

avishk^oar

MEX

Robotics Explorer Kit

User Manual



PROBLEM
SOLVING



MECHANICAL
DESIGN



CREATIVITY



ROBOTICS





**"I don't dream
of success, I work
towards it!"**

Sneak peak

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Make the Most Out of Your Kit

Innovate



Take the Innovator's Oath

Take the innovator's oath mentioned on page 5 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



**Explore
your Kit**

Welcome to Avishkaar

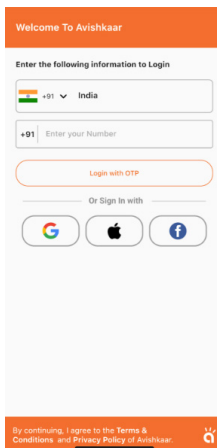
Download the Avishkaar App

Download the Avishkaar App by scanning the QR codes below:



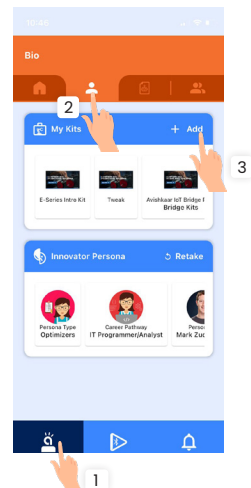
① Create an Account

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

Armour Check

Box 1 (Construction parts)

BEAM



9H Beam
x 2



7H Beam
x 2



5H Beam
x 4



3H Beam
x 2

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



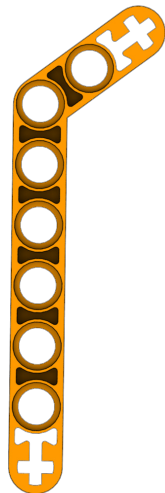
2Cx1H
Thin-Beam
x 4



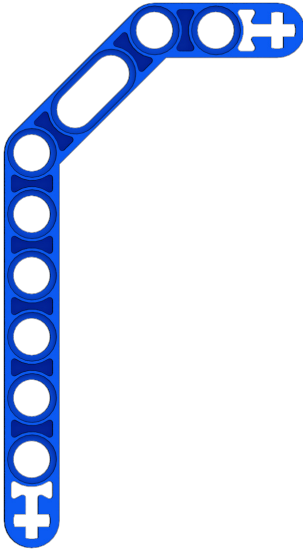
1Cx1H Beam
x 2



3Cx2H Thin-D
x 2



2C x7H Single Bend
x 2



2Cx10H Double
Bend Beam
x 4

FILLERS



Axle Filler- Big
x 4



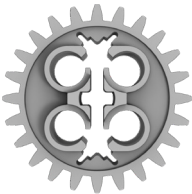
Axle Filler- Small
x 6

WINGS



Wing x 3

GEAR

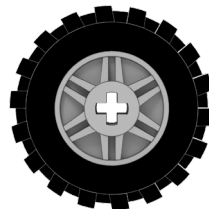


Spur Gear-24T
x 2



20T Double
Bevel gear
x 2

WHEEL



Small Wheel
x 4

PINS



Long Pin-Blue
x 2

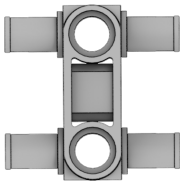


Medium Pin-Black
x15



Medium Axle Pin-Blue
x 6

CONNECTORS



3Hx4 Pin Connector
x 2



Triple Axle Connector
x 1



Axle Triple Pin
Perpendicular Connector
x 2



1C x 1H Perpendicular
Connector x 1

Rubber Band



Rubber band
x 3

All About Axles

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

1:1



2H
Axle
(4)



3H
Axle
(1)



4H
Axle
(2)



6H
Axle
(1)



8H
Axle
(2)



9H
Axle
(1)



10H
Axle
(1)

13H
Beam



13th Hole

12th Hole

11th Hole

10th Hole

9th Hole

8th Hole

7th Hole

6th Hole

5th Hole

4th Hole

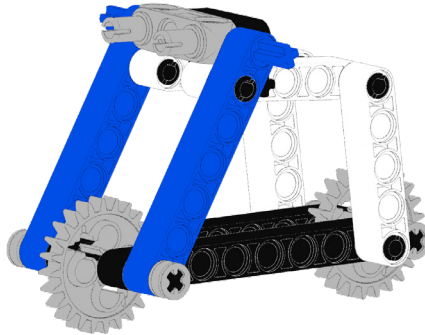
3rd Hole

2nd Hole

1st Hole

Project 1: MEX Mountain Bike(MTB)

Let's Build!



Things we need



9H Beam
x 2



5H Beam
x 4



3H Beam
x 1



4H Axle
x 2



6H Axle
x 1



Medium
Pin-Black
x 4



Medium Axle
Pin-Blue
x 2



3Hx4Pin
Connector
x 1



Spur Gear 24T
x 2



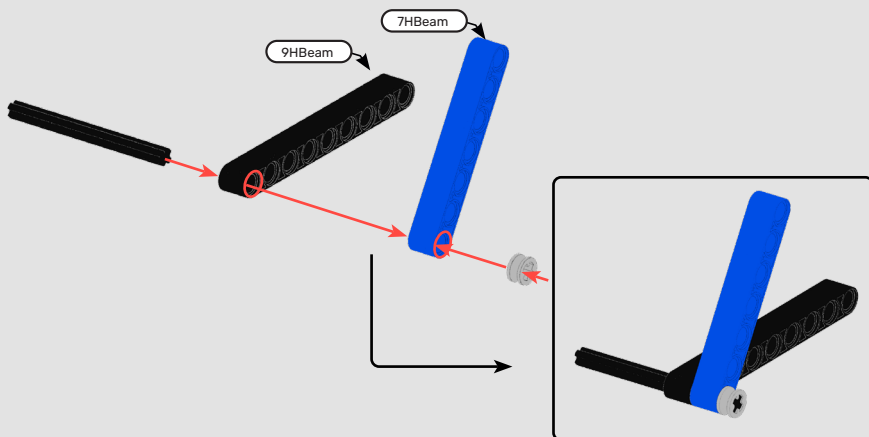
Axle
Filler-Small
x 5

Steps

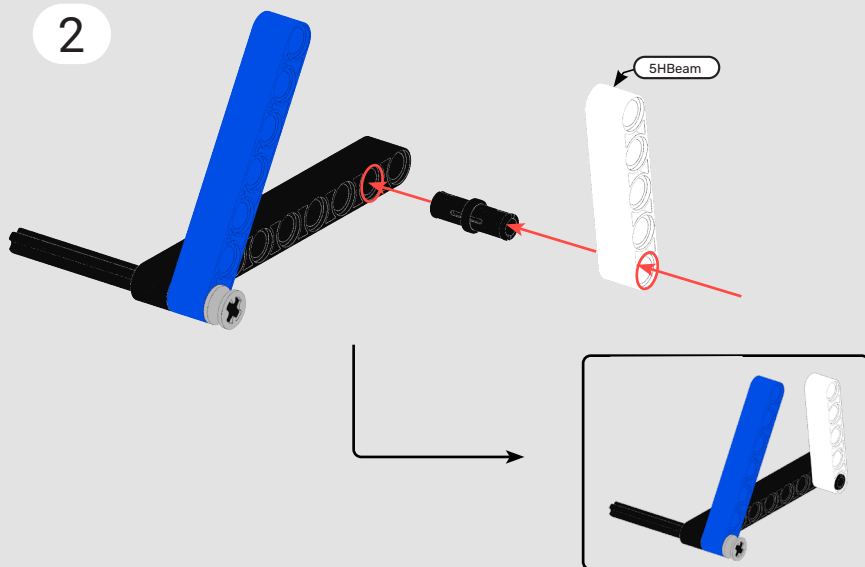
1:1

6H Axle

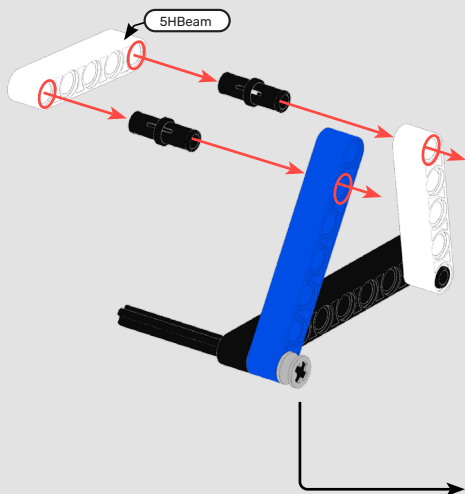
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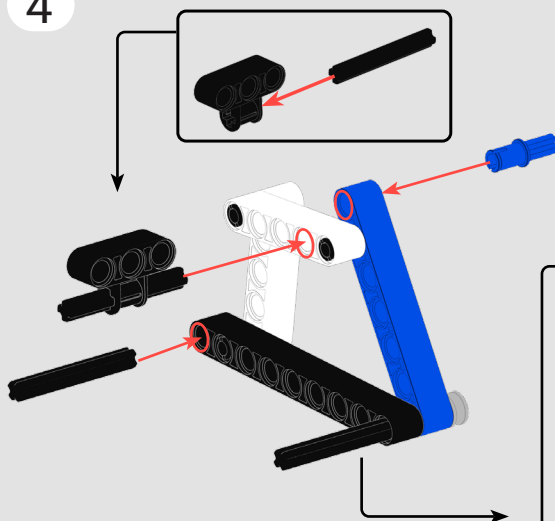
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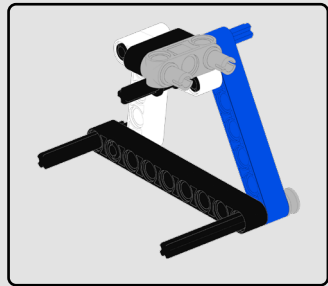
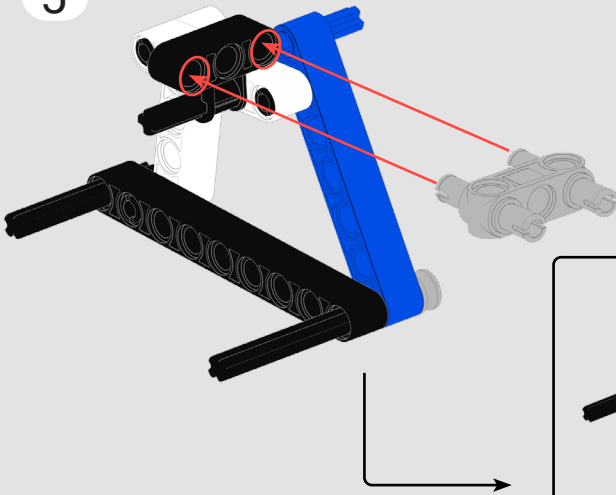
1:1

4H Axle

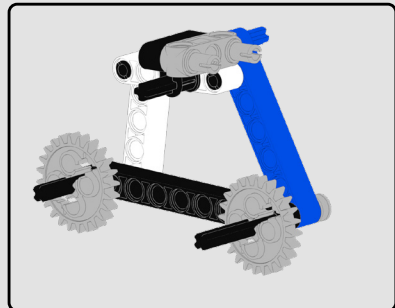
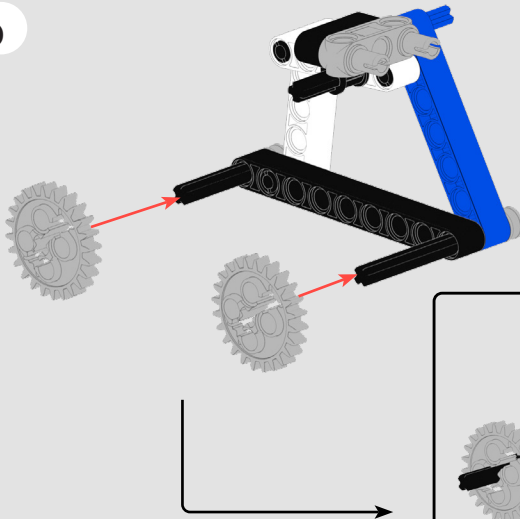
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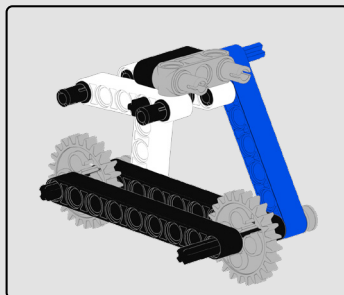
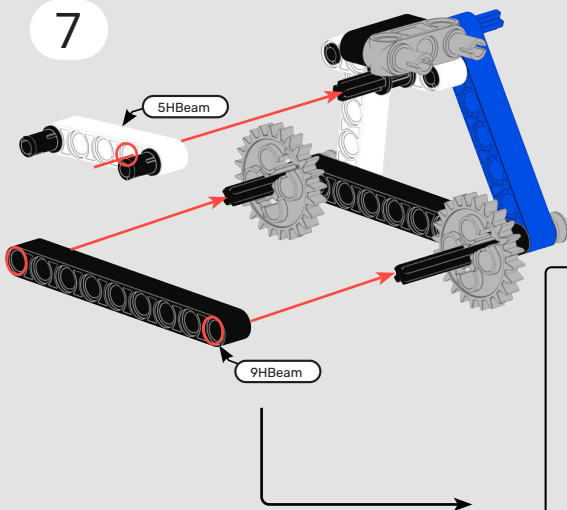
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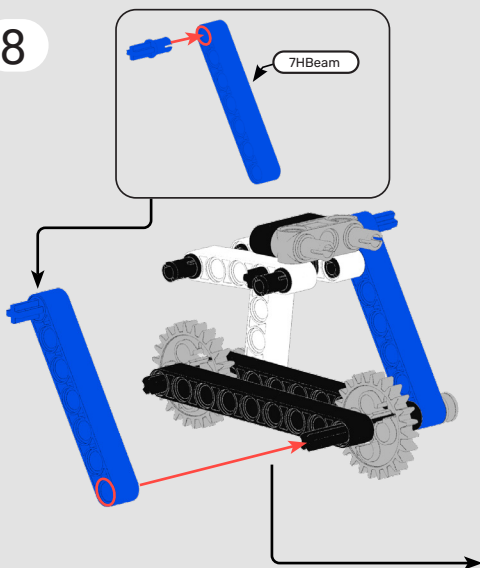
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7



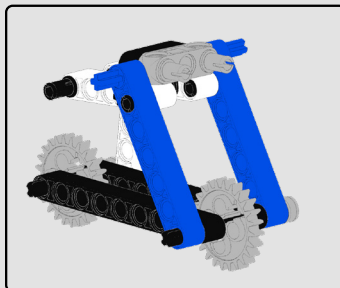
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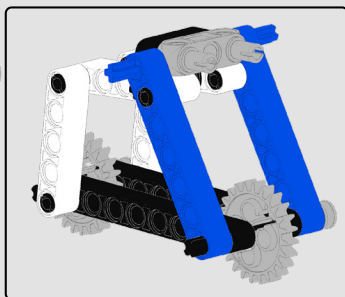
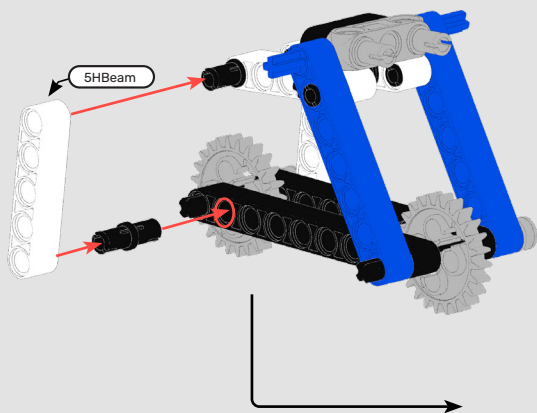
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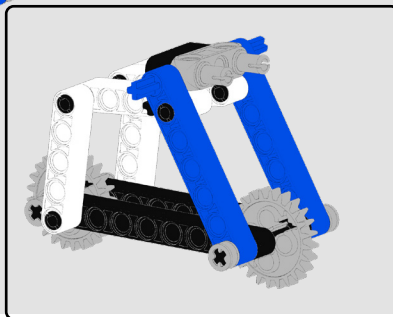
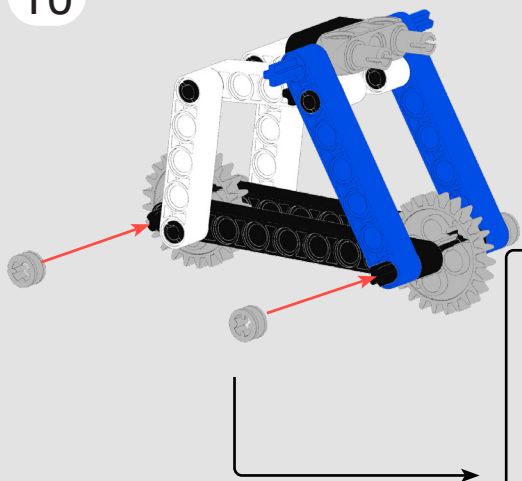
Medium Axle Pin Blue



9



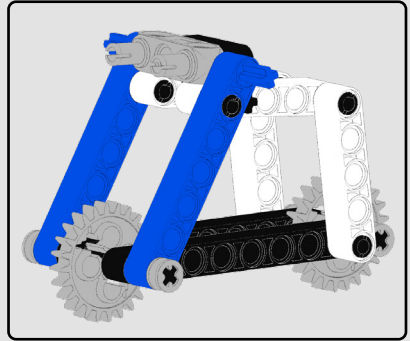
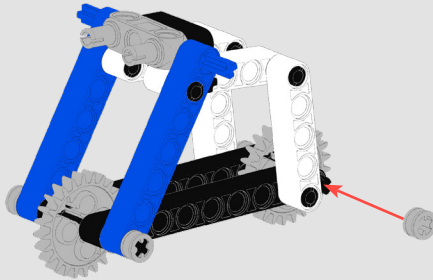
10



11



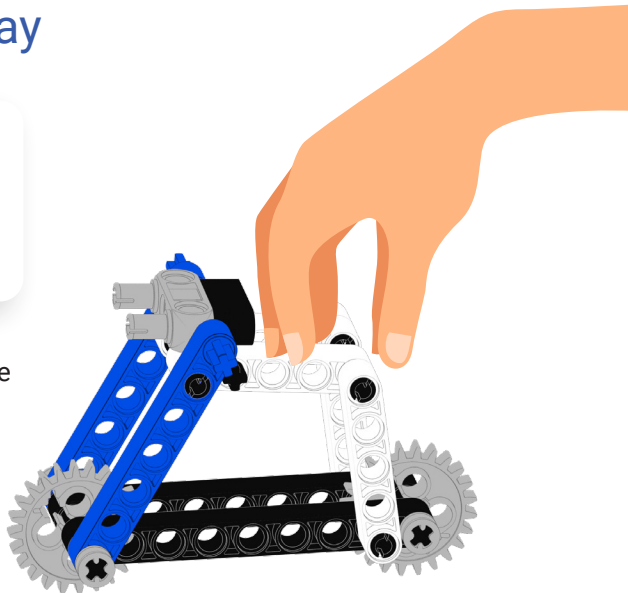
Axle Filler- Small



How to play

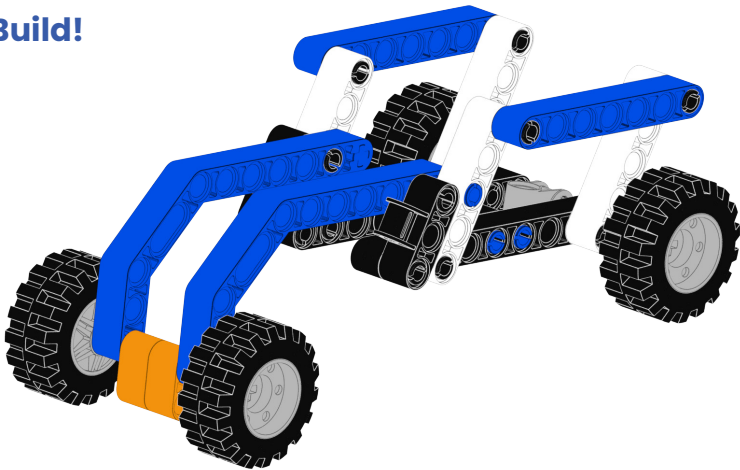


Scan QR
and upload the
Project!



Project 2: MEX Retro Car

Let's Build!



Things we need



9H Beam
x 2



7H Beam
x 2



5H Beam
x 4



3H Beam
x 2



2Cx10H
Double Bend
Beam
x 2



1Cx1H Beam
x 2



Medium Axle
Pin-Blue
x 2



Medium
Pin-Black
x 13



Long
Pin-Blue
x 2



3Hx4Pin
Connector
x 2



1Cx1H
Perpendicular
Connector
x 1



Axle Triple Pin
Perpendicular
Connector
x 1



6H Axle
x 1



10H Axle
x 1



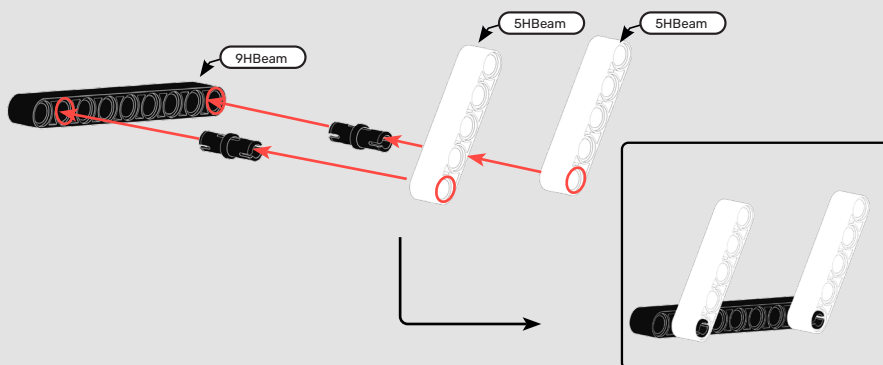
Wheel
x 4



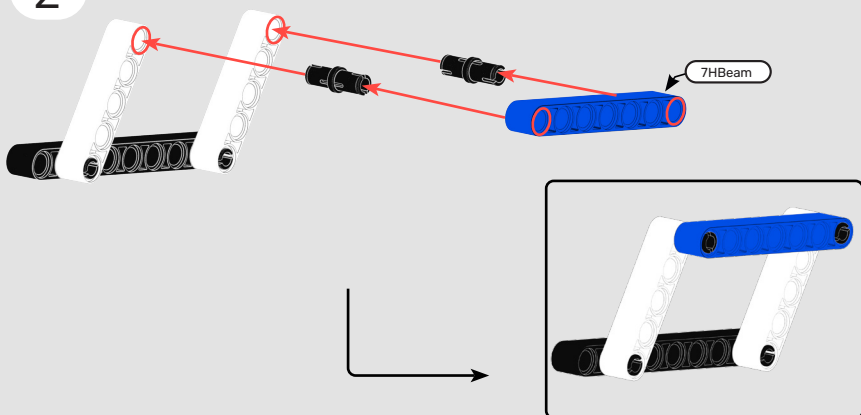
Rubber band
x 1

Steps

1



2

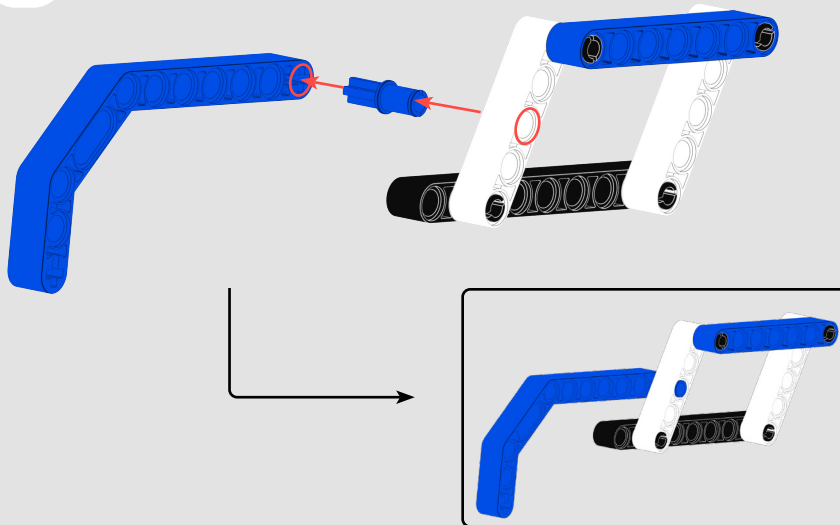


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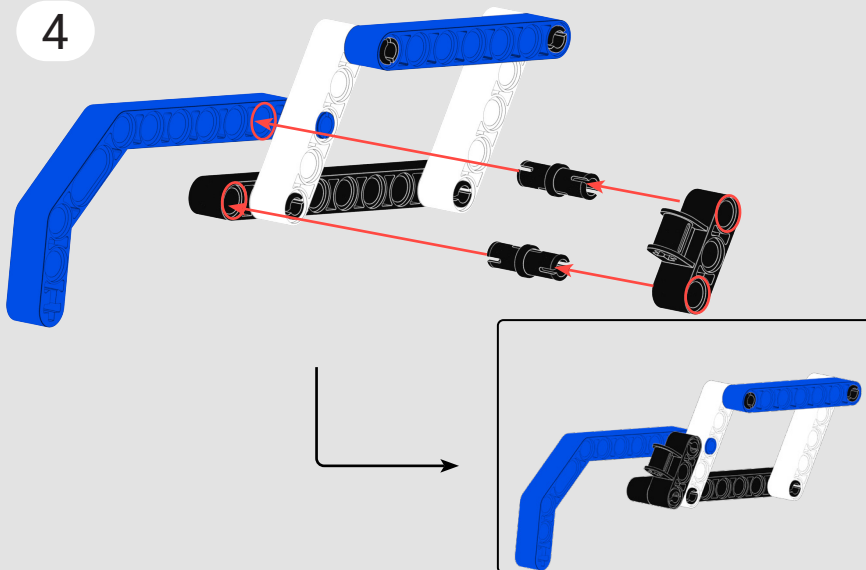
1:1



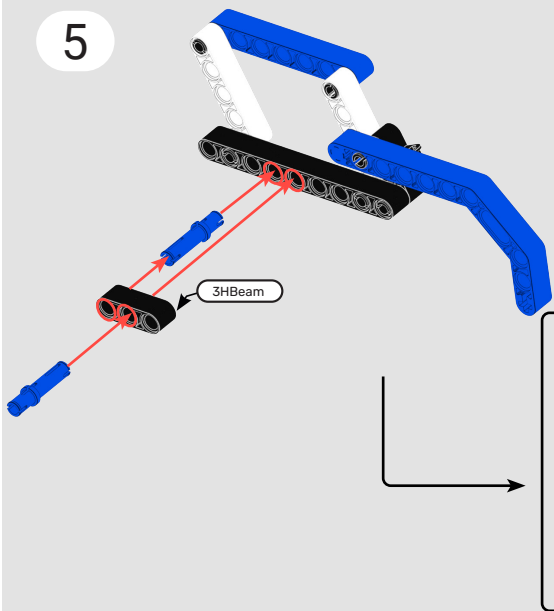
Medium Axle Pin Blue



4



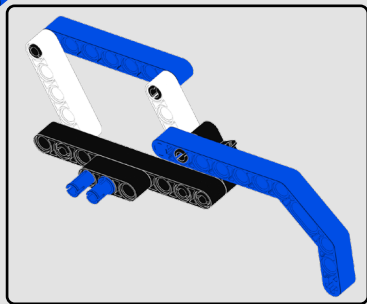
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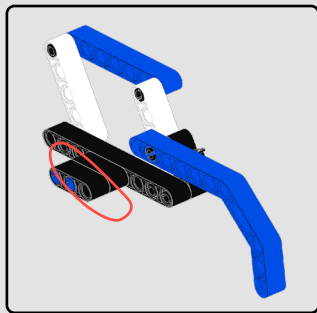
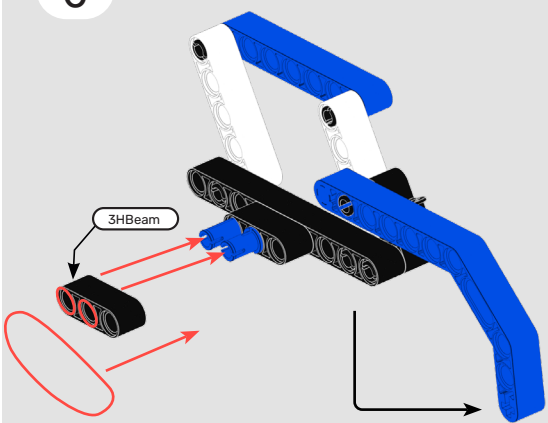
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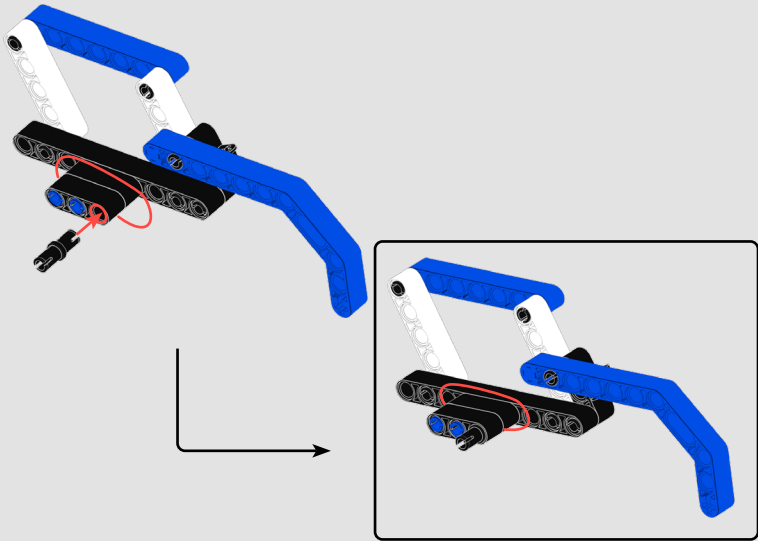
Long Pin Blue



6

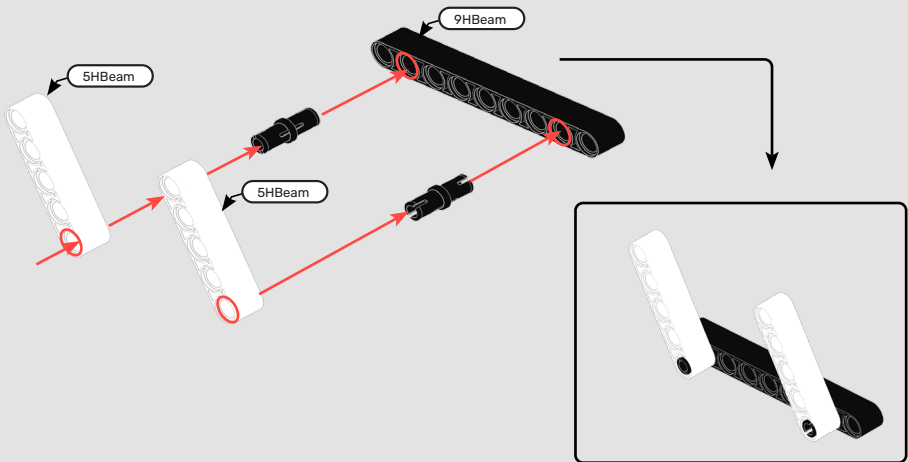


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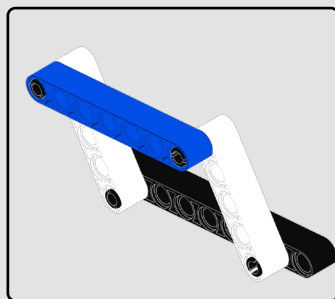
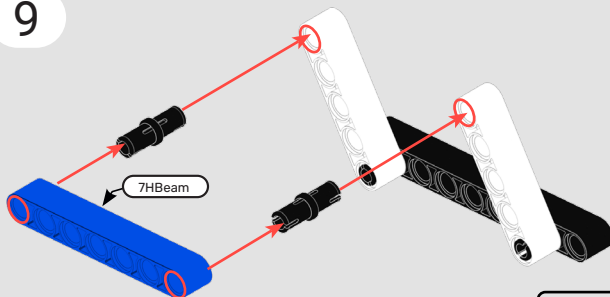


Let's make the another side.

8



9

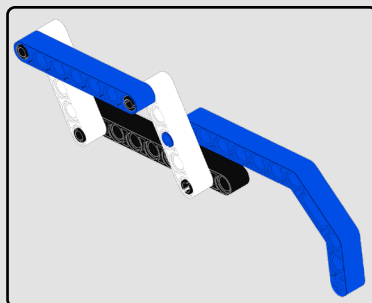
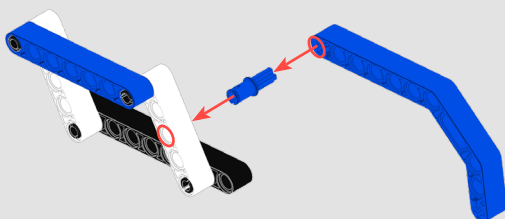


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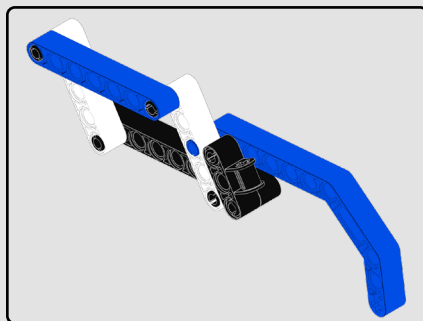
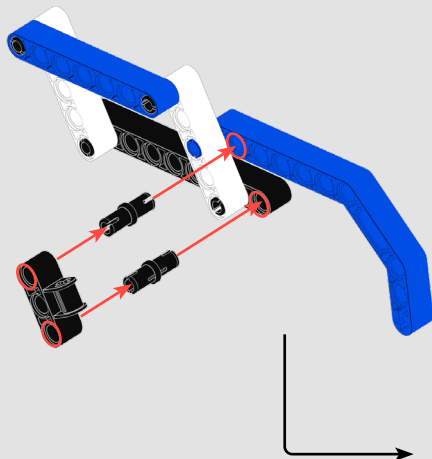
1:1



Medium Axle Pin Blue



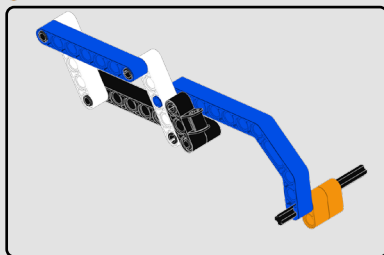
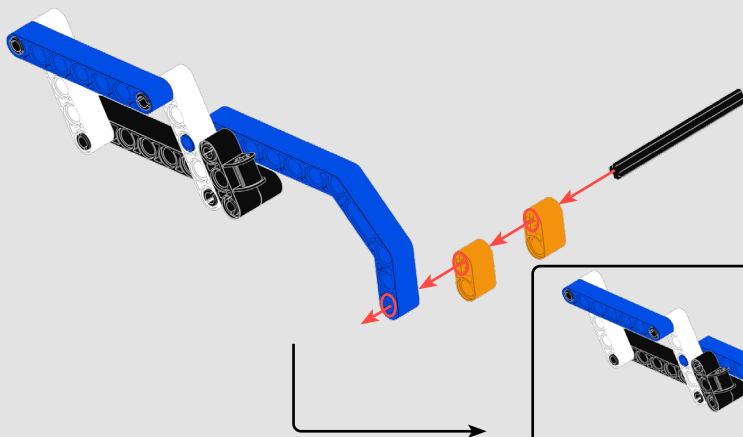
11



1:1

6H Axle

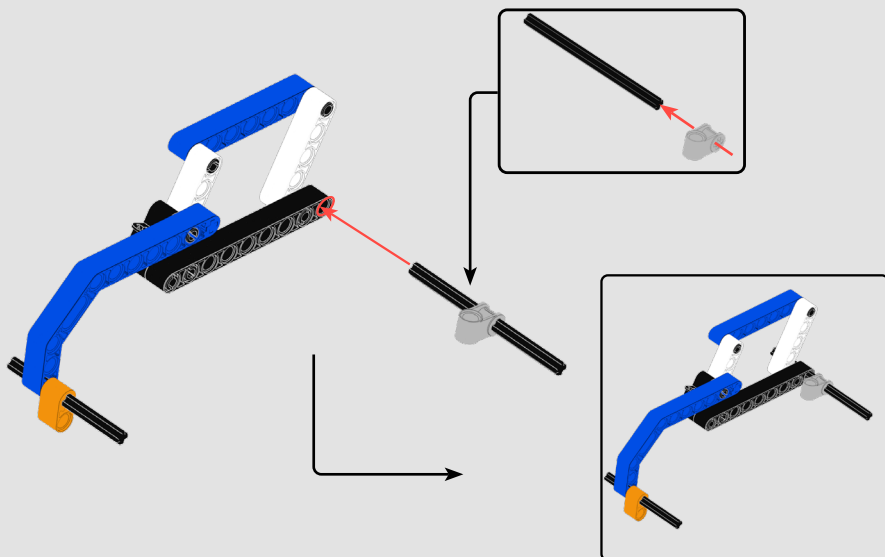
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13

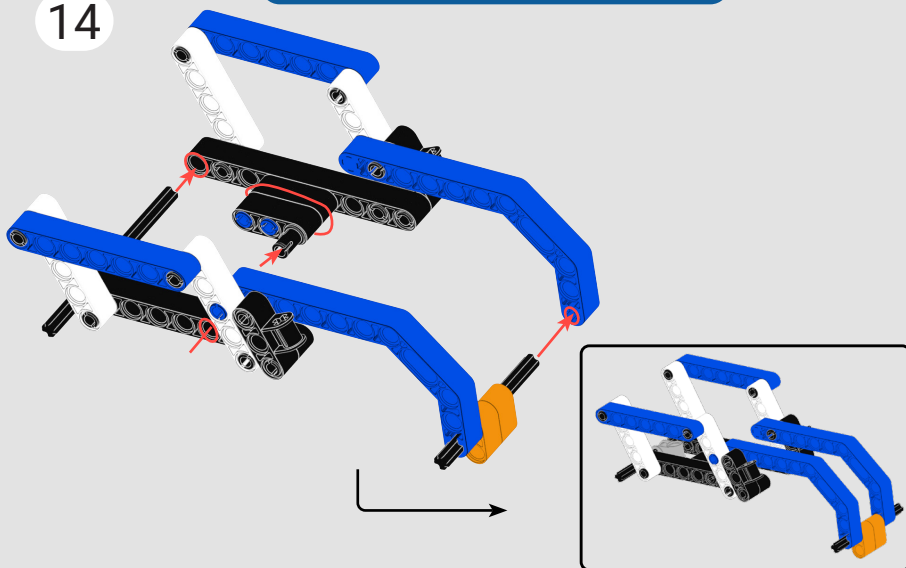
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8H Axle

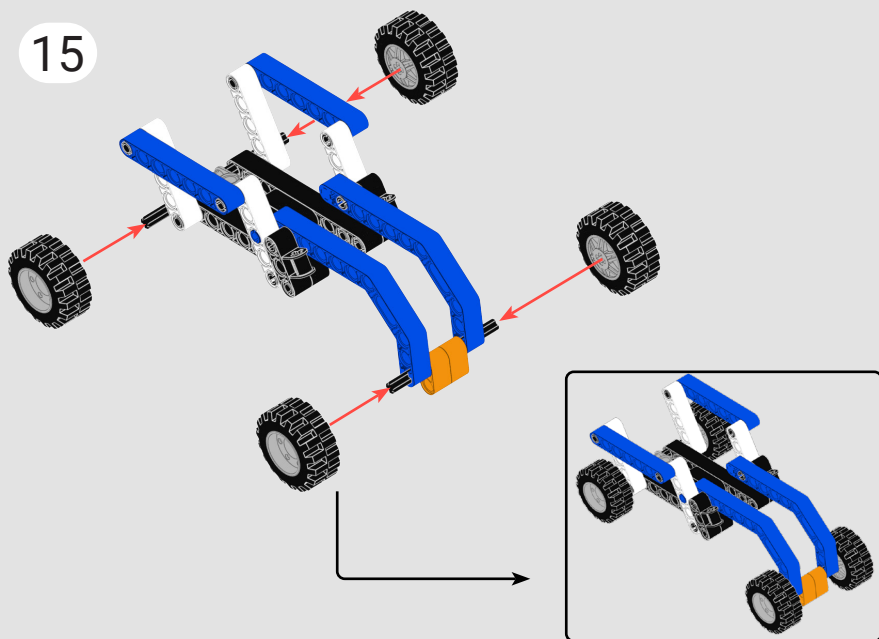


Let's Assemble both the sides.

14



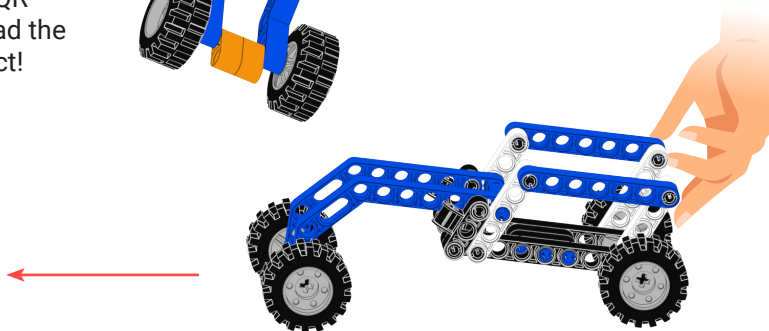
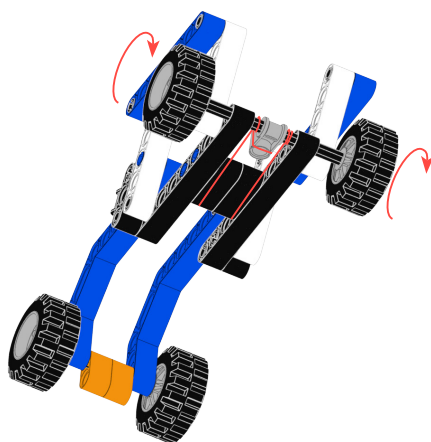
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How to play

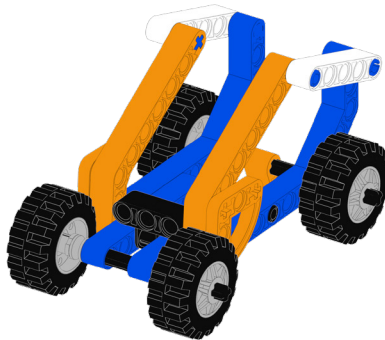


Scan QR
and upload the
Project!



Project 3: MEX Buggy

Let's Build!



Things we need



7H Beam
x 2



5H Beam
x 2



2Cx10H
Double Bend
Beam
x 2



2Cx7H Single
Bend Beam
x 2



3Cx2H Thin-D
x 2



1Cx1H Beam
x 2



Medium Axle
Pin-Blue
x 4



Medium
Pin-Black
x 4



6H Axle
x 1



8H Axle
x 1



10H Axle
x 1



Axle Filler-Big
x 4



Axle Filler-
Small
x 2



Axle Triple Pin
Perpendicular
Connector
x 1

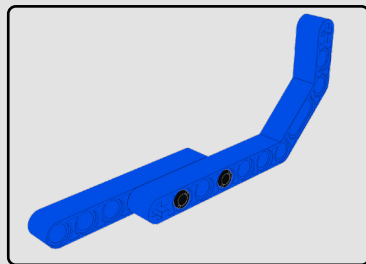
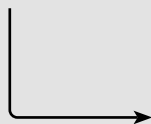
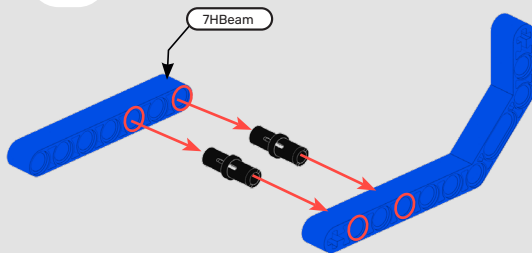


Wheel
x 4



Rubber band
x 1

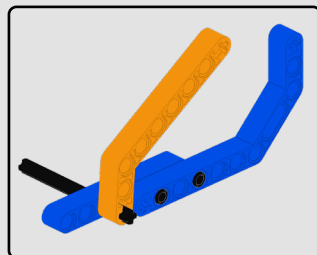
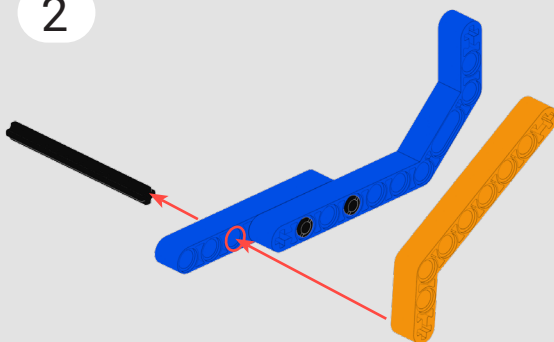
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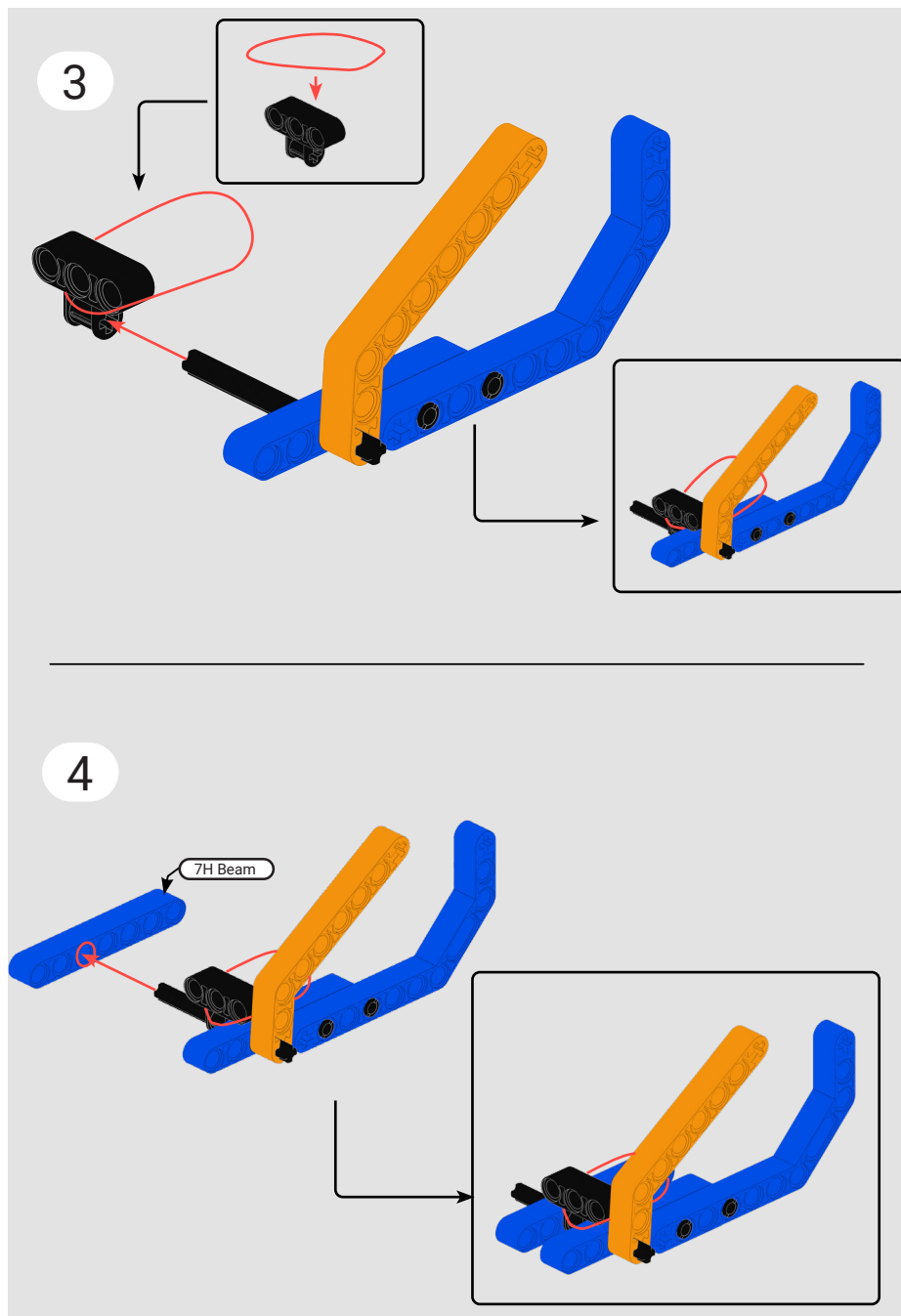


2

1:1

6H Axle

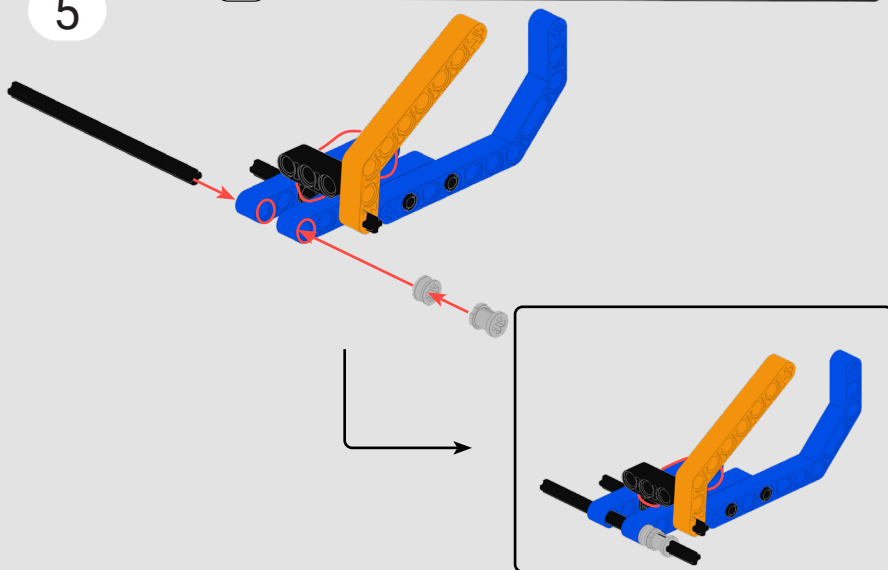




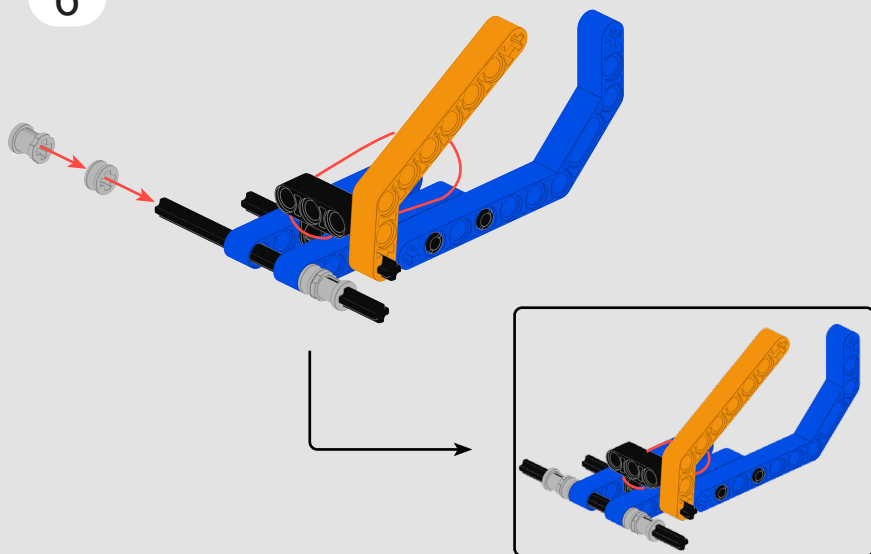
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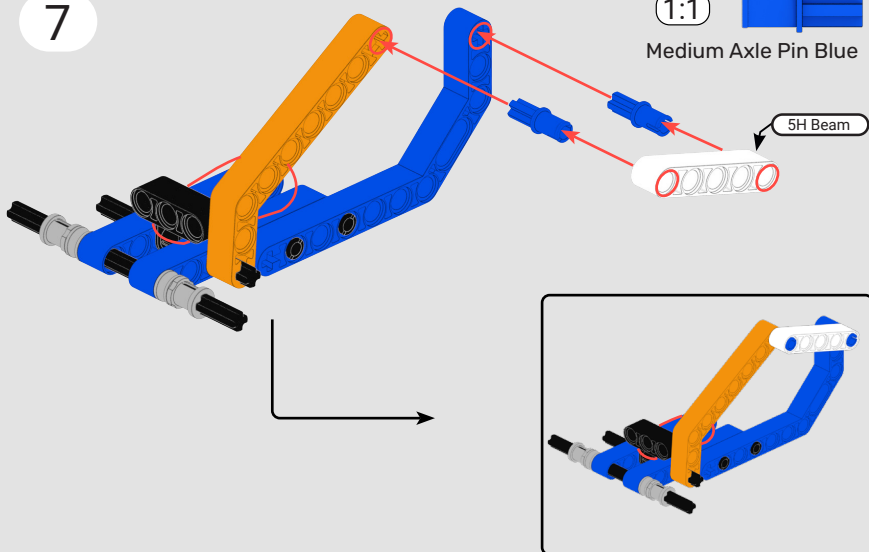
10H Axle



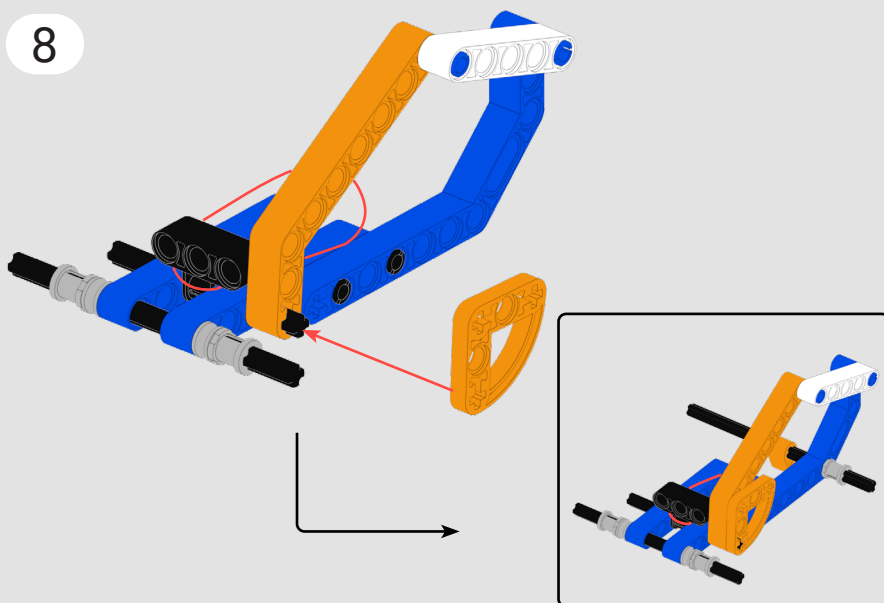
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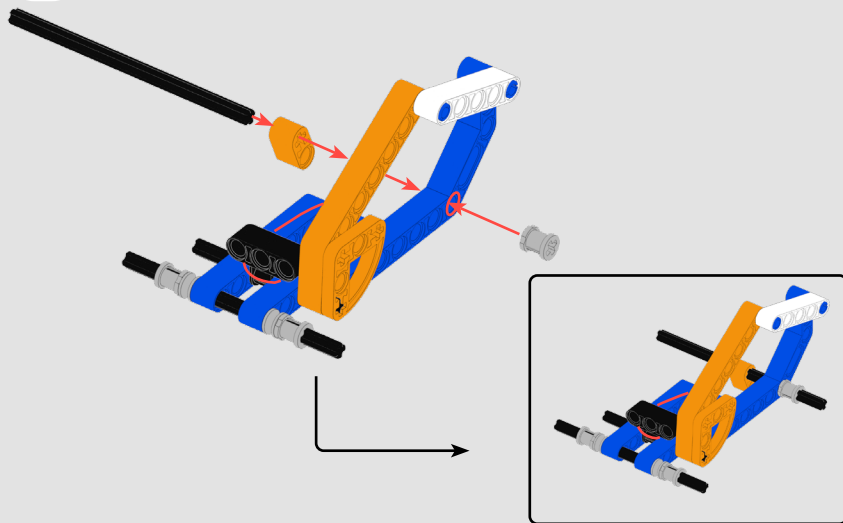
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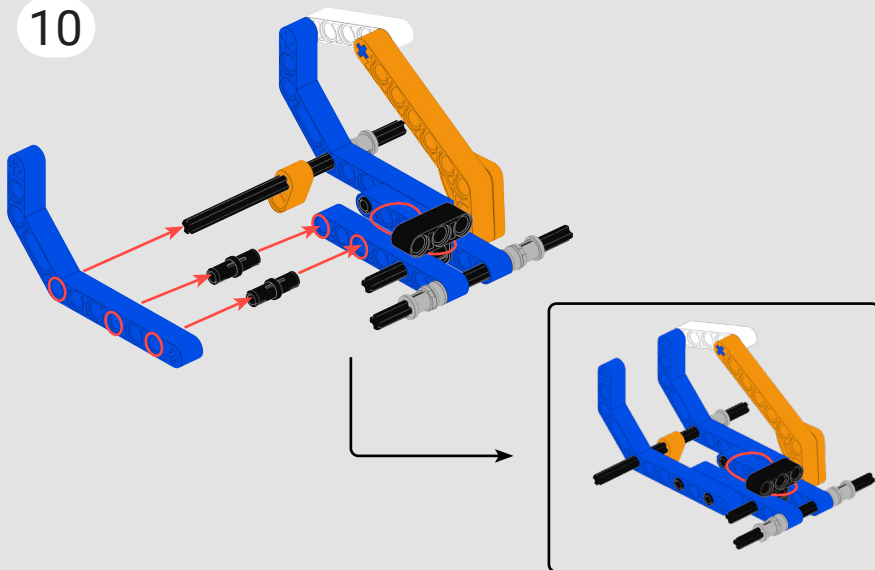
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8H Axle

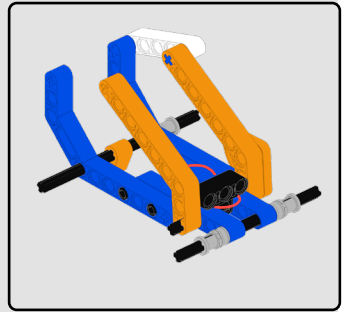
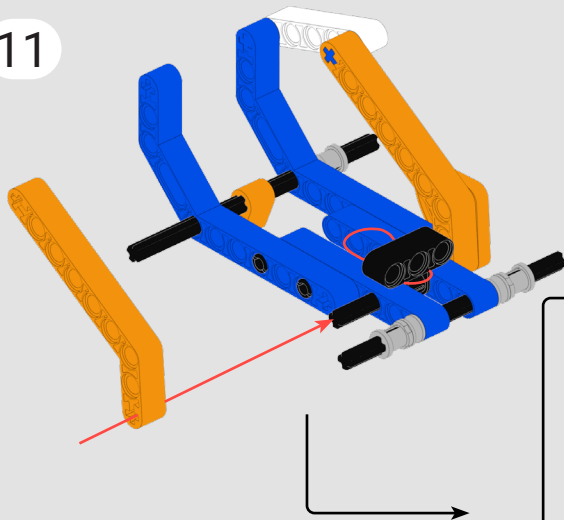
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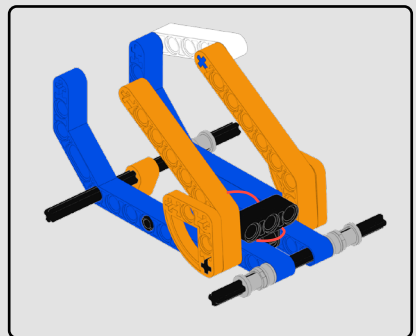
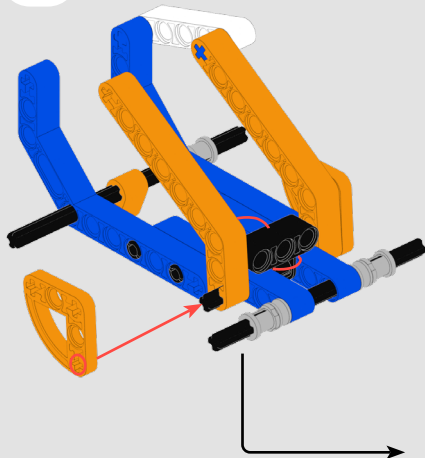
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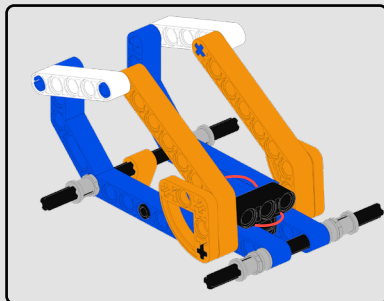
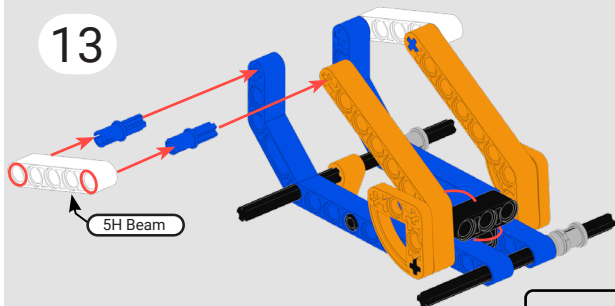
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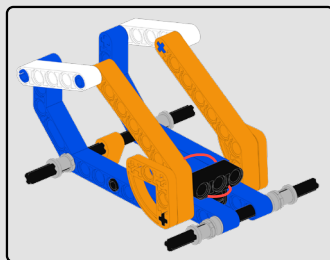
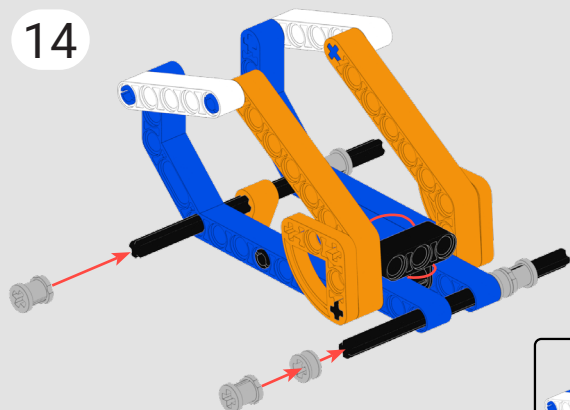
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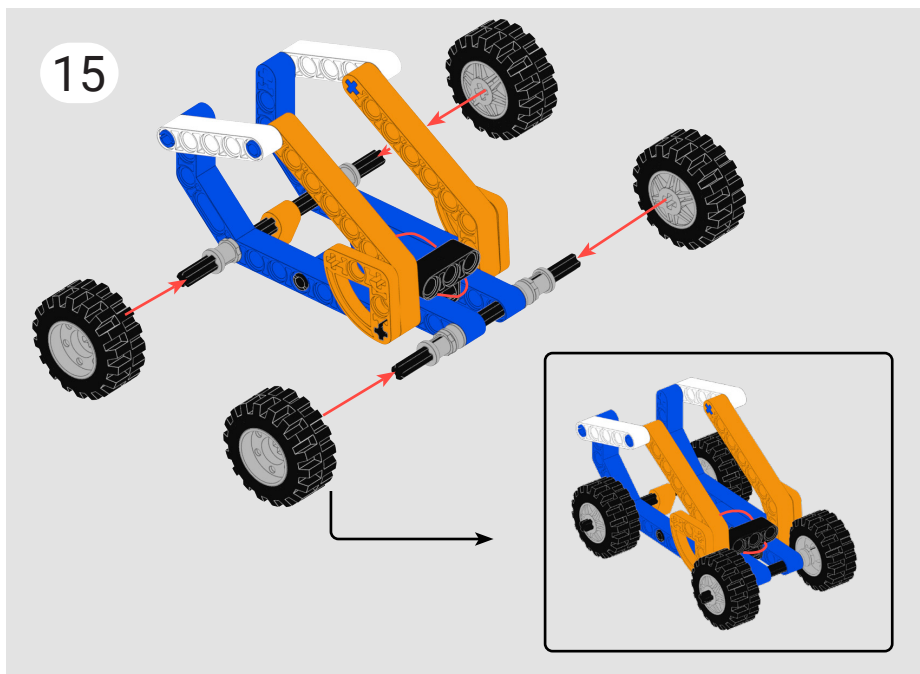


13



14

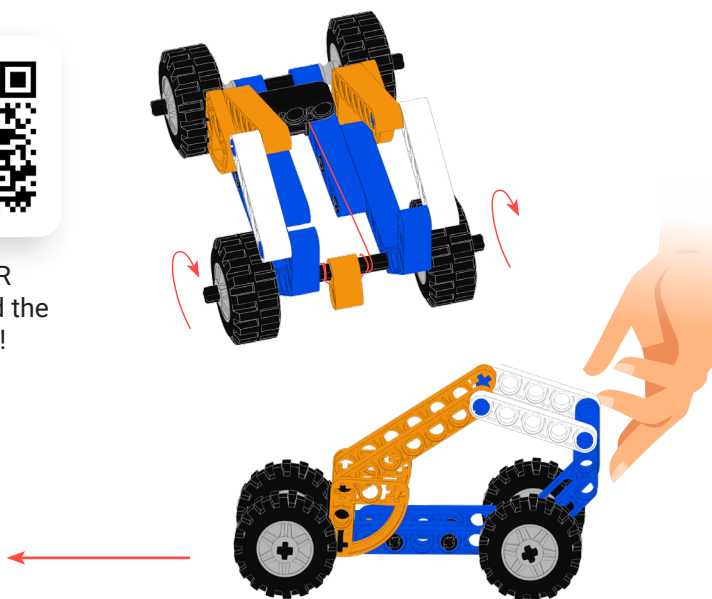




How to play

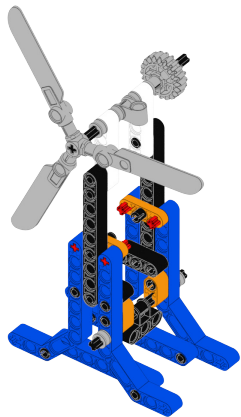


Scan QR
and upload the
Project!



Project 4: MEX Windmil

Let's Build!



Things we need



9H Beam
x 2



5H Beam
x 2



3H Beam
x 2



2Cx10H
Double Bend
Beam
x 4



2Cx1H
Thin-Beam
x 2



1Cx1H Beam
x 2



2H Axle
x 4



8H Axle
x 1



10H Axle
x 1



Wing
x3



Triple Axle
connector
x1



Axle Filler-
Small
x 5



Medium
PinBlack
x 14



20T Double
Bevel gear
x 1



Axle Filler-Big
x 4



Axle Triple Pin
Perpendicular
Connector
x 1

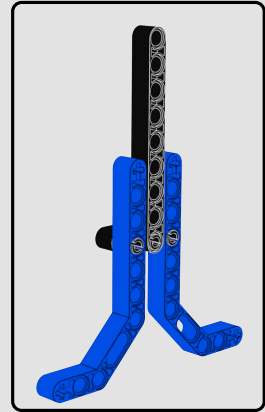
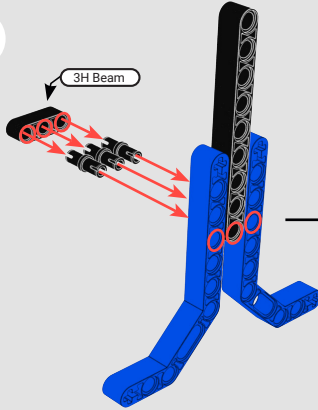


1Cx1H
Perpendicular
Connector
x 1

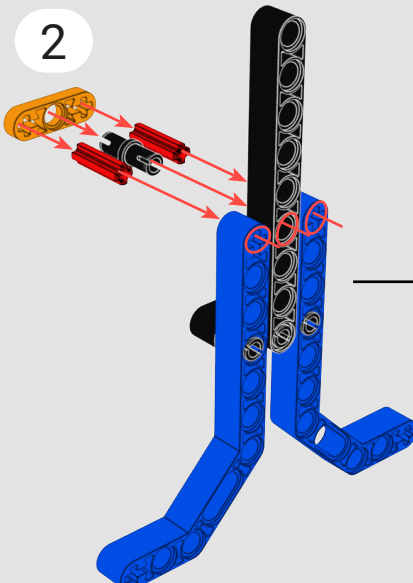


Rubber band
x 1

1

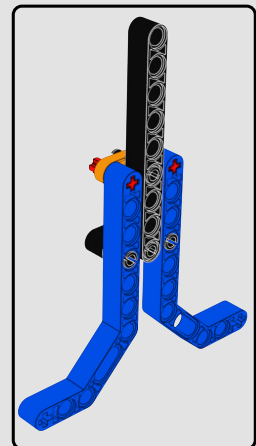


2

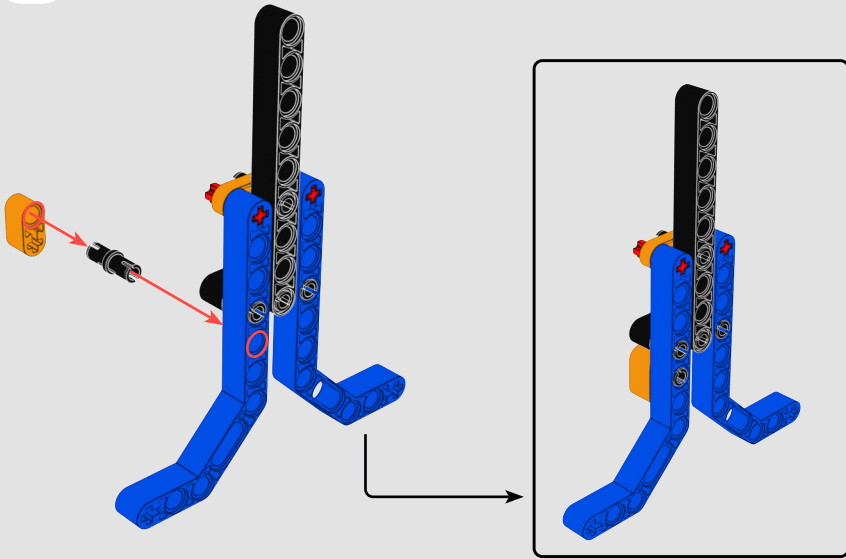


1:1

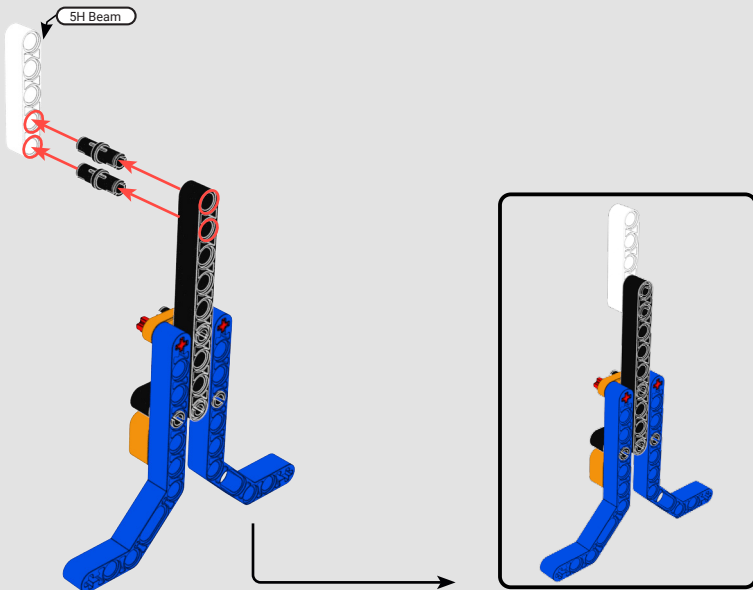
2H Axle



3

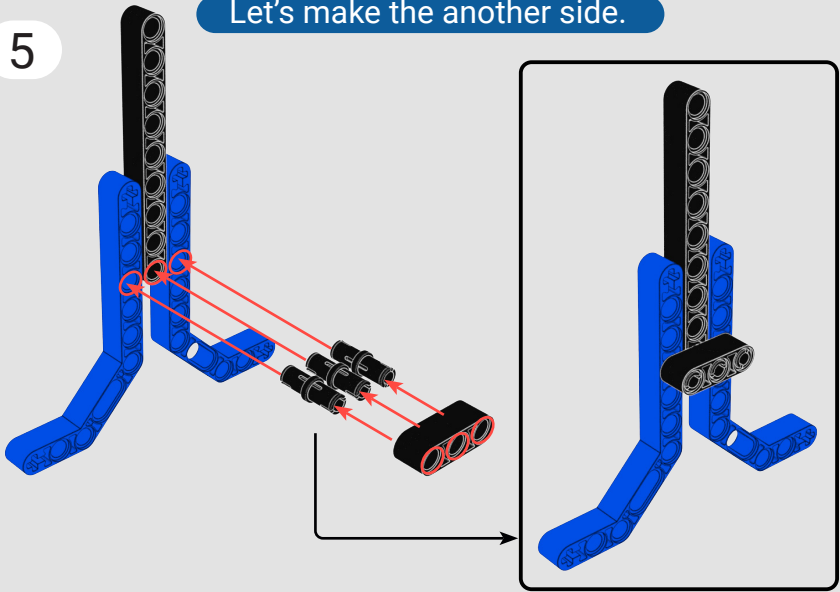


4



5

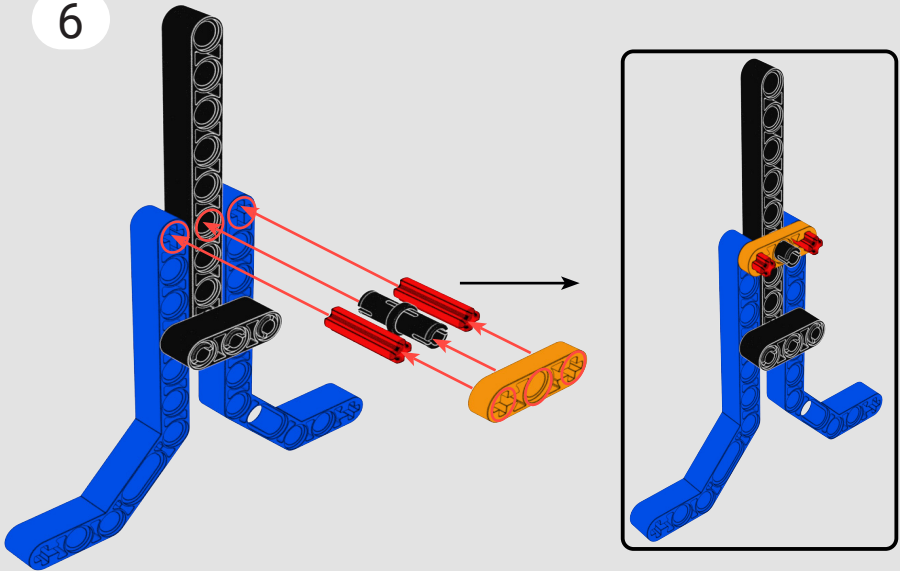
Let's make the another side.



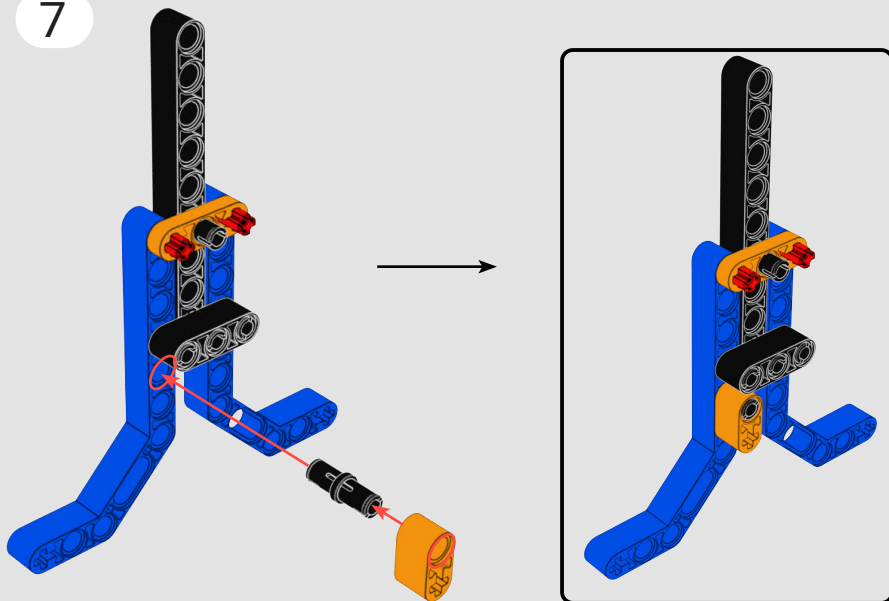
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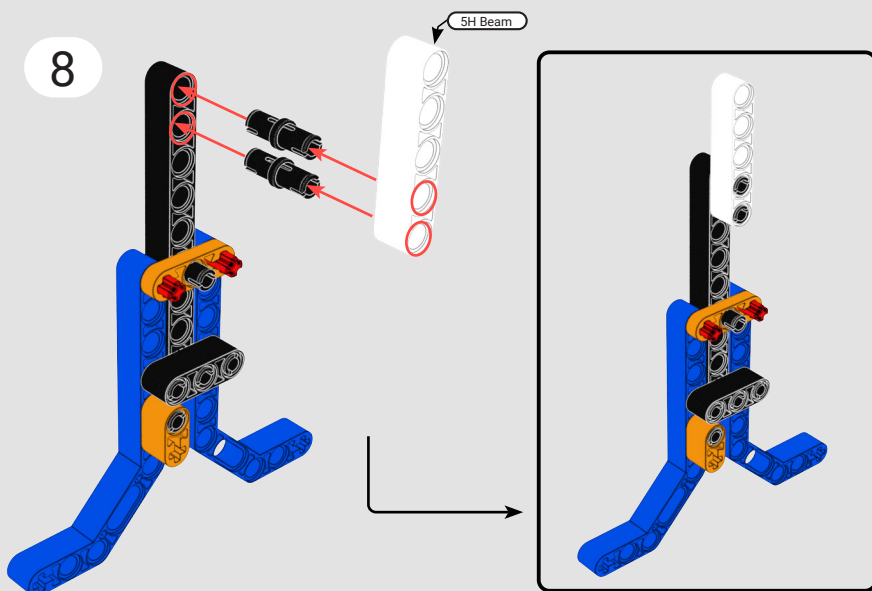
2H Axle



7



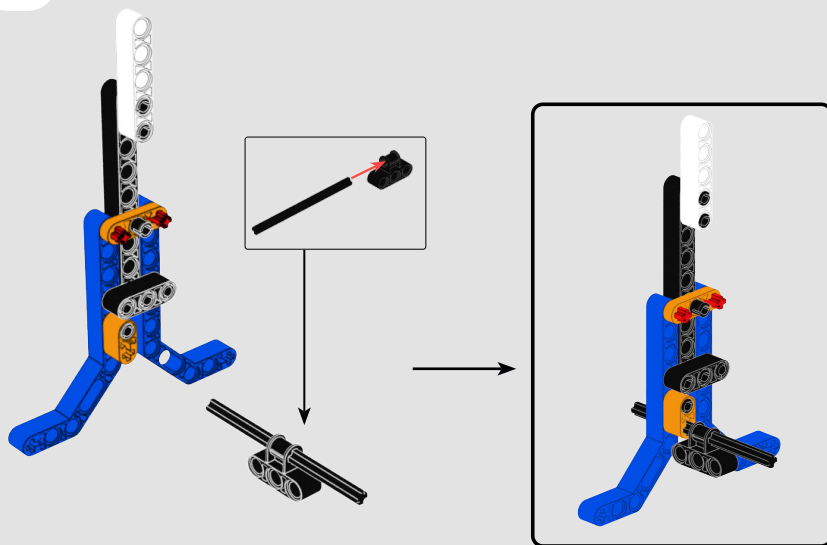
8



9

1:1

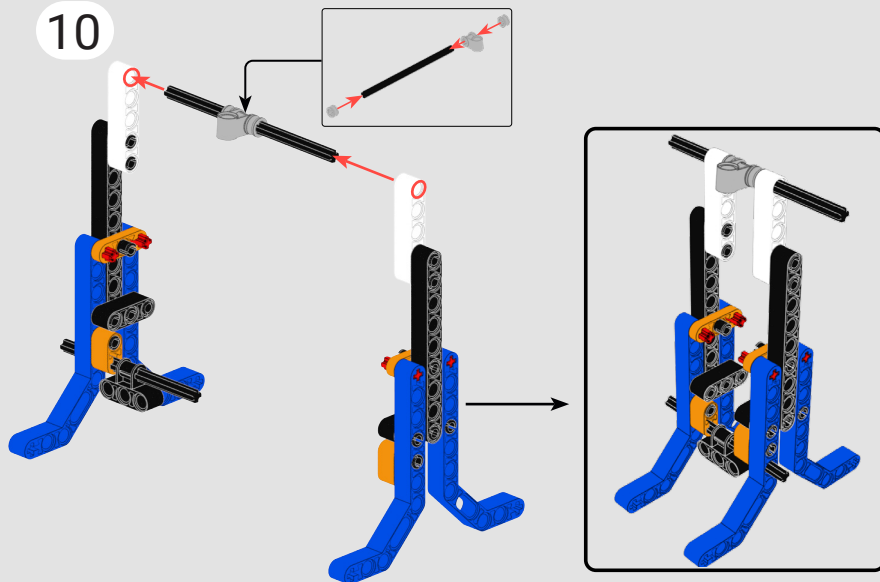
8H Axle



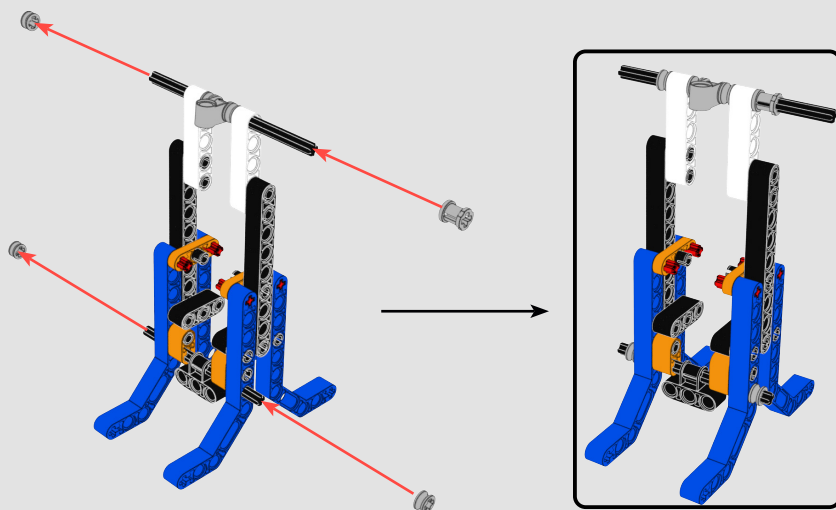
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10H Axle

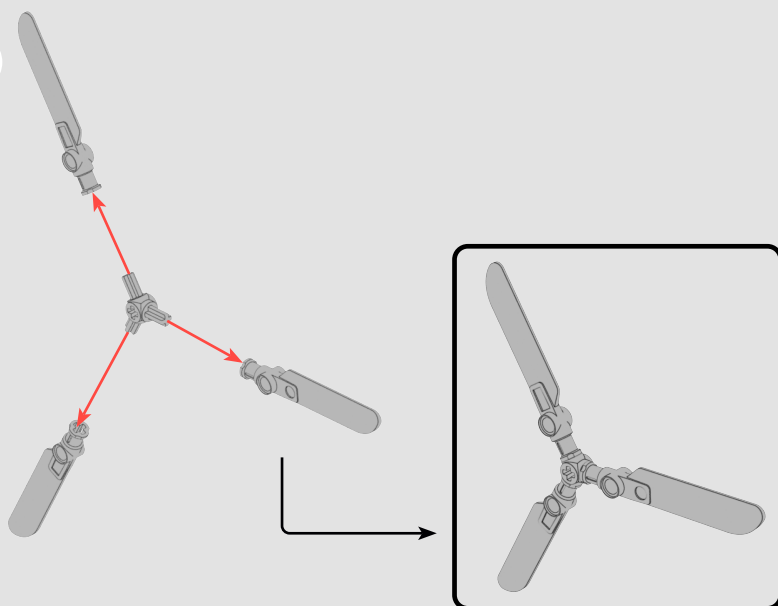
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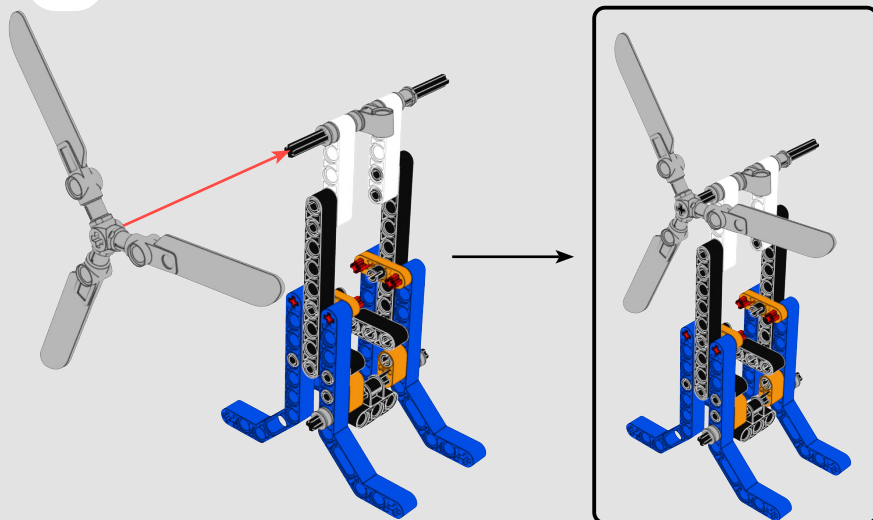
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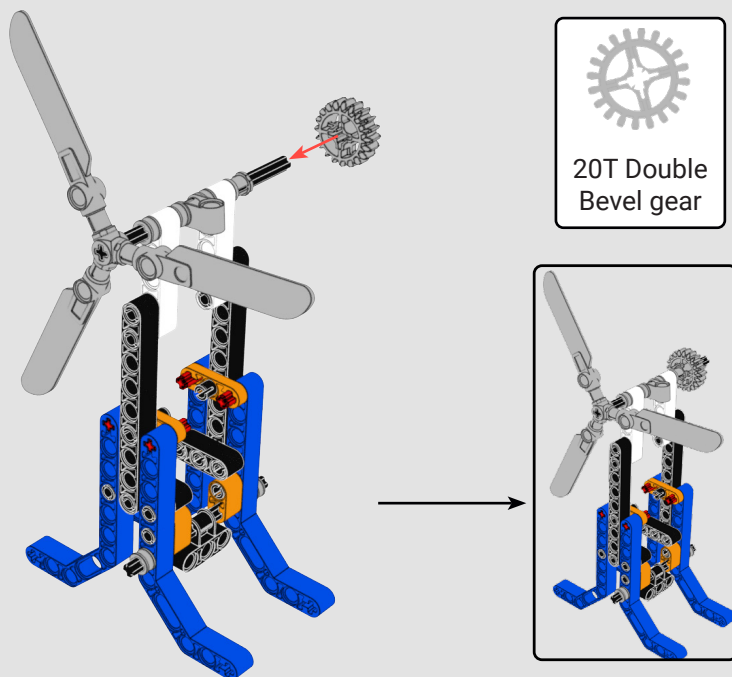
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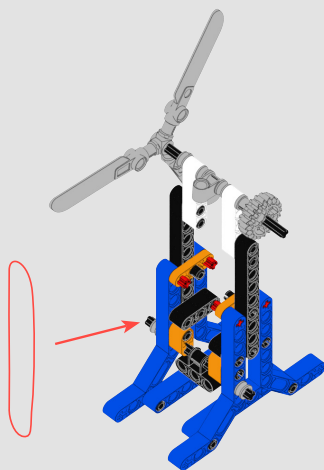
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14



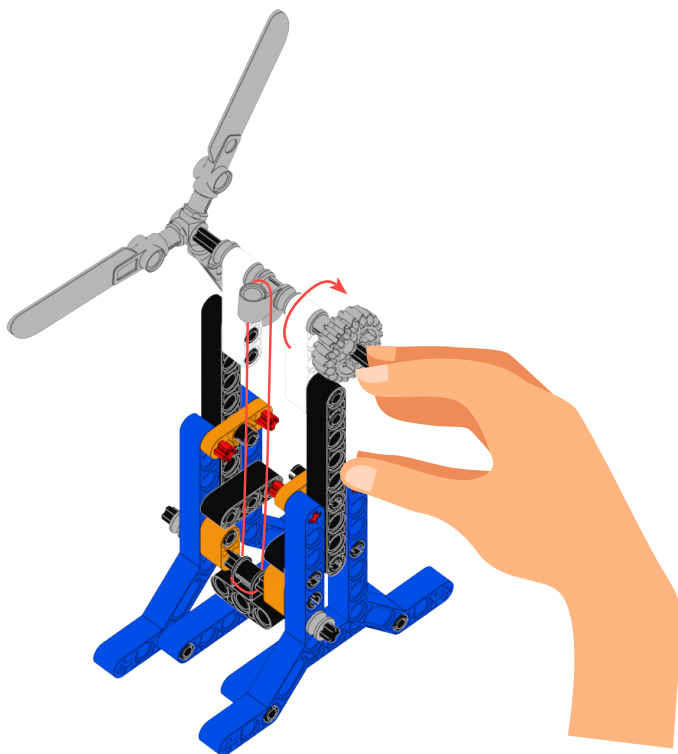
14



How to play

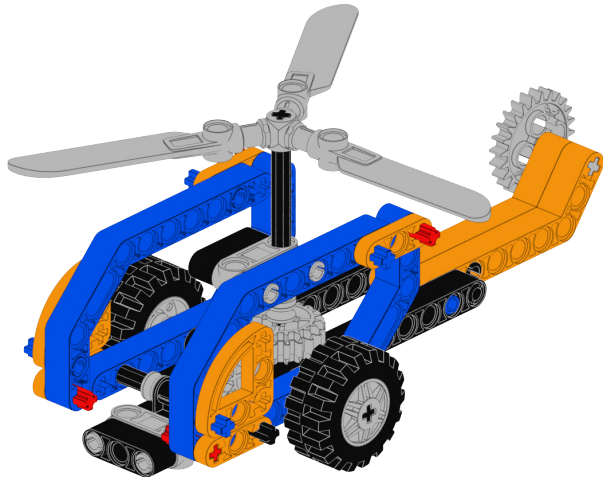


Scan QR
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Project!



Project 5 : MEX Copter

Let's Build!



Things we need



9H Beam
x 2



3H Beam
x 2



2Cx10H
Double Bend
Beam
x 4



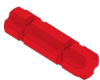
2Cx7H Single
Bend Beam
x 2



3Cx2H Thin-D
x 2



2Cx1H
Thin-Beam
x 2



2H Axle
x 4



8H Axle
x 1



3H Axle
x 1



10H Axle
x 1



Medium
Pin-Black
x 5



Medium Axle
Pin-Blue
x 4



3Hx4Pin
Connector
x 2



Axle
Filler- Small
x 5



Axle Filler-Big
x 4



Wing
x3



Triple Axle
connector
x1



Axle Triple Pin
Perpendicular
Connector
x 1



20T Double
Bevel gear
x 2



Spur Gear24T
x 1



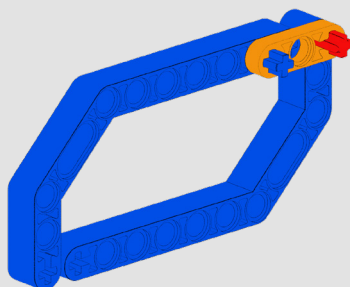
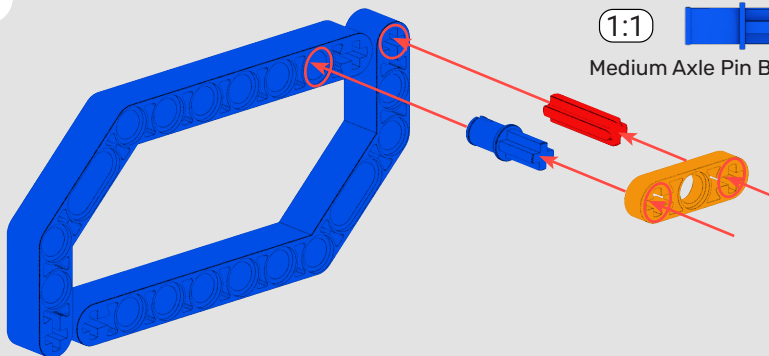
Wheel
x 4

Steps

1

1:1 2H Axle

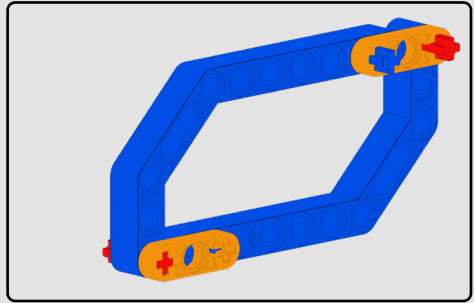
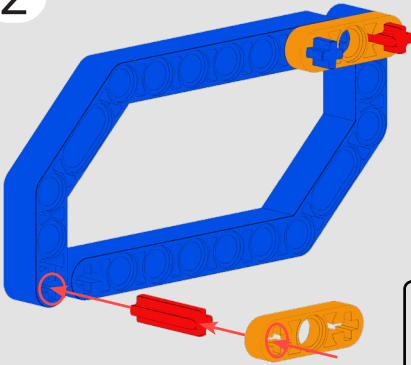
1:1 Medium Axle Pin Blue



2

1:1

2H Axle

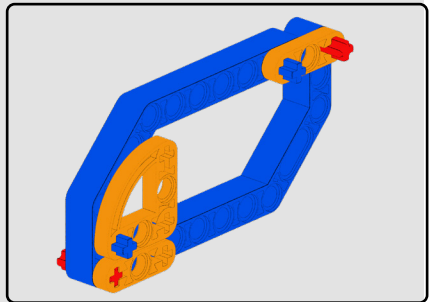
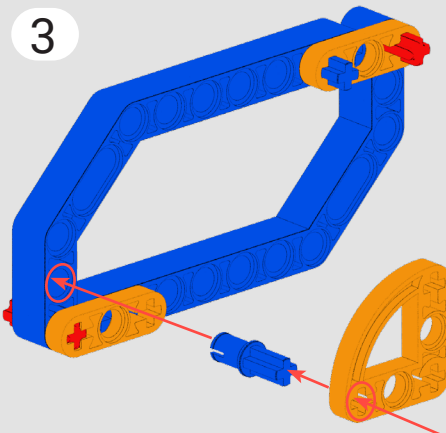


3

1:1



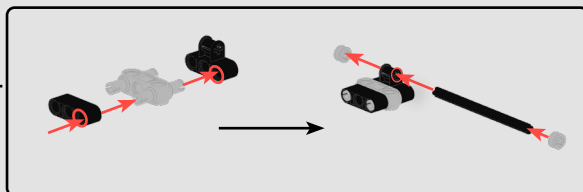
Medium Axle Pin Blue



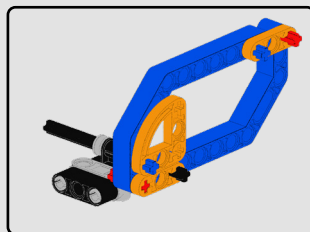
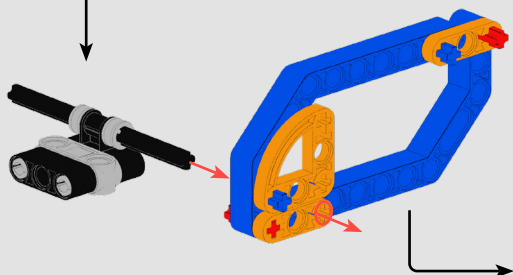
4

1:1

8H Axle

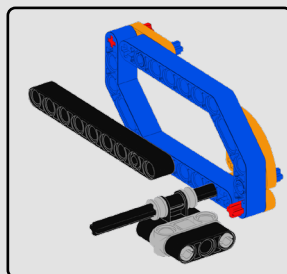
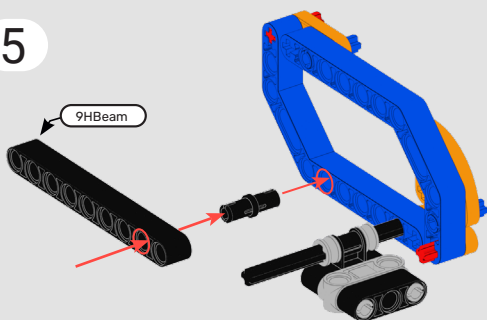


Axle Filler- Small



5

9H Beam



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. :)

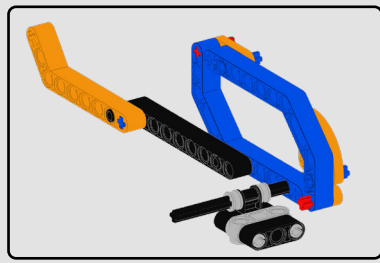
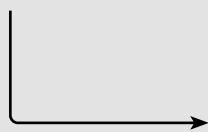
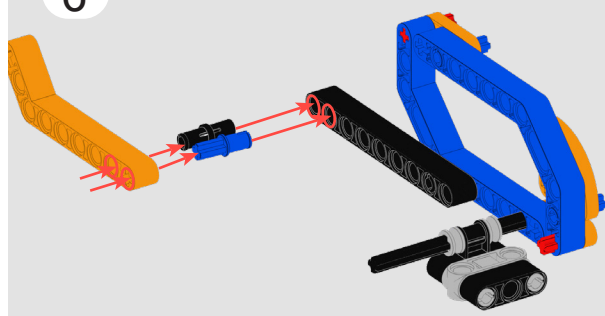


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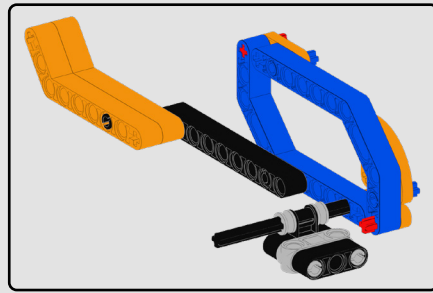
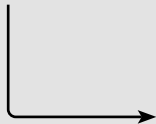
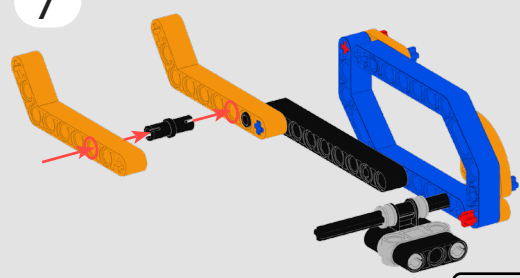
1:1



Medium Axle Pin Blue



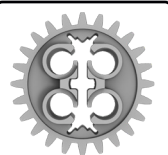
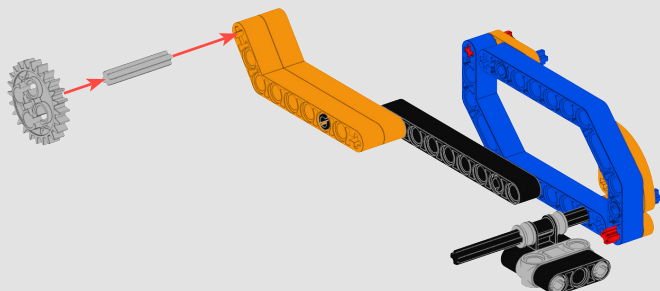
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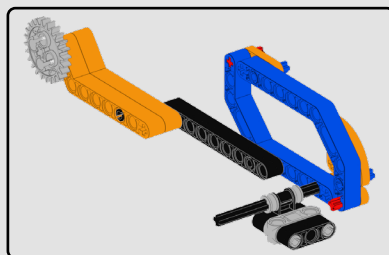
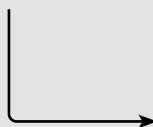
8

1:1

3H Axle



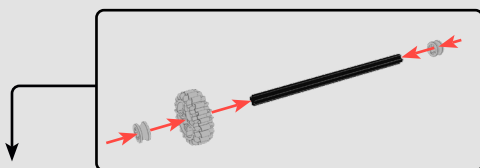
Spur Gear-24T



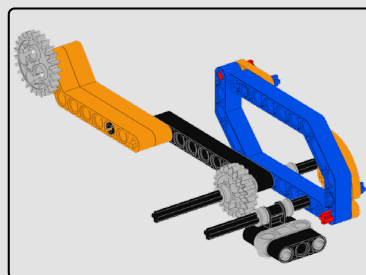
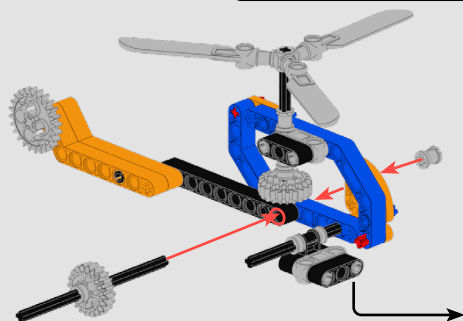
9

1:1

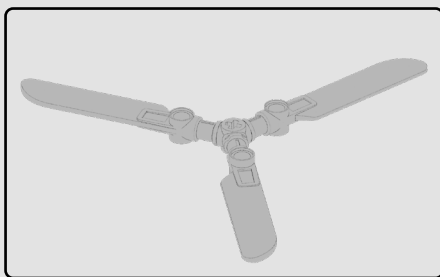
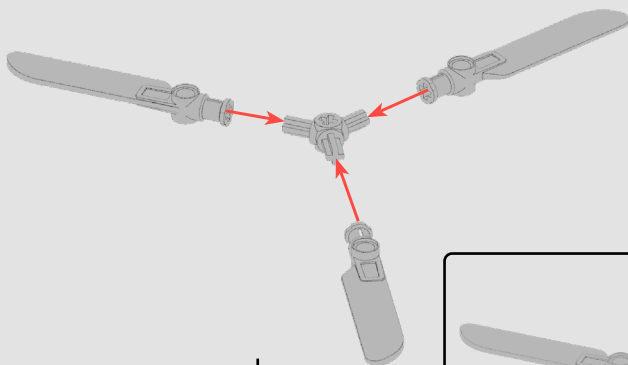
10H Axle



20T Double Bevel
gear



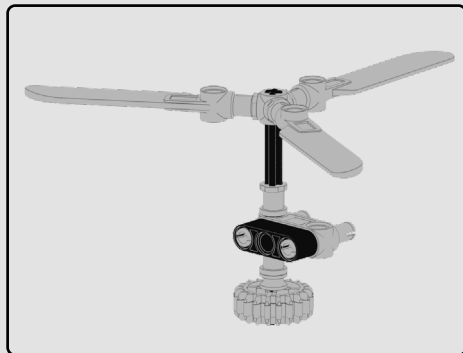
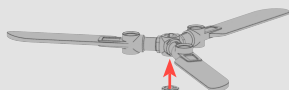
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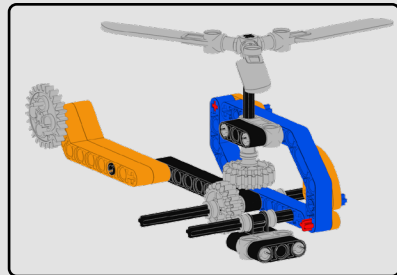
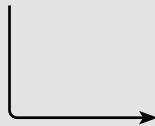
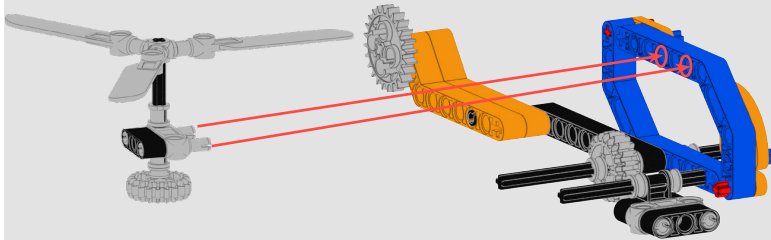
11

1:1

8H Axle

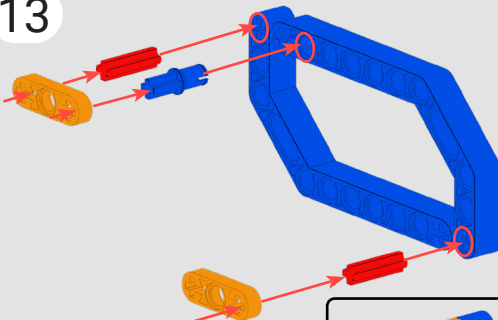


12



Let's make the other side.

13



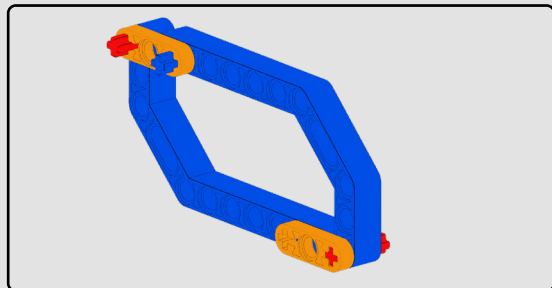
1:1

2H Axle

1:1



Medium Axle Pin Blue

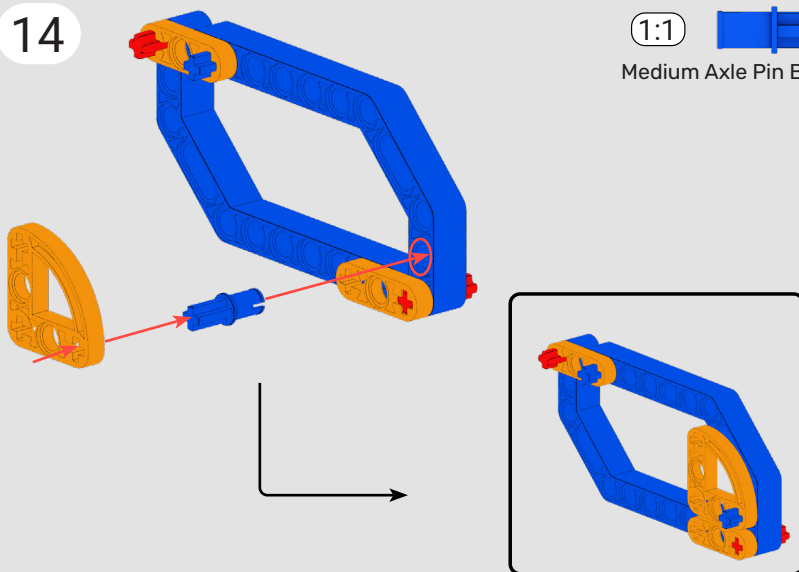


14

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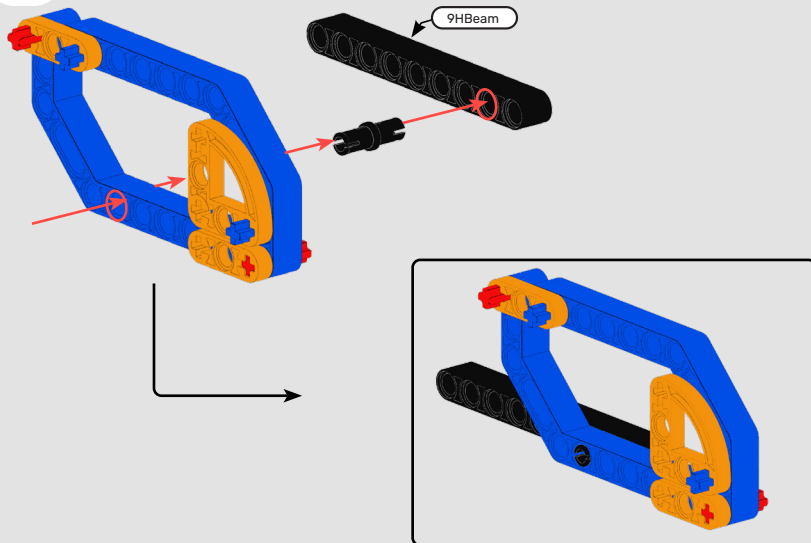


Medium Axle Pin Blue

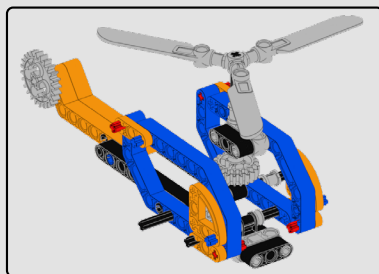
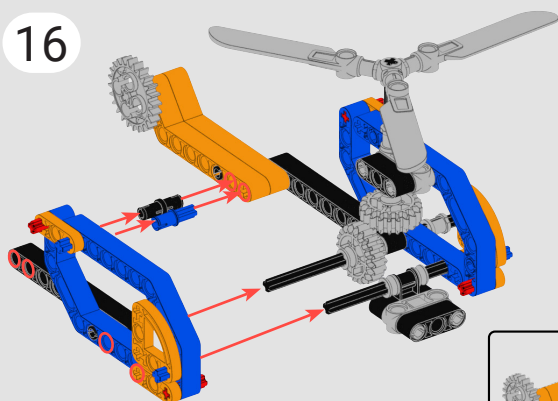


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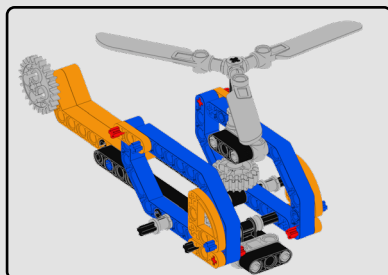
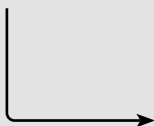
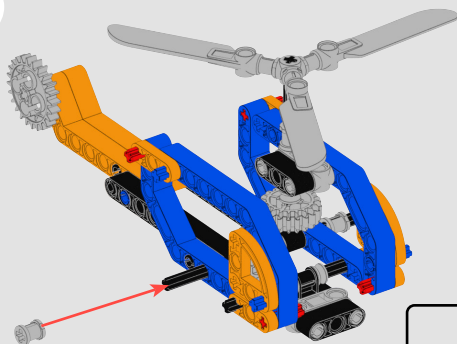
9HBeam

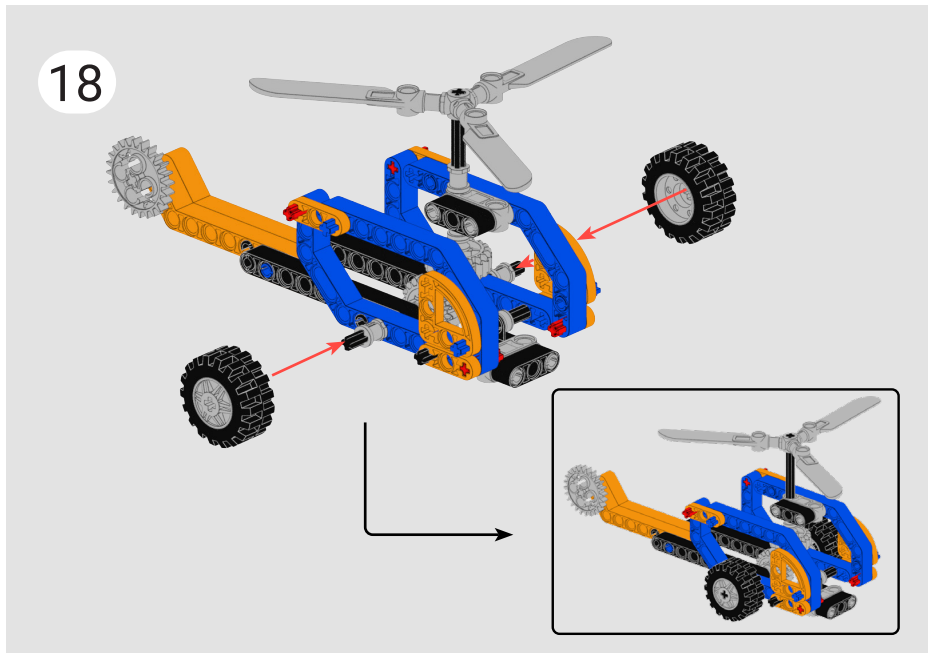


16



17

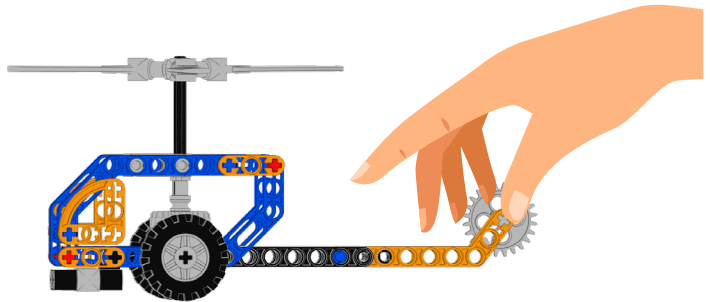




How to play

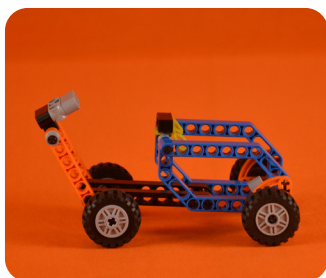


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 +91 - 8506931515  support@avishkaar.cc  www.avishkaar.cc



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