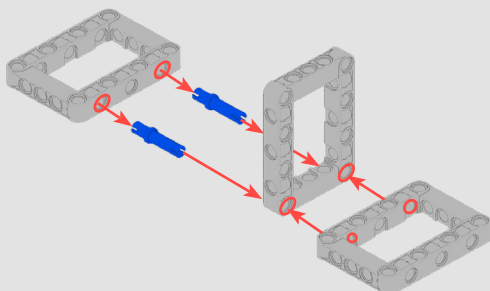
8

Let's make the base structure.

1:1



Long Pin Blue

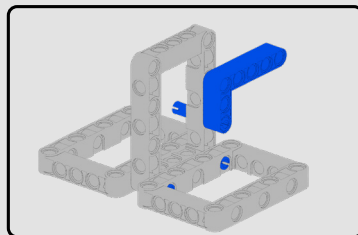
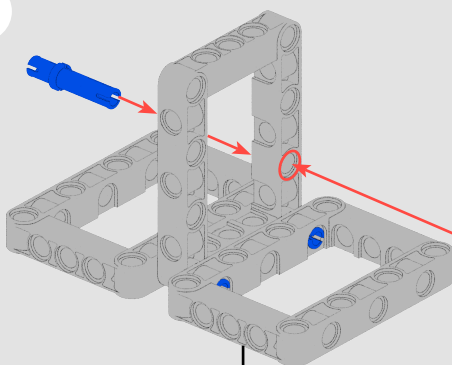


9

1:1

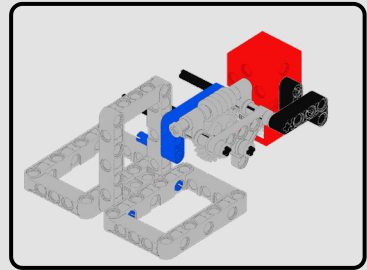
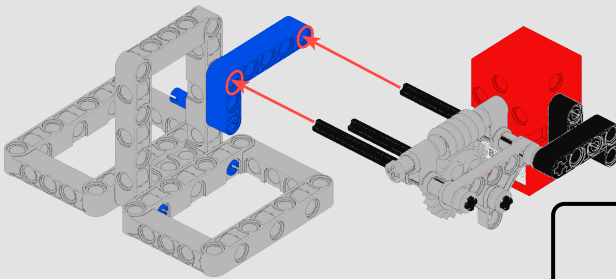


Long Pin Blue

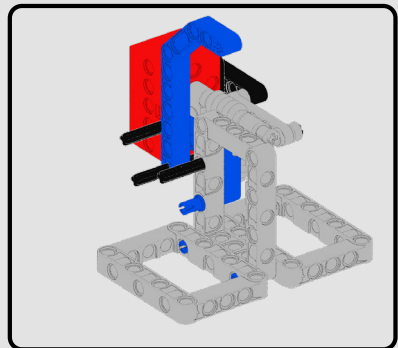
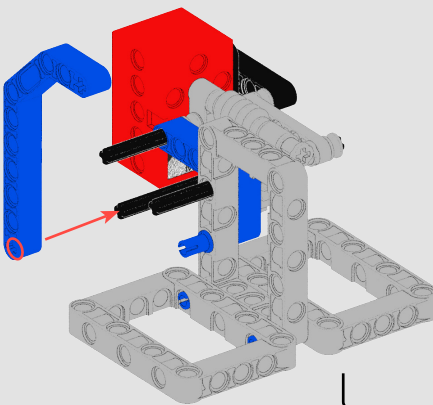


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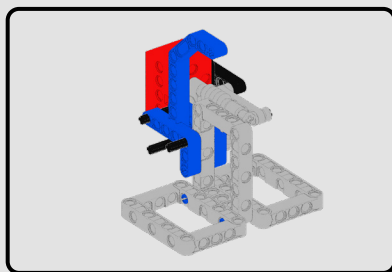
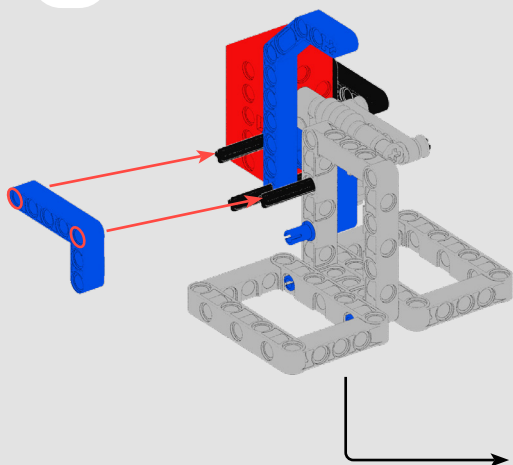
Let's Assemble the base structure and motor mechanism.



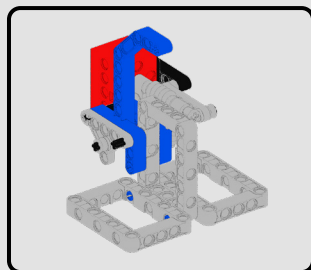
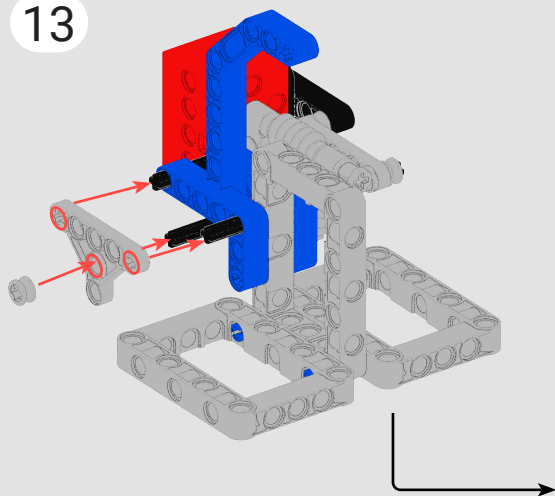
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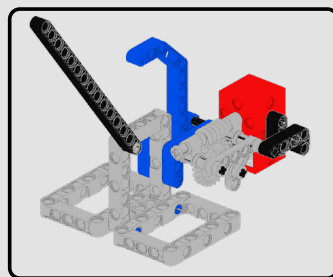
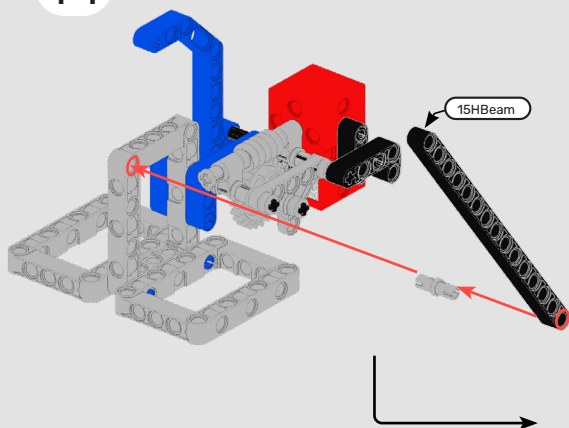
12



13



14

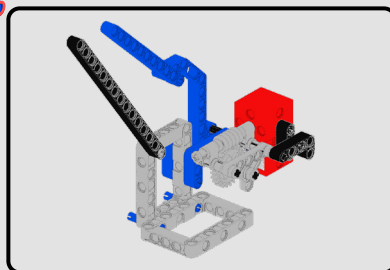
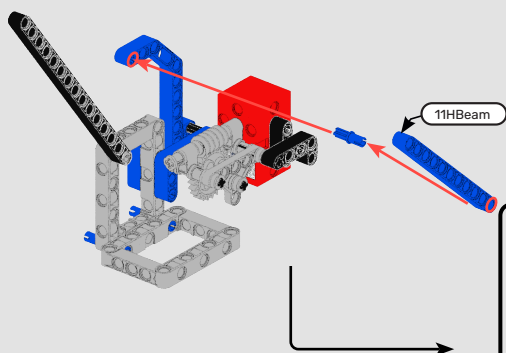


15

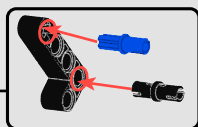
1:1



Medium Axle Pin Blue



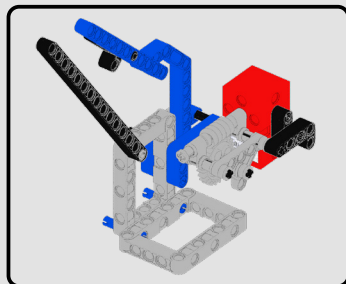
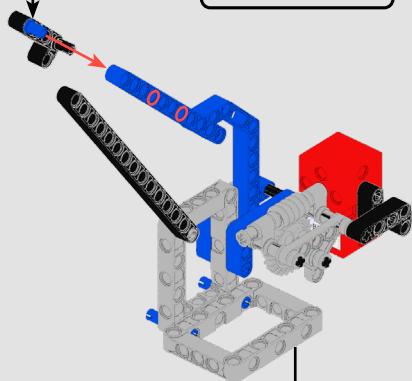
16



1:1



Medium Axle Pin Blue

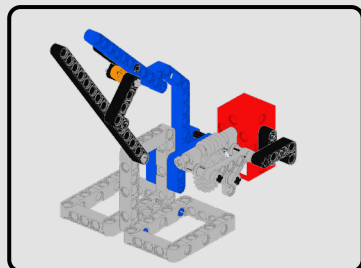
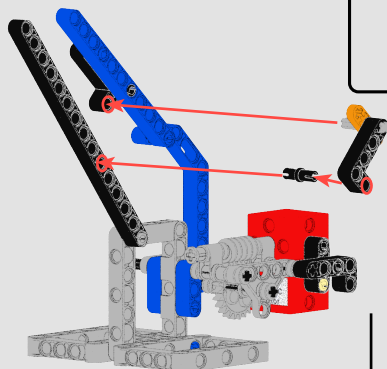
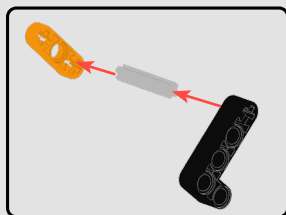


17

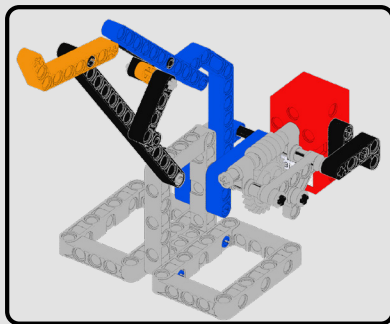
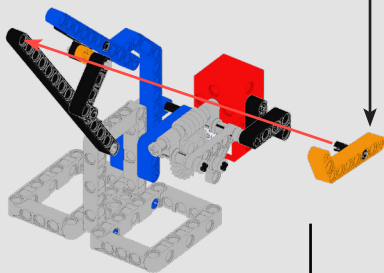
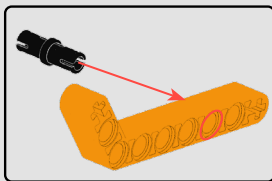
1:1



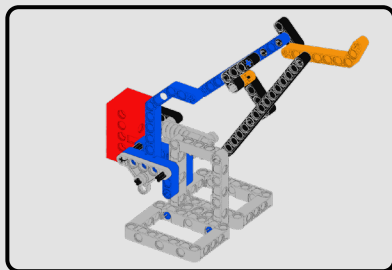
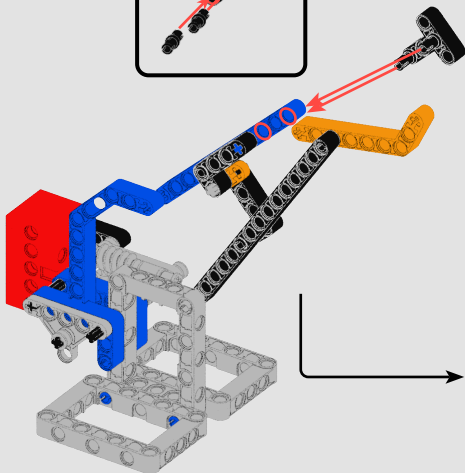
3H Axle



18



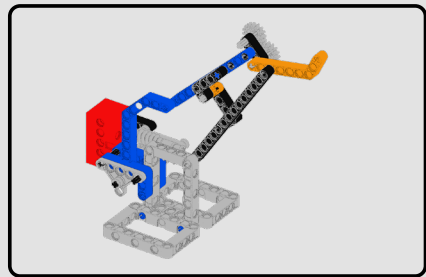
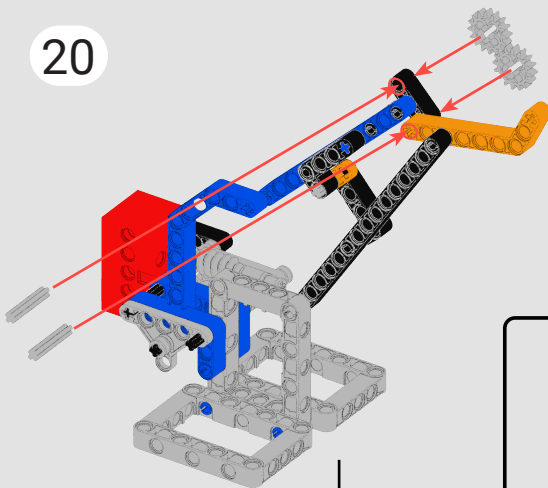
19



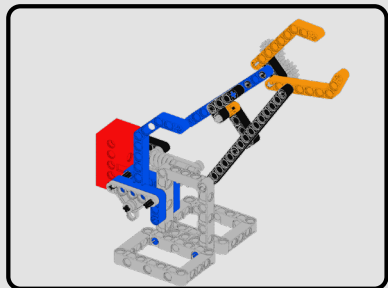
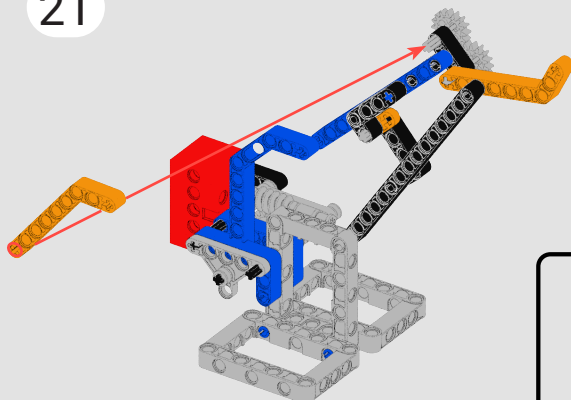
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1:1

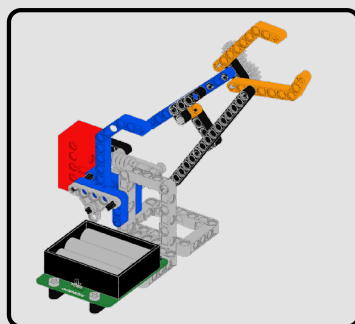
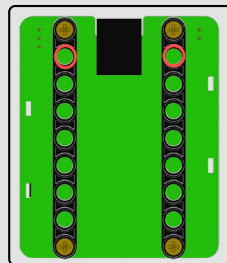
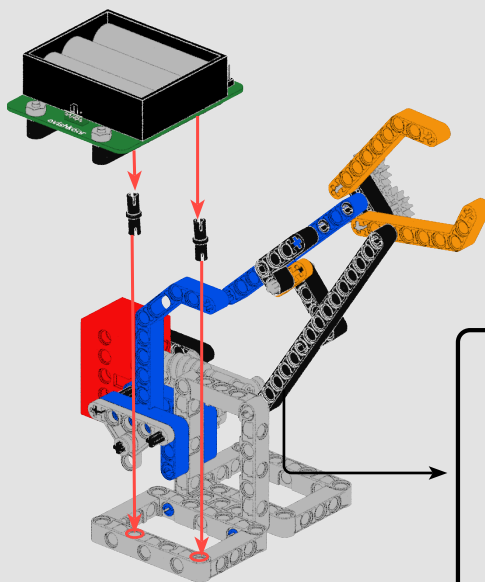
3H Axle



21



22



Congratulations on Completing this Project!

Excited to play with it using the avishkaar mobile app?

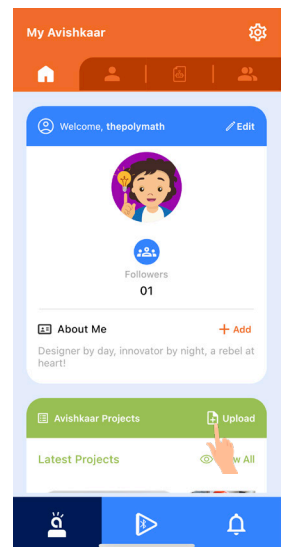
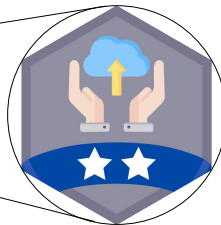
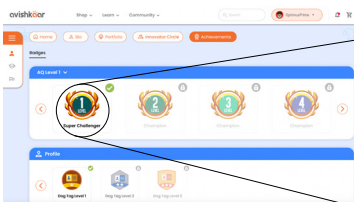
Go to Pg 8 about the detailed instructions on how to download the app and control your bot using it.



Share your Creation with the World and Win the 'Scratch the Surface' Level 2 Badge

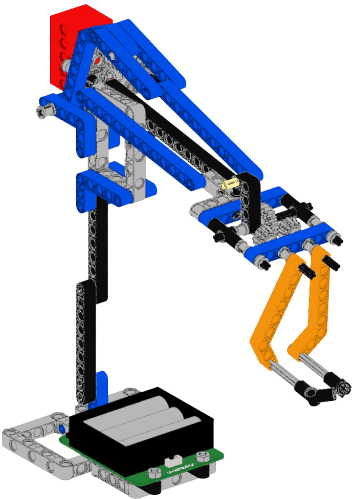
Upload photos or videos of your project using the project section of the Avishkaar App to progress towards winning the 'Scratch the Surface' Level 2 Badge.

See all your collected badges in the achievement section of your profile on www.avishkaar.cc. Explore all other badges to be collected and win them all!



Project 3: MEX Robo Lift

Let's Build!



Things we need



15H Beam
x 1



13H Beam
x 1



11H Beam
x 1



9H Beam
x 2



7H Beam
x 4



7H L-Beam
x 5



1Cx4H L-Beam
x 1



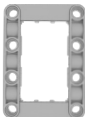
2C x 10 H
Double Bend
Beam
x 1



2C x 7 H
Single Bend
Beam
x 2



4 x 4 Perpendicular
L Connector x 1



Open centre
x 4



2C x 5H
Triangle
x 2



Worm
Gear-Big
x 1



12T Double
Bevel gear
x 2



20T Double
Bevel gear
x 1



Spur Gear24T
x 3



Axle Triple Pin
Perpendicular
Connector
x 1



1Cx1H
Perpendicular
Connector
x 1



Axle Filler- Small
x 12



Axle Filler-Big
x16



3H Axle
x1



5H Capped
Axle x 2



6H Axle
x 4



8H Axle
x 2



10H Axle
x 1



Shot pin yellow
x 1



Medium
Pin-Black
x 13



Medium Axle
Pin-Blue
x 2



Long Pin-Blue
x 13



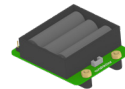
Long
Pin Yellow
x 1



Axle Angle
Connector -180
x 2



Axle Angle
Connector-135
x 2



Avishkaar
MEXCore
x 1

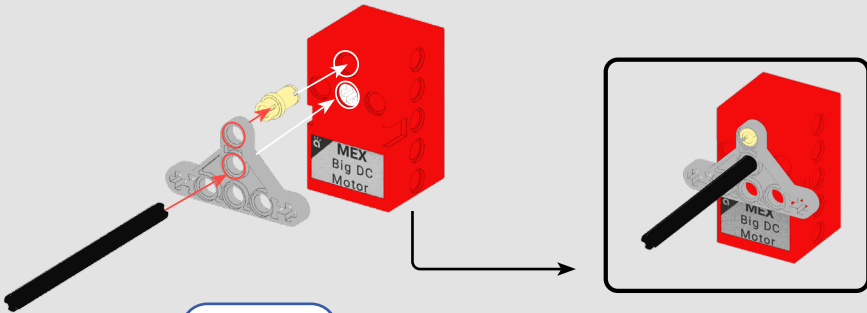


MEX Big DC
Motor
x 1

1

1:1

8H Axle

**Build Tip**

Short Yellow Pins can be a little delicate!

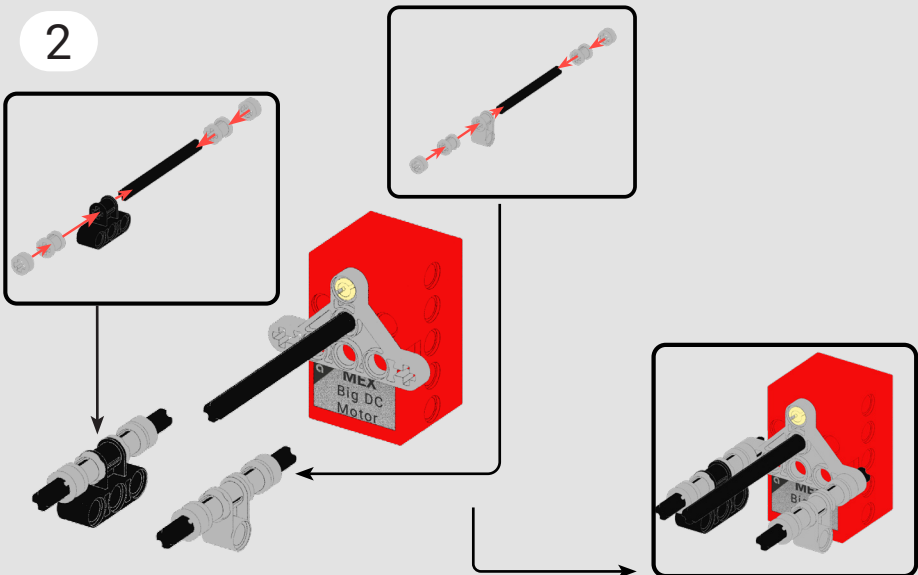
Be careful while using them. They break easily. And they can also be hard to remove - take the help of a parent or an adult to remove them safely.



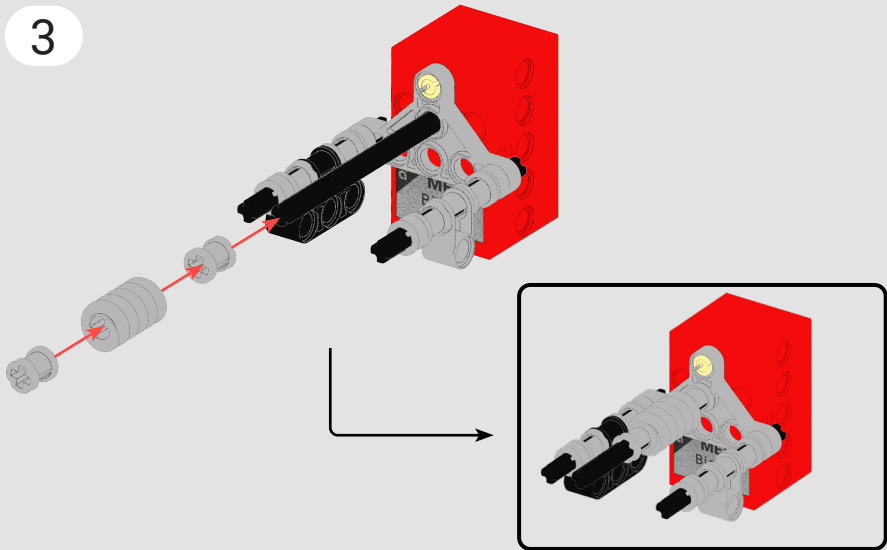
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6H Axle

2



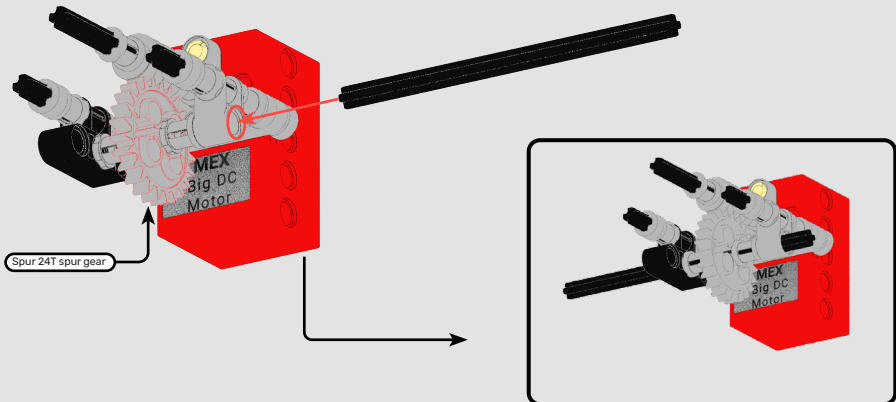
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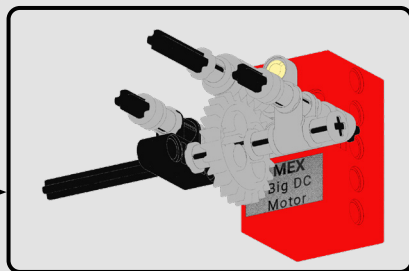
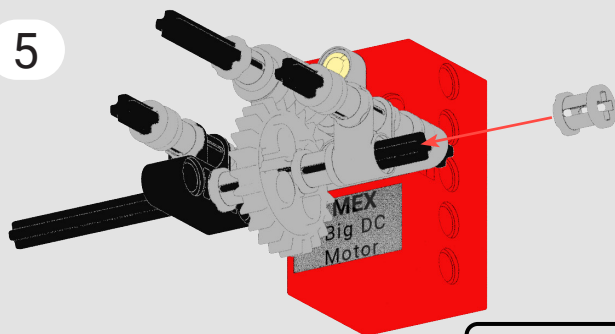
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1:1

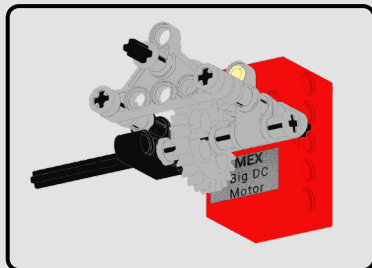
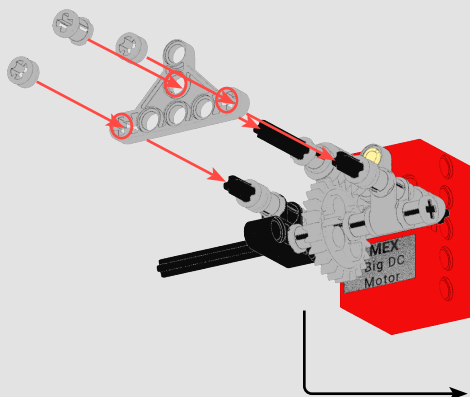
10H Axle



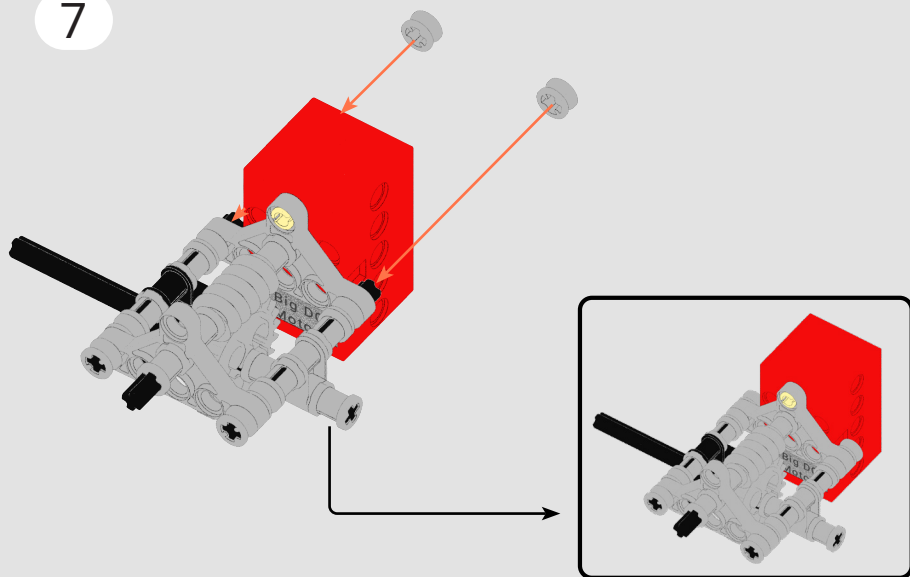
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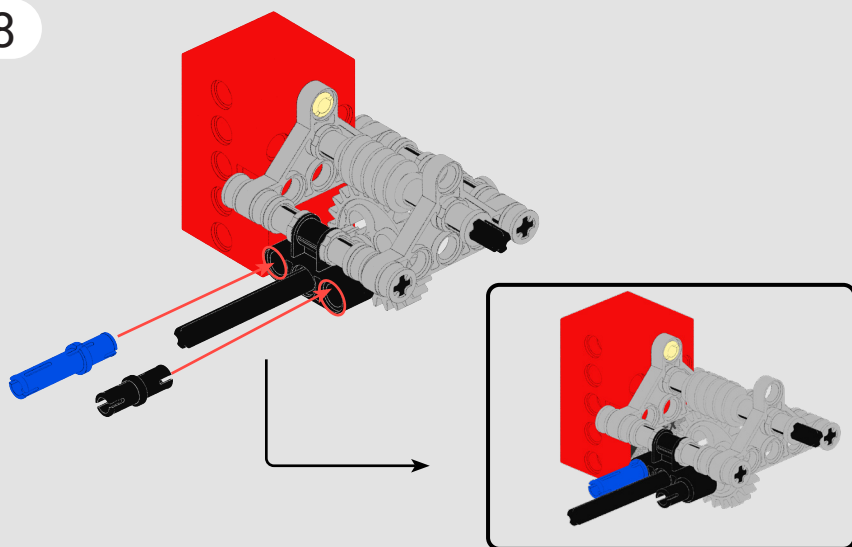
6



7



8



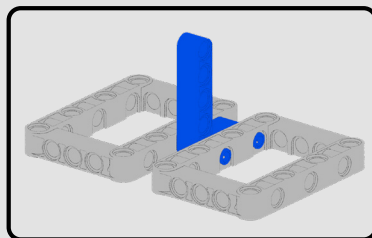
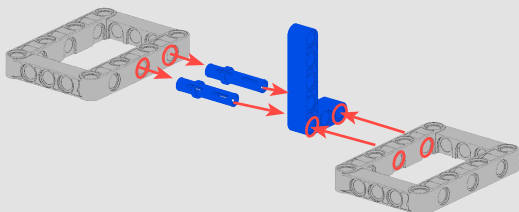
9

Let's make the base structure.

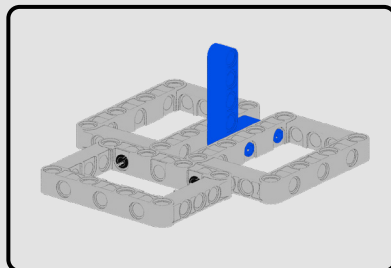
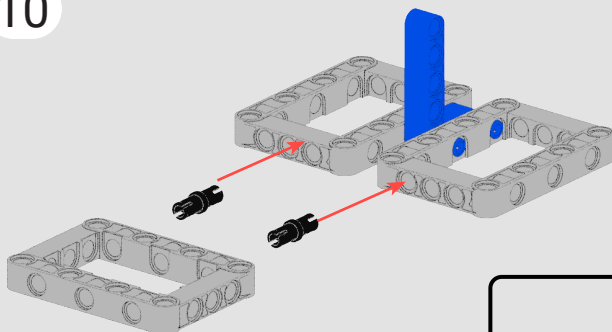
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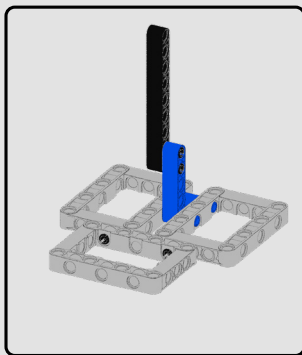
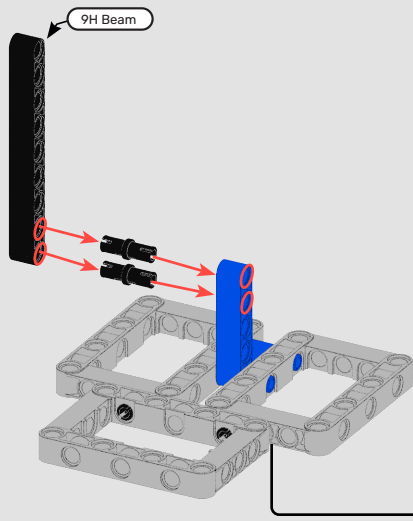
Long Pin Blue



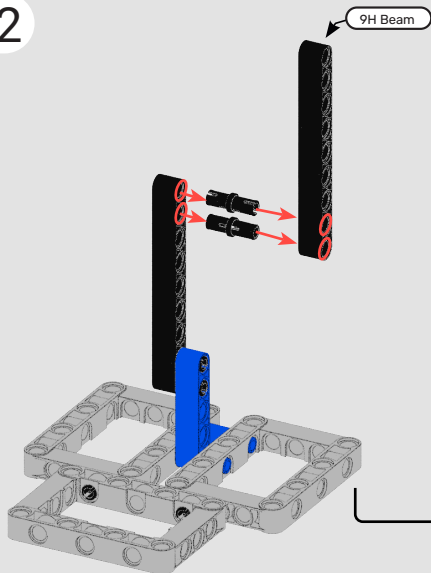
10



11



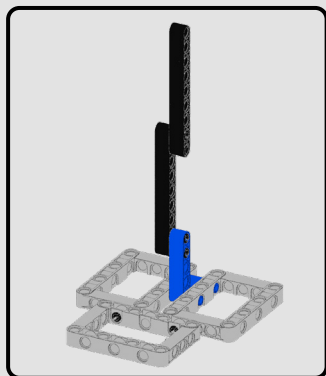
12



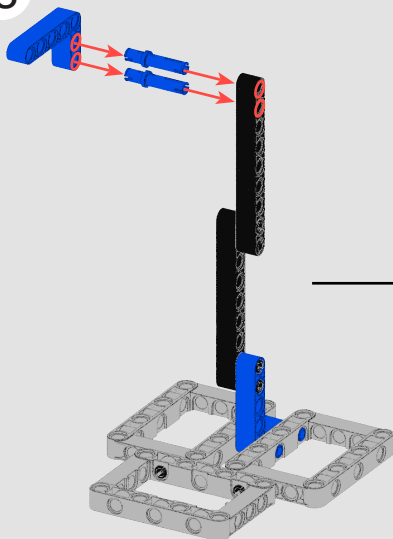
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Long Pin Blue



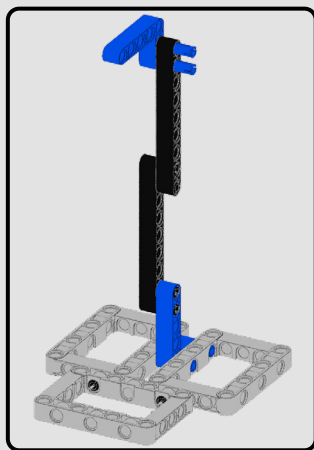
13



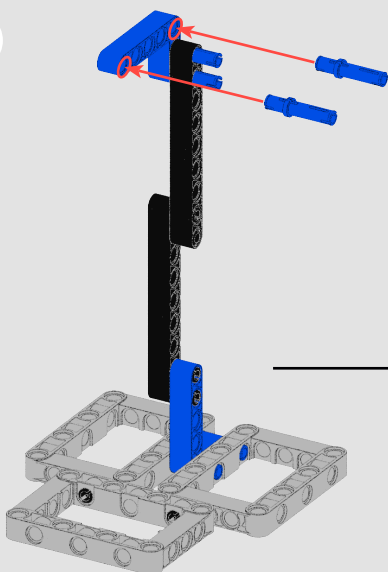
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Long Pin Blue



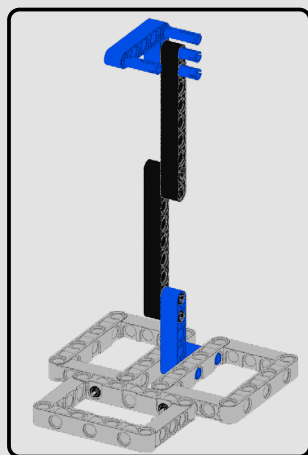
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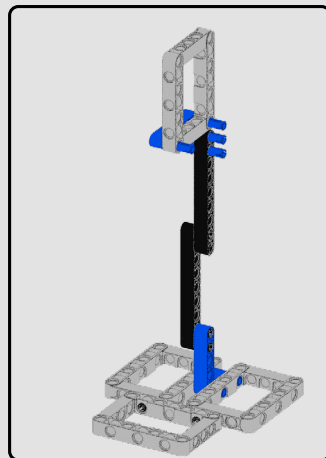
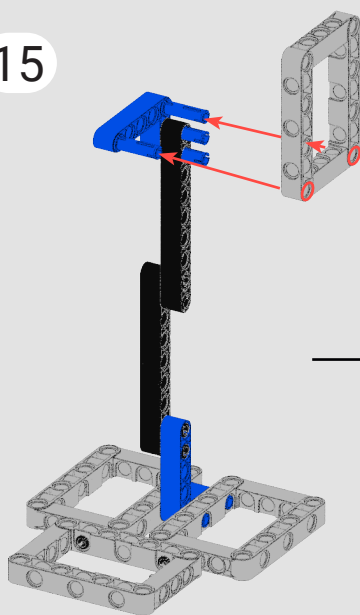
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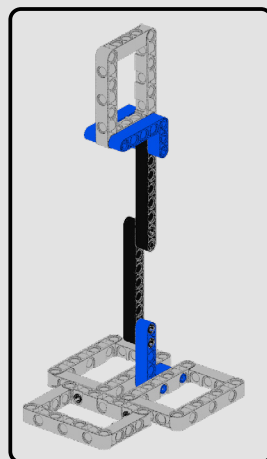
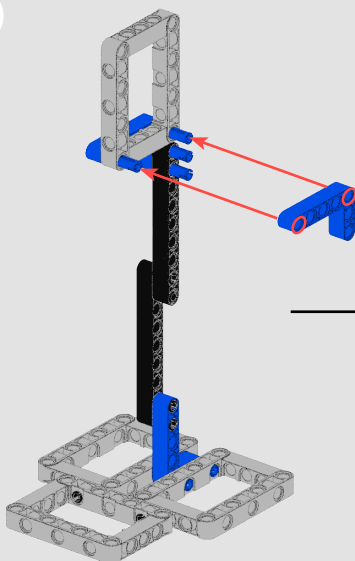
Long Pin Blue



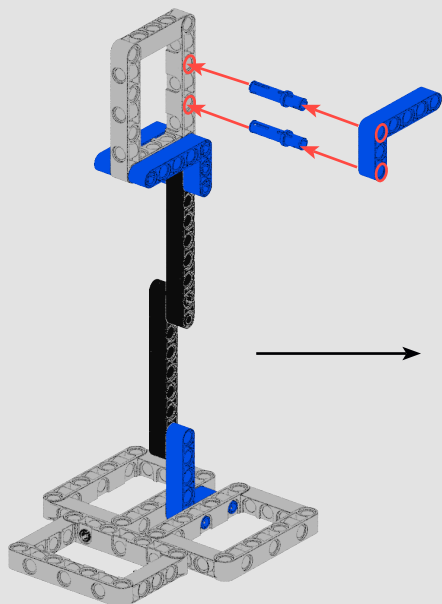
15



16



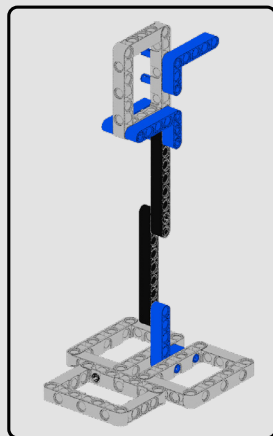
17



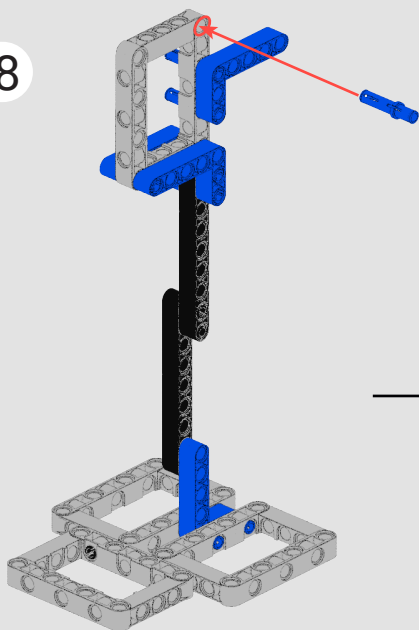
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Long Pin Blue



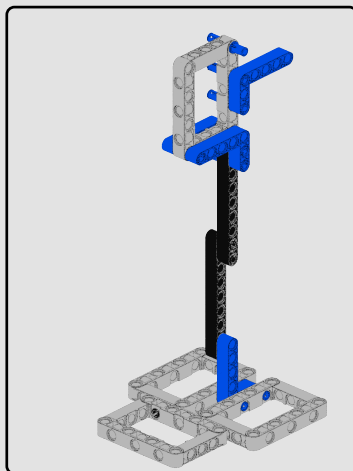
18



1:1

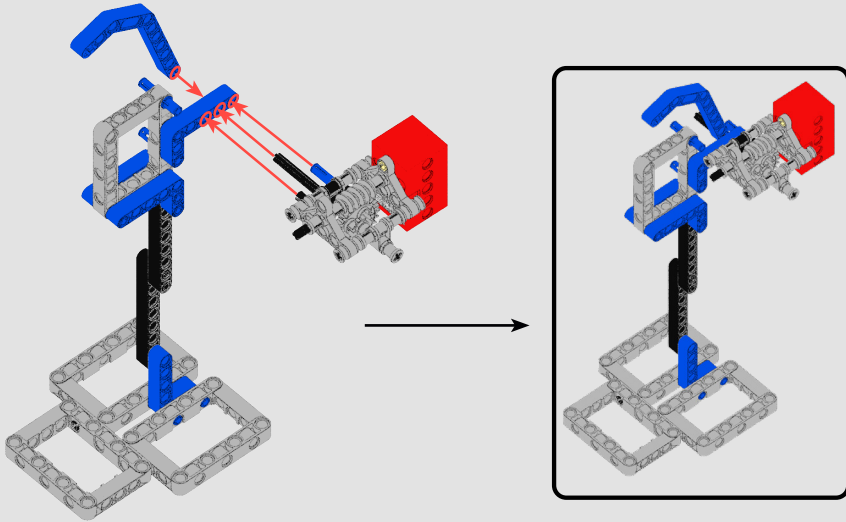


Long Pin Blue

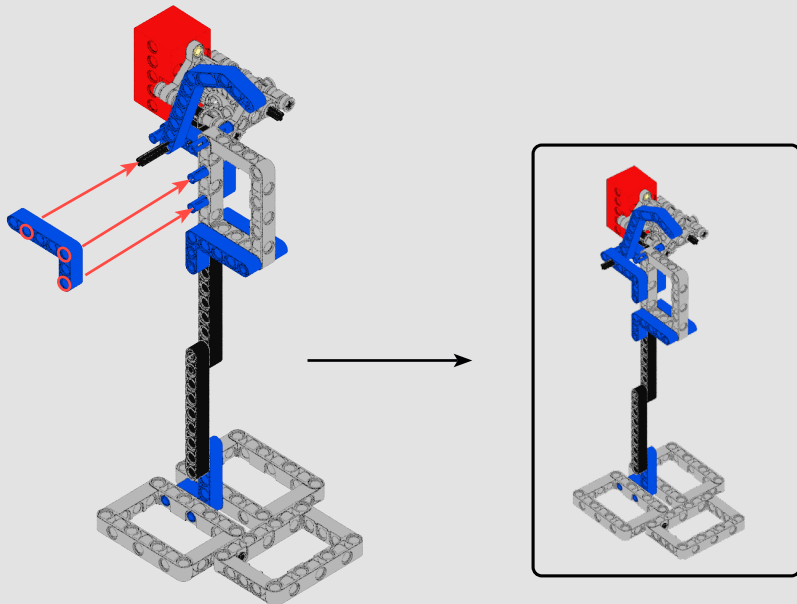


19

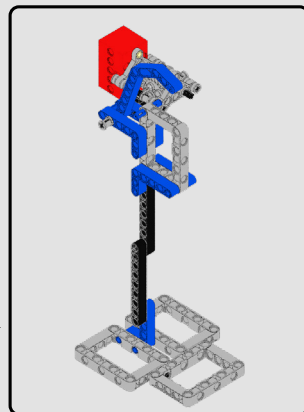
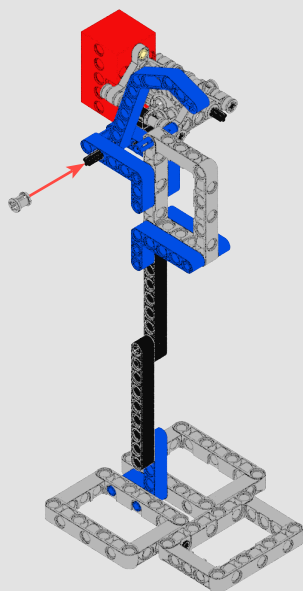
Let's Assemble the base stucture and motor mechanism.



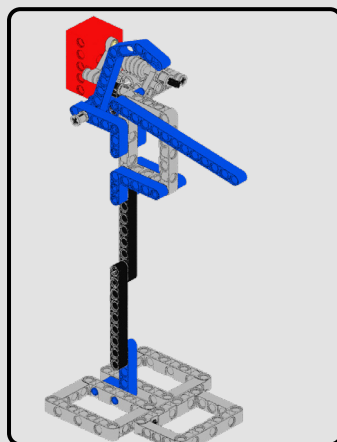
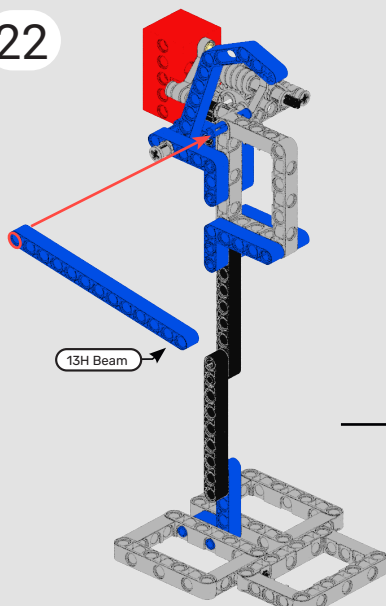
20



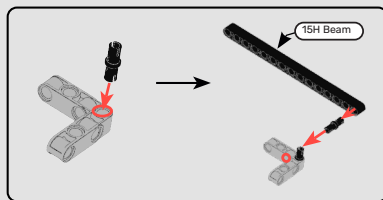
21



22



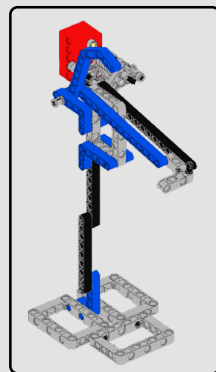
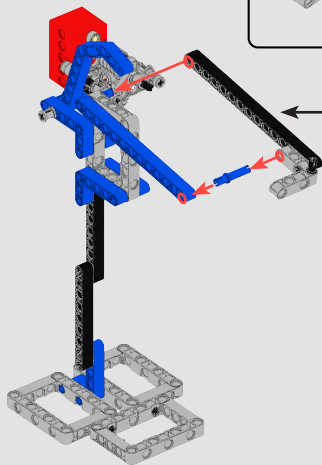
23



1:1



Long Pin Blue

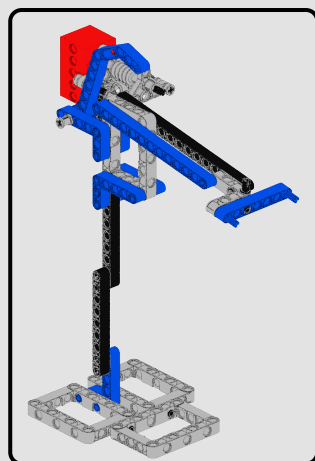
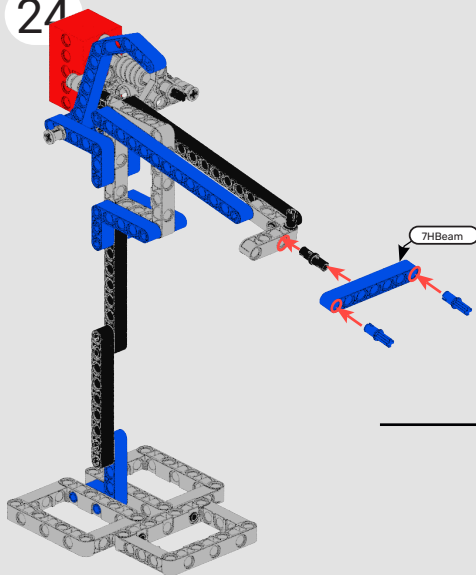


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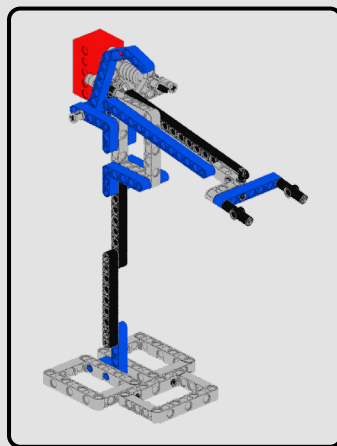
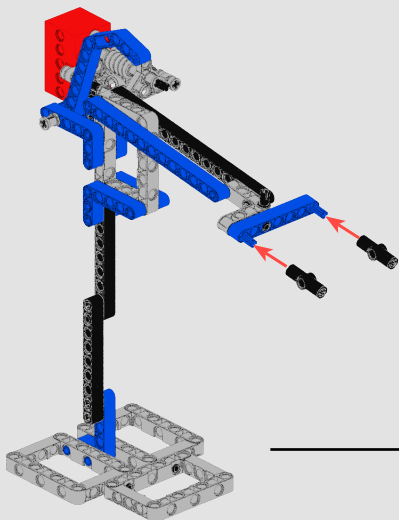
1:1



Medium Axle Pin Blue



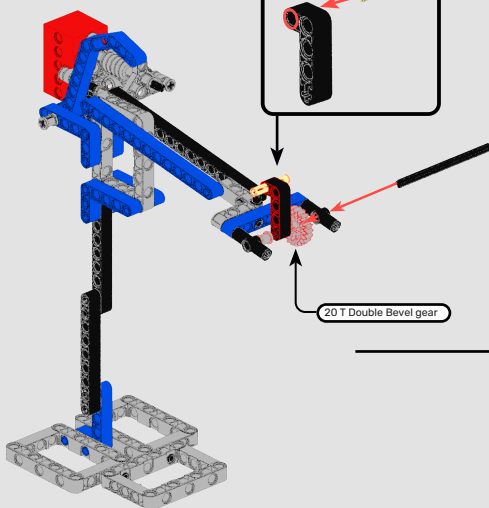
25



1:1

8H Axle

26

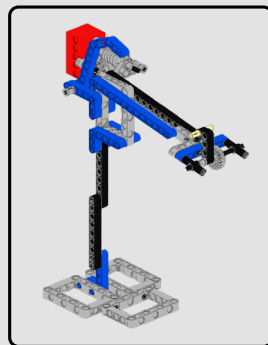


20 T Double Bevel gear

1:1



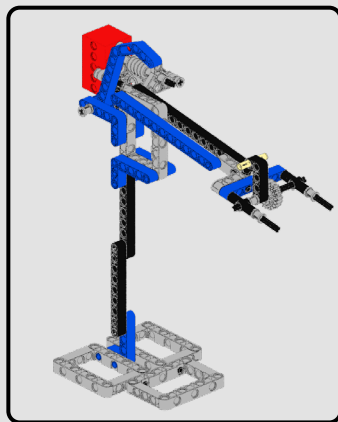
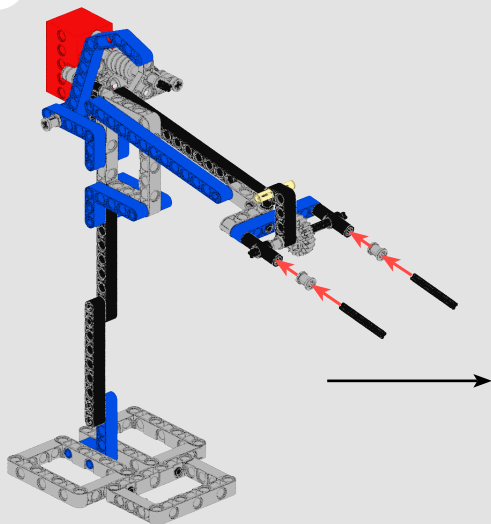
Long Pin Yellow



27

1:1

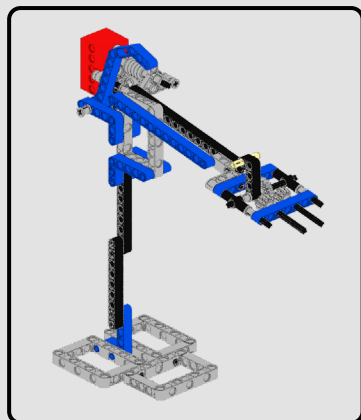
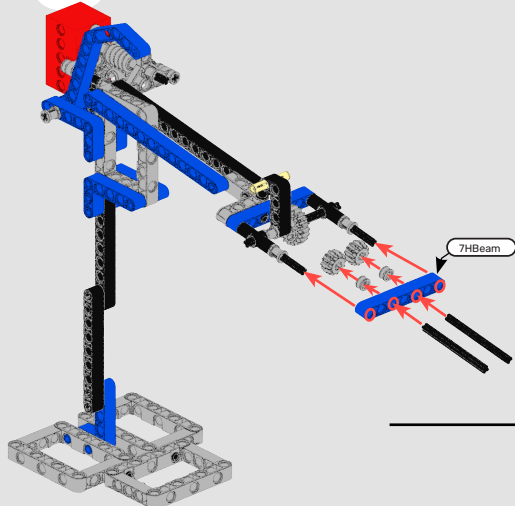
4H Axle



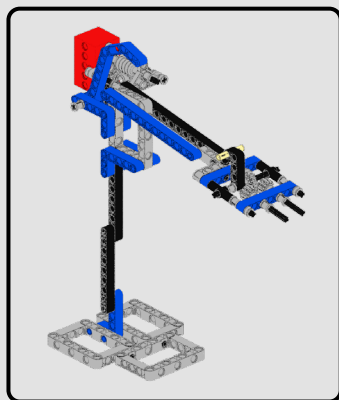
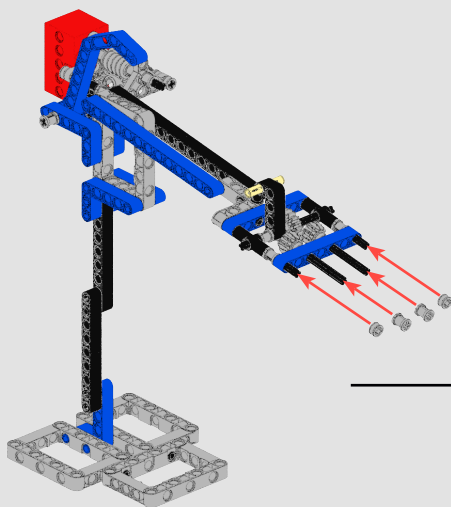
1:1

6H Axle

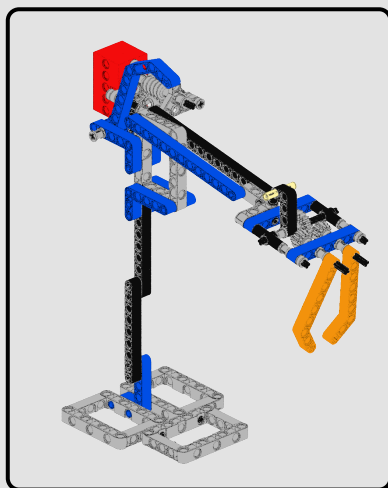
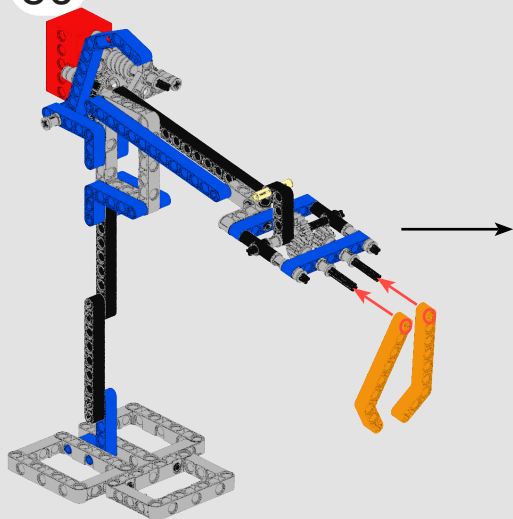
28



29



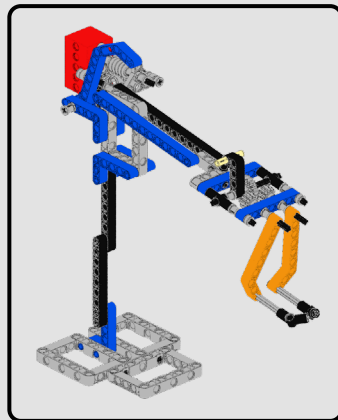
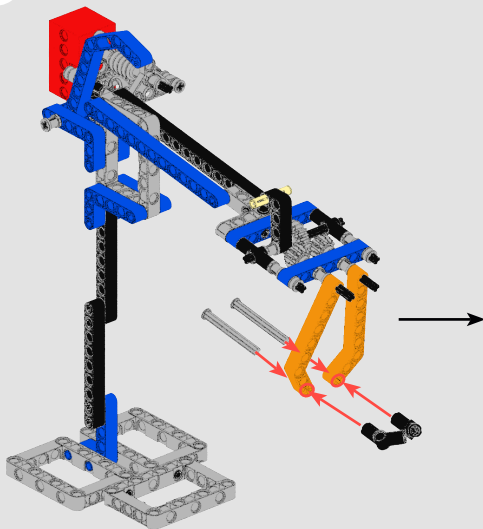
30



31

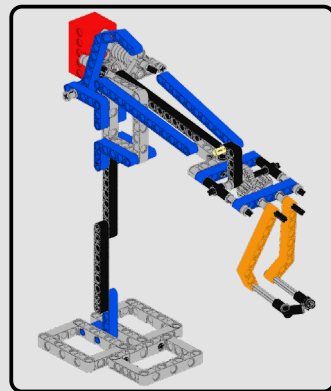
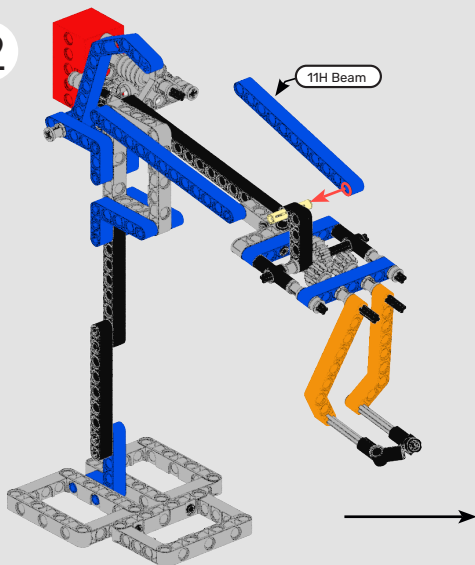
1:1

5H Axle Capped

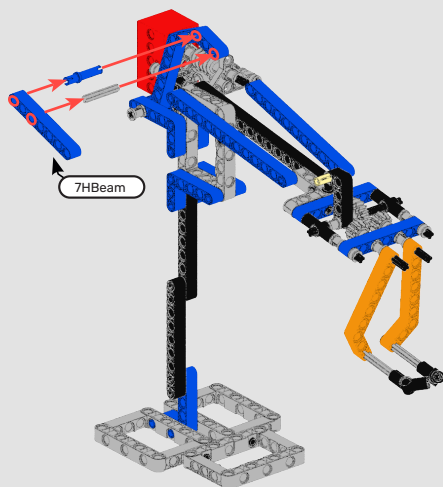


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11H Beam



33



1:1

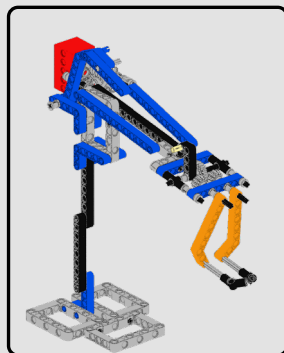


Long Pin Blue

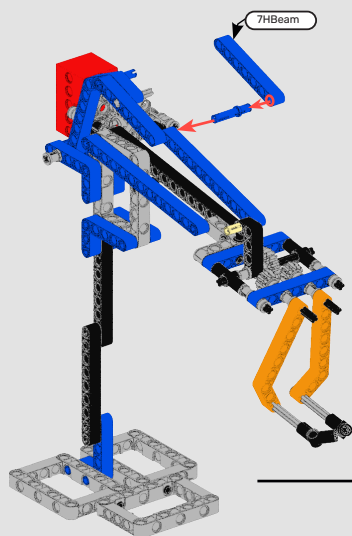
1:1



3H Axle



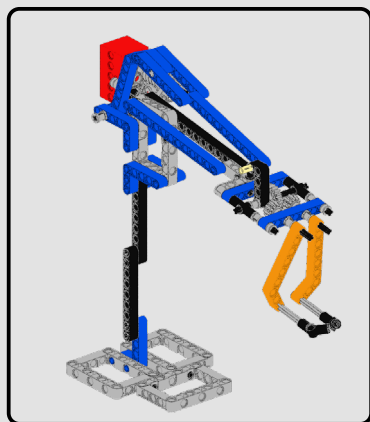
34



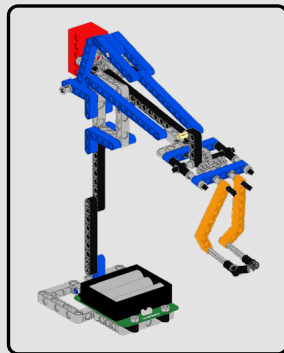
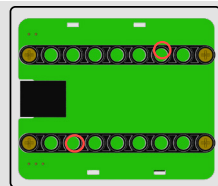
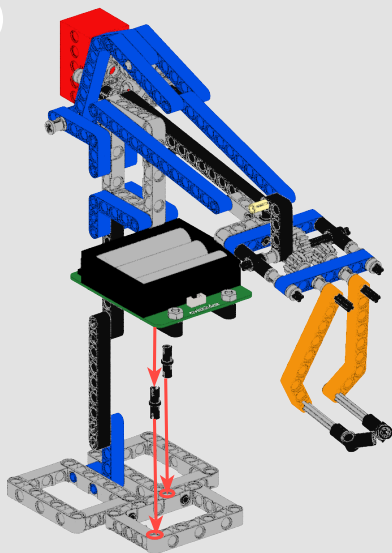
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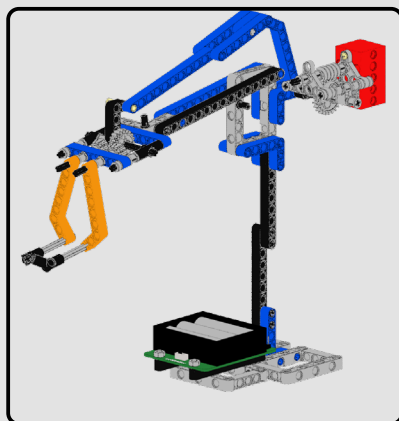
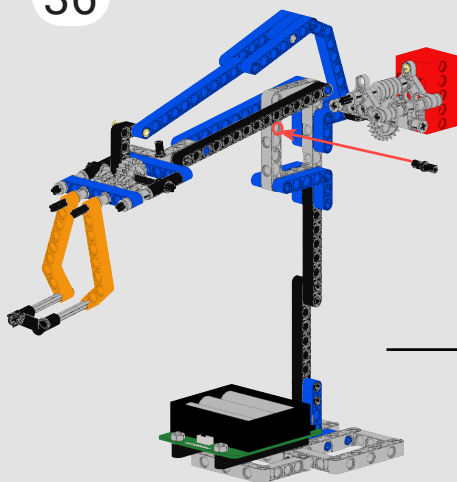
Long Pin Blue



35



36



Congratulations on Completing this Project!

Excited to play with it using the avishkaar mobile app?

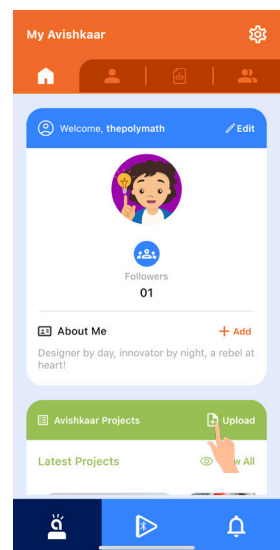
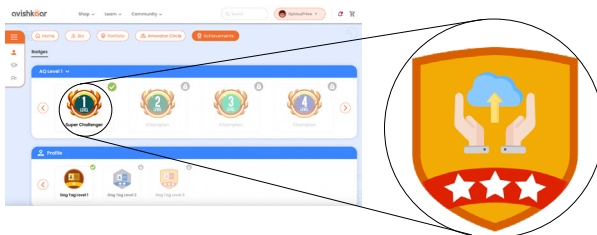
Go to Pg 8 about the detailed instructions on how to download the app and control your bot using it.



Share your Creation with the World and Win the 'Scratch the Surface' Level 3 Badge

Upload photos or videos of your project using the project section of the Avishkaar App to win the 'Scratch the Surface' Level 3 Badge.

See all your collected badges in the achievement section of your profile on www.avishkaar.cc. Explore all other badges to be collected and win them all!



Facing an Issue?

Our technical support is available to assist you at these timings -

Monday to Saturday: 9am to 8pm

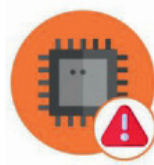
Sunday and 3rd Saturday: 9am to 6pm



Software Issues



Usability Issues



Hardware Issues

Contact support by scanning the QR Code.



support@avishkaar.cc

+91-8506931515