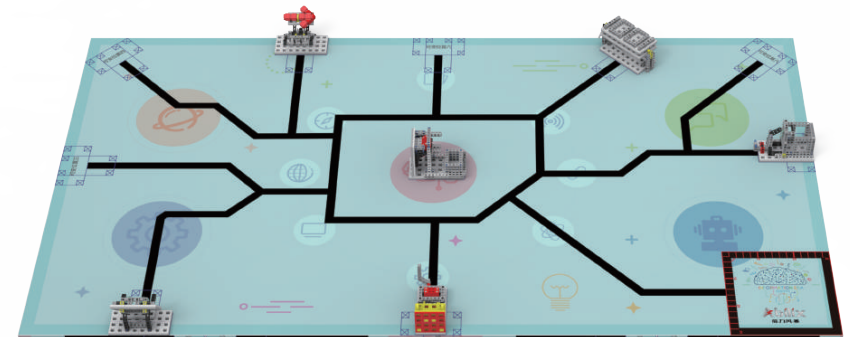
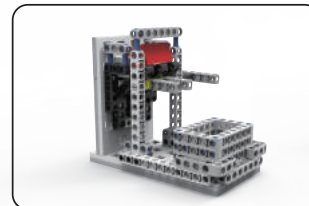
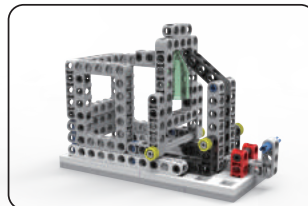
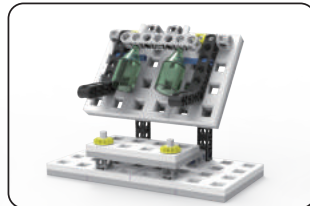
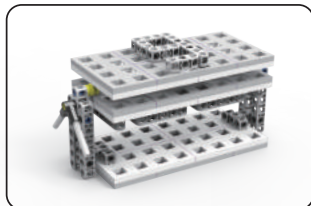
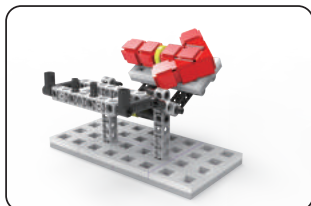


C203T-18

2018 Brick Robot Competition Arena kit v 1.0



Arena frame not included in this kit



Content

I. The map layout	1
II. Task Models Building	3
1.Shopping	3
2.GPS	10
3.BHD Converter	18
4.Data Center	27
5.Cloud Server	38
6.Recycling of E-waste	46
III. Task Models Placing	54

I . Map Layout

The map is laid out as the figure 1. Here are the setting steps.

1. Take out the arena map from the WER Brick Robot Arena Kit (C203T-18) and unfold it for a little while. Generally, the map is suggested to be placed for 30-60 minutes to unwrinkle the map.

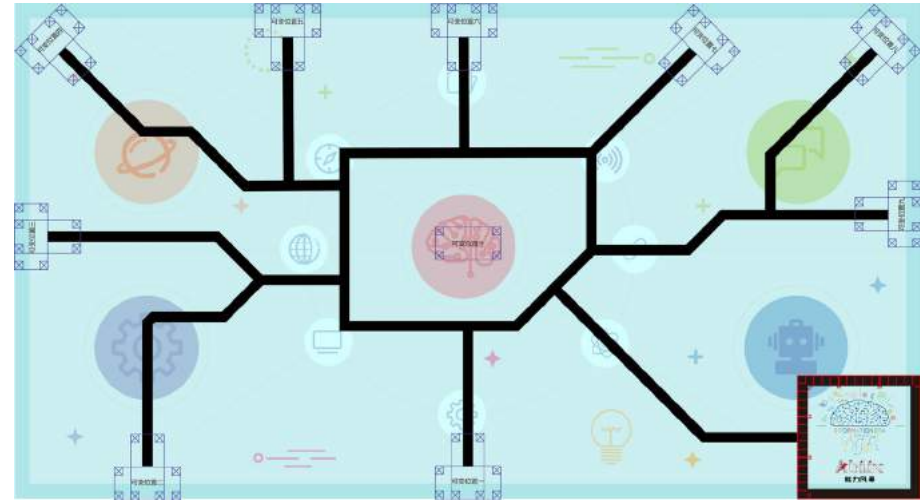


Figure 1 Arena Map

2. Unfold the arena map on the site, which is better to be placed on the wood floor, cement floor or tile floor (the floor with large gaps is not suggested). If there are wrinkles on the map, transparent tape can be pasted on the four angles of the map to strain it. There should be 0.5-1m space for contestants to move on, as shown in figure.2.

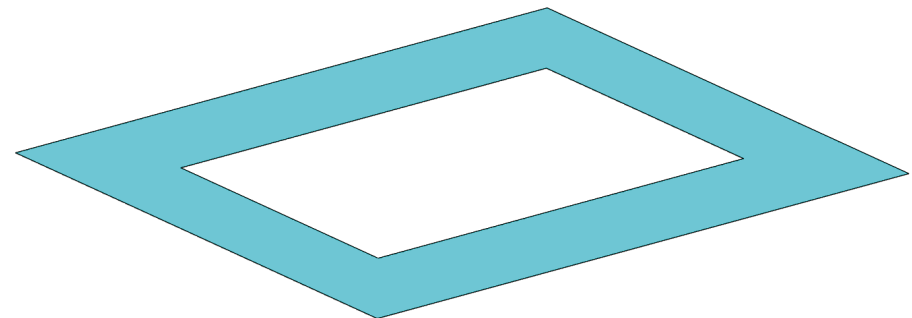
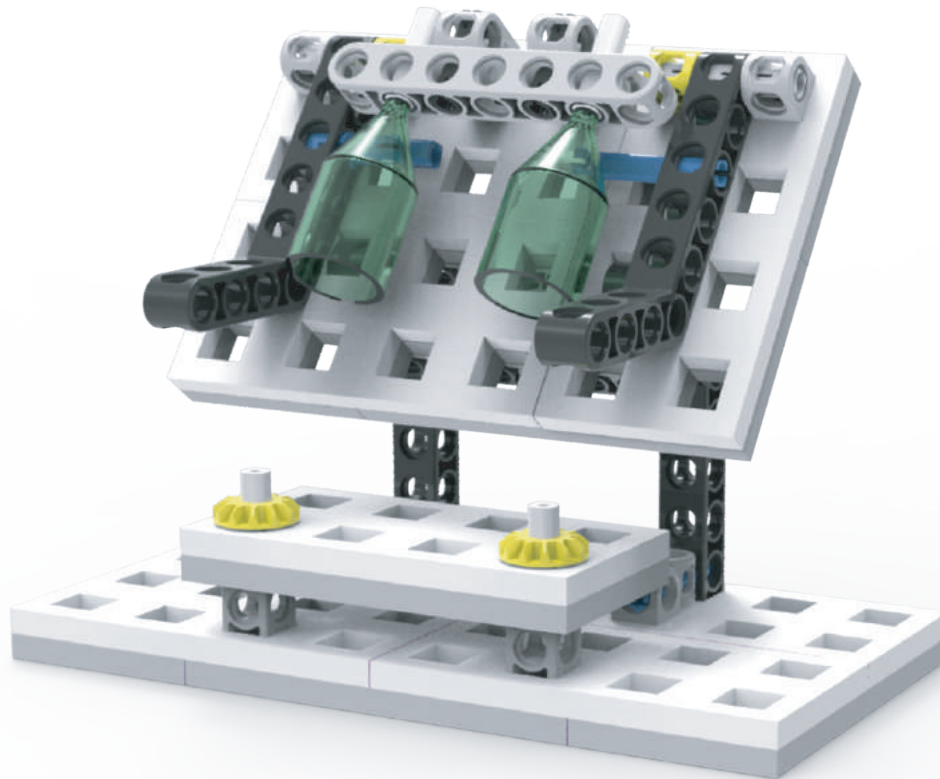
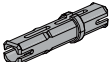
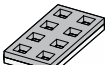
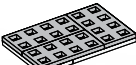
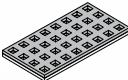


Figure 2 Reserving Space

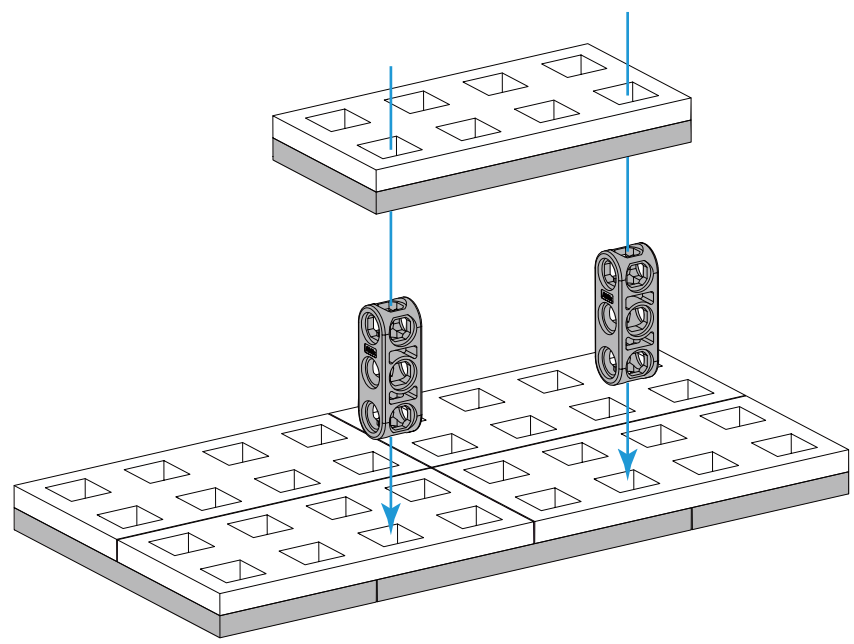
Shopping



							
Pin15	x2	Tight Bolt 2	x2	Pin30	x2	Tight Bolt 3	x4
							
TubeSR20	x2	TubeSR60	x2	Magnet	x2	12-tooth Bevel Gear	x2
							
Beam 20	x4	Beam 30	x4	Beam 70	x4	Beam 30	x2
							
Beam(C)4X6_126.87	x4	Green bottle	x2	1# Slab	x1	3# Slab	x1
							
4# Slab	x1						

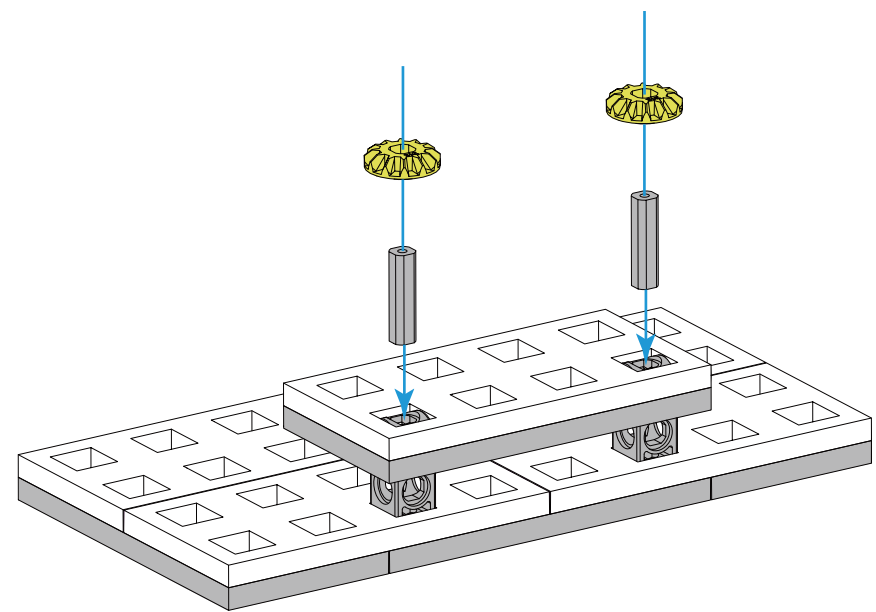
1

1# Slab	x1	4# Slab	x1
Beam 30	x2		

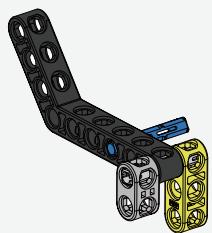


2

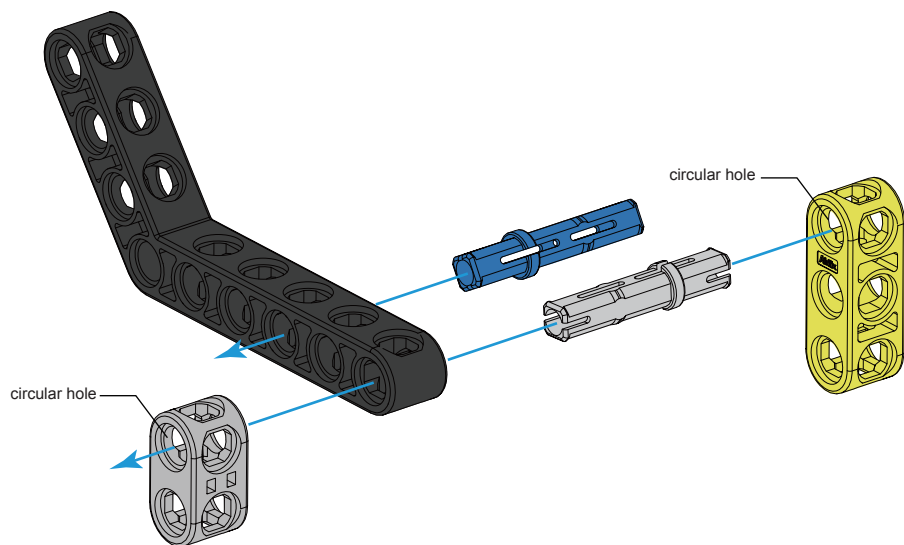
1#	x1	12-tooth Bevel Gear	x2
TubeSR20	x2		



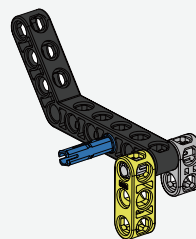
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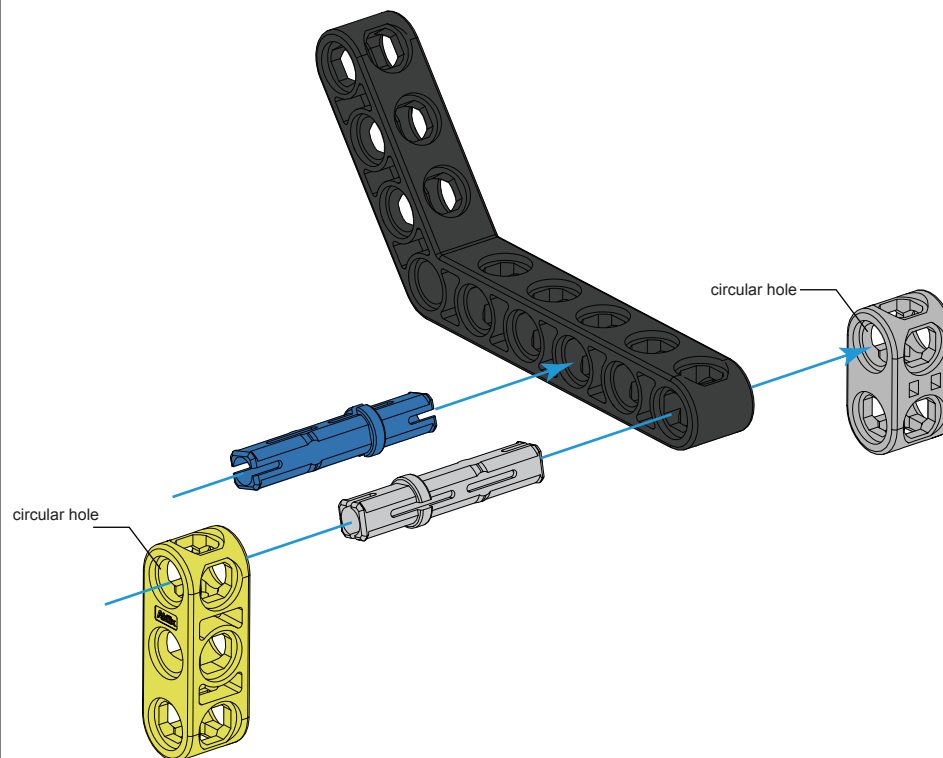
Beam 30	x1	Beam 30	x1	Beam(C)4X6_126.87	x1
Pin30	x1	Tight Bolt 3	x1		



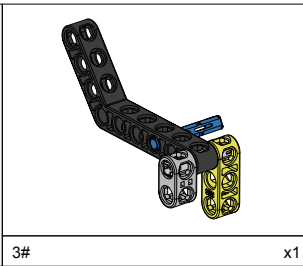
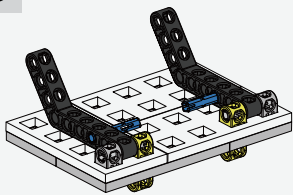
4



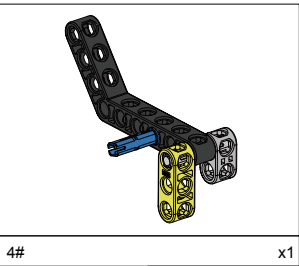
Beam 20	x1	Beam 30	x1	Beam(C)4X6_126.87	x1
Pin30	x1	Tight Bolt 3	x1		



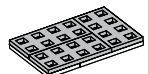
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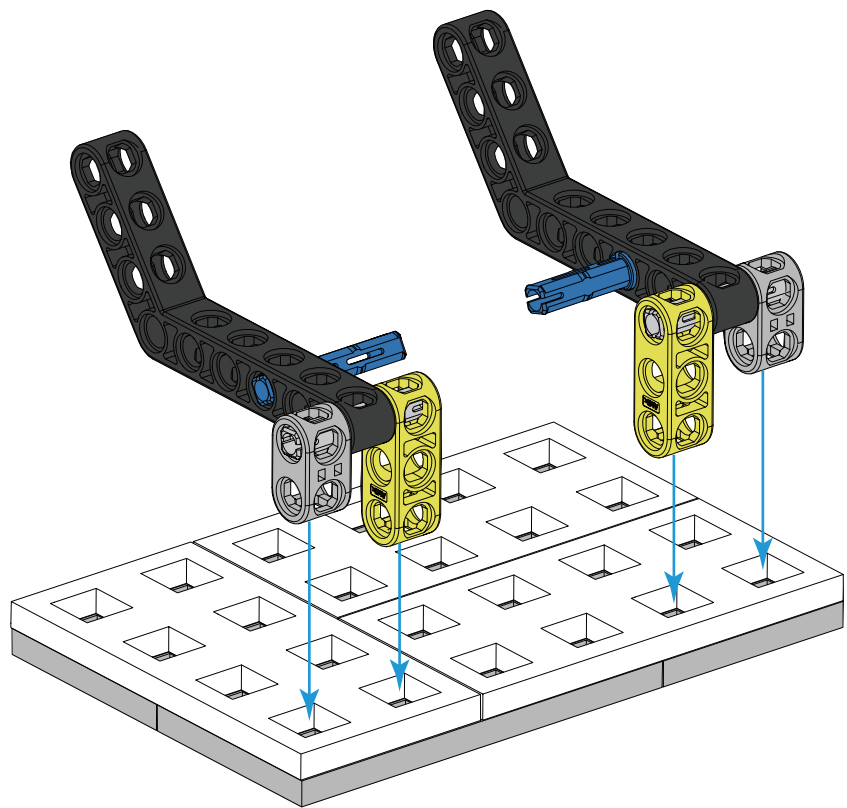
3# x1



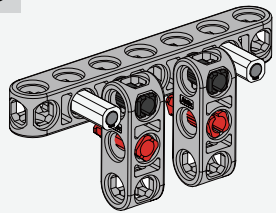
4# x1



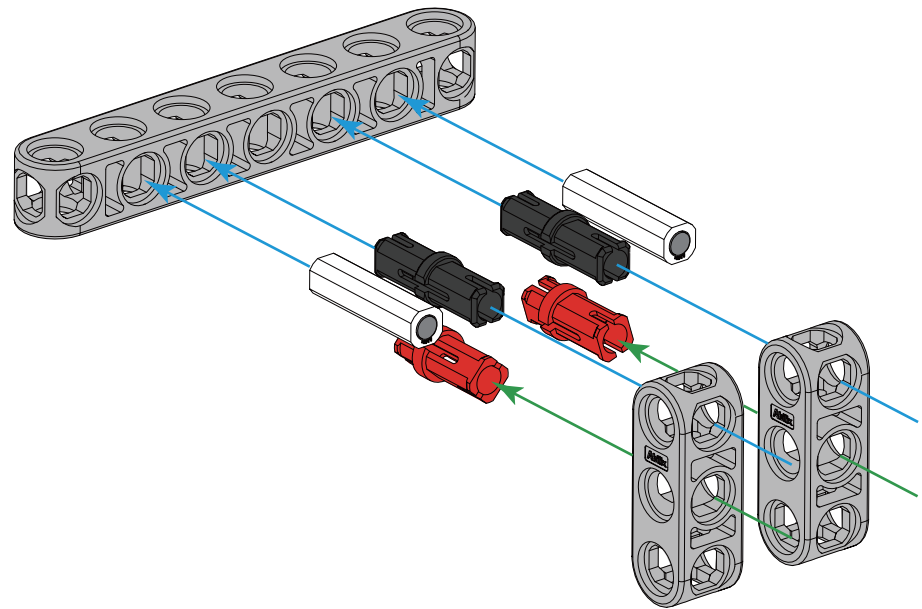
3# Slab x1



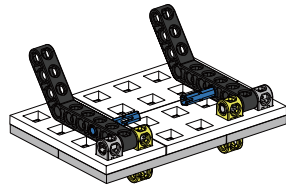
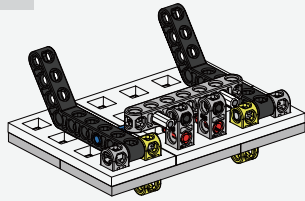
6



	x2		x2		x2
	x2		x1		

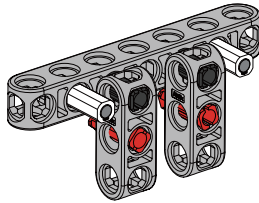


7



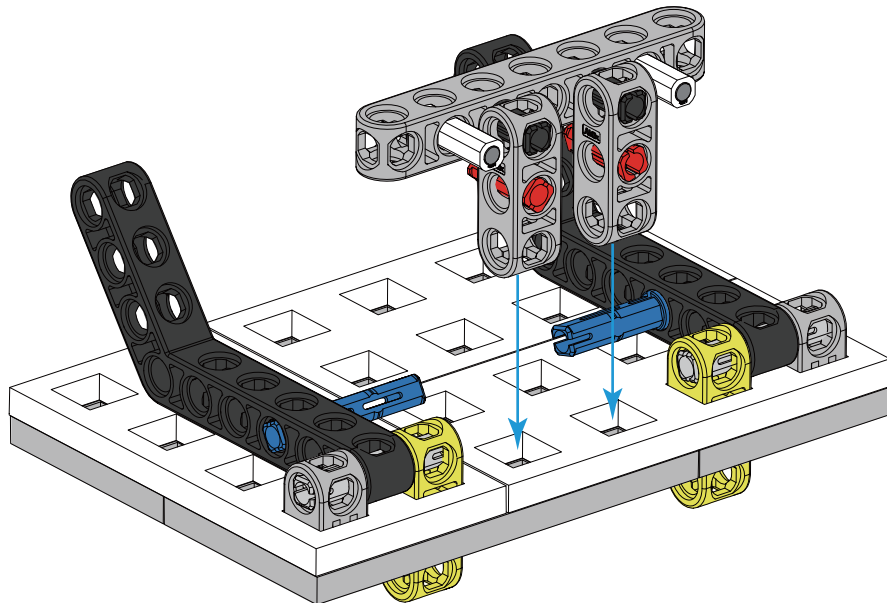
5#

x1

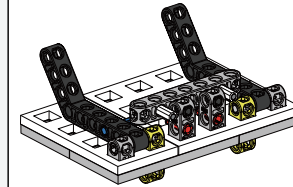
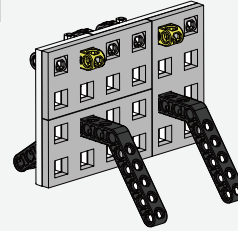


6#

x1



8

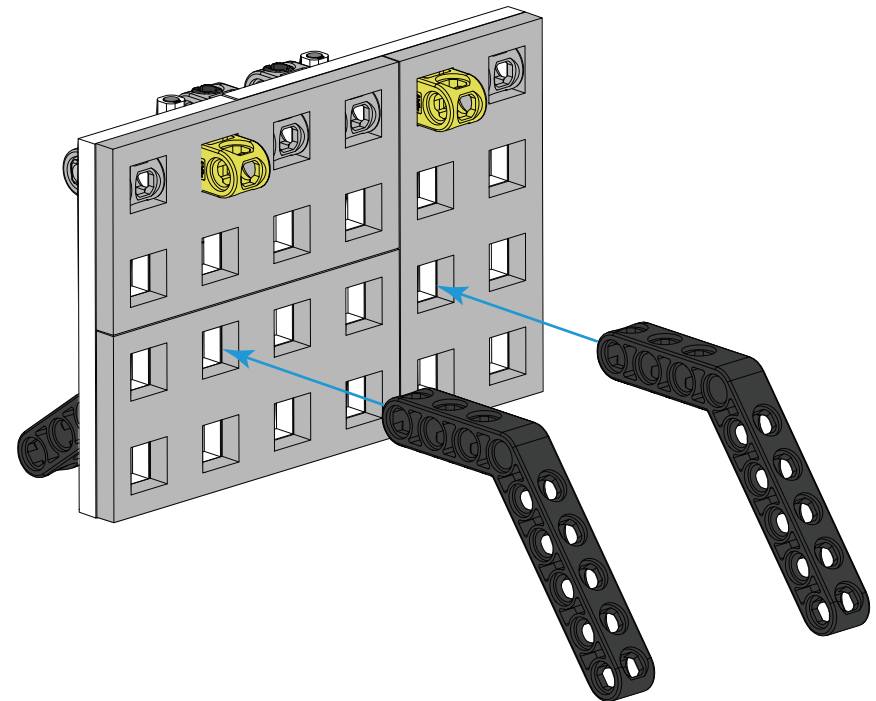


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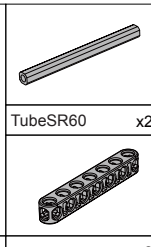
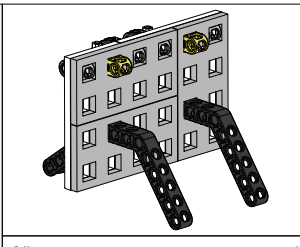
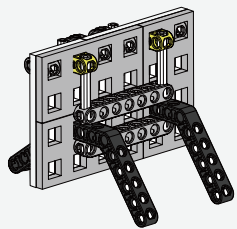
x1



Beam(C)4X6_126.87 x2



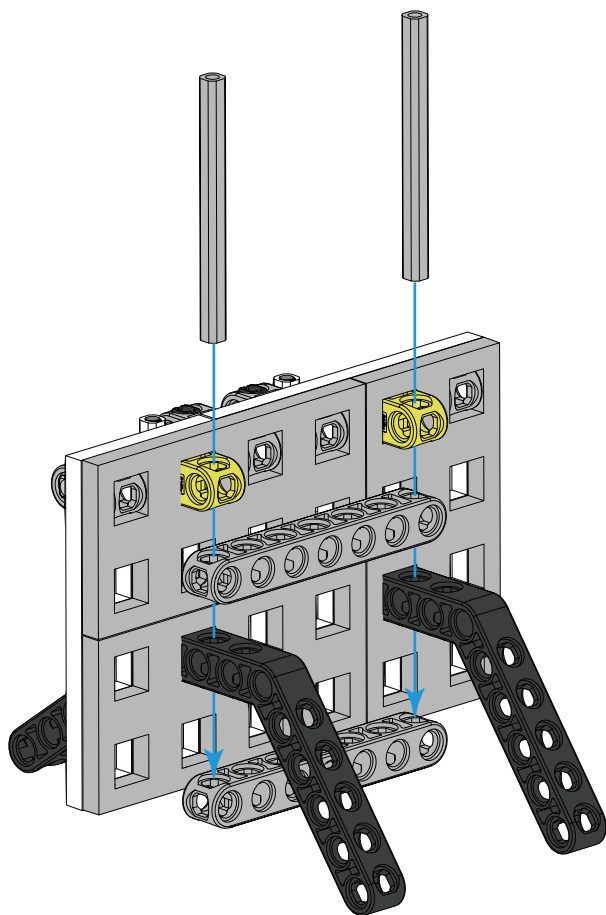
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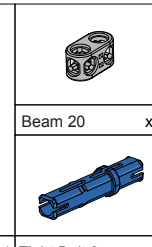
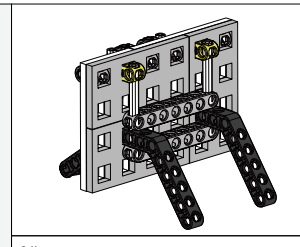
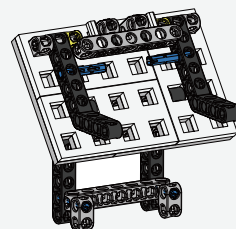
TubeSR60 x2



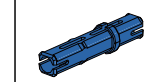
8# x1 Beam 70 x2



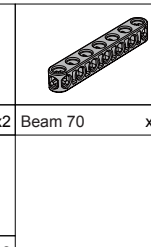
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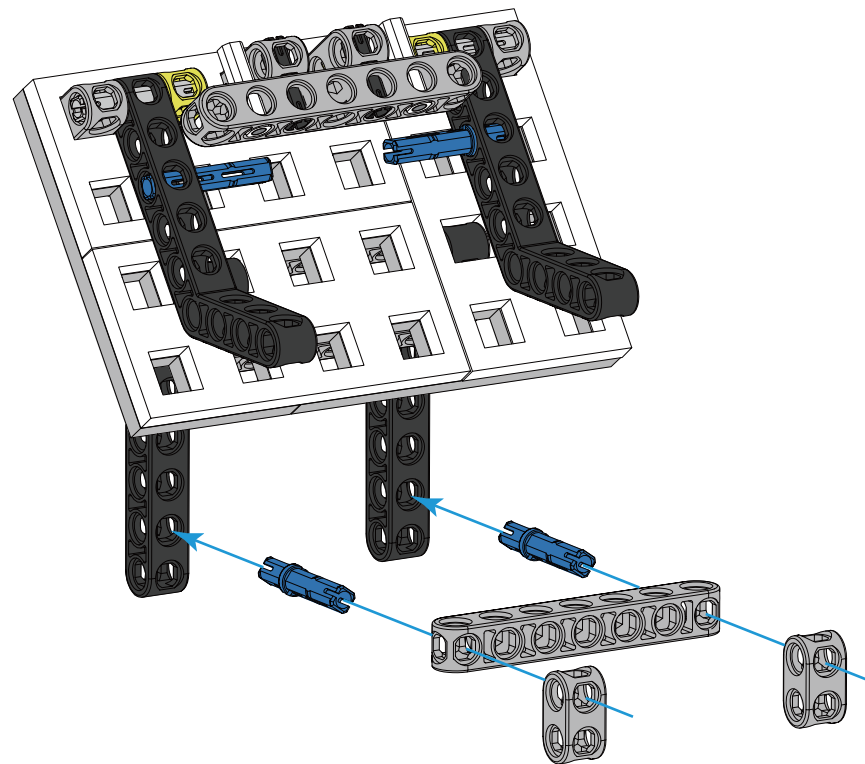
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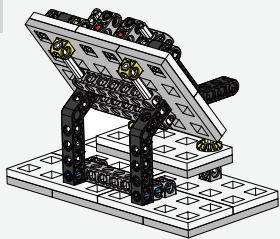
Tight Bolt 3 x2



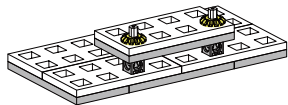
Beam 70 x1



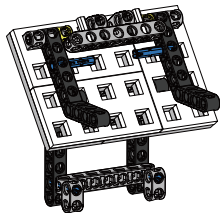
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2#

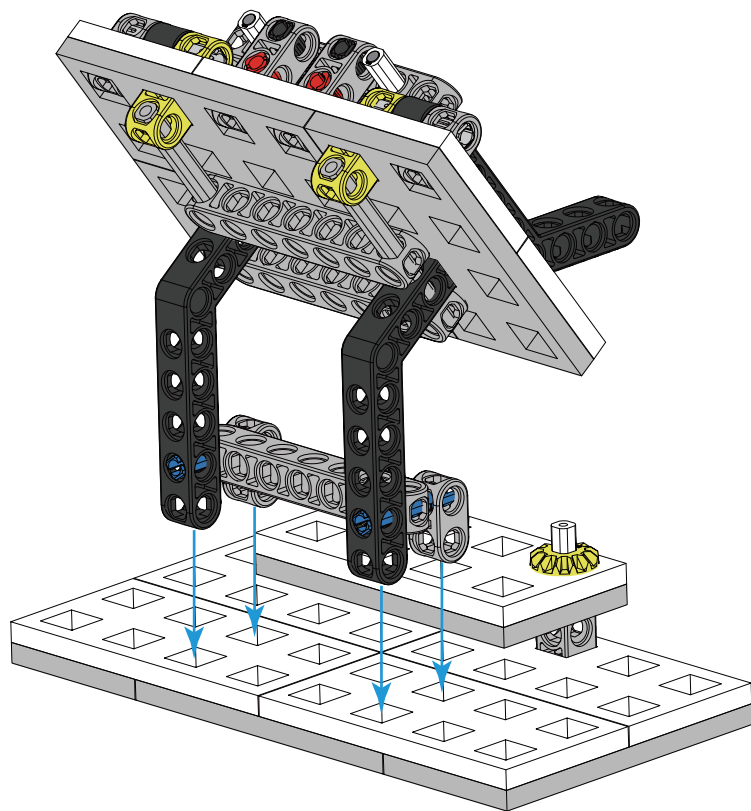


x1

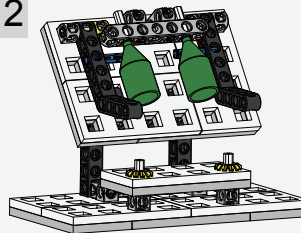


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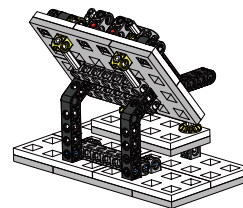
x1



12



11#

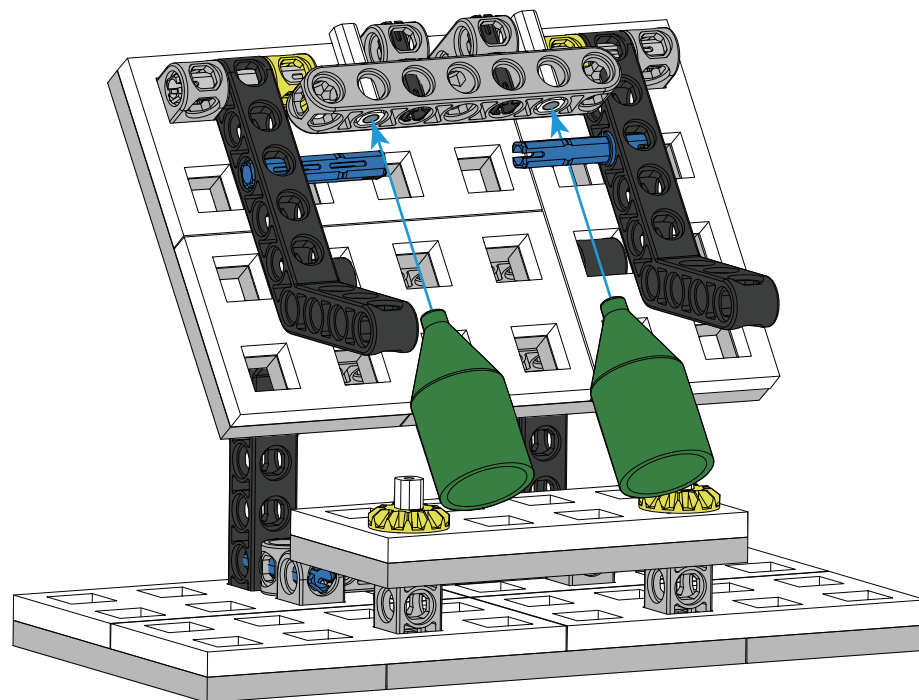


x1

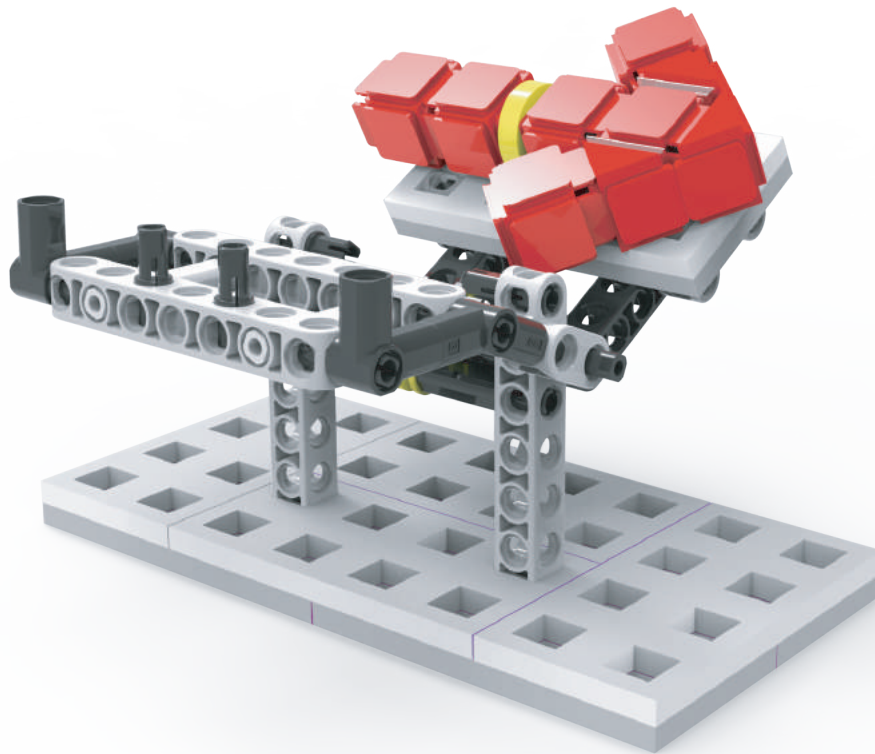


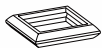
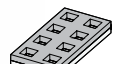
Green bottle

x2

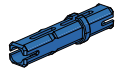
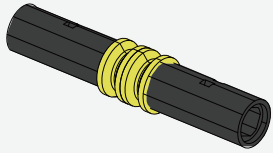


GPS



			
Shaft Sleeve 0.5 x4	Tight Bolt 2 x18	Tight Bolt 3 x1	Tube Connector(S) 20 x3
			
Tube SR 40 x2	Tube SR 50 x3	Tube connector(C) 10x10 90 x2	Tube connector(C) 10x10 157.5 x2
			
Beam 20 x6	Beam 70 x4	Beam(C) 4x6 126.87 x2	16-tooth Gear x2
			
20 Bevel Gear x1	Short bolt x1	Middle A connector x1	Slope cube x3
			
Cube x6	Cube connector x2	1# Slab x1	4# Slab x1

1



Tight Bolt 3

x1



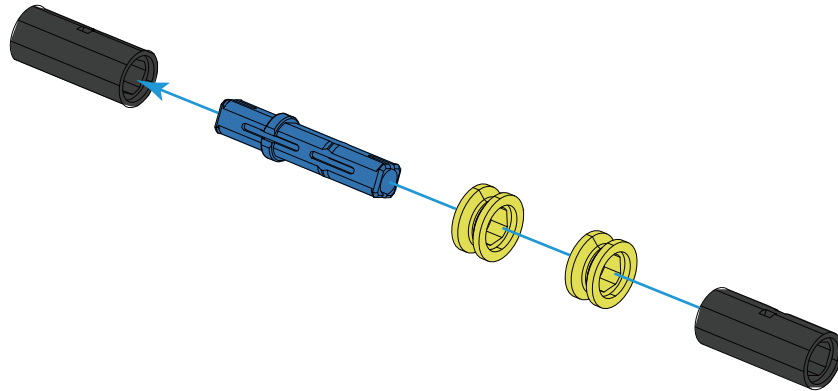
Shaft Sleeve0.5

x2

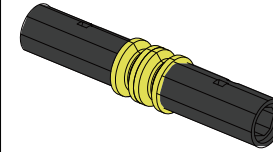
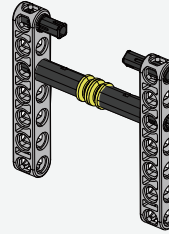


Tube Connector(S)20

x2



2



1#

x1



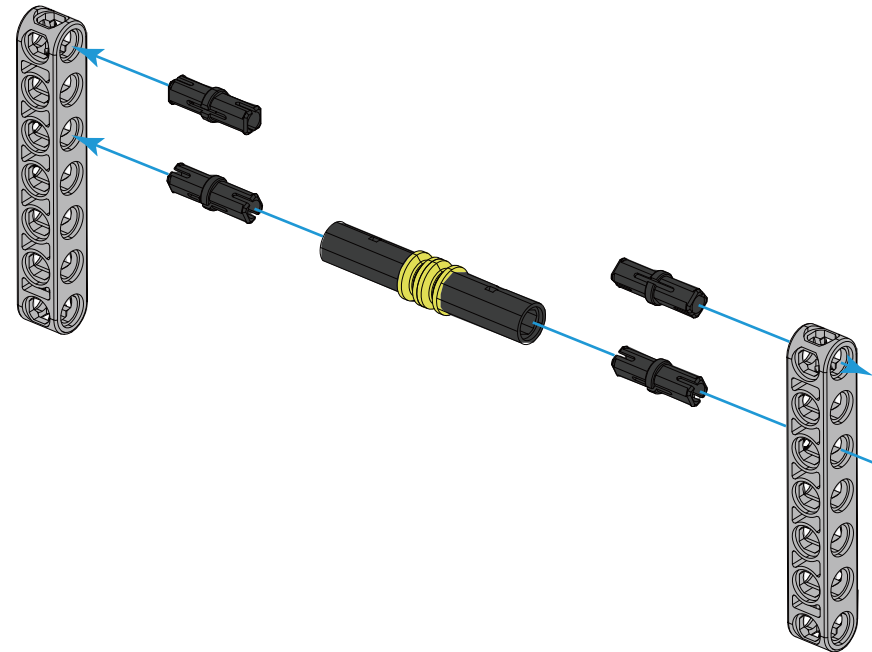
Tight Bolt 2

x4

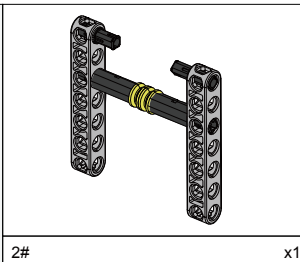
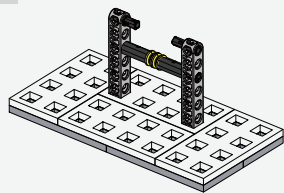


Beam 70

x2

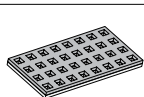


3



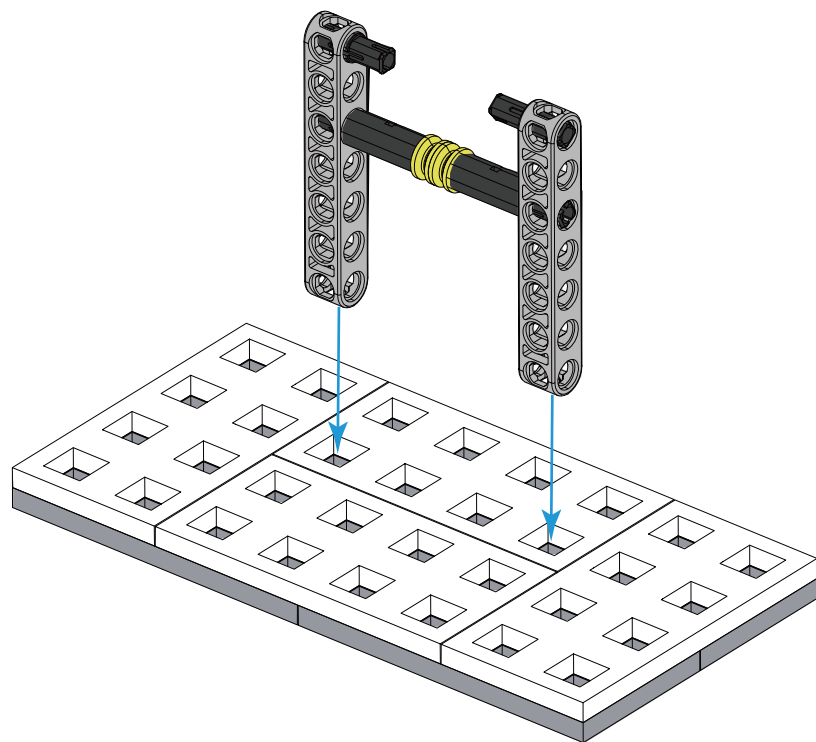
2#

x1

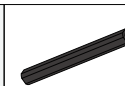
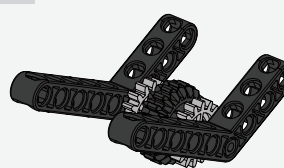


4# Slab

x1



4



TubeSR50

x1



Beam(C)4X6_126.87

x2



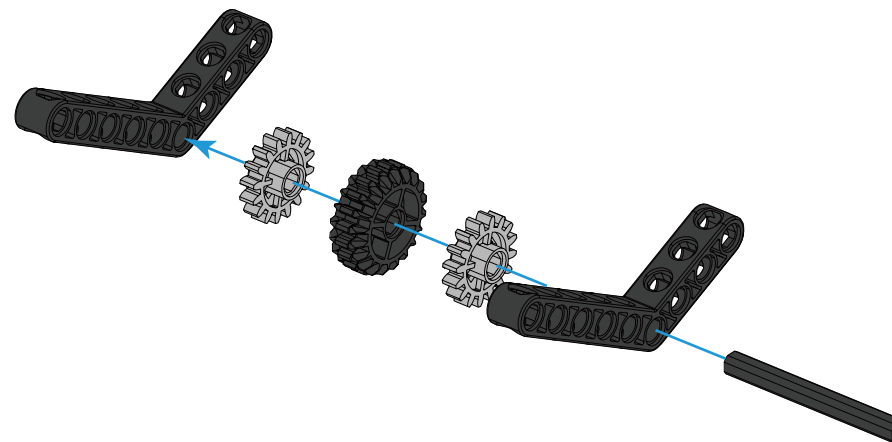
16-tooth Gear

x2

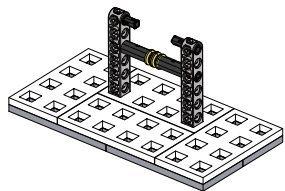
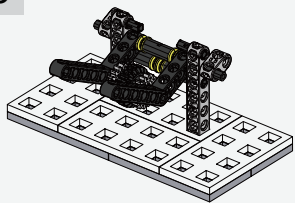


20 Bevel Gear

x1

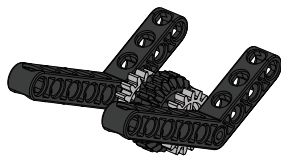


5



3#

x1



4#

x1



Shaft Sleeve0.5 x2



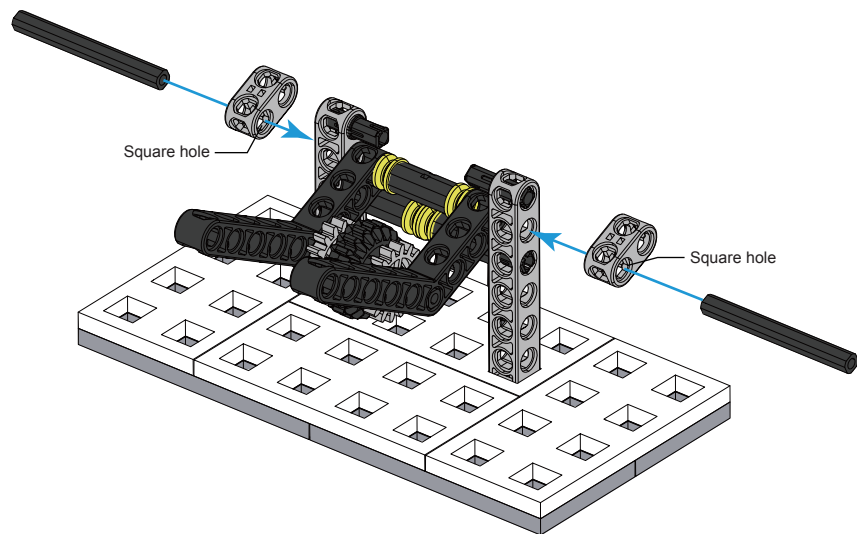
Tube Connector(S)20 x1



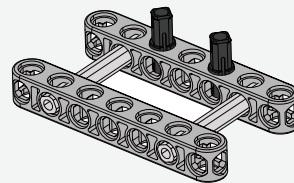
Beam 20 x2



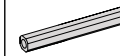
TubeSR50 x2



6



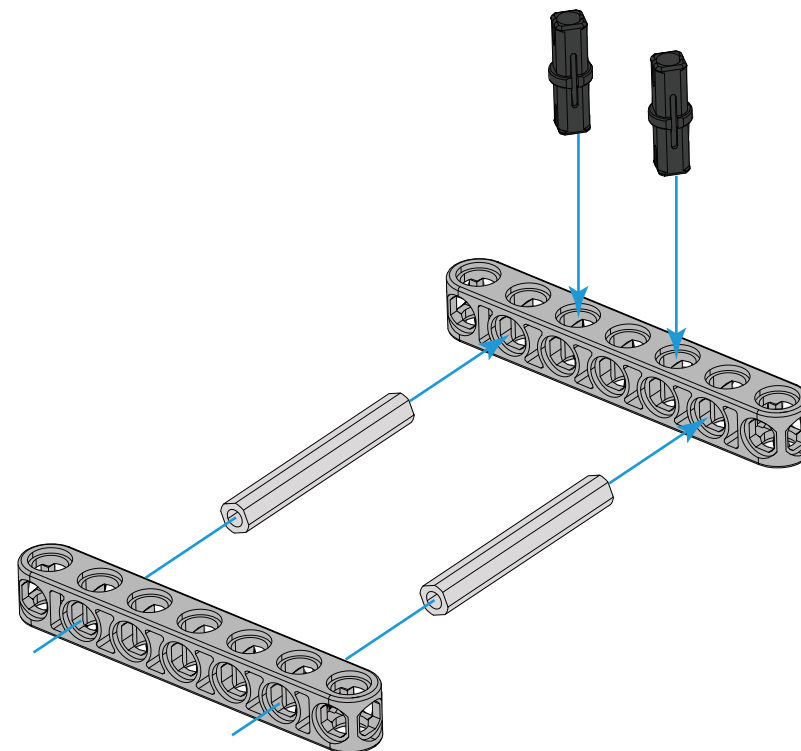
Tight Bolt 2 x2



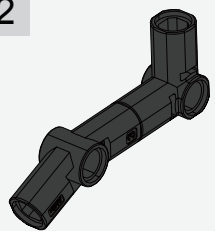
TubeSR40 x2



Beam 70 x2



7x2



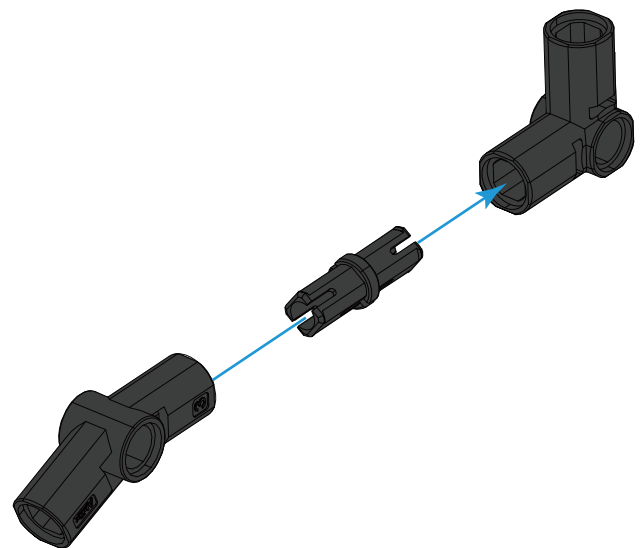
Tight Bolt 2 x2



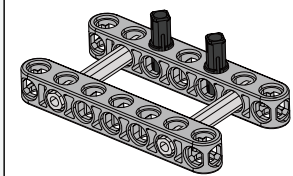
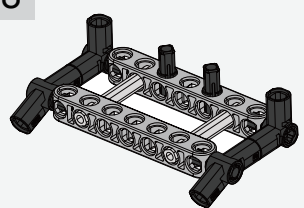
Tube connector(C) 10x10_90 x2



Tube connector(C) 10x10_157.5 x2

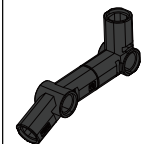


8



6#

x1

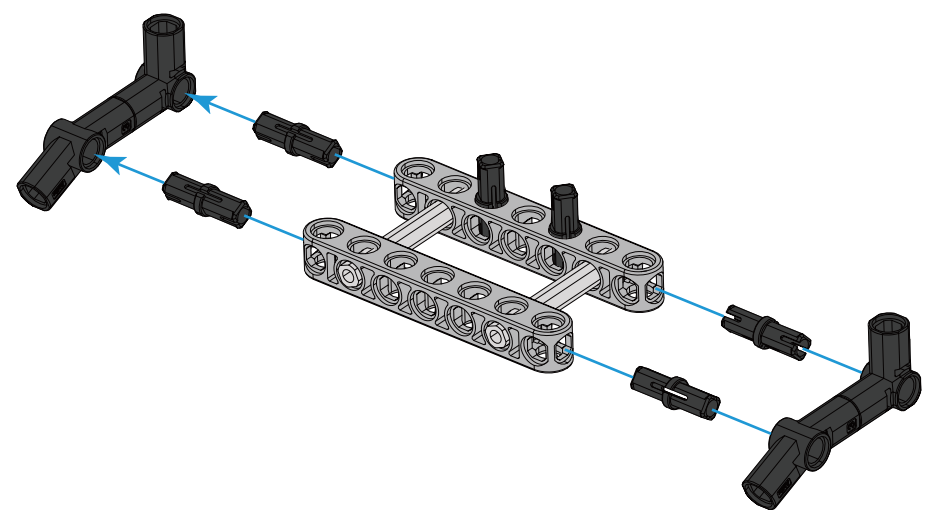


7#

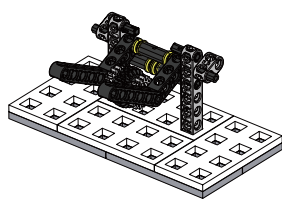
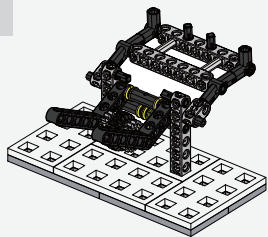
x2



Tight Bolt 2 x4

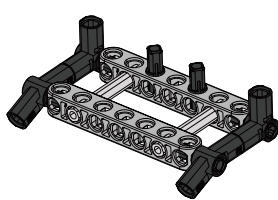


9



5#

x1

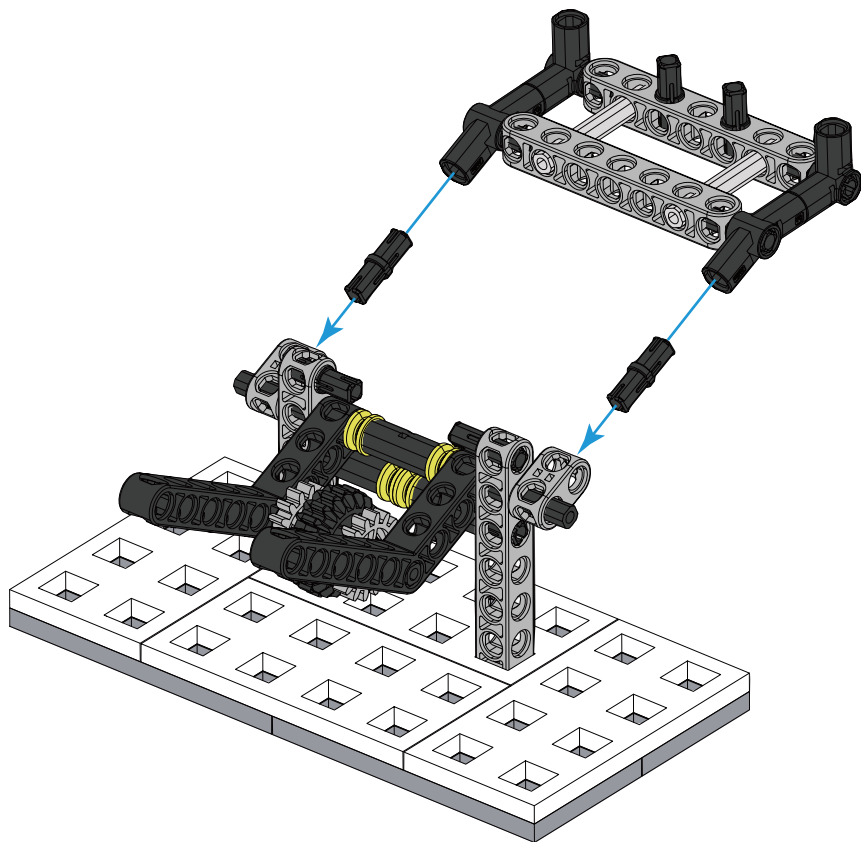


8#

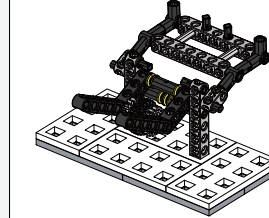
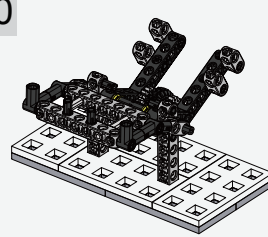
x1



Tight Bolt 2 x2



10



9#

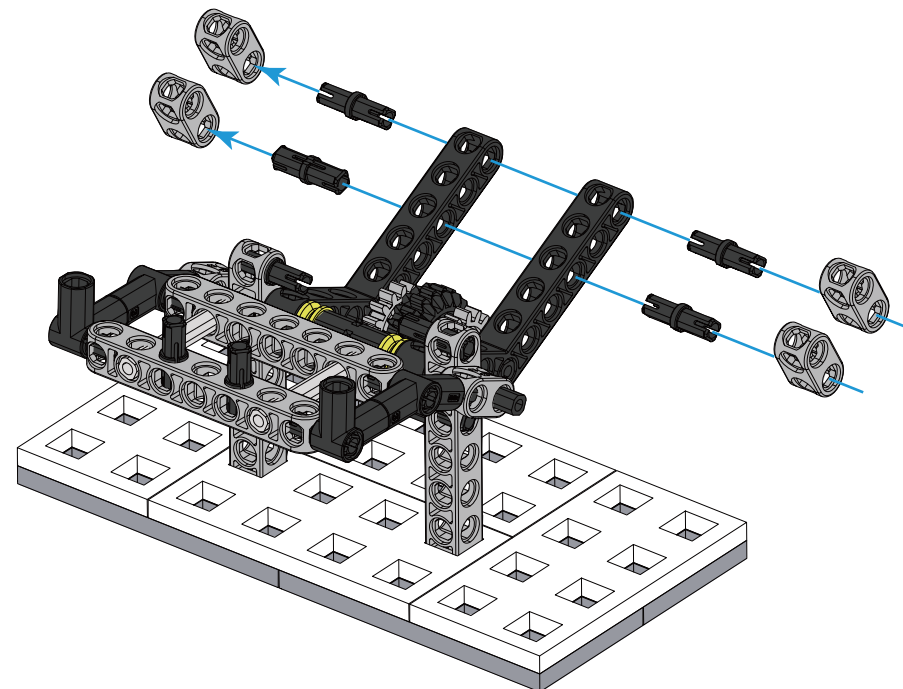
x1



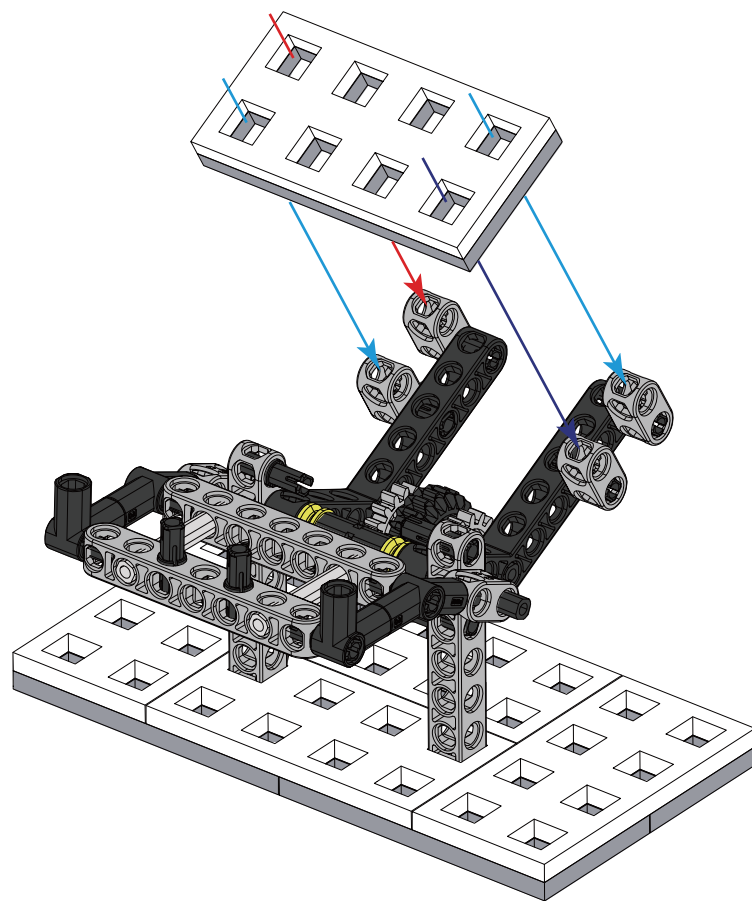
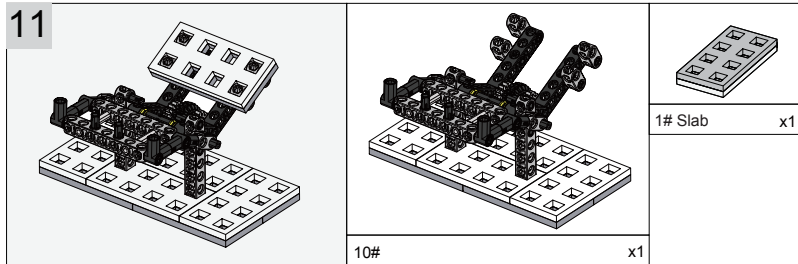
Tight Bolt 2 x4



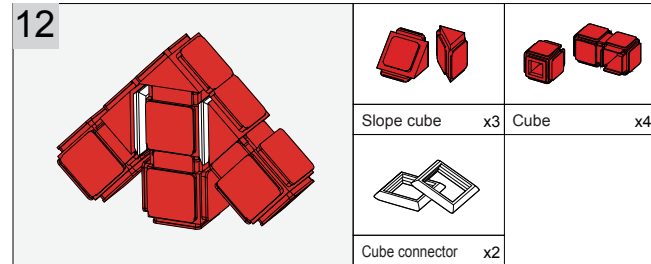
Beam 20 x4



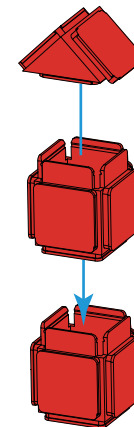
11



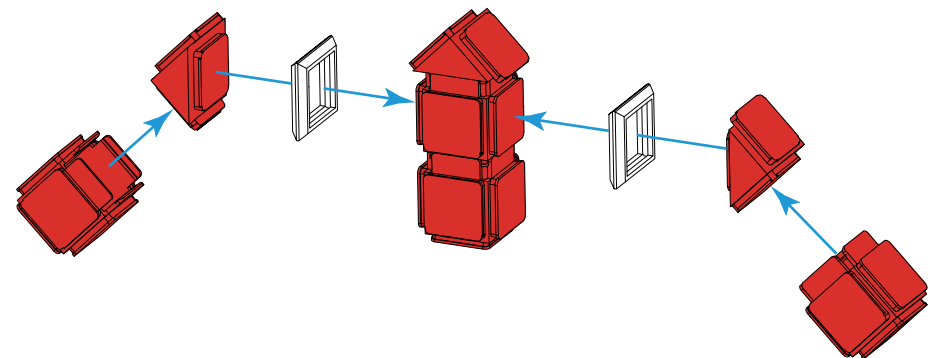
12



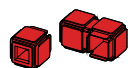
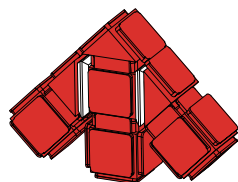
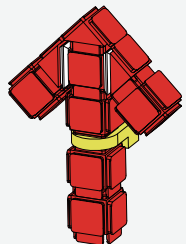
Step 1:



Step 2:



13



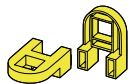
Cube

x2



Short bolt

x1

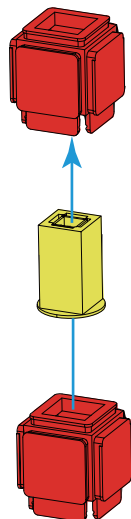


Middle A connector

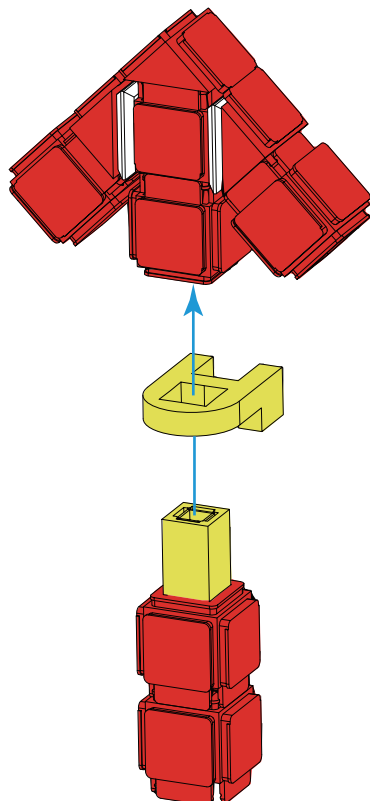
x1

12#

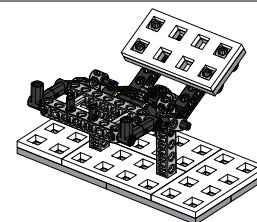
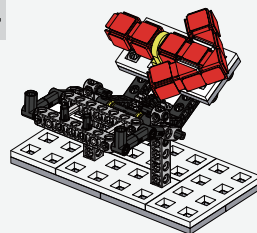
Step 1:



Step 2:

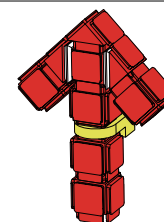


14



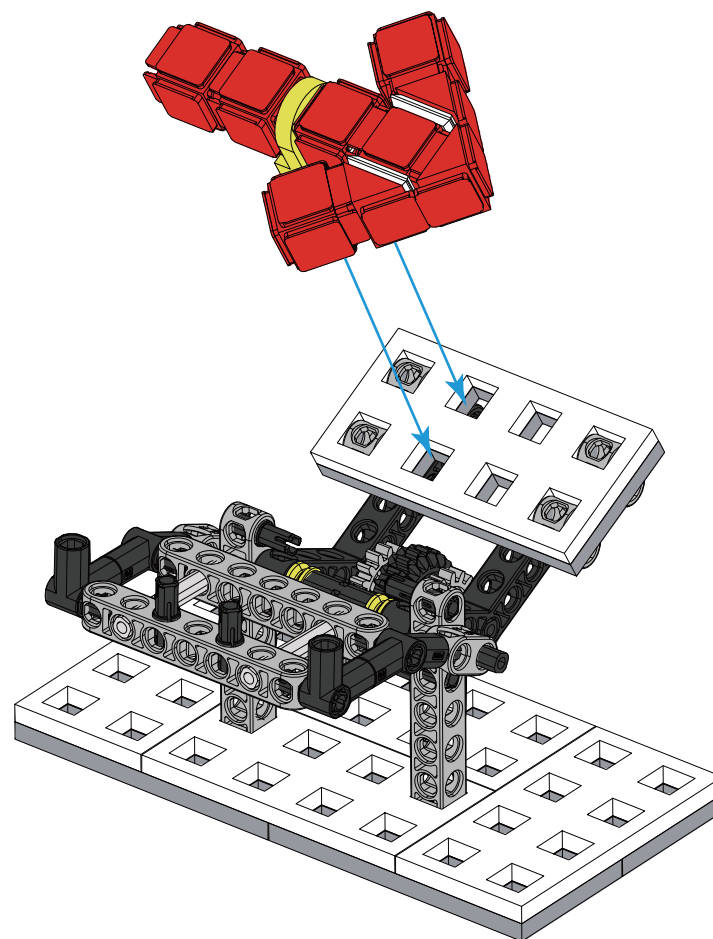
11#

x1

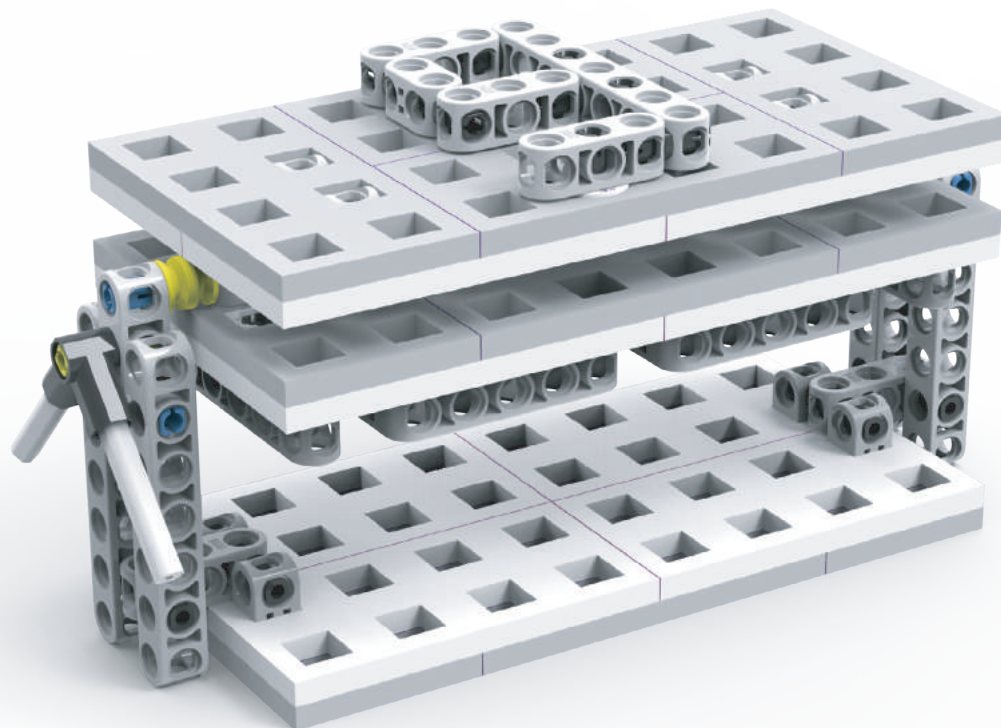


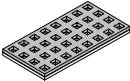
13#

x1

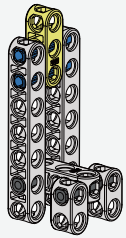


BHD Converter

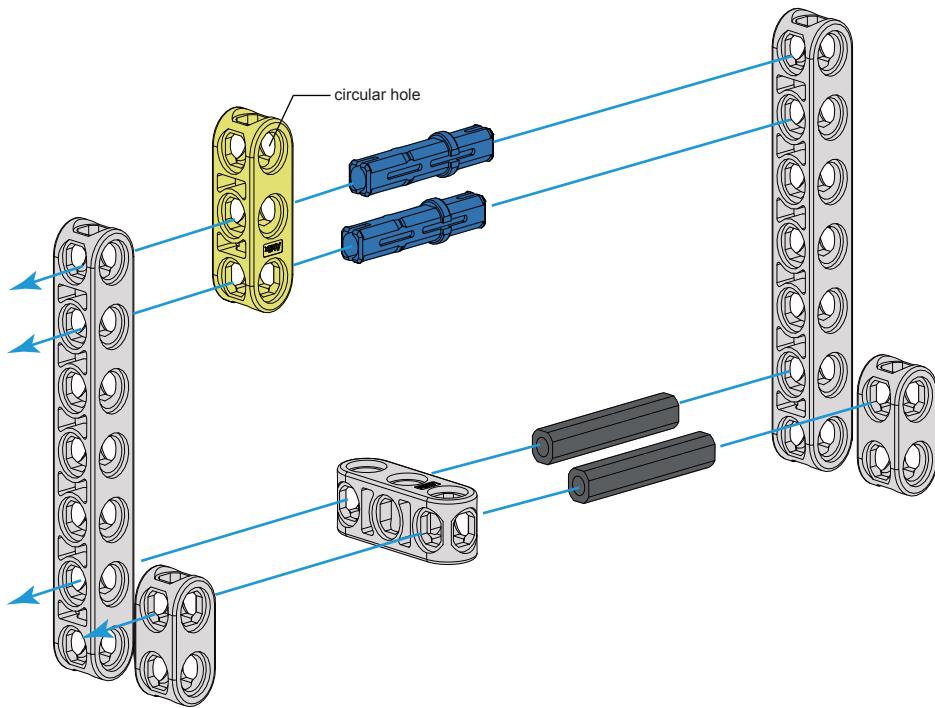


	x3		x5		x11		x2
	x7		x4		x2		x4
	x11		x1		x20		x1
	x7		x2				

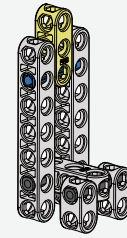
1



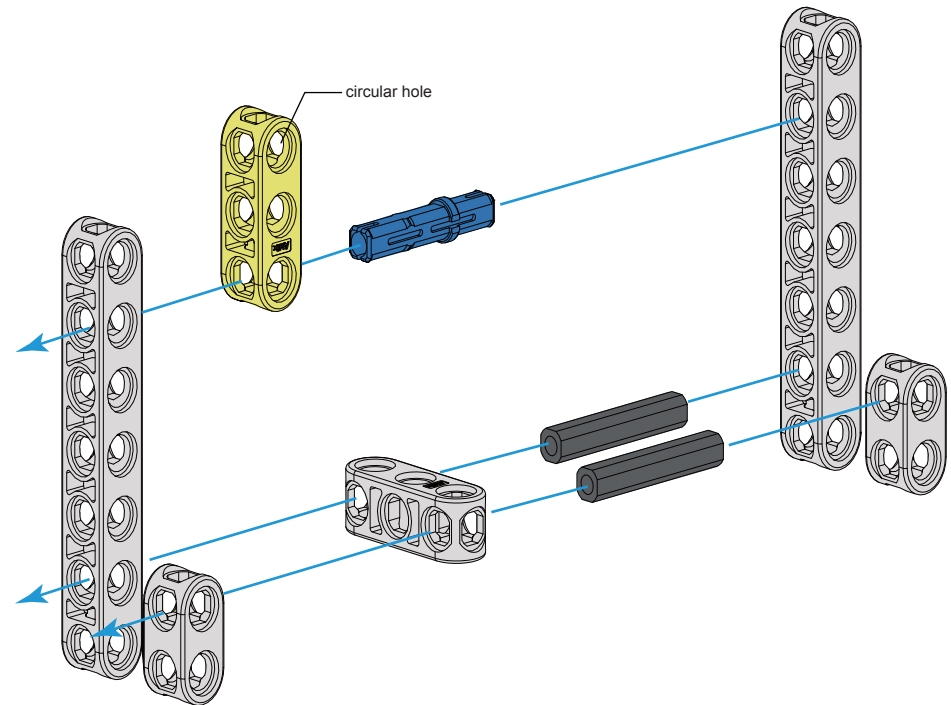
	x2		x2		x1
	x1		x2		x2



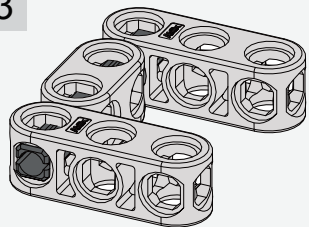
2



	x2		x2		x1
	x1		x1		x2



3



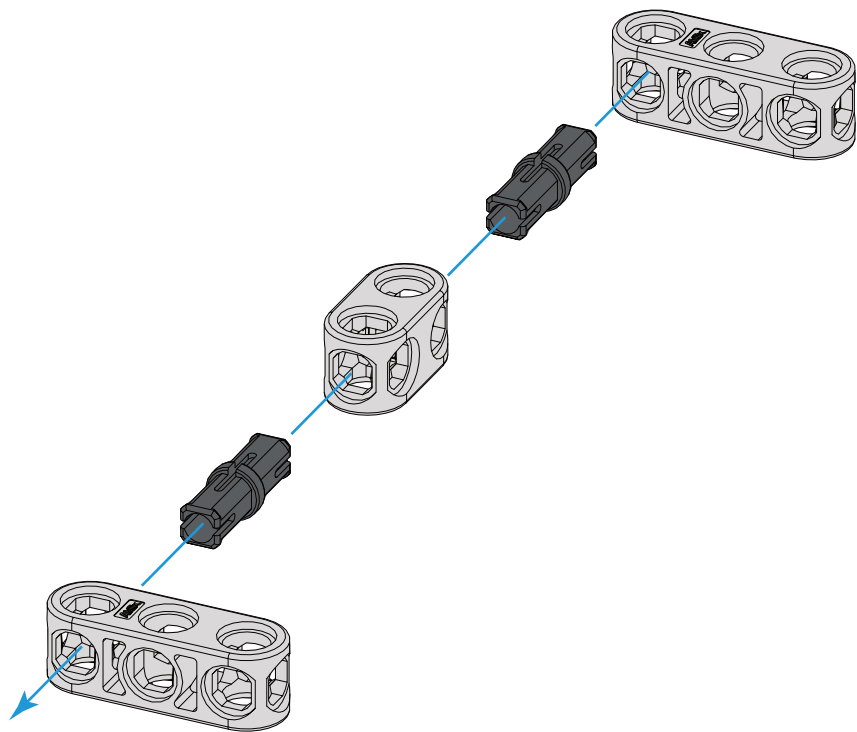
Beam 30 x2



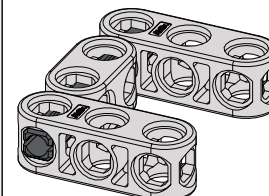
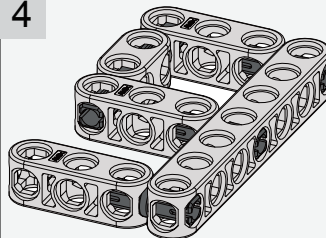
Beam 20 x1



Tight Bolt 2 x2



4



3#



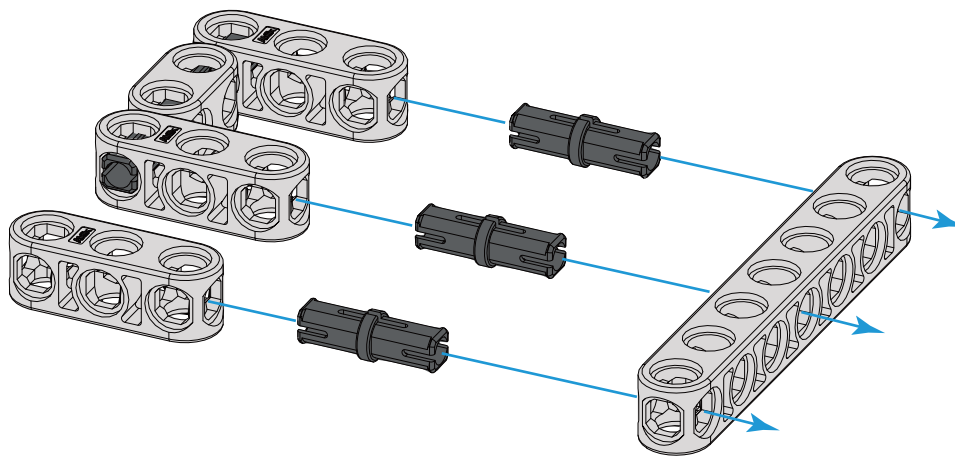
Beam 30 x1



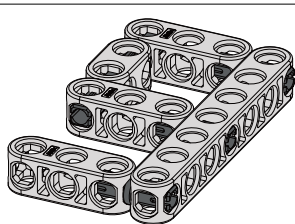
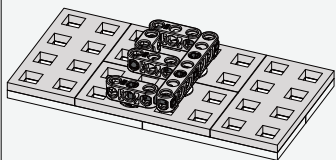
Beam 70 x1



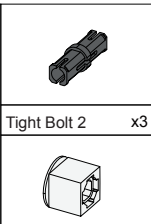
Tight Bolt 2 x3



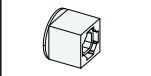
5



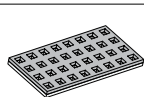
4# x1



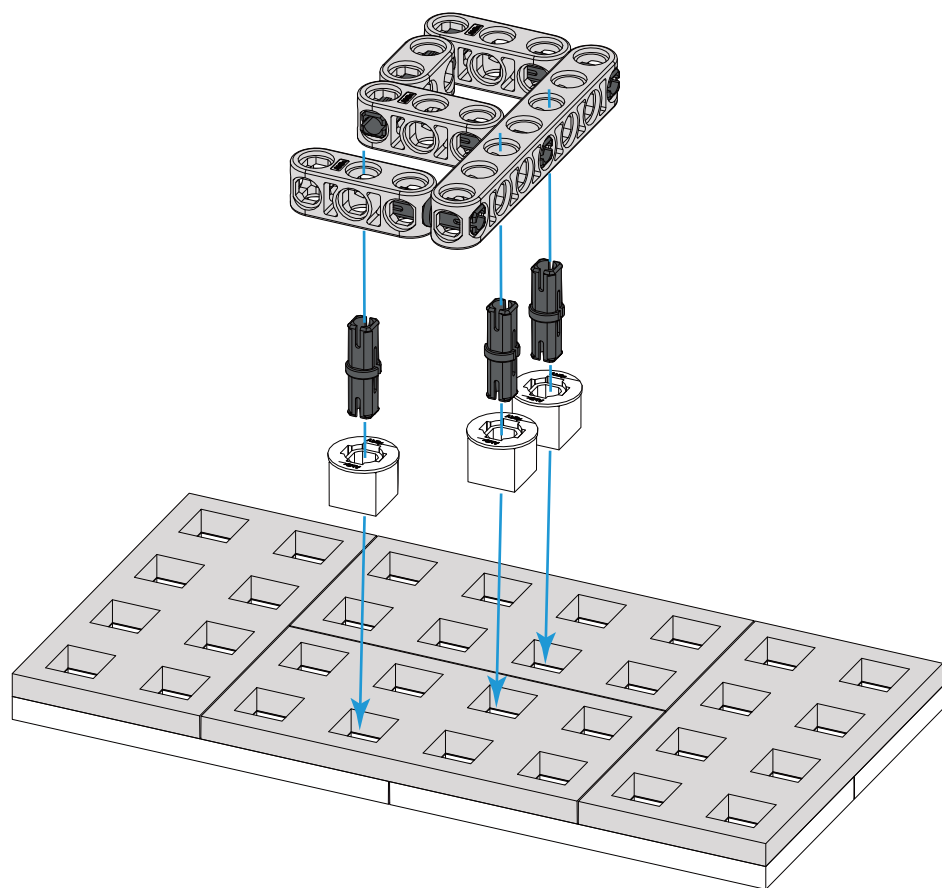
Tight Bolt 2 x3



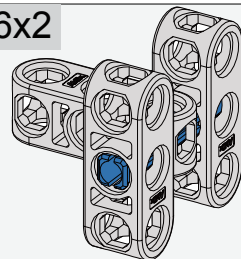
Bearing x3



4# Slab x1



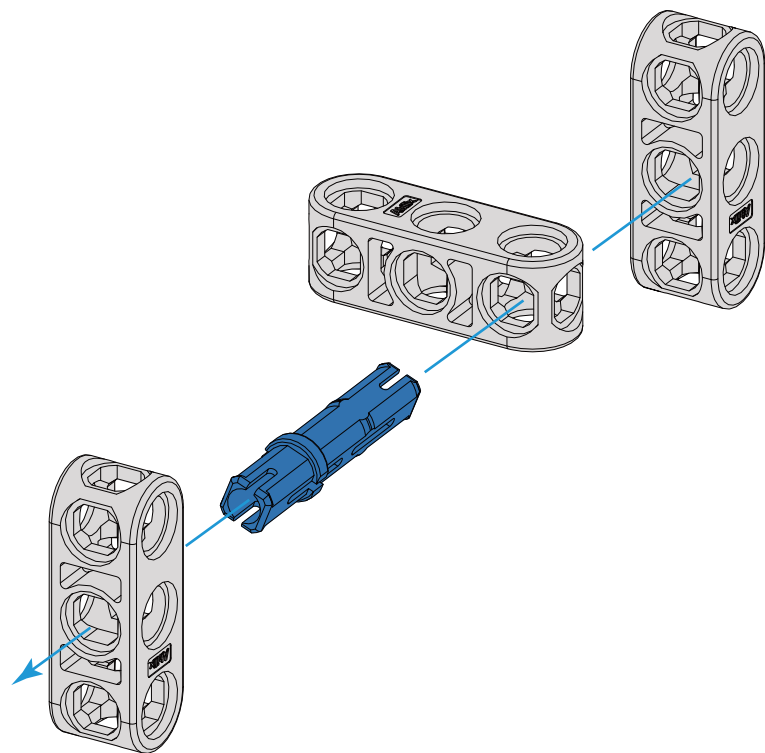
6x2



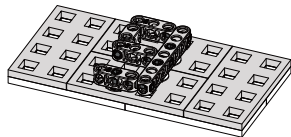
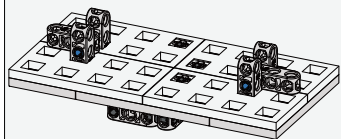
Beam 30 x6



Tight Bolt 3 x2

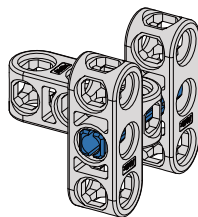


7



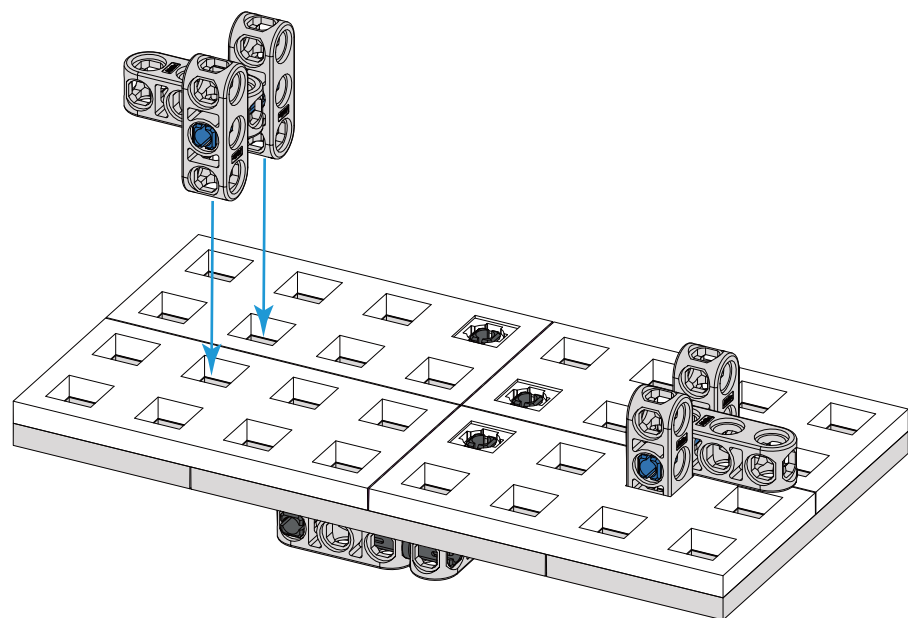
5#

x1

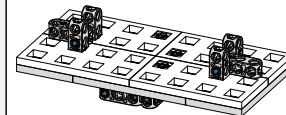
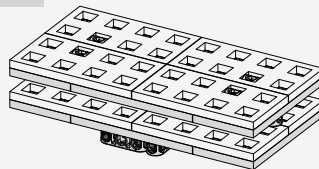


6#

x2

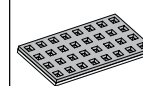


8



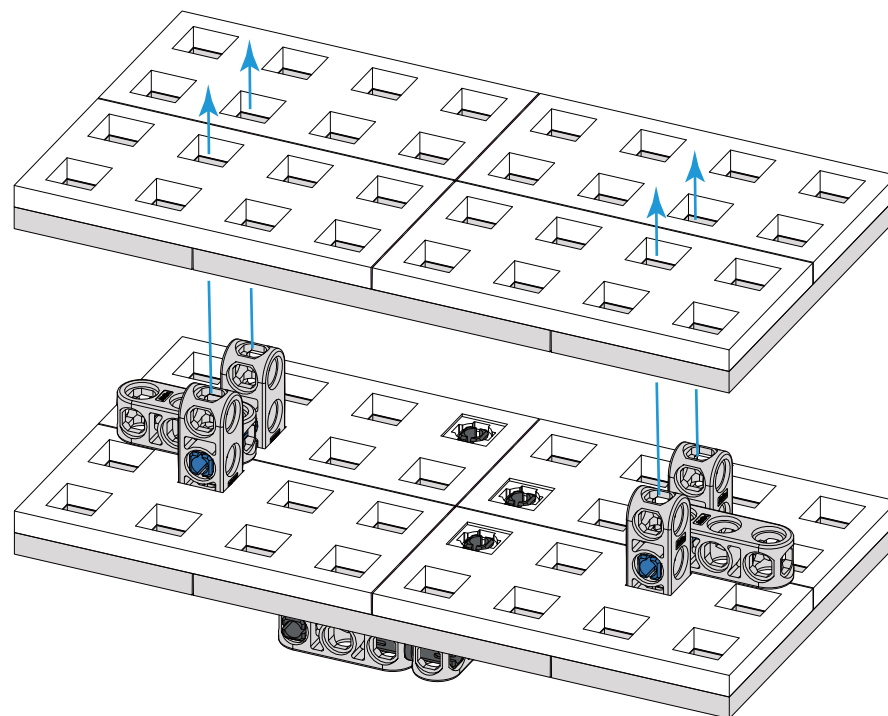
7#

x1

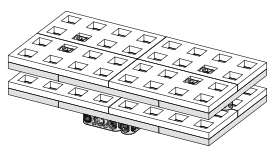
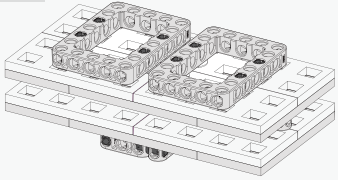


4# Slab

x1



9



8#



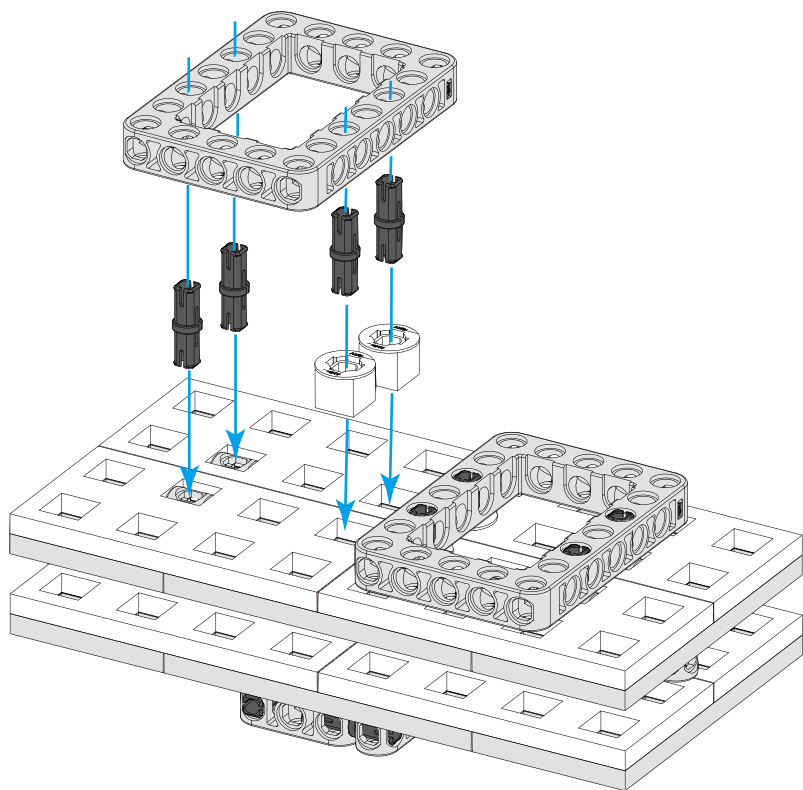
5*7 Beam x2



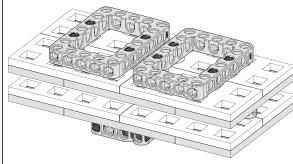
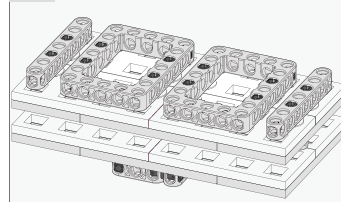
Tight Bolt 2 x8



Bearing x4



10



9#



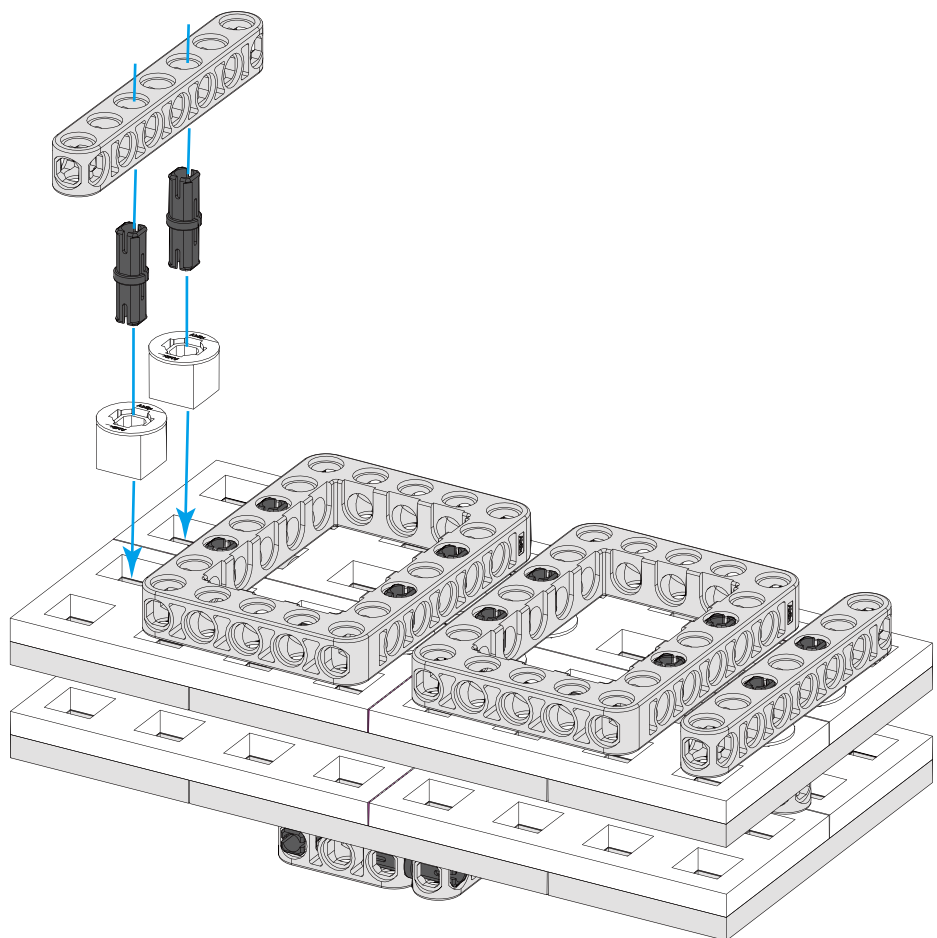
Beam 70 x2



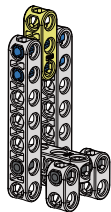
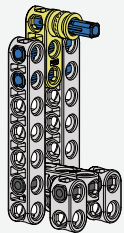
Tight Bolt 2 x4



Bearing x4



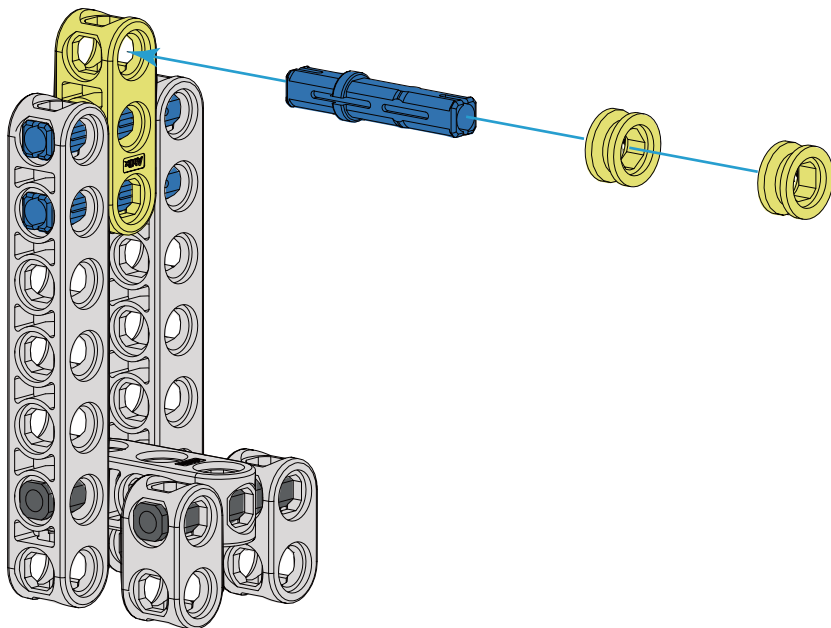
11



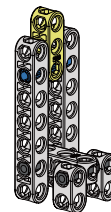
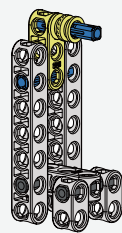
Tight Bolt 3 x1



1# x1 Shaft Sleeve0.5 x2



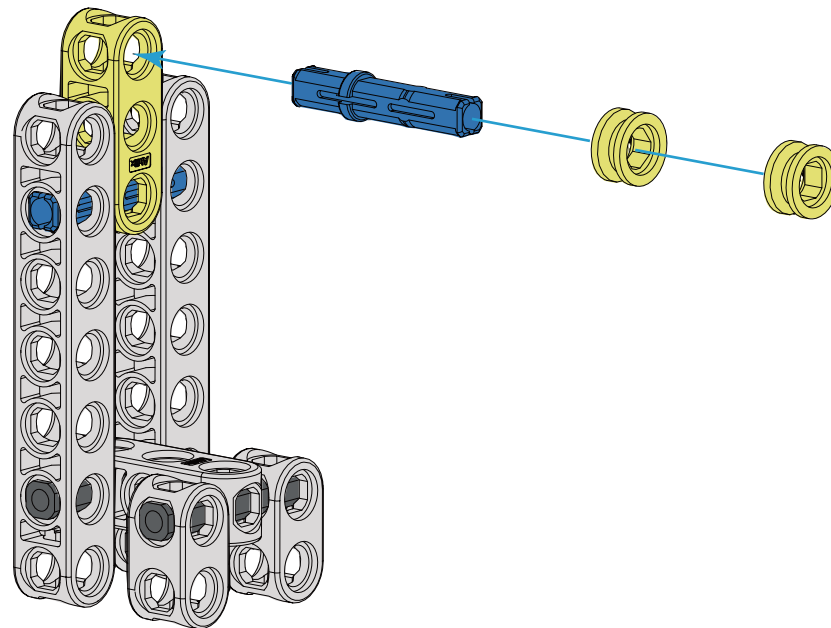
12



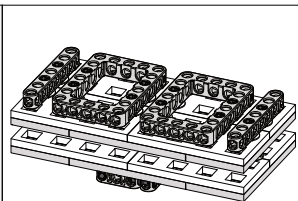
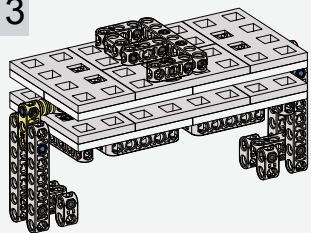
Tight Bolt 3 x1



2# x1 Shaft Sleeve0.5 x2

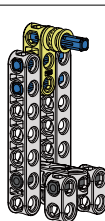


13



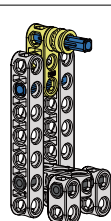
10#

x1



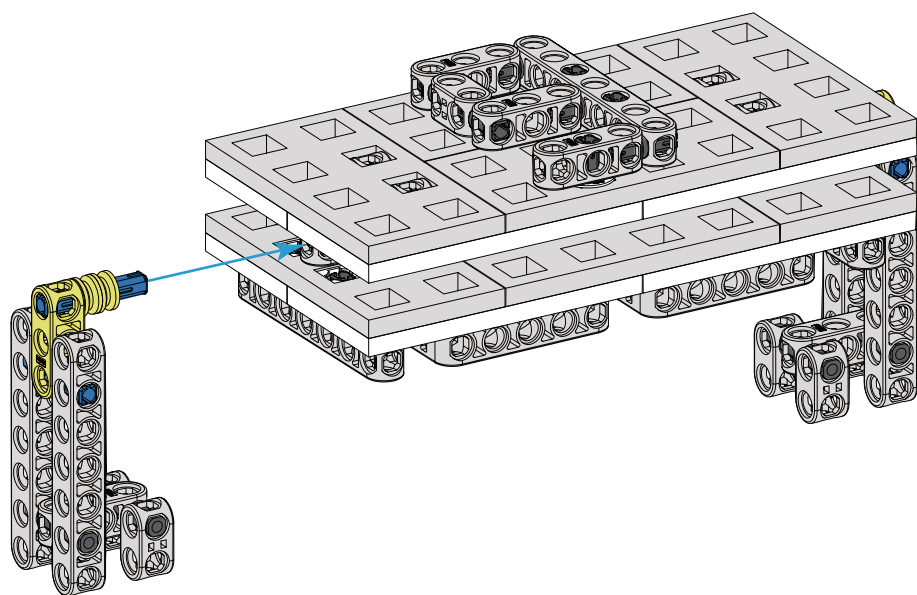
11#

x1

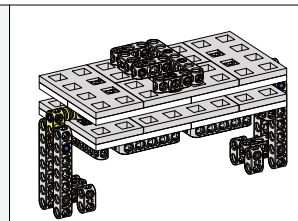
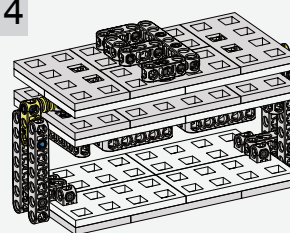


12#

x1

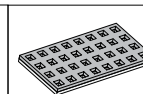


14



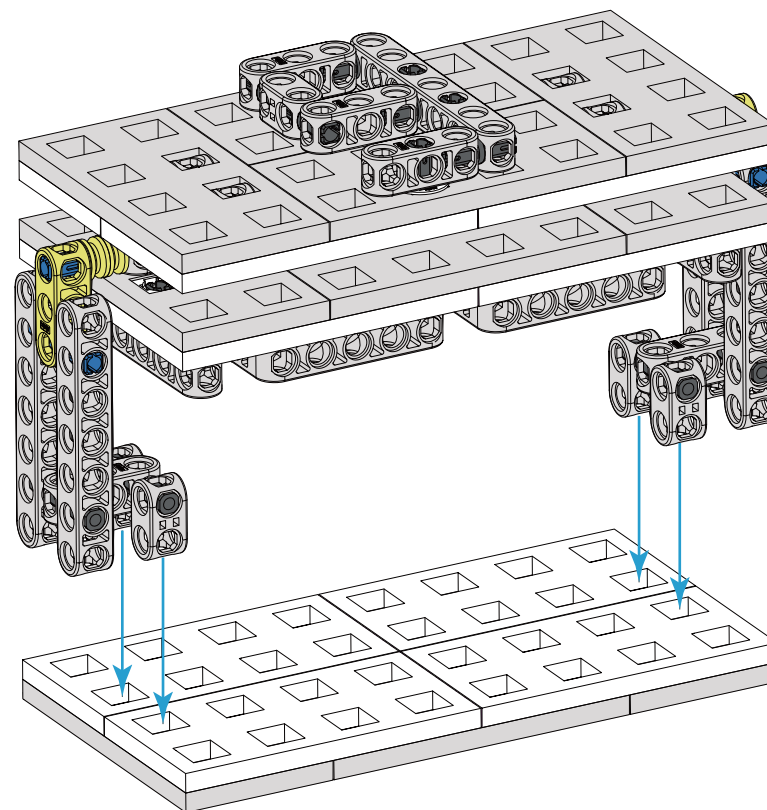
13#

x1

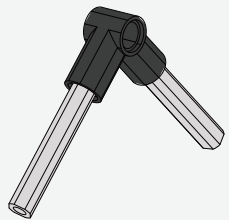


4# Slab

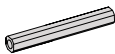
x1



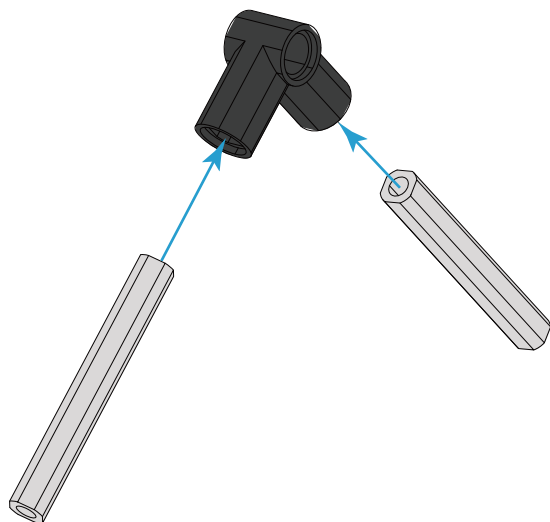
15



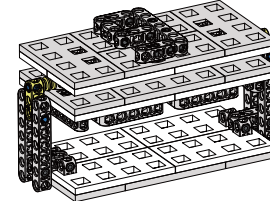
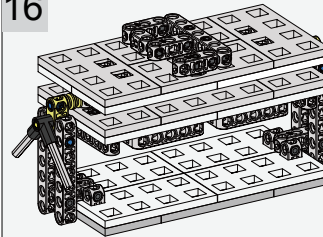
Tube conector(C)
10x10_90 x1



TubeSR40 x2

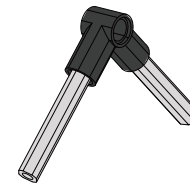


16



14#

x1

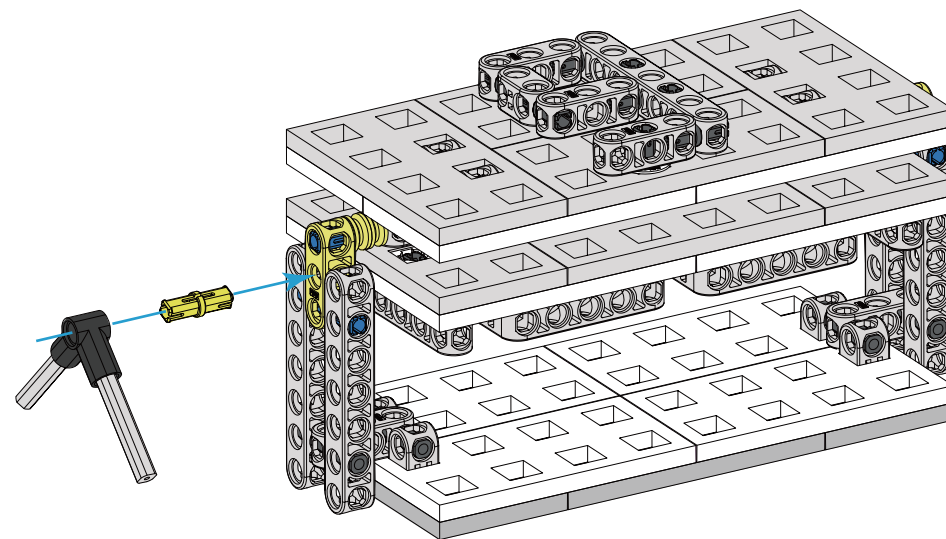


15#

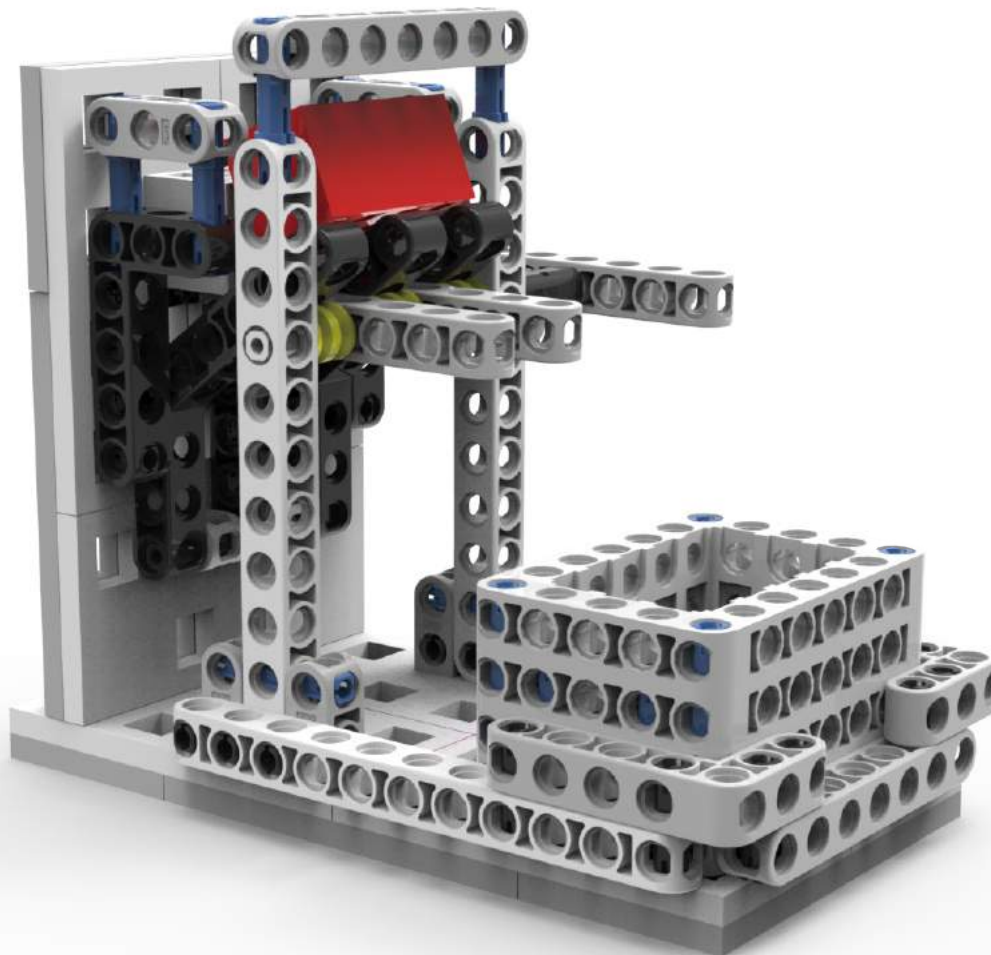
x1

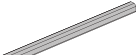
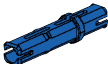
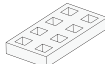
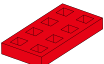
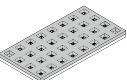
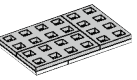


Pin20 x1



Data Center



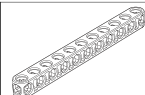
			
Shaft Sleeve0.5 x6	TubeSR20 x8	TubeSR50 x1	TubeSR80 x1
			
Tight Bolt 2 x19	Tight Bolt 3 x18	Tube Connector(S)20 x1	Bearing x4
			
Beam 20 x2	Beam 30 x6	Beam 70 x5	Beam 110 x4
			
Beam(C)4x6_126.87 x3	Beam(C)3x5_90 x2	Beam(C)3x5_90 x2	5*7 Beam x4
			
Small slab x4	Small slab x4	Middle L connector x2	4# Slab x1
			
3# Slab x1			

1x2



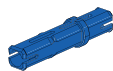
Beam 30

x4



Beam 110

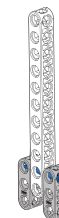
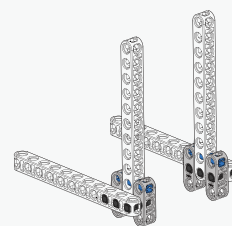
x2



Tight Bolt 3

x2

2



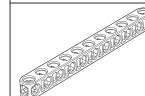
1#

x2



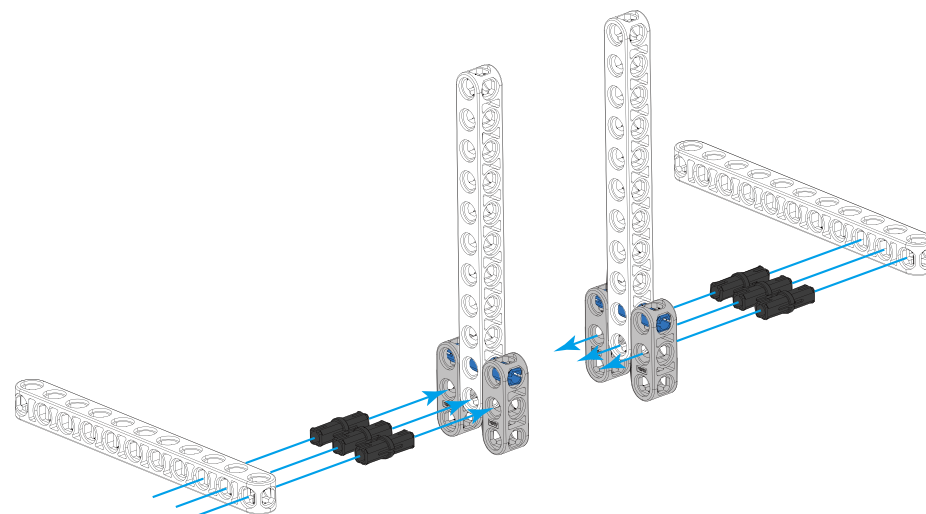
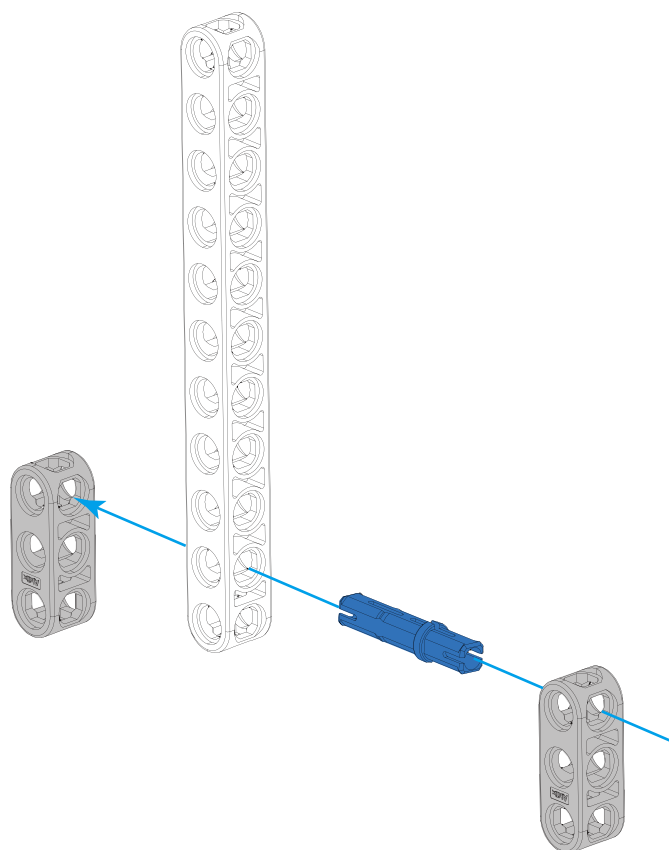
Tight Bolt 2

x6

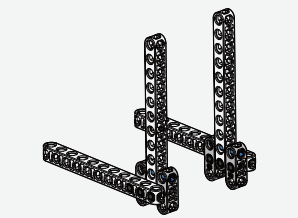
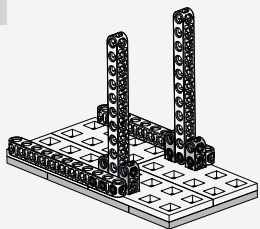


Beam 110

x2

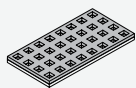


3



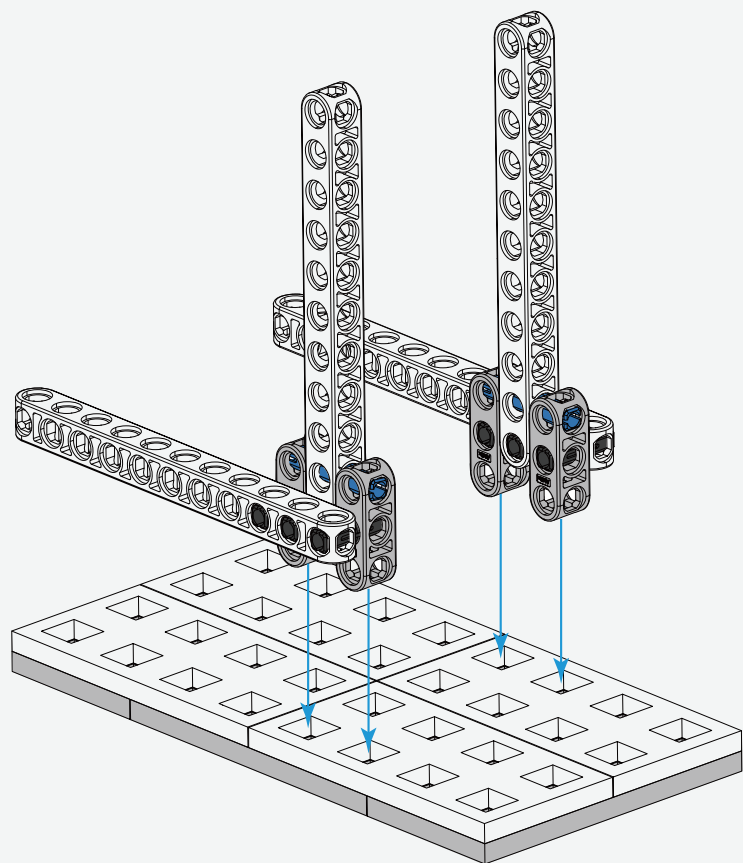
2#

x1

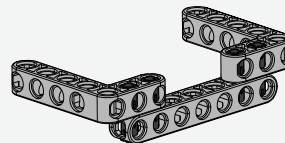


4# Slab

x1

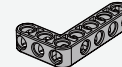


4



Beam 70

x1



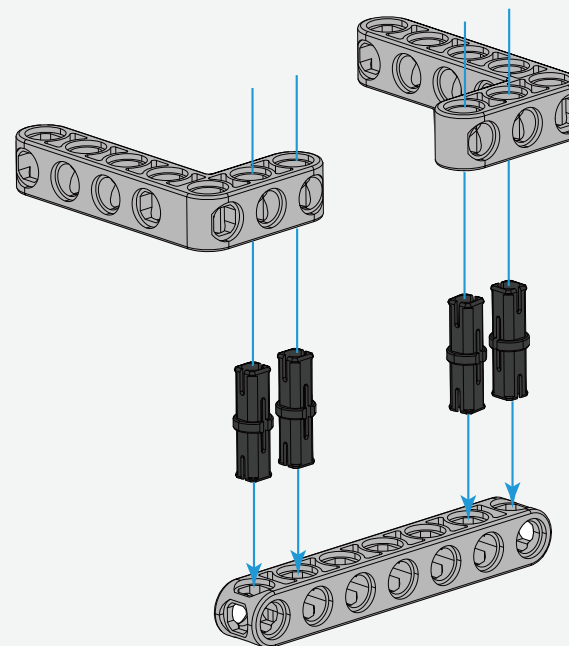
Beam(C)3X5_90

x2

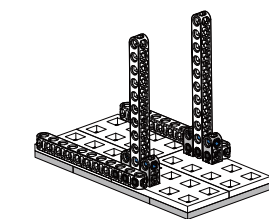
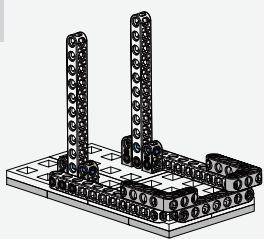


Tight Bolt 2

x4

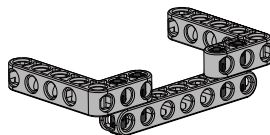


5



3#

x1

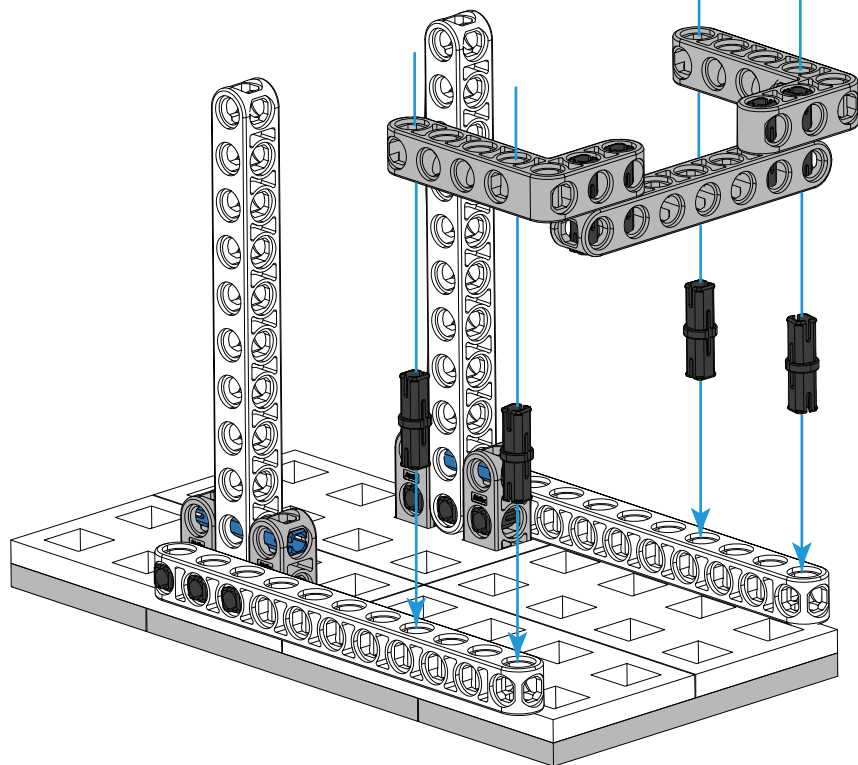


4#

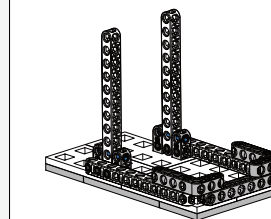
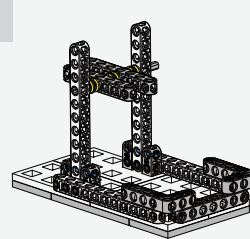
x1



Tight Bolt 2 x4



6

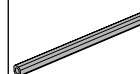


5#

x1



Shaft Sleeve 0.5 x6

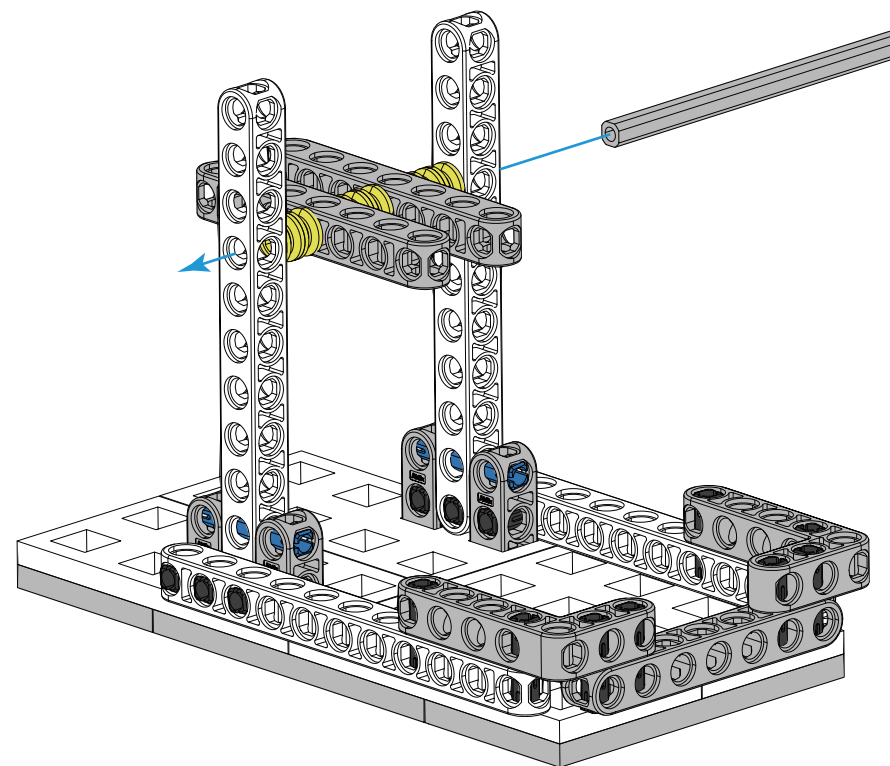


Tube SR80 x1

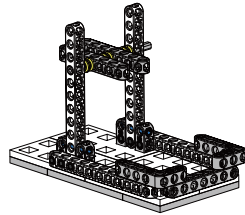
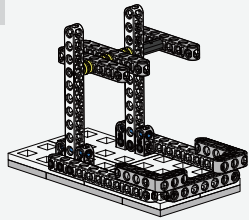


Beam 70

x2



7



6#

x1



Tight Bolt 2

x1



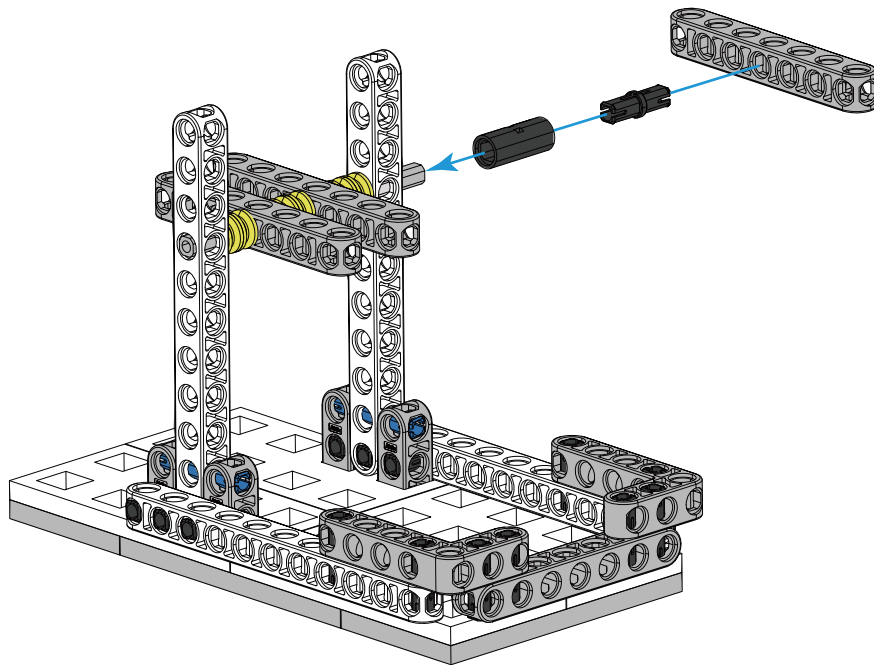
Tube Connector(S)20

x1



Beam 70

x1



8



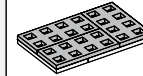
Bearing

x4



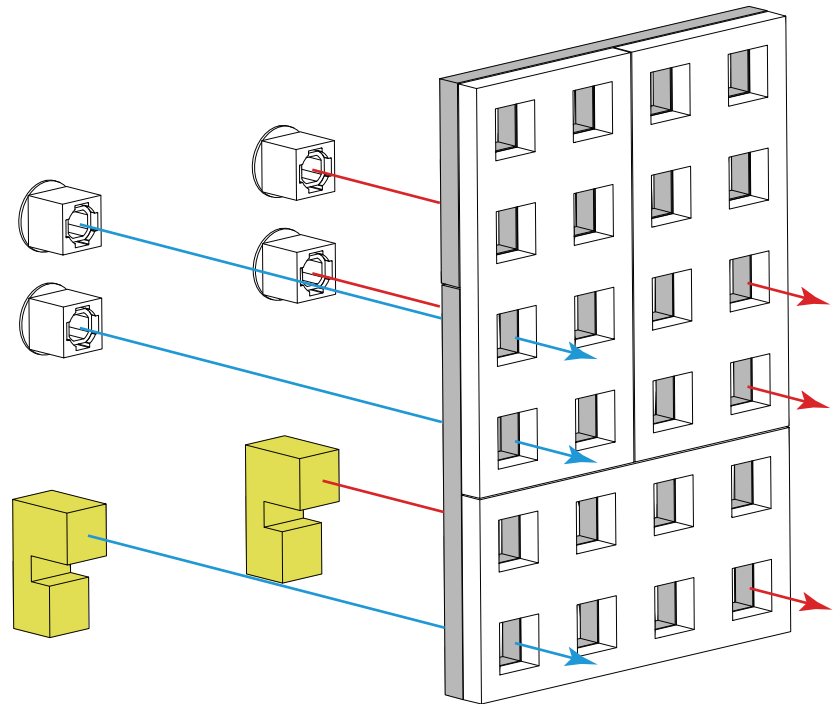
Middle L connector

x2

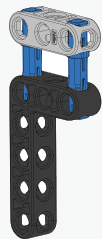


3# Slab

x1

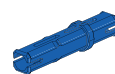


9x2



Beam 30

x2



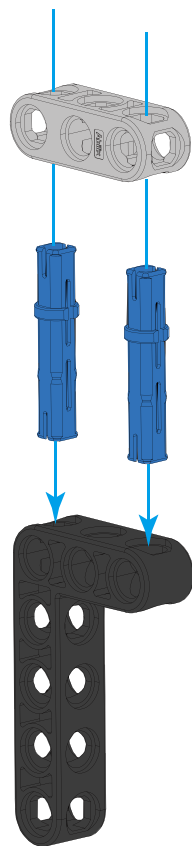
Tight Bolt 3

x4

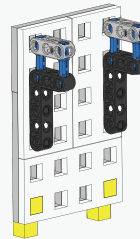


Beam(C)3x5_90

x2



10

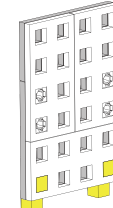


9#

x2

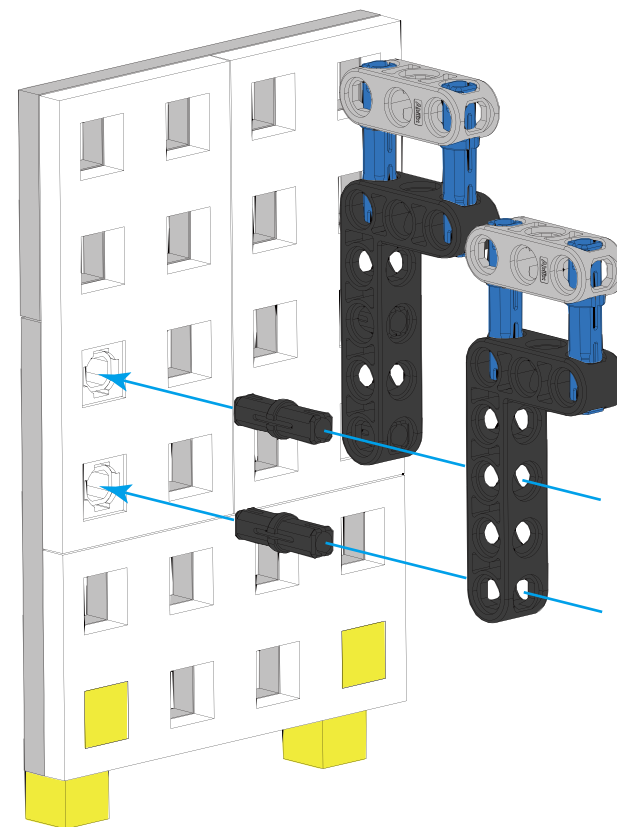
8#

x1

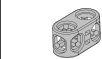


Tight Bolt 2

x4



11



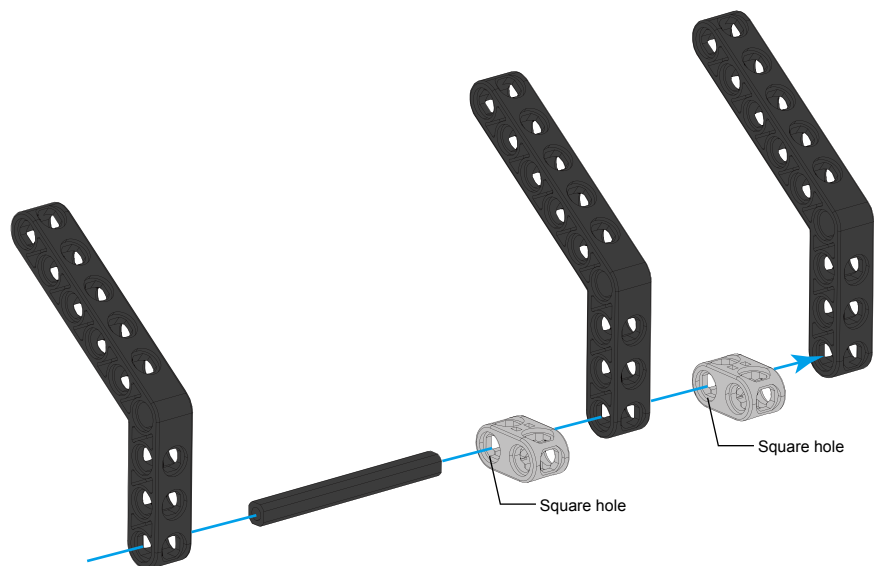
Beam 20 x2



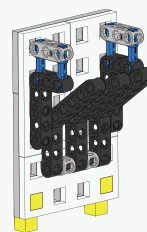
Beam(C)4X6_126.87 x3



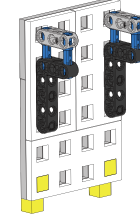
TubeSR50 x1



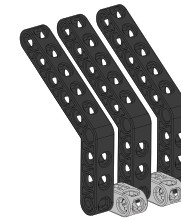
12



10#

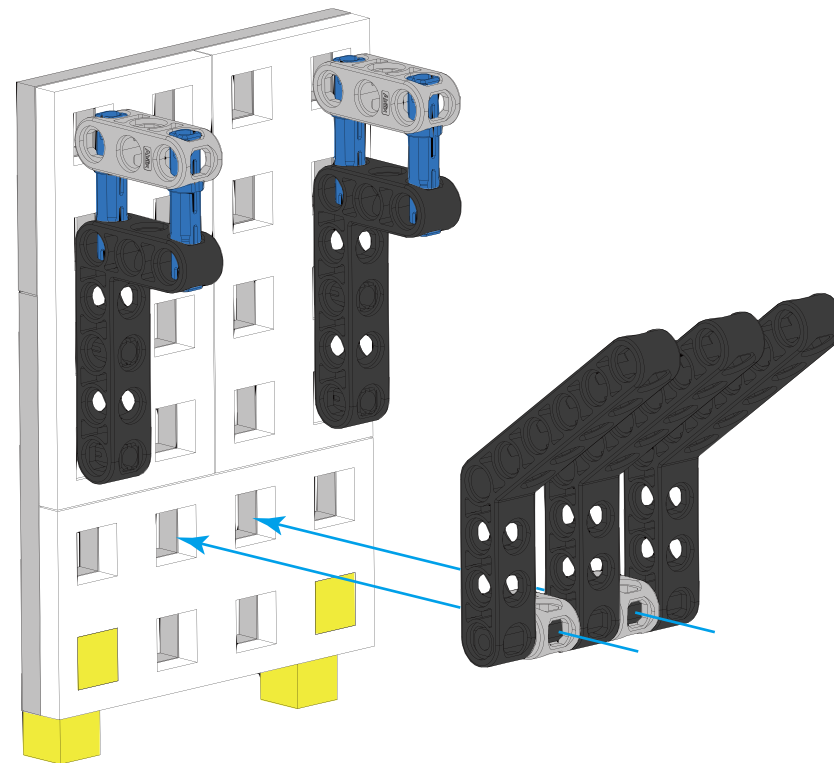


x1

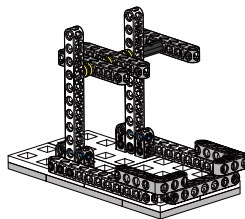
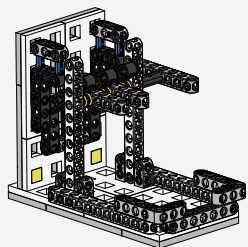


11#

x1

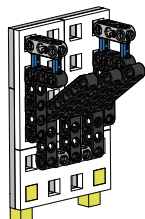


13



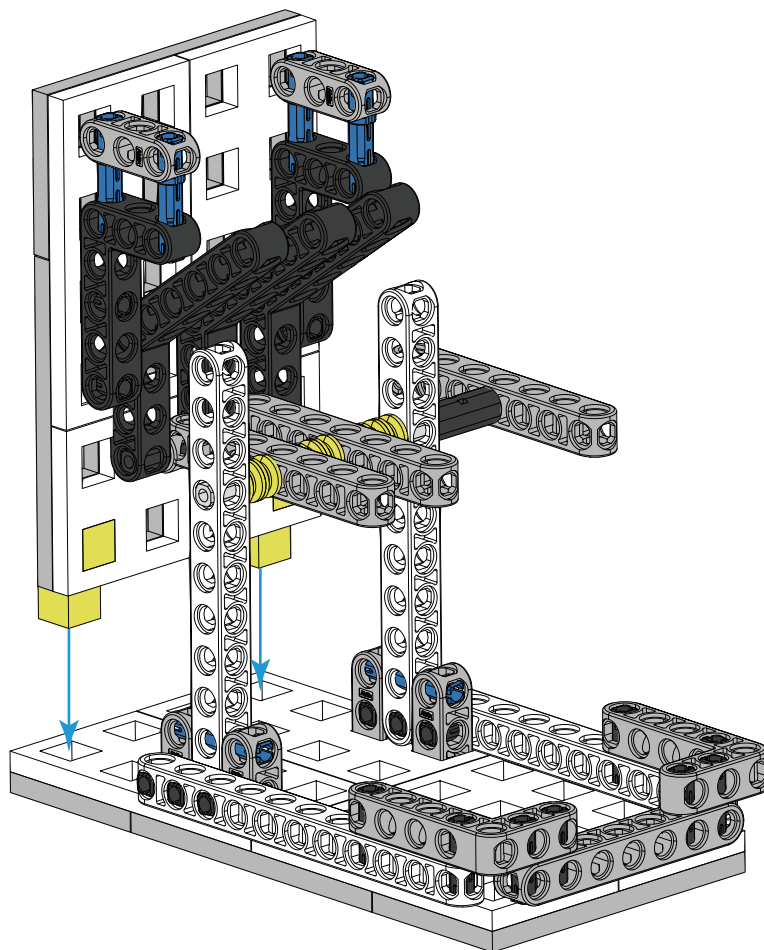
7#

x1

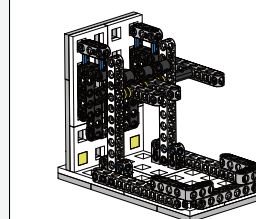
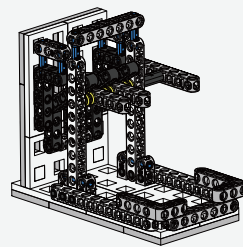


12#

x1

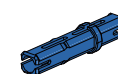


14



13#

x1



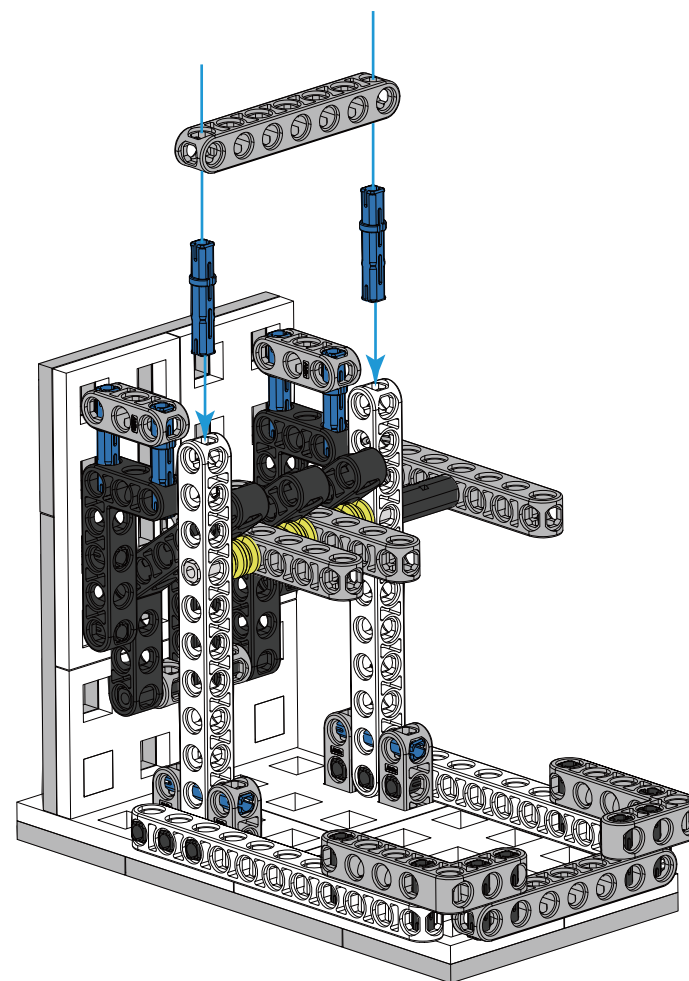
Tight Bolt 3

x2

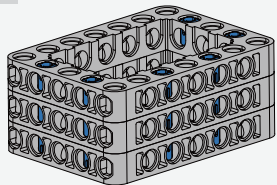


Beam 70

x1



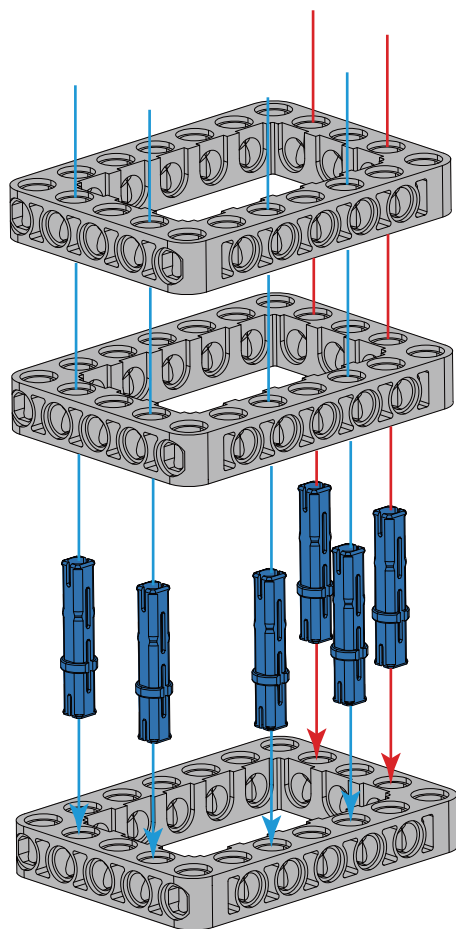
15



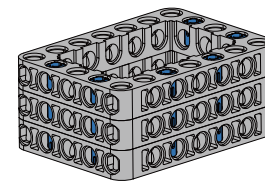
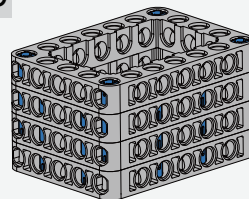
Tight Bolt 3 x6



5*7 Beam x3

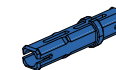


16



15#

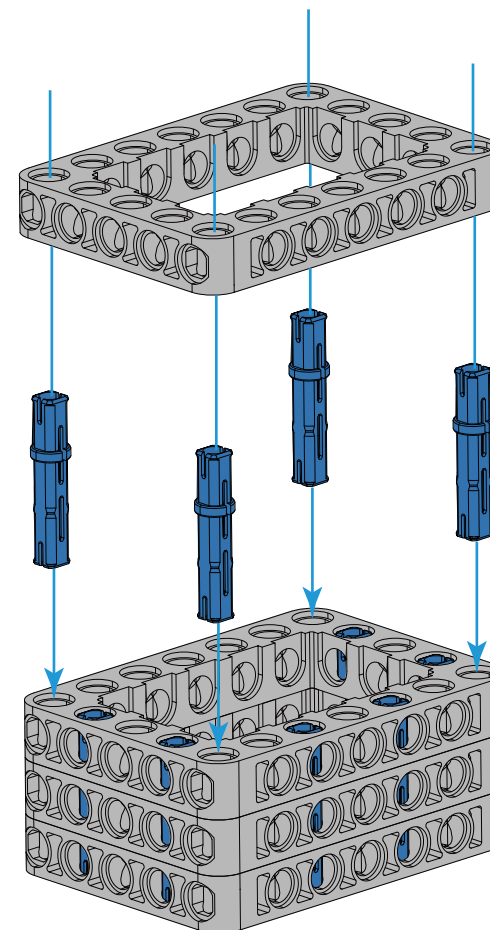
x1



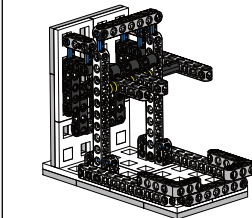
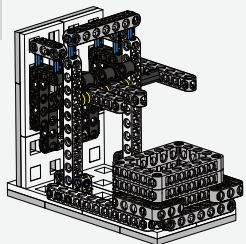
Tight Bolt 3 x4



5*7 Beam x1

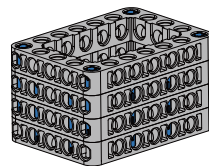


17



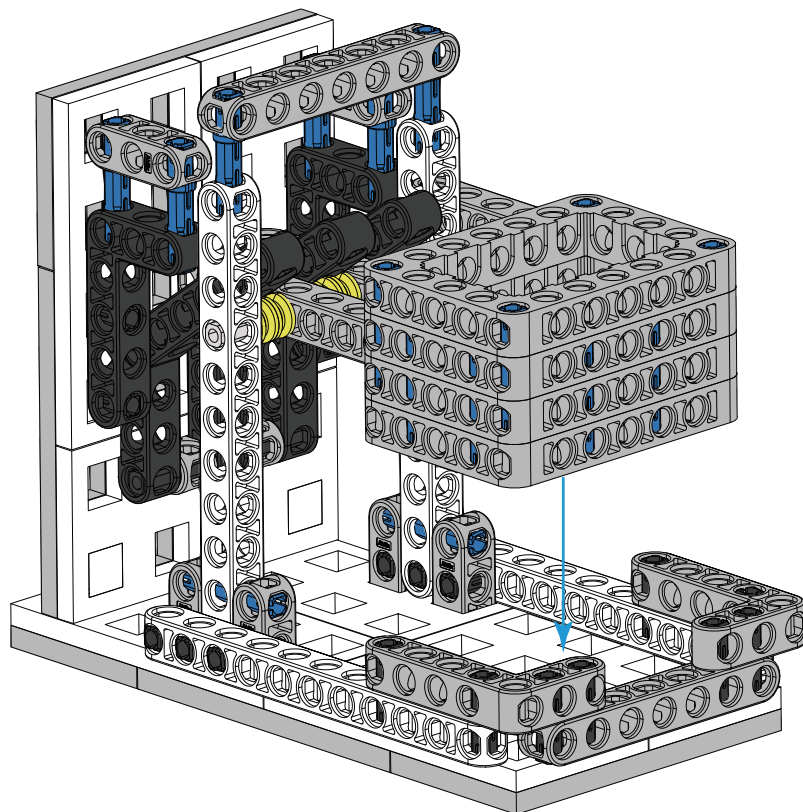
14#

x1

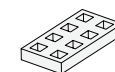
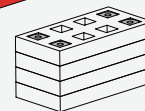
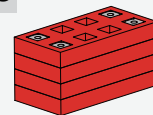


16#

x1



18



Small slab

x4



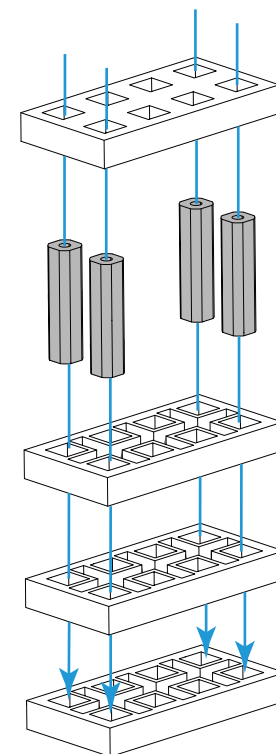
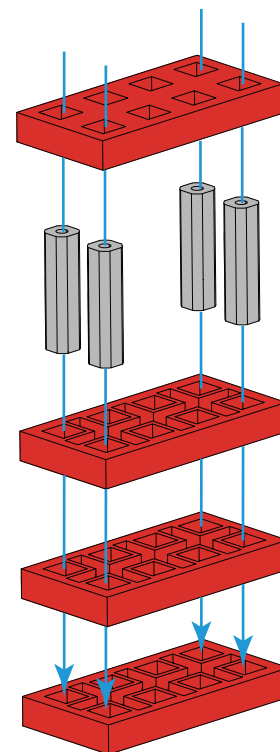
Small slab

x4

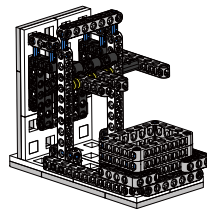
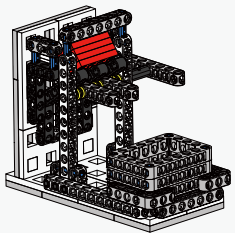


TubeSR20

x8

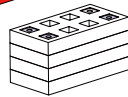
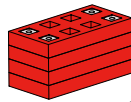


19



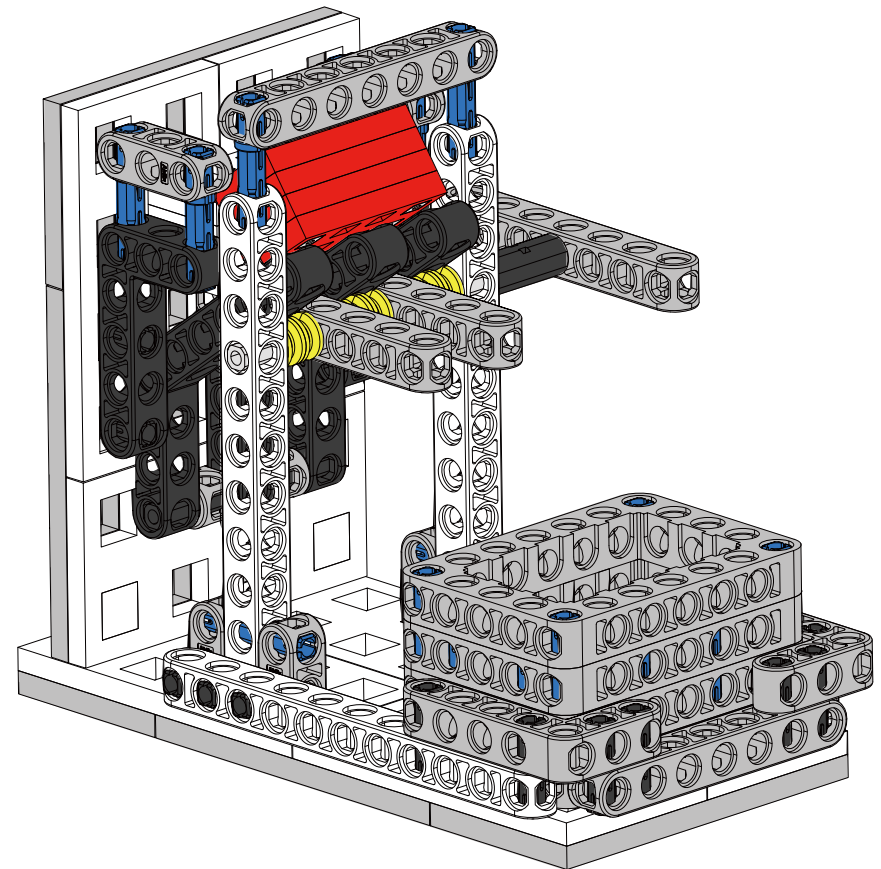
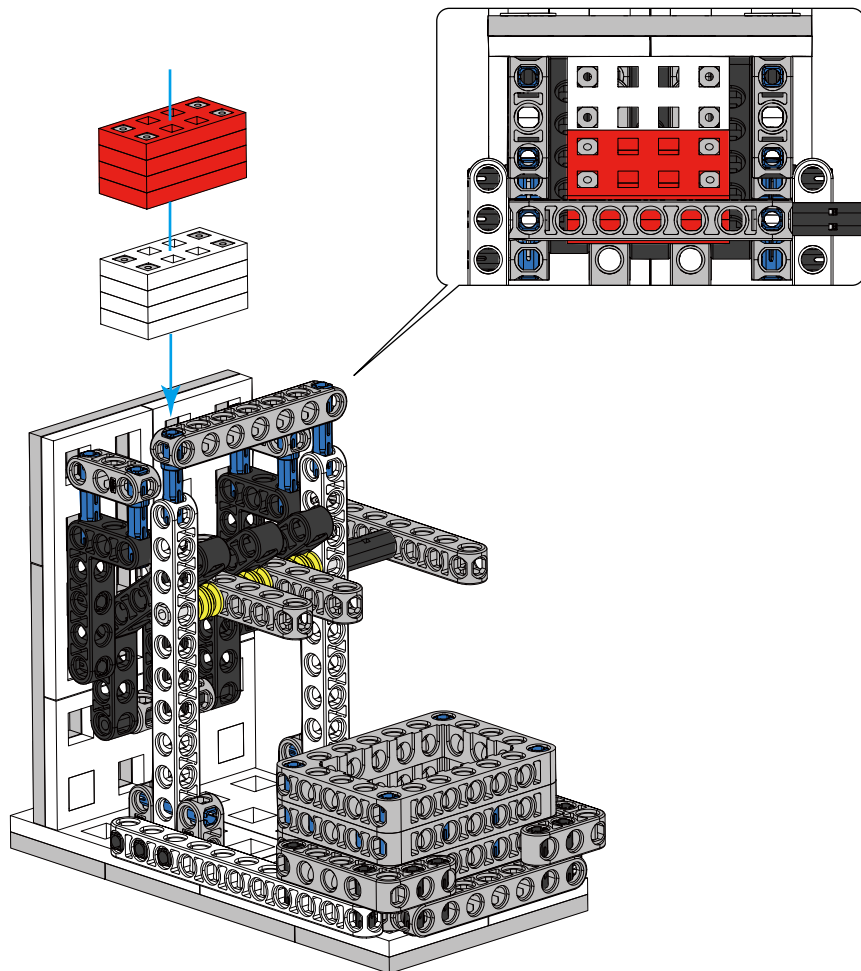
17#

x1

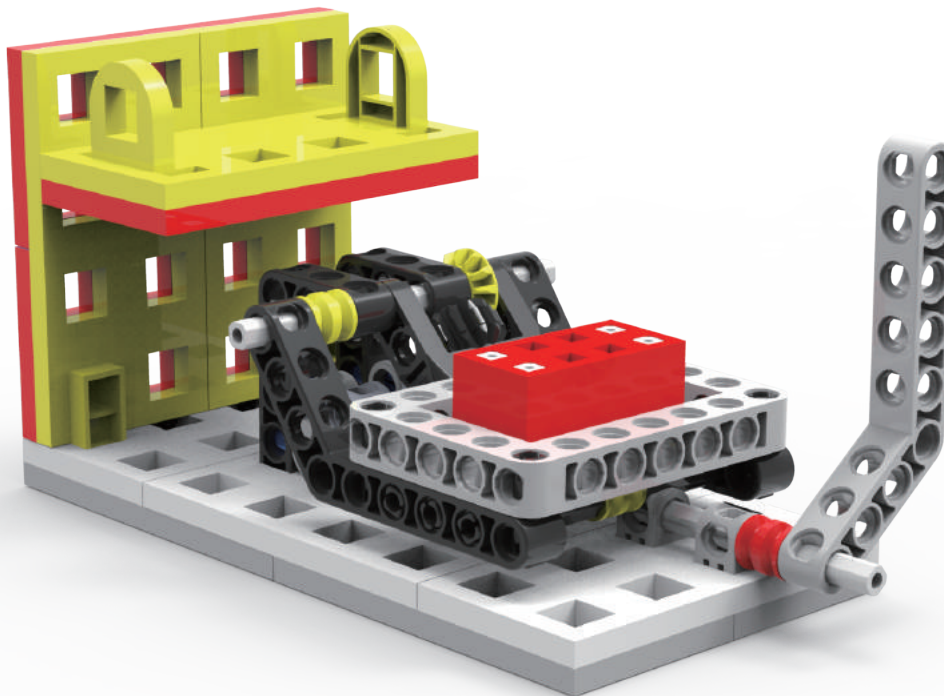


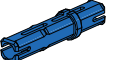
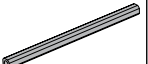
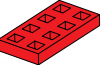
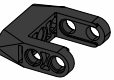
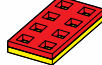
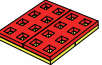
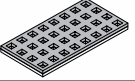
18#

x1

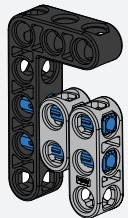


Cloud Server



			
Shaft Sleeve0.5 x2	Shaft Sleeve0.5 x8	Tight Bolt 2 x10	Tight Bolt 3 x7
			
TubeSR20 x4	TubeSR30 x1	TubeSR80 x2	Tube Connector(S)20 x6
			
12-tooth Bevel Gear x1	12 Bevel Gear x1	Small slab x4	Universal Joint x1
			
Beam 20 x4	Beam 30 x2	Beam(C)4X6_126.87 x1	Beam(C)4X6_126.87 x2
			
Beam(C)3X5_90 x2	5*7 Beam x1	U Beam x1	Middle L connector x4
			
Middle A connector x2	1# Slab x1	2# Slab x1	4# Slab x1

1x2



Beam 20

x2



Beam 30

x2



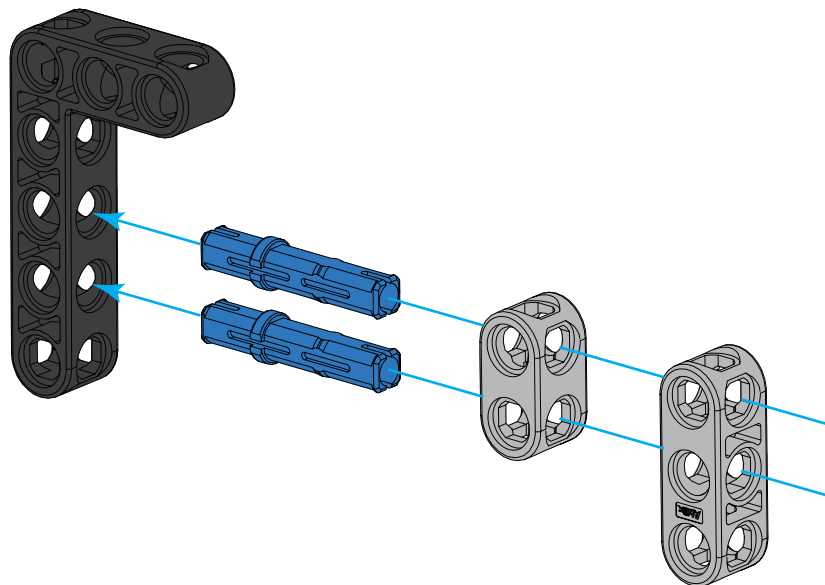
Beam(C)3X5_90

x2

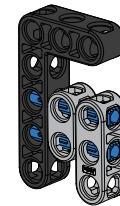
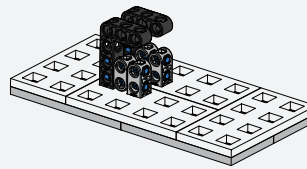


Tight Bolt 3

x4

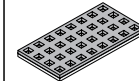


2



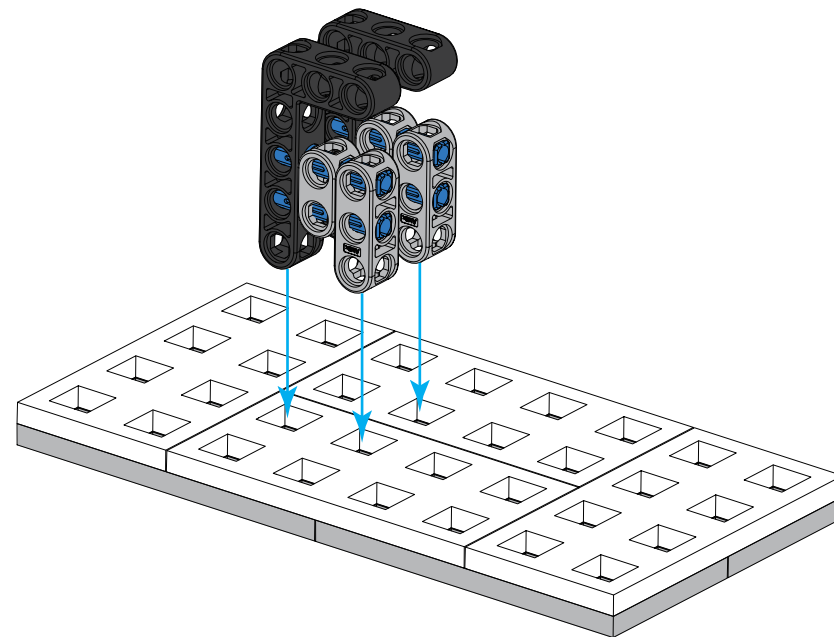
1#

x2

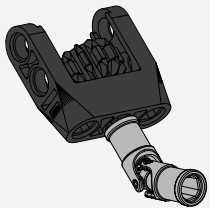


4# Slab

x1



3



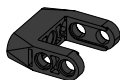
TubeSR30

x1



12 Bevel Gear

x1



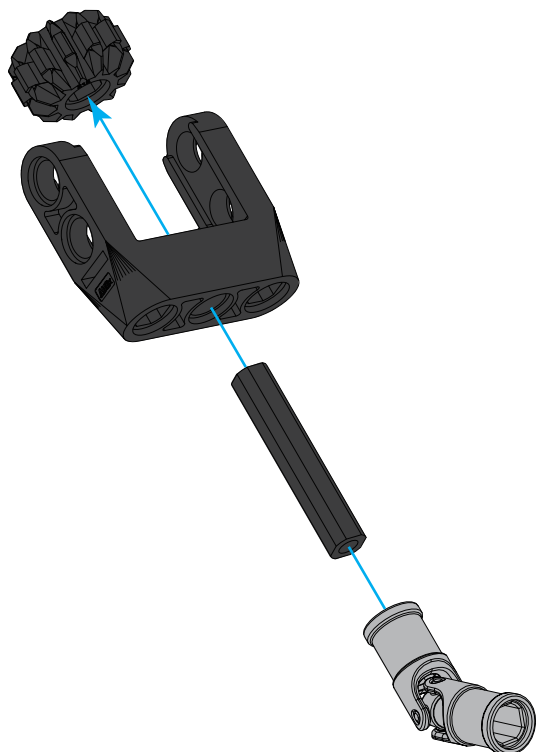
U Beam

x1

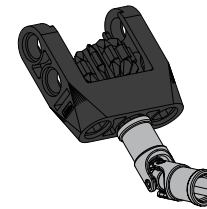
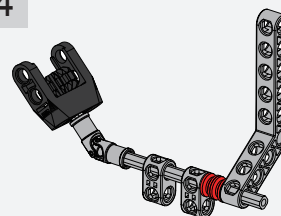


Universal Joint

x1



4



3#

x1



Shaft Sleeve0.5

x2



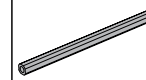
Beam 20

x2



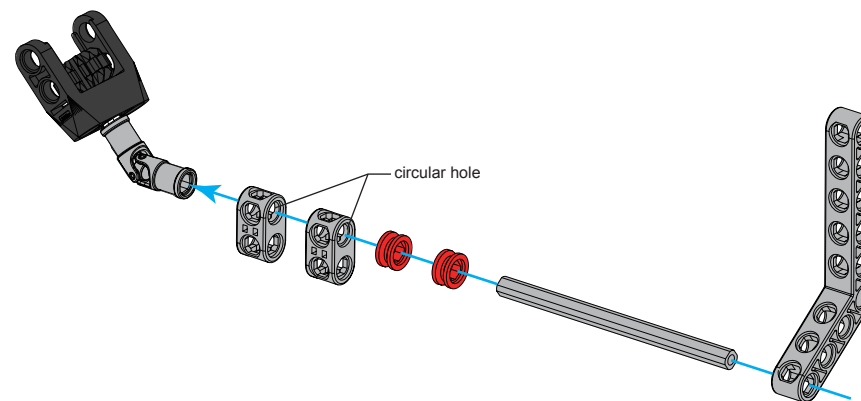
Beam(C)4X6_126.87

x1

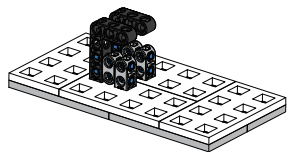
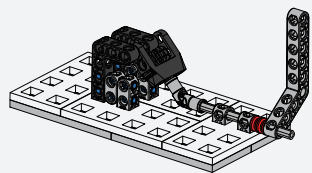


TubeSR80

x1

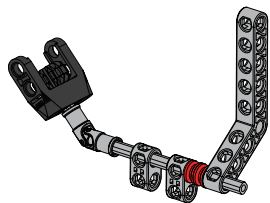


5



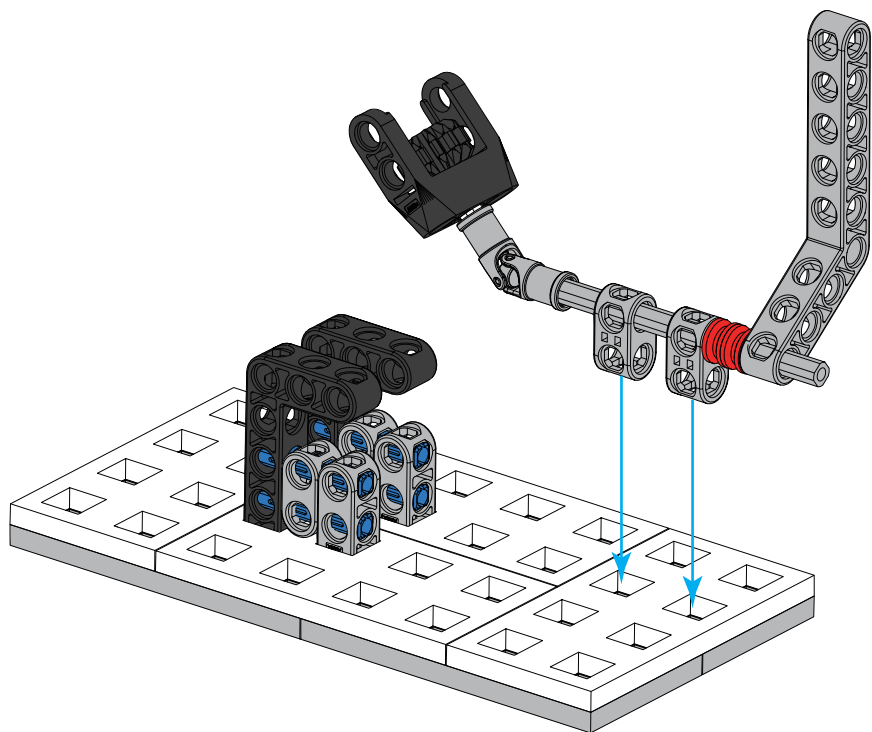
2#

x1

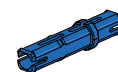
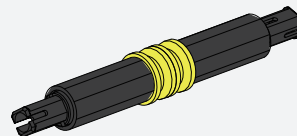


4#

x1



6x3



Tight Bolt 3

x3



Tight Bolt 2

x6



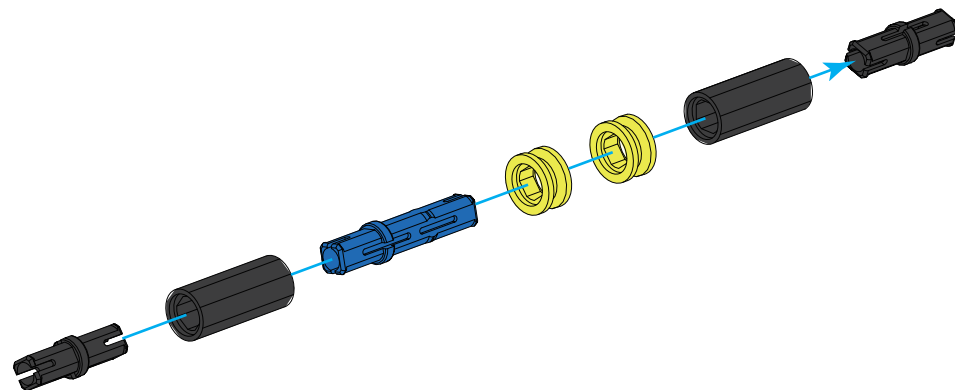
Shaft Sleeve0.5

x6

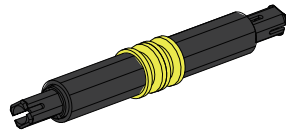
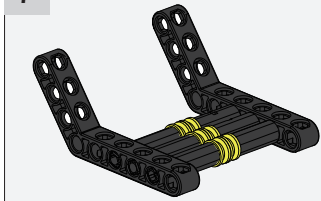


Tube Connector(S)20

x6



7

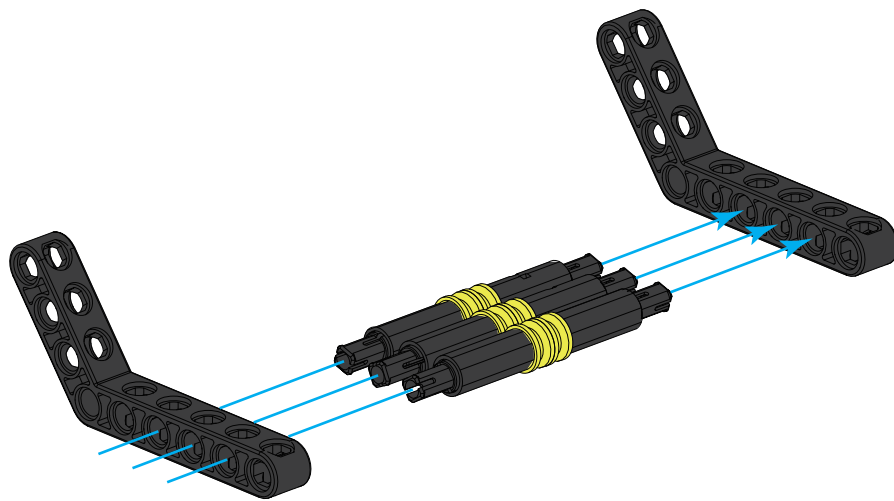


6#

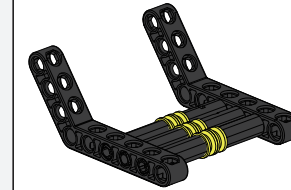
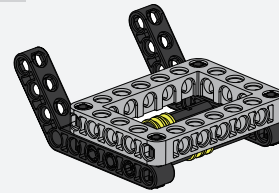
x3



Beam(C)4X6_126.87 x2



8



7#

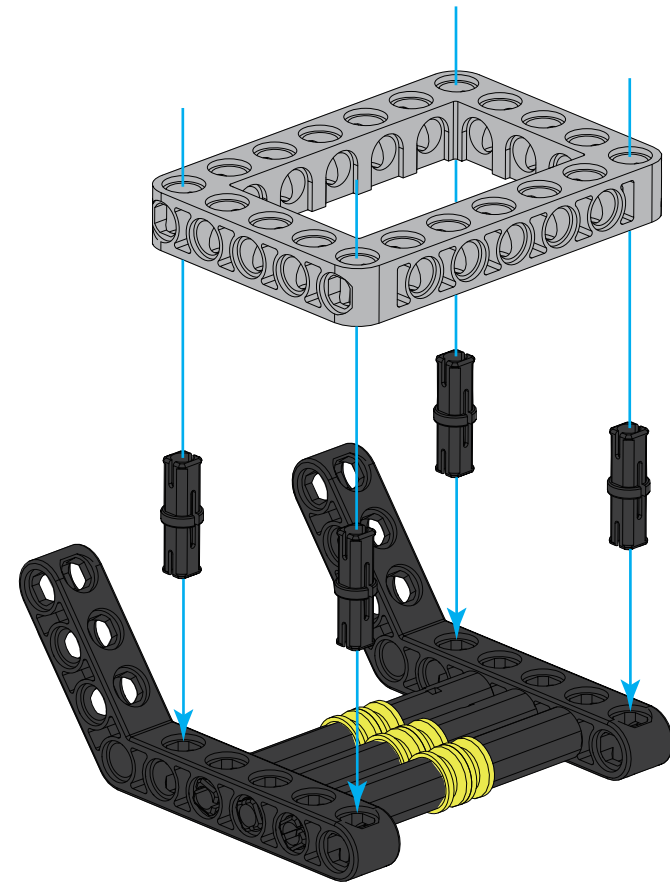
x1



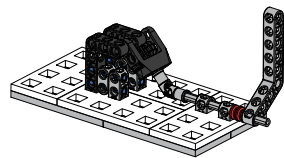
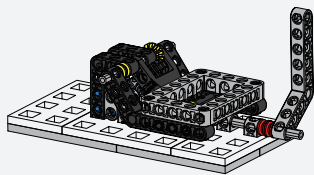
Tight Bolt 2 x4



5*7 Beam x1

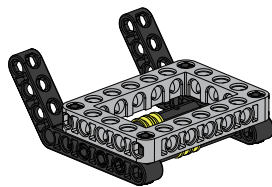


9



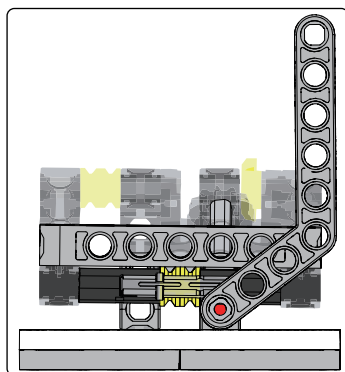
5#

x1

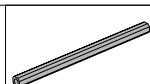


8#

x1



Users should pay attention to adjust gear meshing mode to make 5x7 square beam horizontal and 126.87° 4x6 beam side vertical (like figure above).



TubeSR80

x1



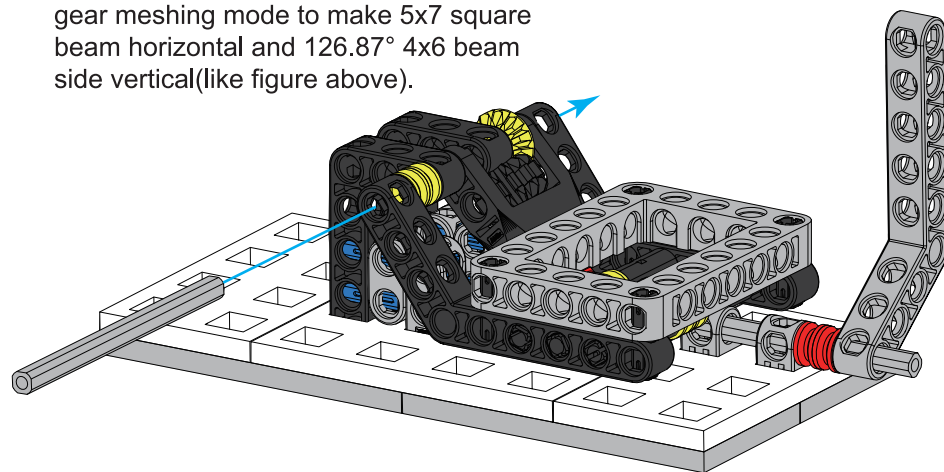
Shaft Sleeve0.5

x2

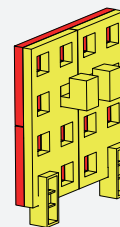


12-tooth Bevel Gear

x1

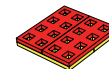


10



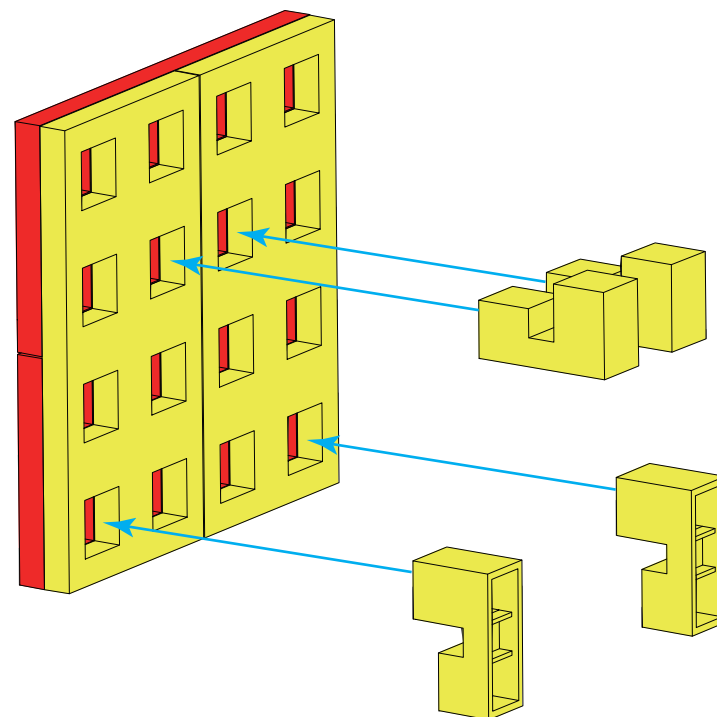
Middle L connector

x4

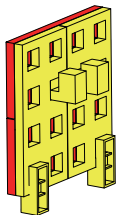
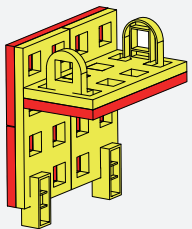


2# Slab

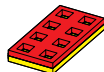
x1



11



Middle A connector x2

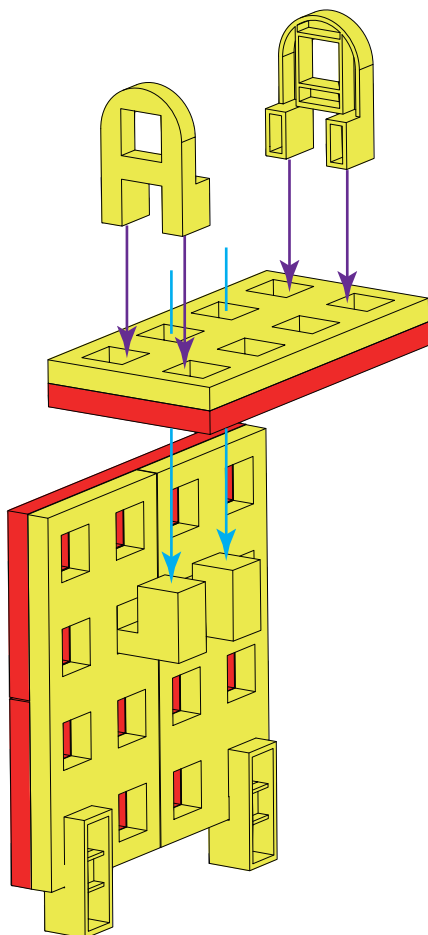


10#

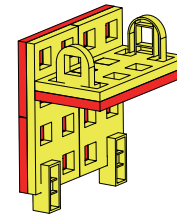
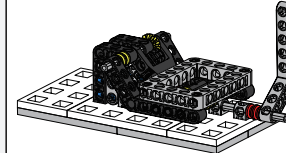
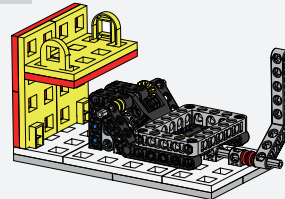
x1

1# Slab

x1



12

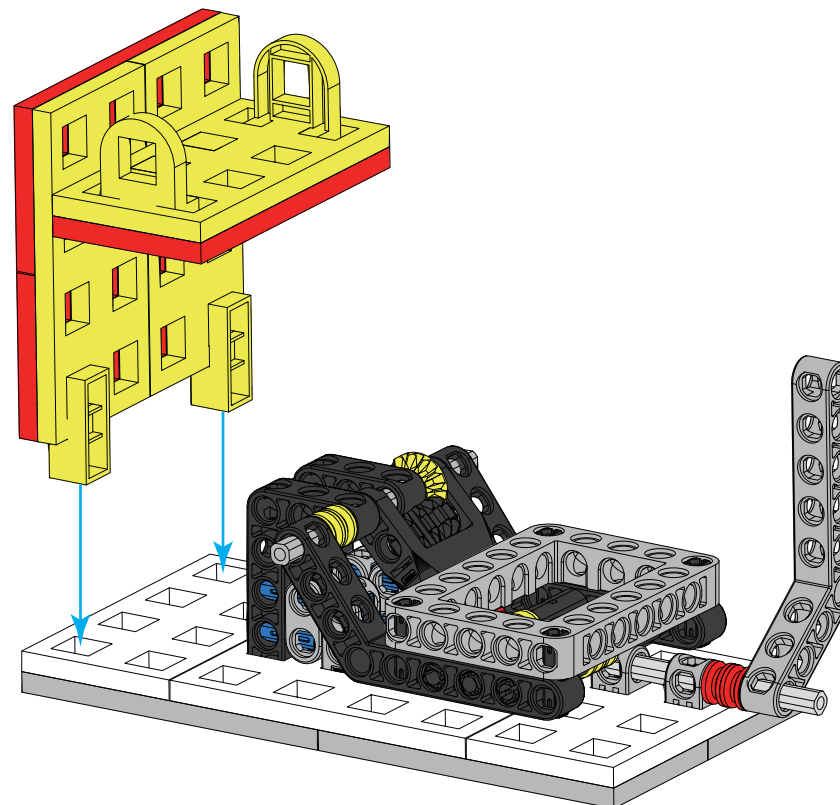


9#

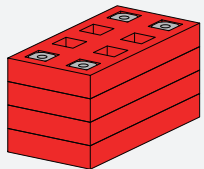
x1

11#

x1



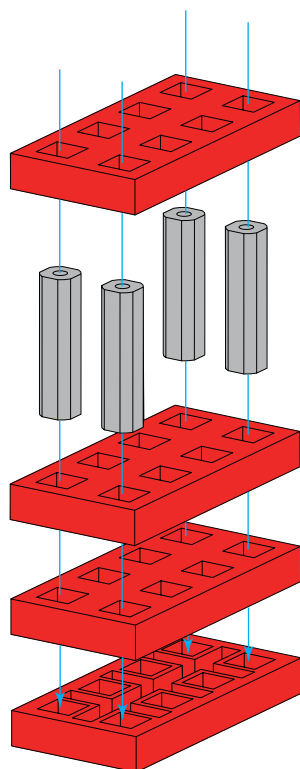
13



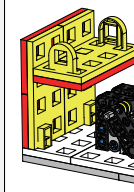
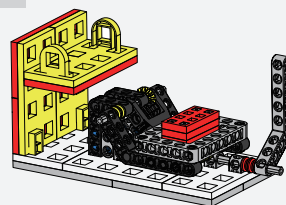
Small slab x4



TubeSR20 x4

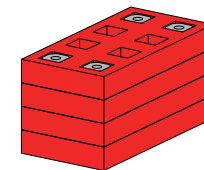


14



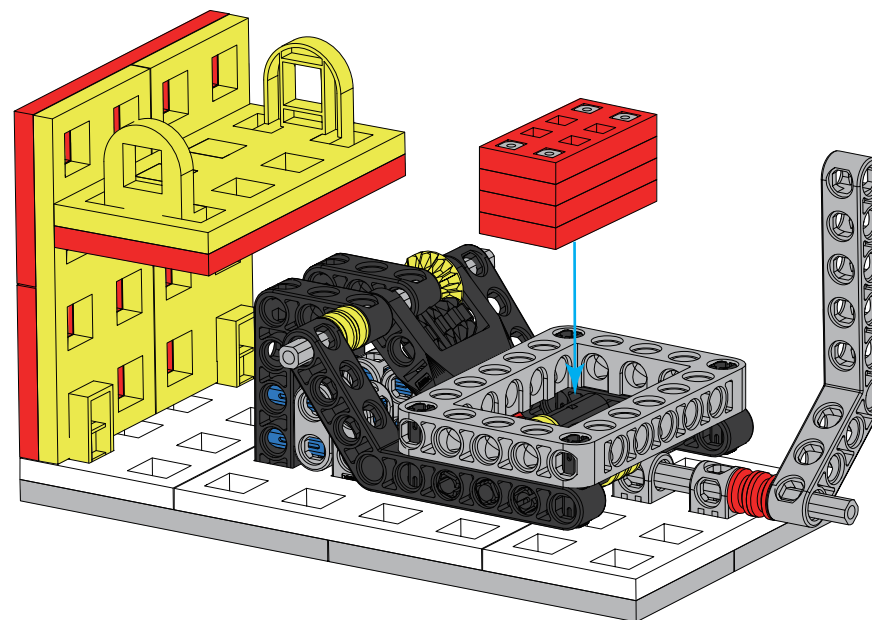
12#

x1

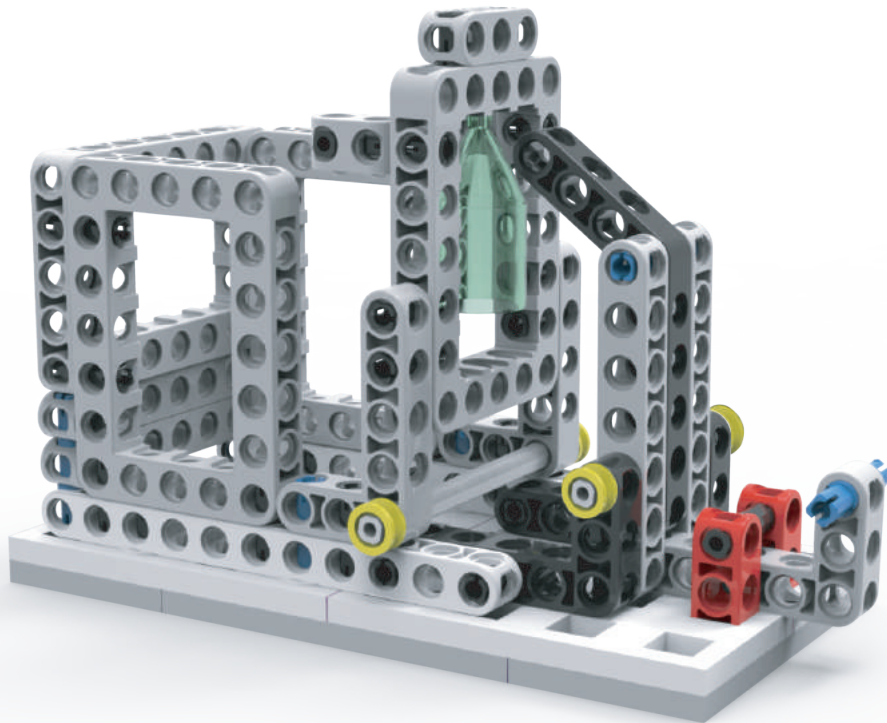


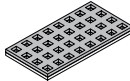
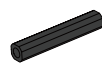
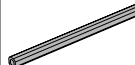
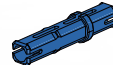
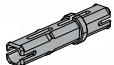
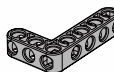
13#

x1

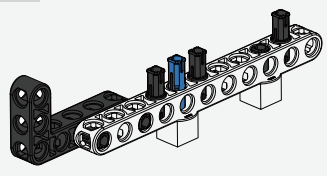


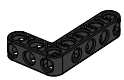
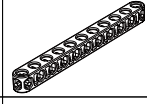
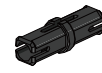
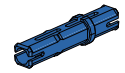
Recycling of E-waste



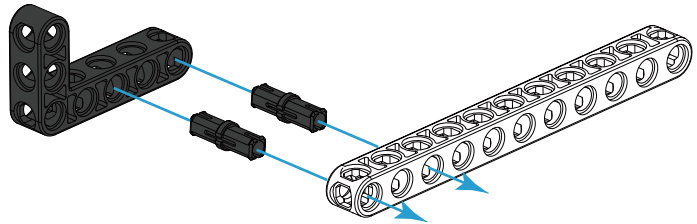
							
4# Slab	x1	TubeSR30	x1	TubeSR50	x1	TubeSR80	x1
							
Beam 20	x2	Beam 30	x1	Beam 30	x2	Beam 70	x4
							
Beam(C)4X6_126.87	x1	Beam 110	x2	Green bottle	x1	Magnet	x1
							
Tight Bolt 2	x24	Tight Bolt 3	x6	Pin30	x1	Bearing	x4
							
Beam(C)3X5_90	x3	Beam(C)3X5_90	x2	Shaft Sleeve0.5	x4	5*7 Beam	x4
							
TubeSR60	x1						

1

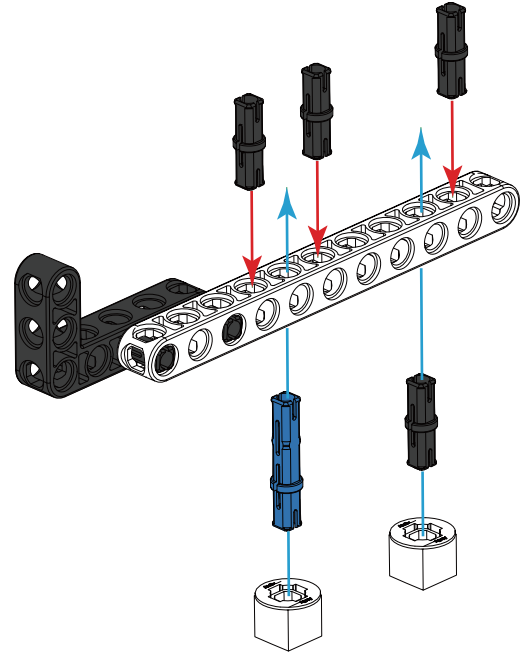


	Beam(C)3x5_90	x1		Beam 110	x1		Bearing	x2
	Tight Bolt 2	x6		Tight Bolt 3	x1			

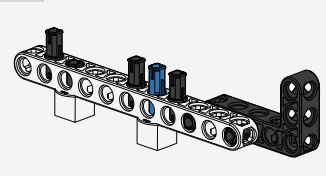
Step 1:

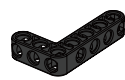
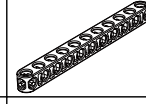


Step 2:

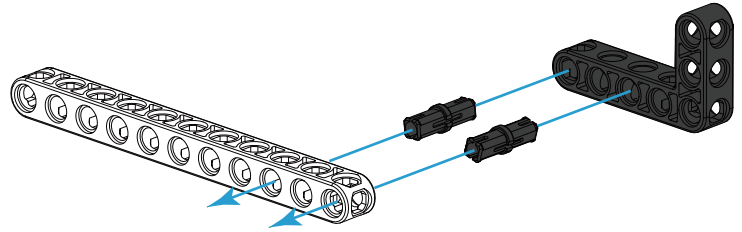


2

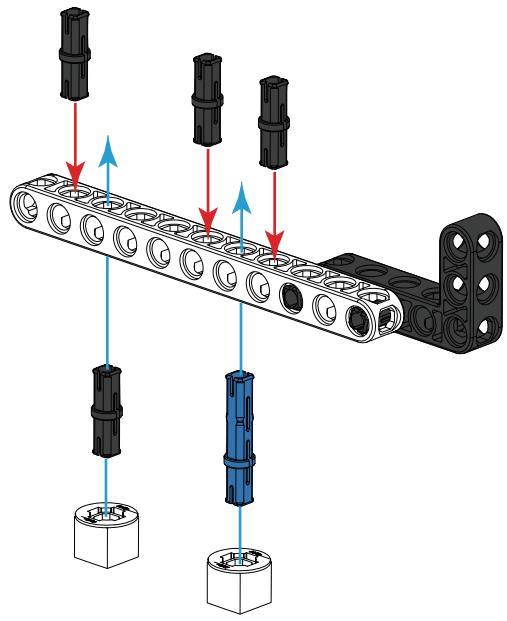


	Beam(C)3x5_90	x1		Beam 110	x1		Bearing	x2
	Tight Bolt 2	x6		Tight Bolt 3	x1			

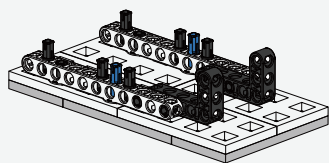
Step 1:



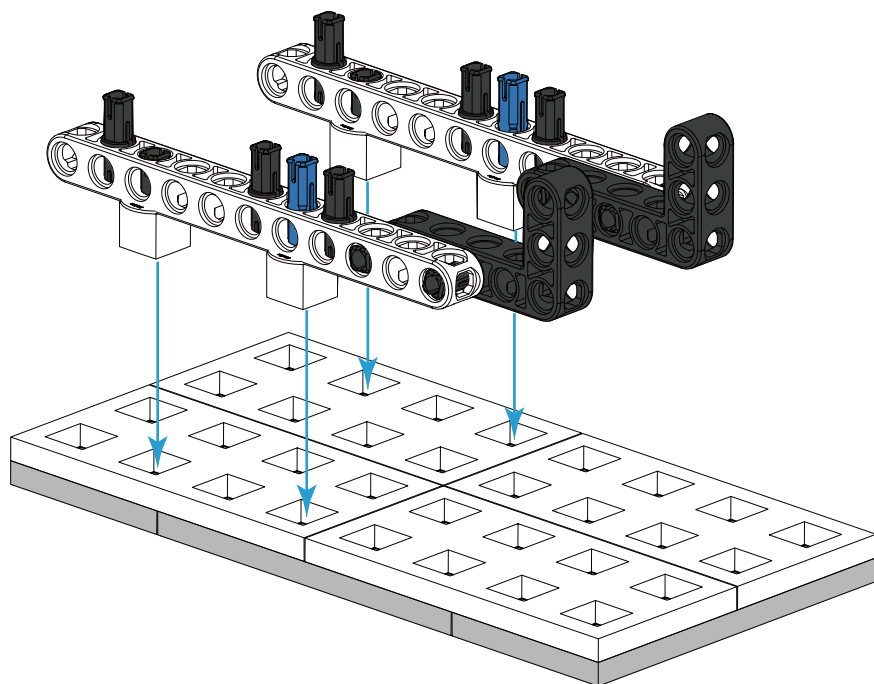
Step 2:



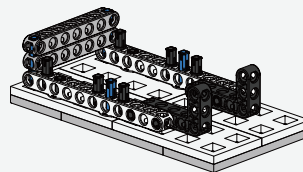
3



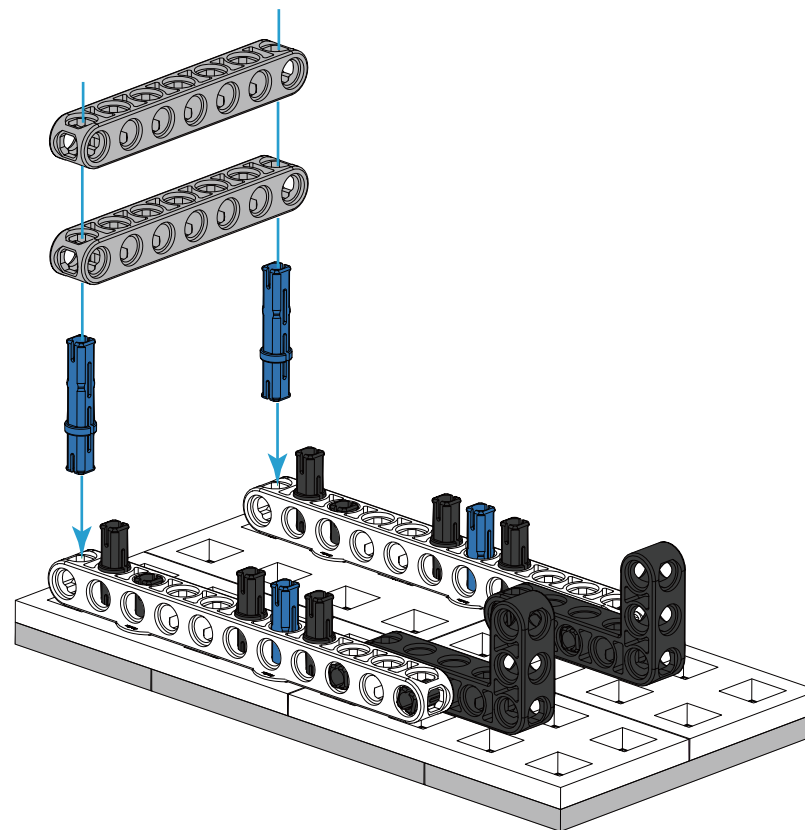
1#	4# Slab	x1
2#		x1



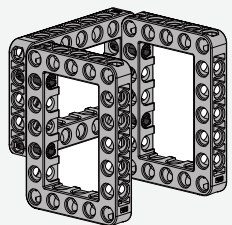
4



3#	Tight Bolt 3	x2
	Beam 70	x2



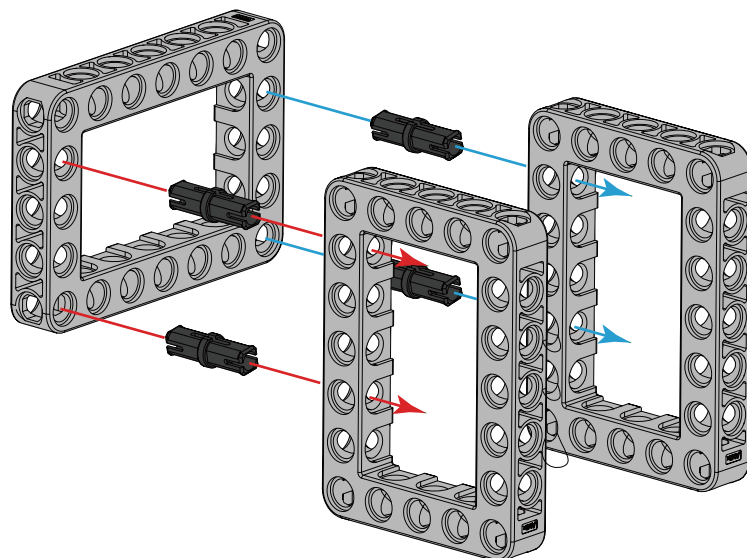
5



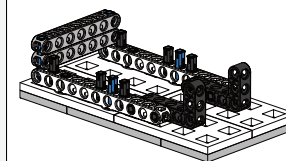
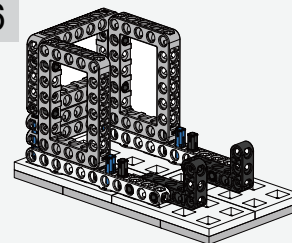
5*7 Beam x3



Tight Bolt 2 x4

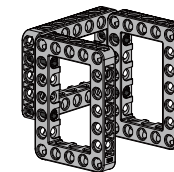


6



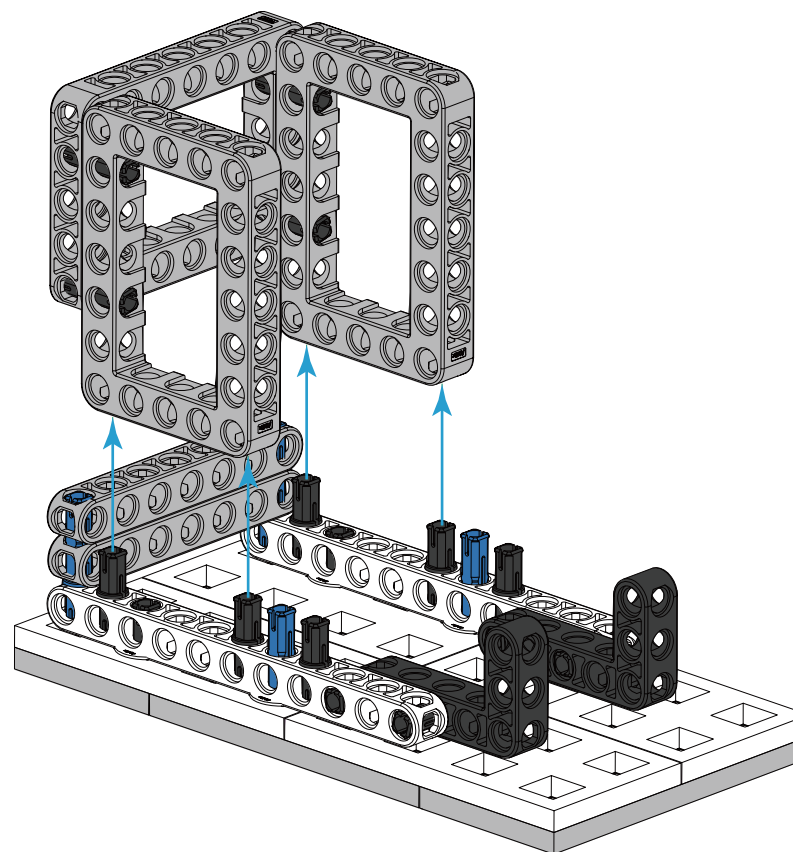
4#

x1

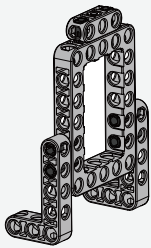


5#

x1

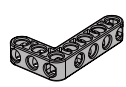


7



5*7 Beam

x1



Beam(C)3X5_90

x2



Magnet

x1



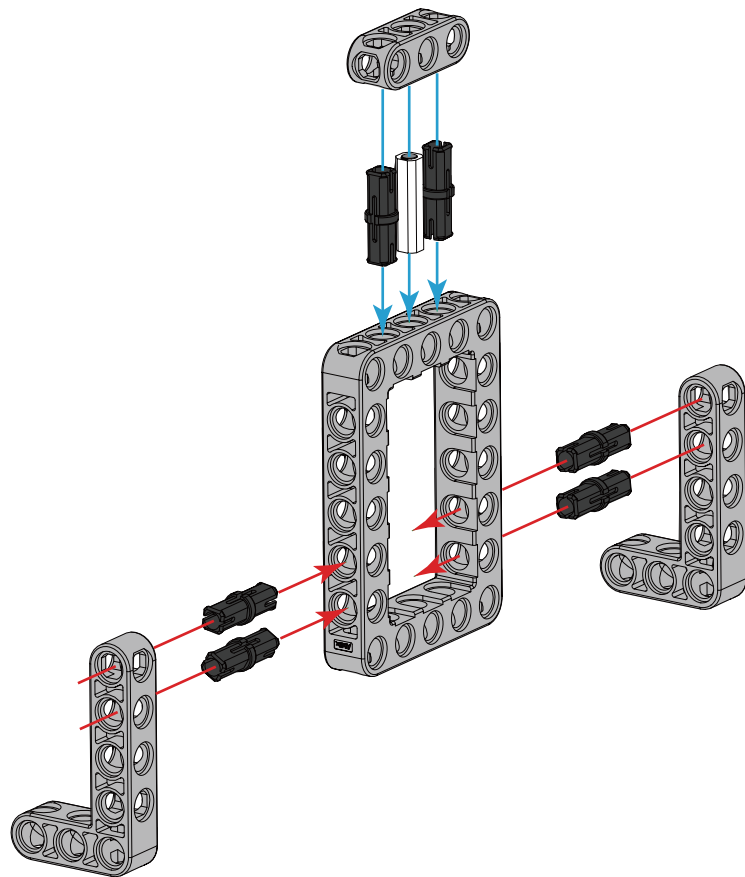
Beam 30

x1

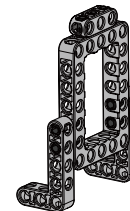
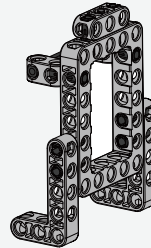


Tight Bolt 2

x6



8



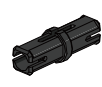
7#

x1



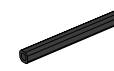
Beam 20

x2



Tight Bolt 2

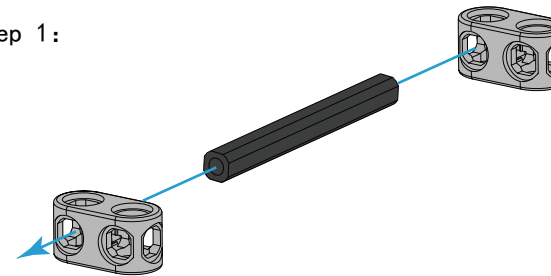
x2



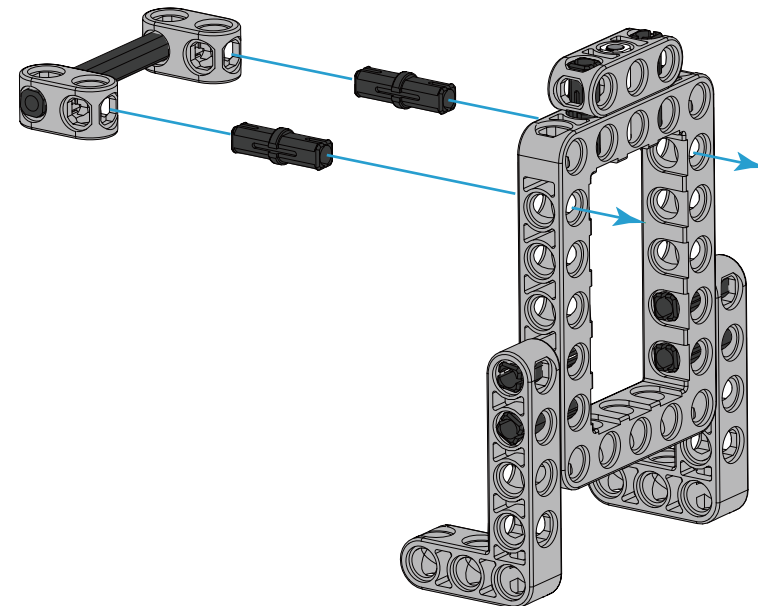
TubeSR50

x1

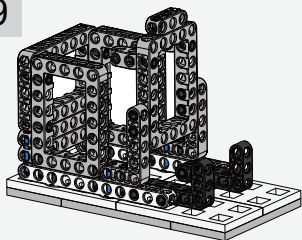
Step 1:



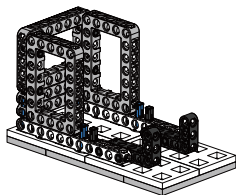
Step 2:



9

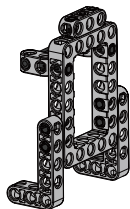


6#

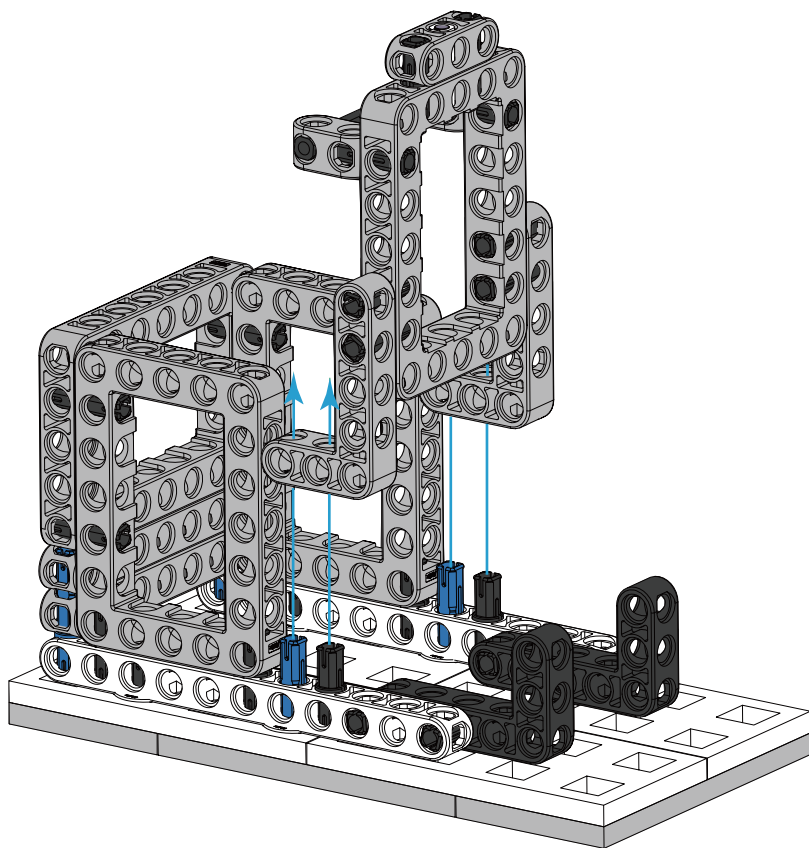


x1

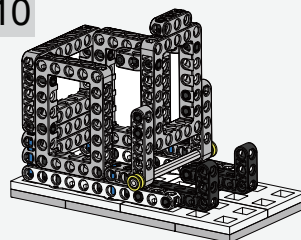
8#



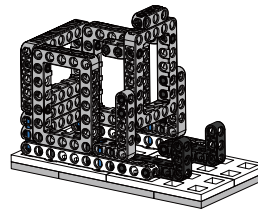
x1



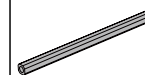
10



9#



x1

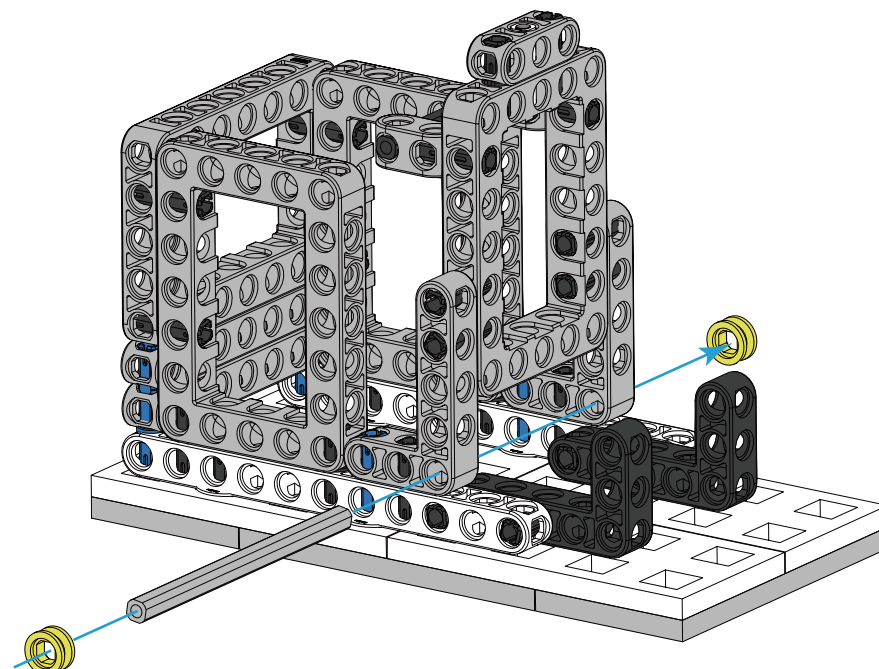


TubeSR80

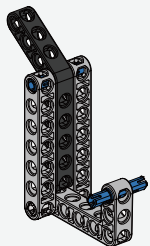
x1



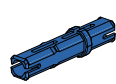
Shaft Sleeve0.5 x2



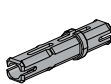
11



x2



x2

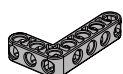


x1



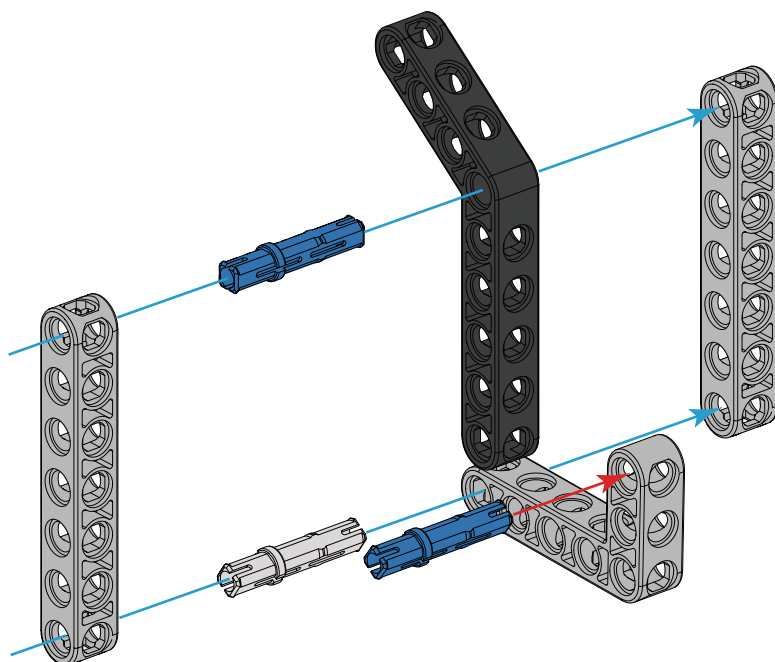
Beam(C)4X6_126.87

x1

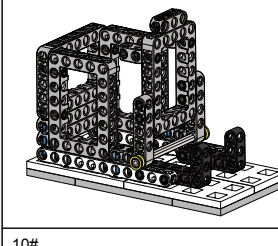
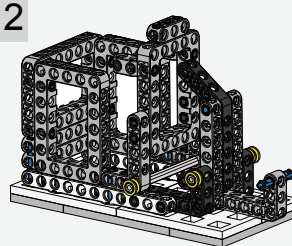


Beam(C)3X5_90

x1

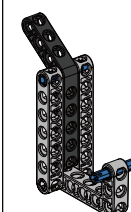


12



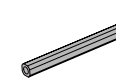
10#

x1



11#

x1



TubeSR60

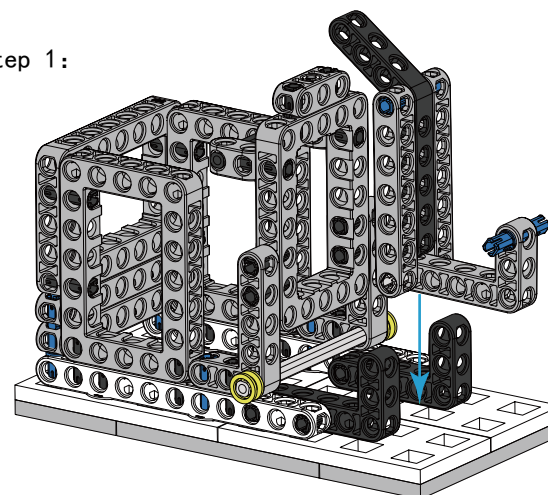
x1



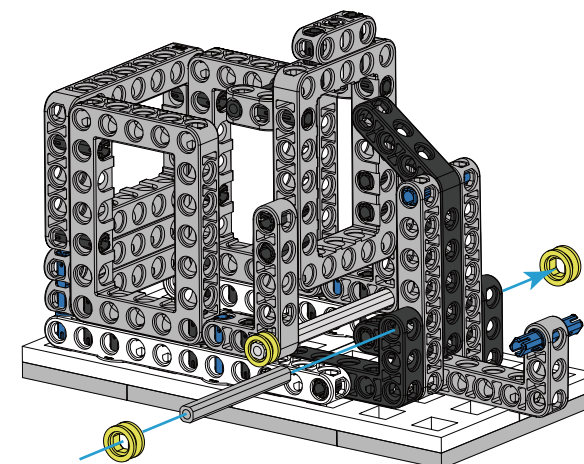
Shaft Sleeve0.5

x2

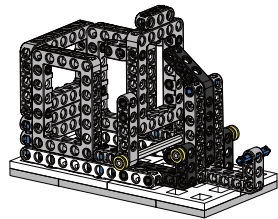
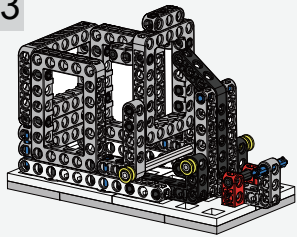
Step 1:



Step 2:

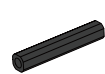


13



12#

x1



TubeSR30

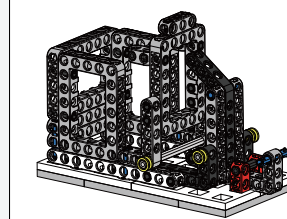
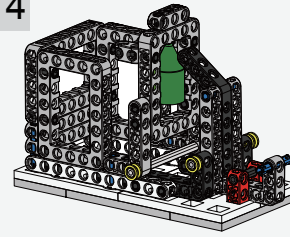
x1



Beam 30

x2

14



13#

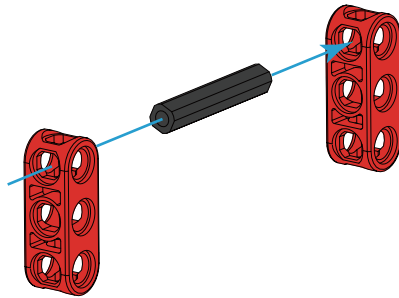
x1



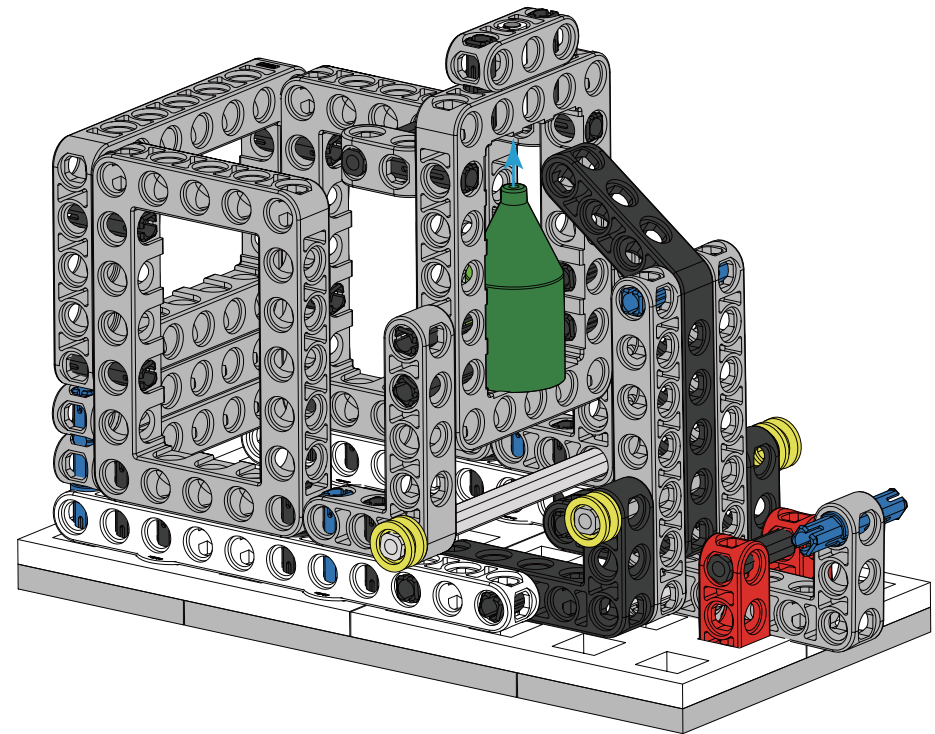
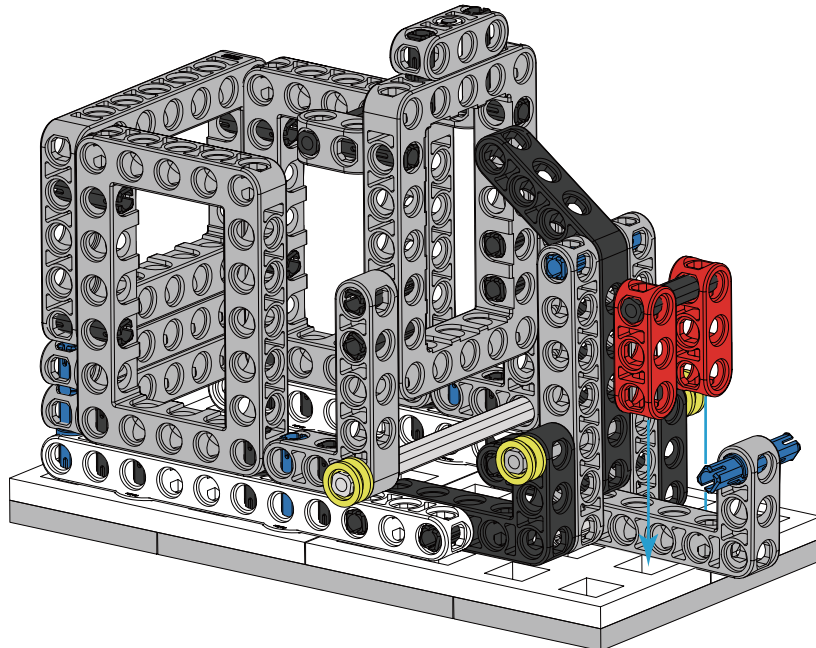
Green bottle

x1

Step 1:

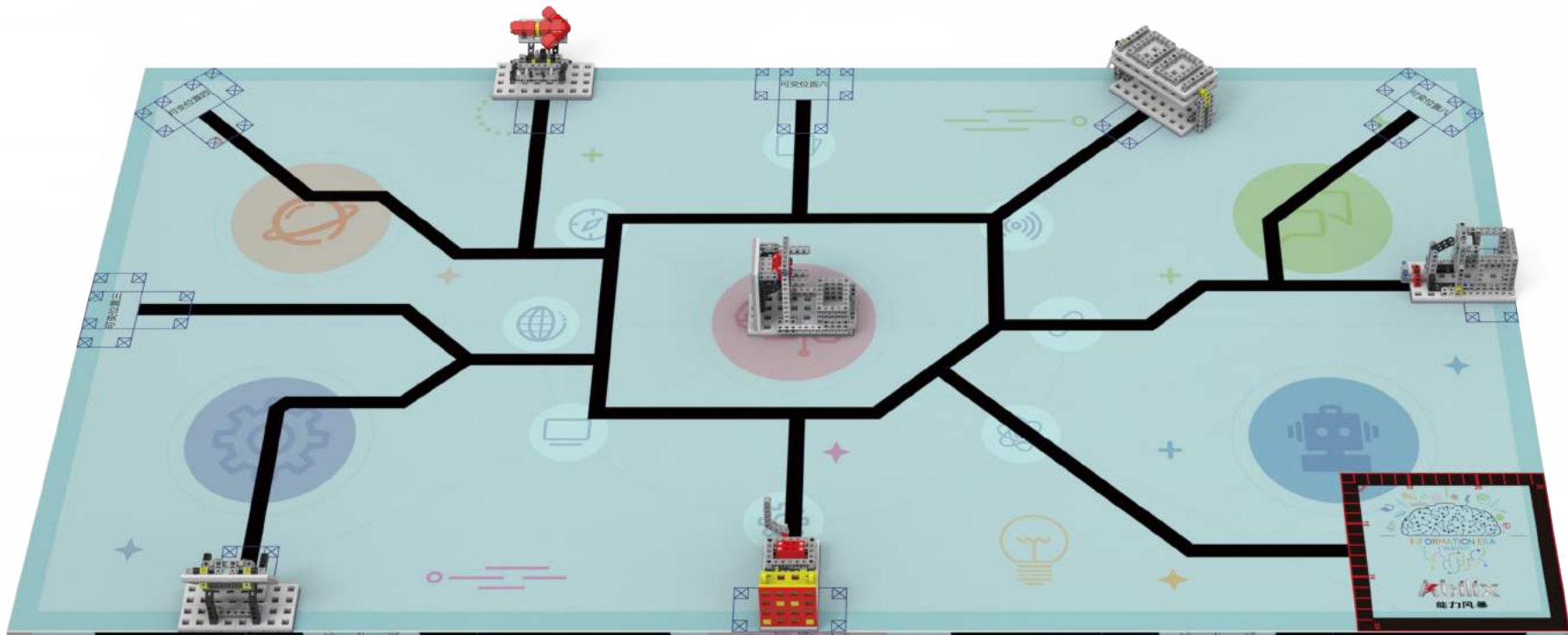


Step 2:



III .Task Models Placing

- 1.The magic tapes are stucked at the four angles of the model base (20*20mm).
- 2.The task models are fixed on the sites as the following figure.





Abilix Creative Bricks

www.wercontest.org



Shanghai PartnerX Robotics Co.,Ltd

Address: Building 2, Phase III 5 , Hi-tech Oasis Park,
Hechuan Road, Minhang District, Shanghai.

Zip Code: 201103

Tel: 400 8080 199

Website: <http://en.abilix.com/>