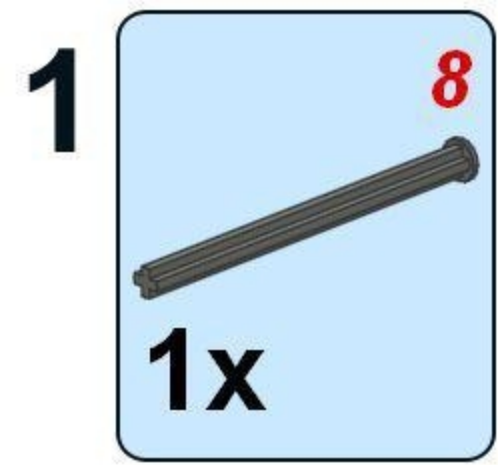


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Model Design, Building
and Programming Instructions
by: **Martyn Boogaarts**

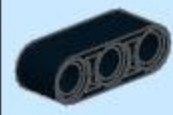


2



3

3



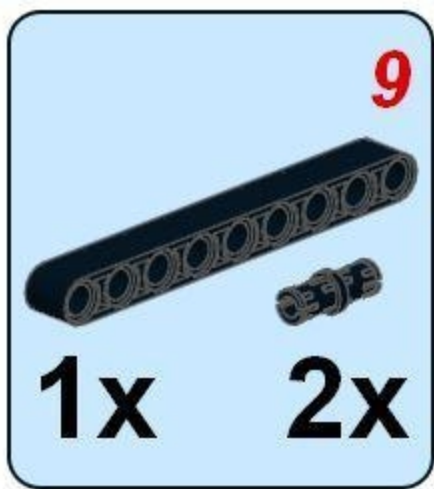
1x



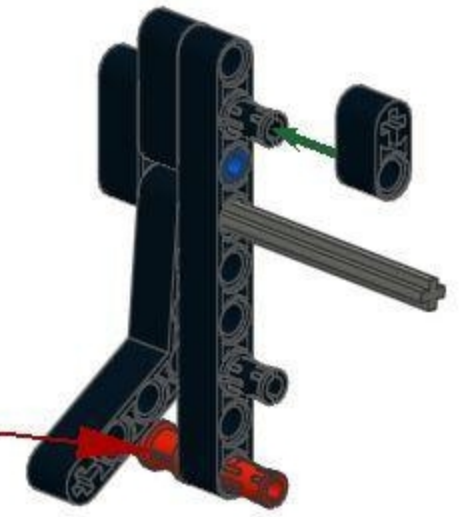
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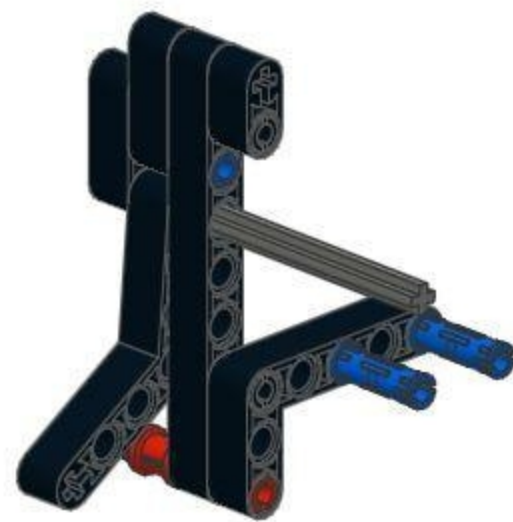
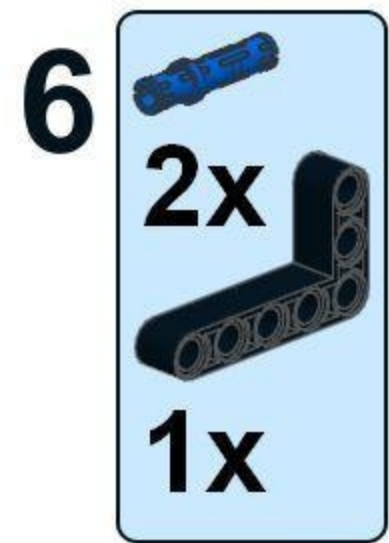


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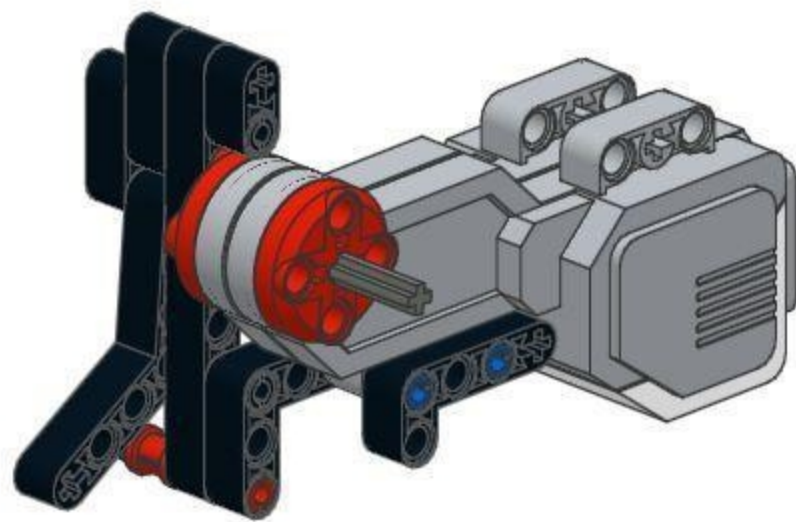
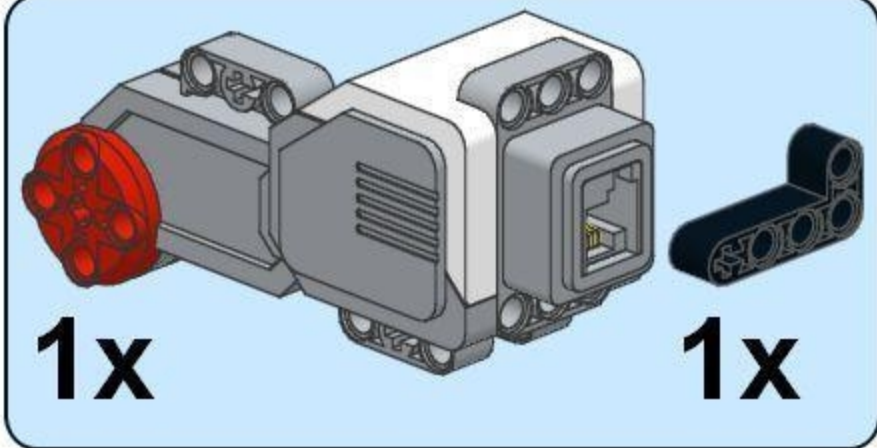


5





7

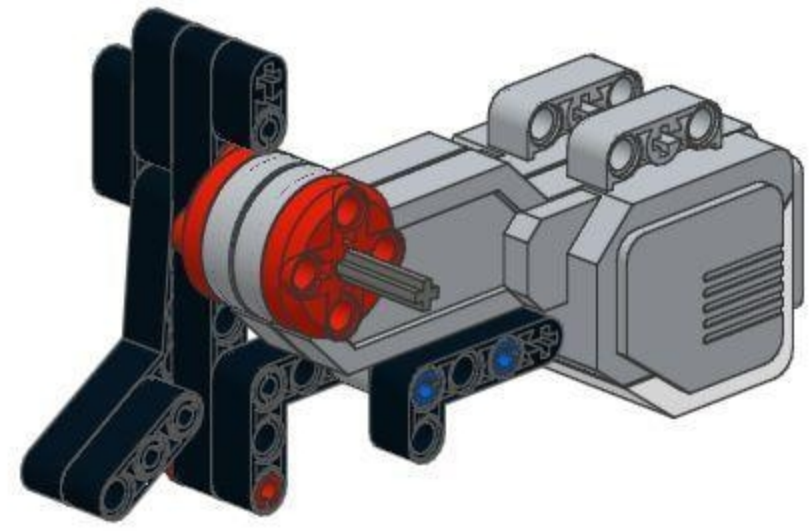


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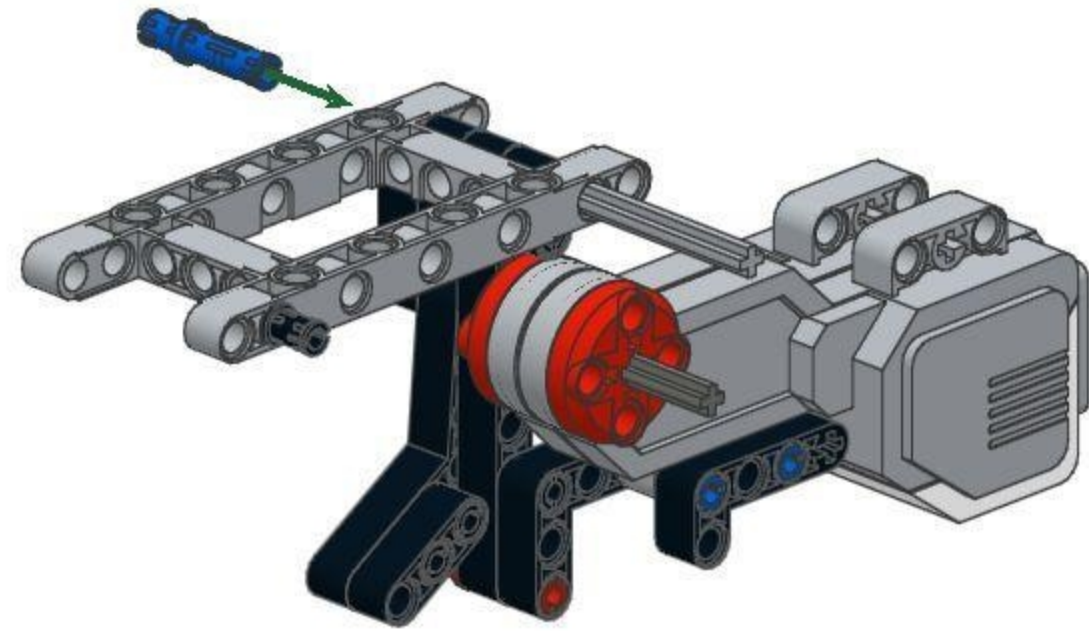
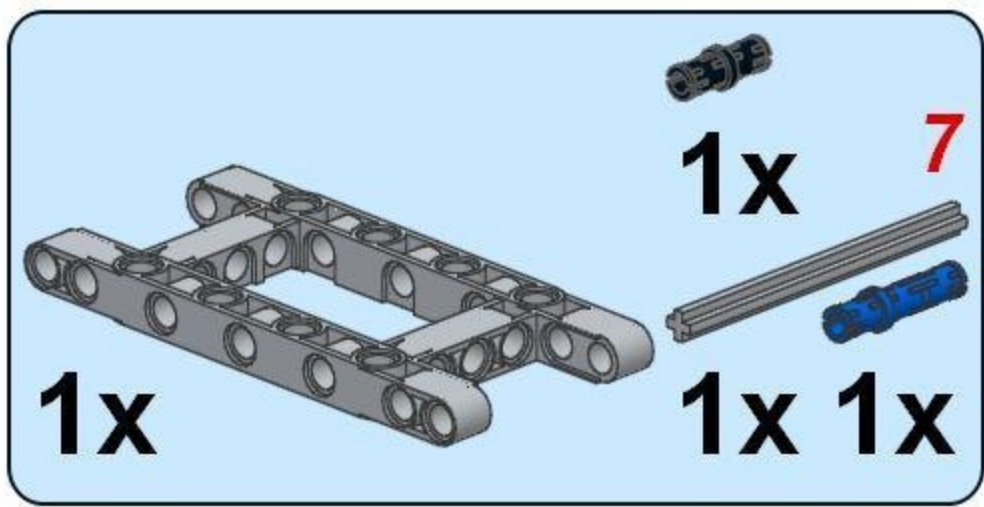
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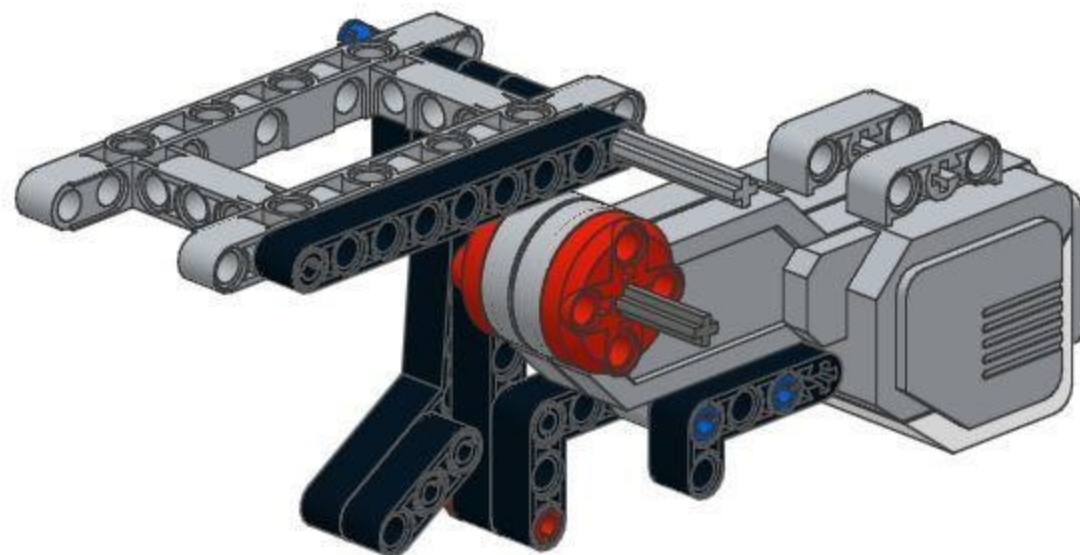
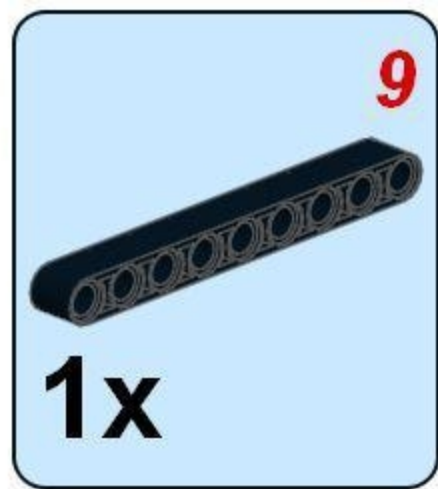
1x 2x



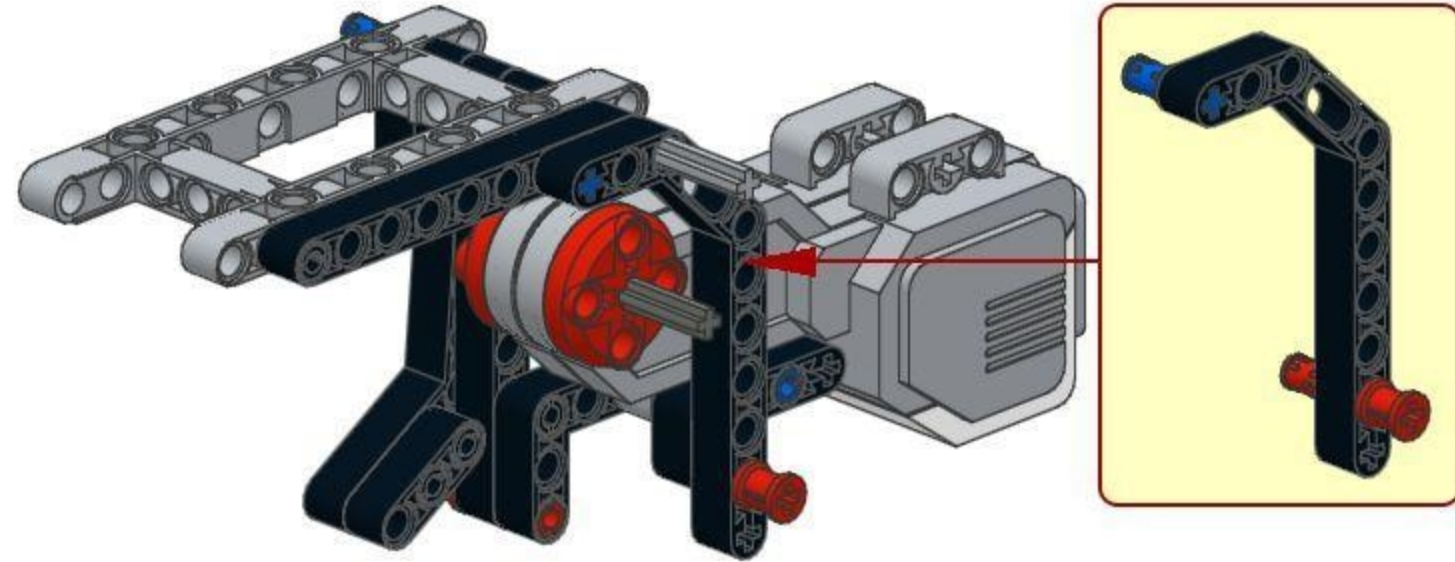
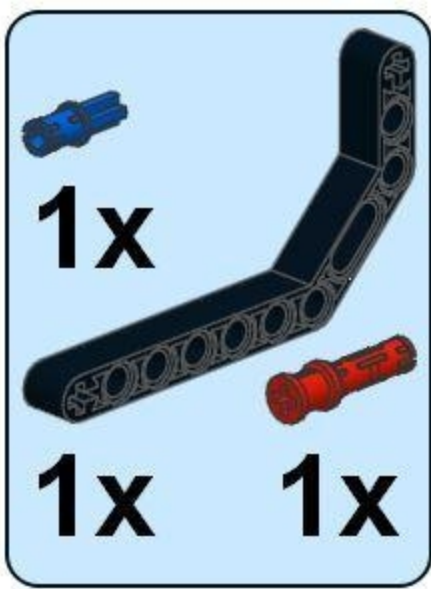
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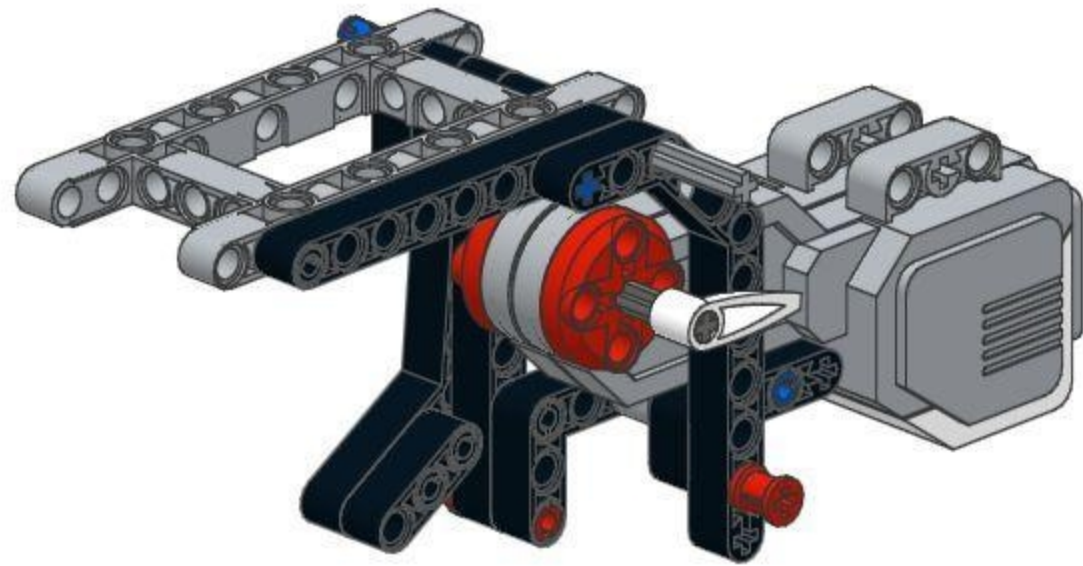
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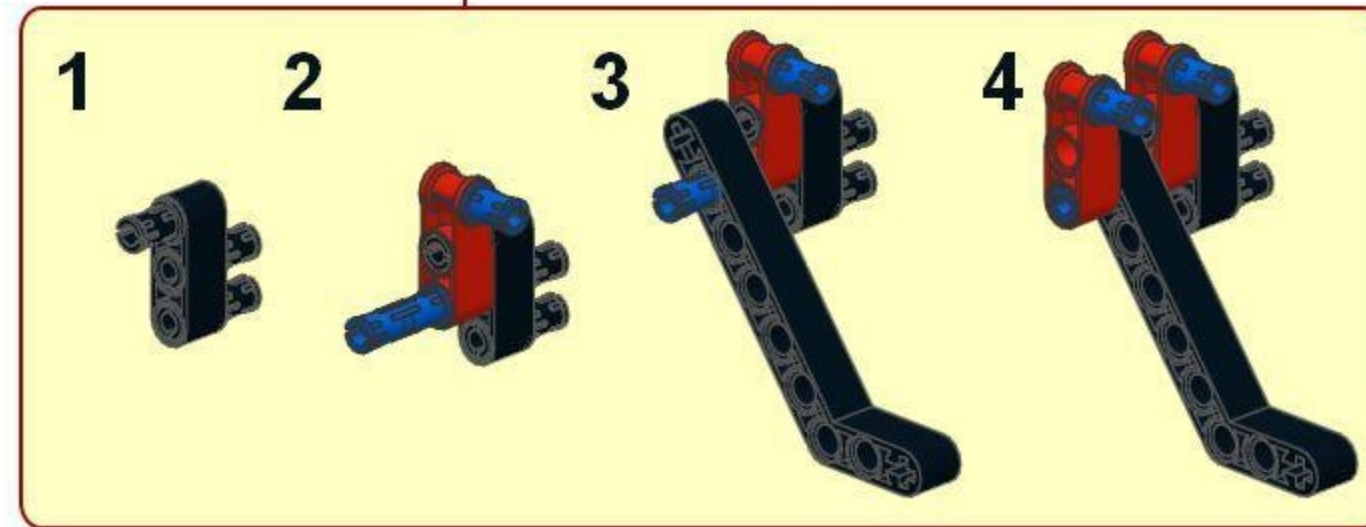
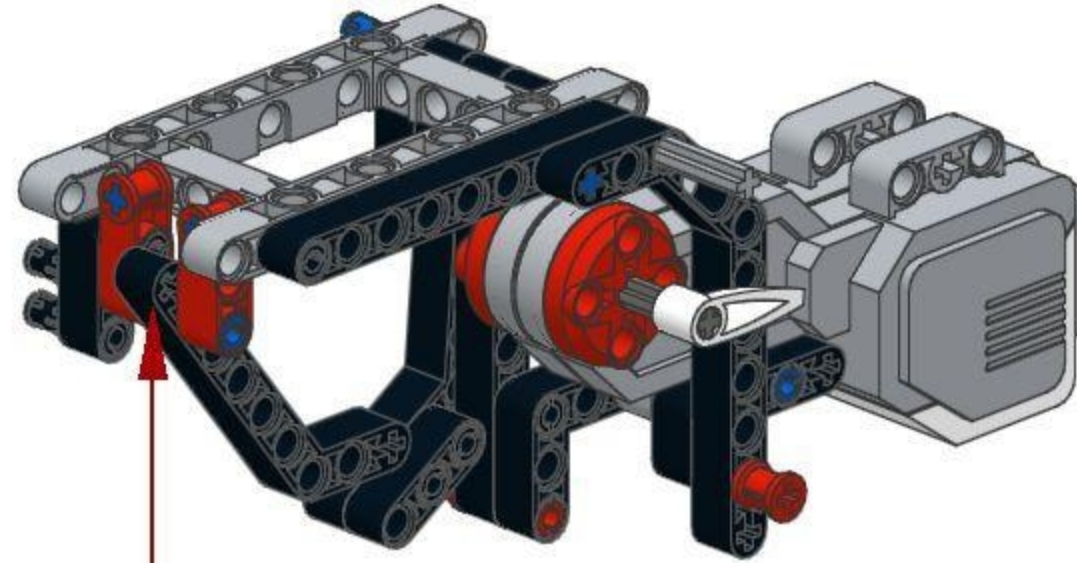
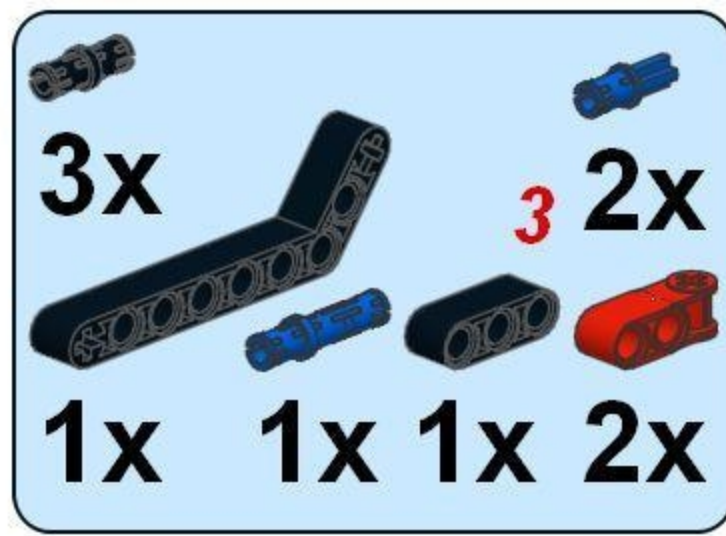
11



12 
1x



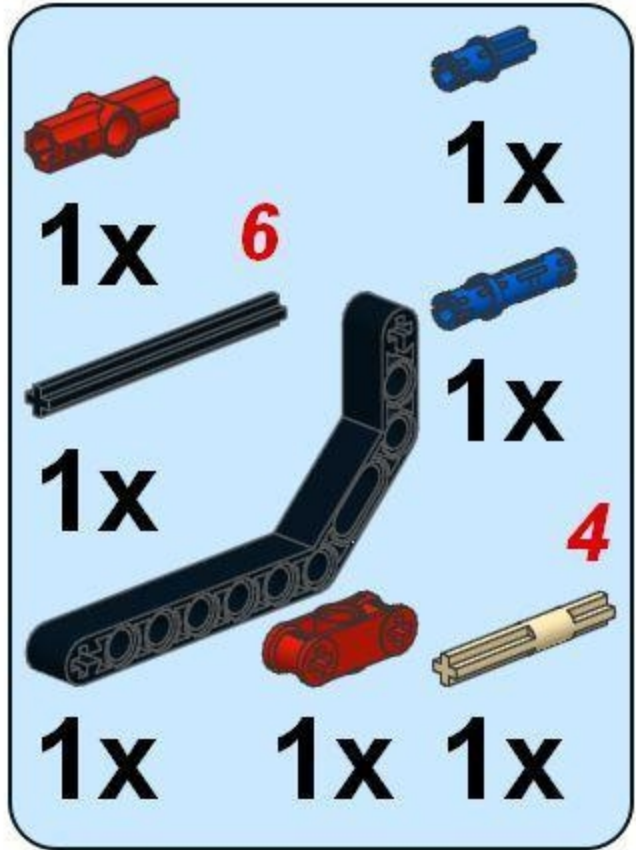
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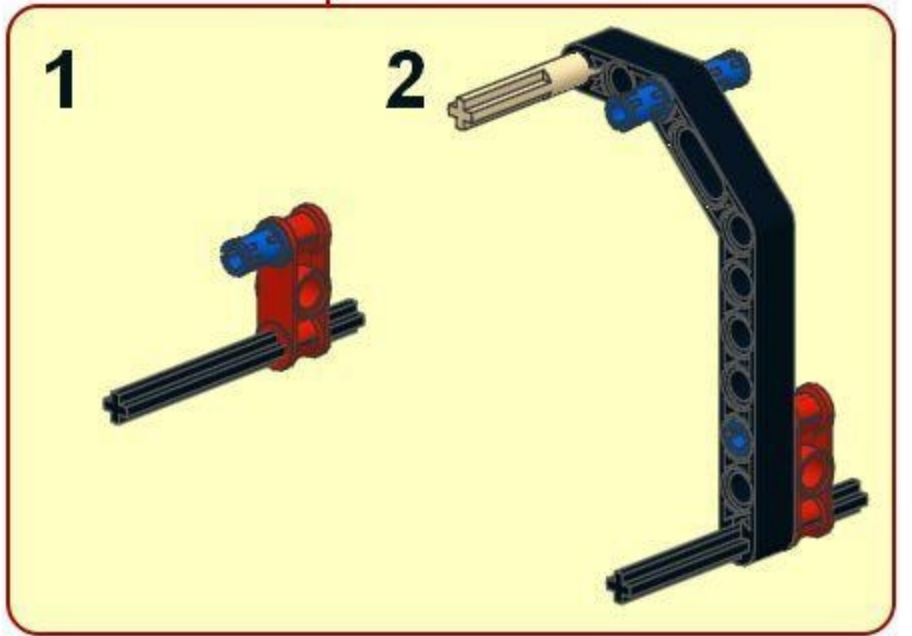
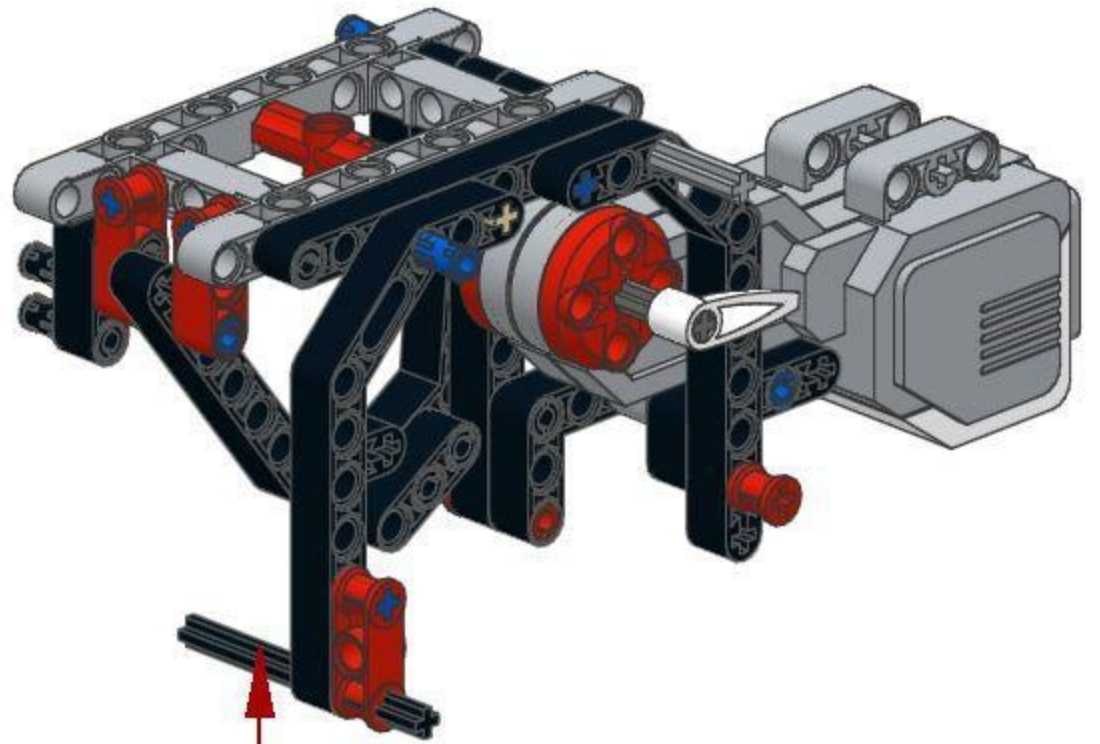
14

1x 1x 1x 1x 1x 1x

6 4



A parts list for step 14, enclosed in a light blue rounded rectangle. It lists the following components: 1x red axle with a bush, 1x blue axle with a bush, 1x black axle, 1x blue axle with a bush, 1x black L-shaped Technic beam, 1x red axle with a bush, and 1x tan axle with a bush. The numbers 6 and 4 are written in red next to the black axle and tan axle respectively.



15



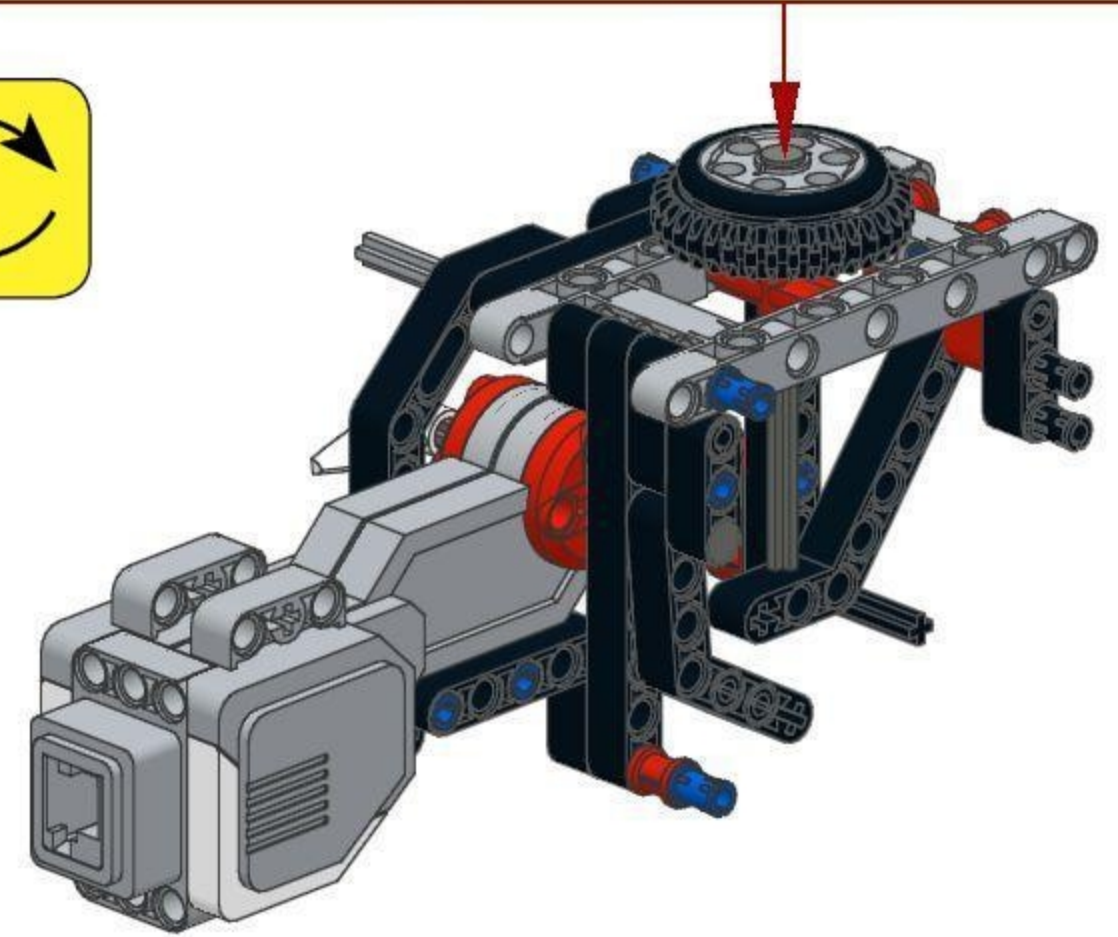
1x 1x 1x 1x 1x 8


This block lists the required parts for step 15: one large gear, one small gear, one axle, one rubber band, one axle with a bush, one axle with a pin, and eight pins.

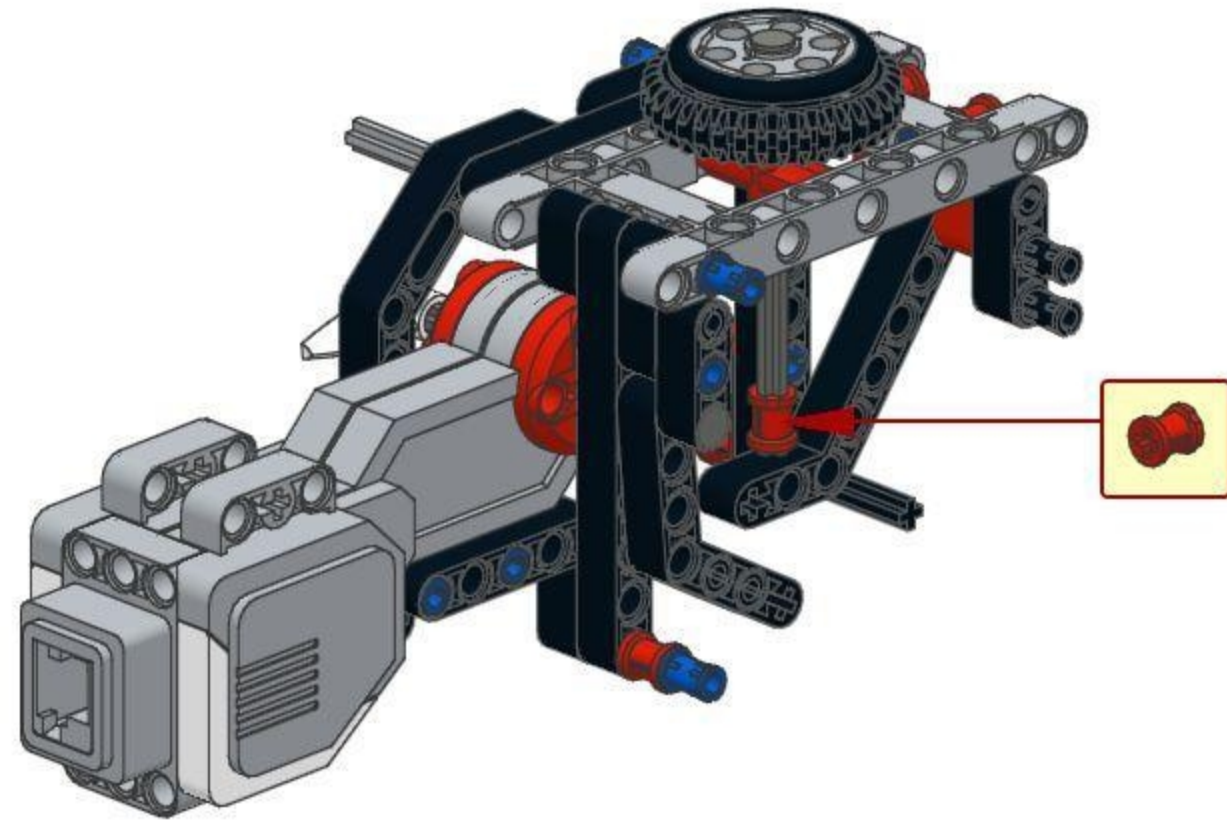


1 2 3

This block shows the three-step assembly process: 1. Inserting the axle into the small gear. 2. Inserting the large gear onto the axle. 3. Inserting a bush onto the axle between the two gears.

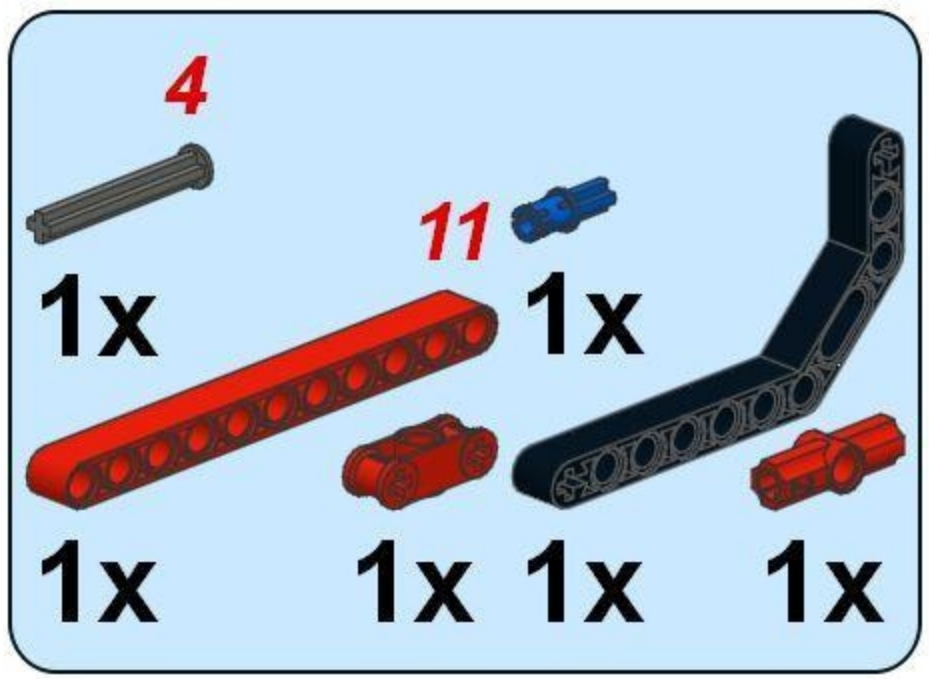


16 
1x

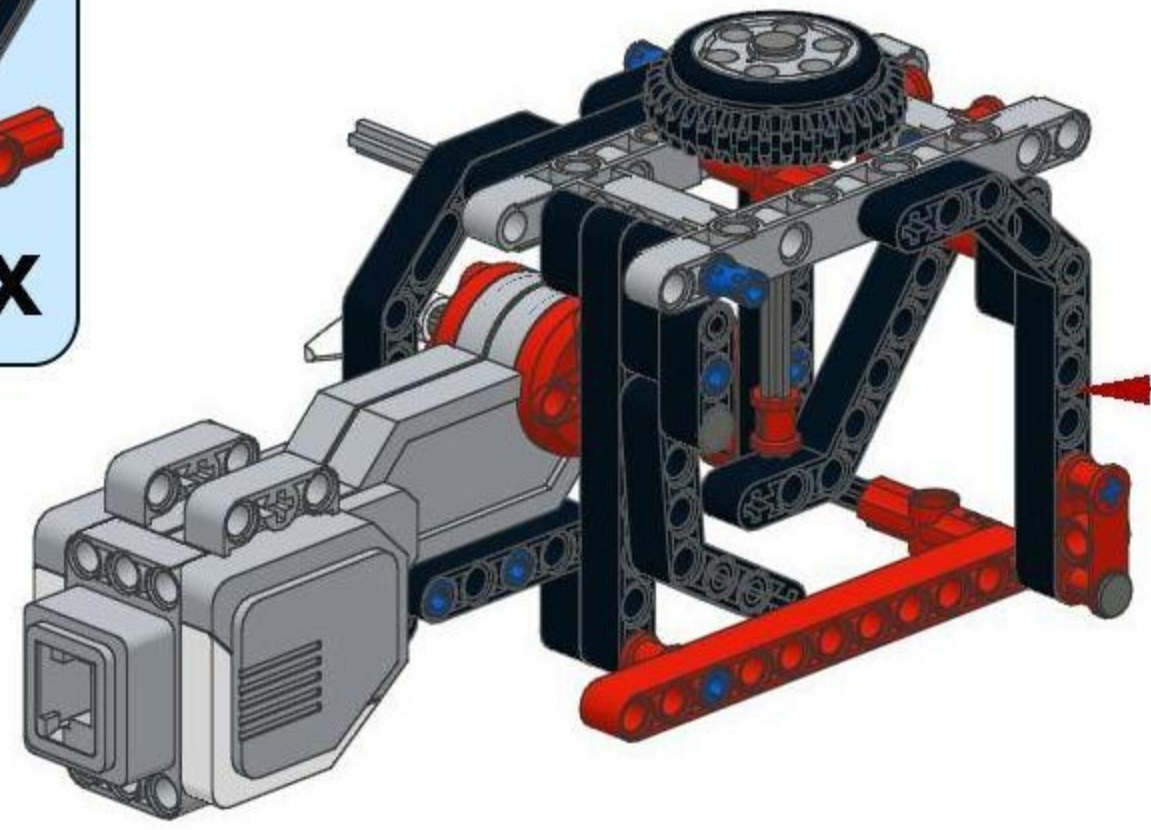


17

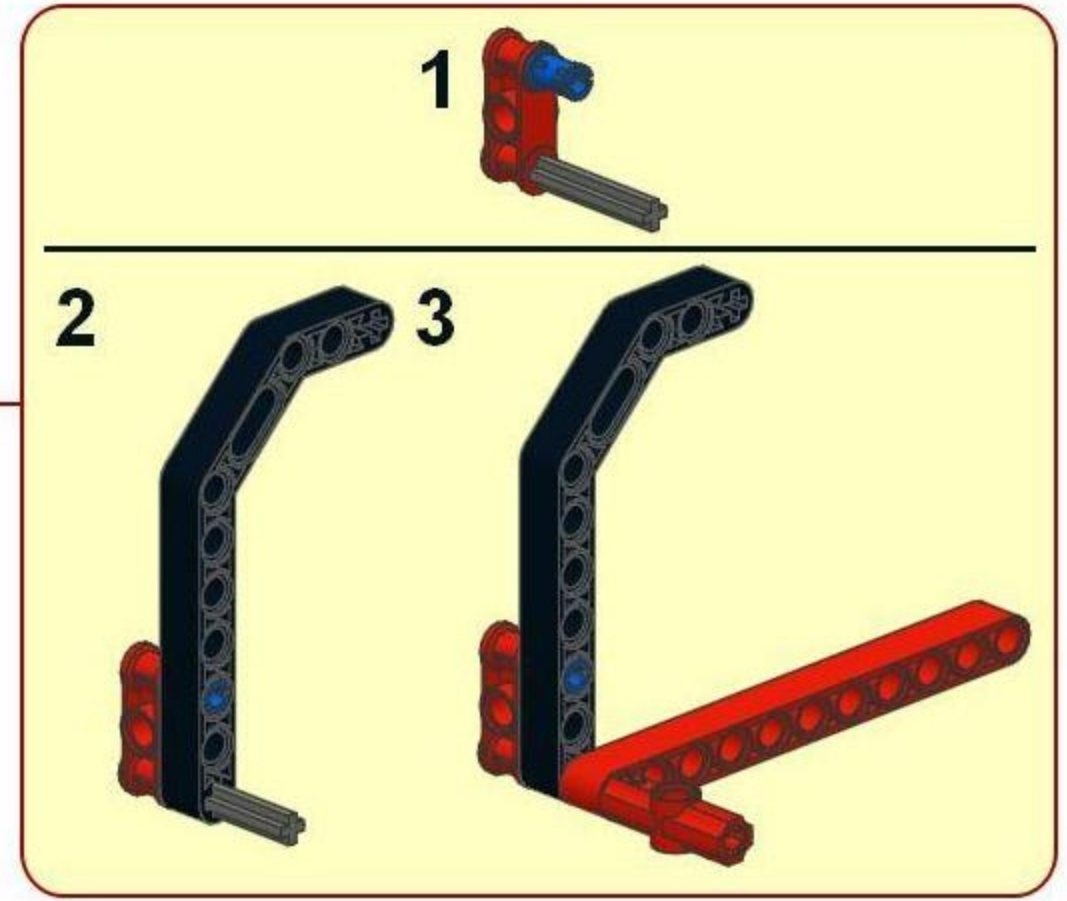
4
1x
11
1x
1x
1x
1x
1x



A light blue rounded rectangle containing a list of parts. At the top left is a grey axle with the number '4' in red above it. Below it is a red 1x10 Technic beam with '1x' to its left. To the right is a blue axle pin with '11' in red above it and '1x' to its right. Below the blue pin is a red axle bush with '1x' to its left. To the right of the bush is a black L-shaped Technic beam with '1x' to its left. At the bottom right is a red axle bush with '1x' to its left.

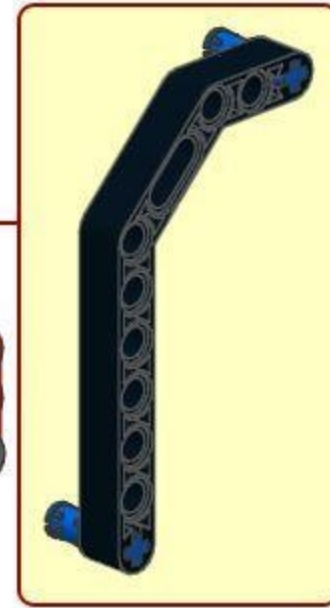
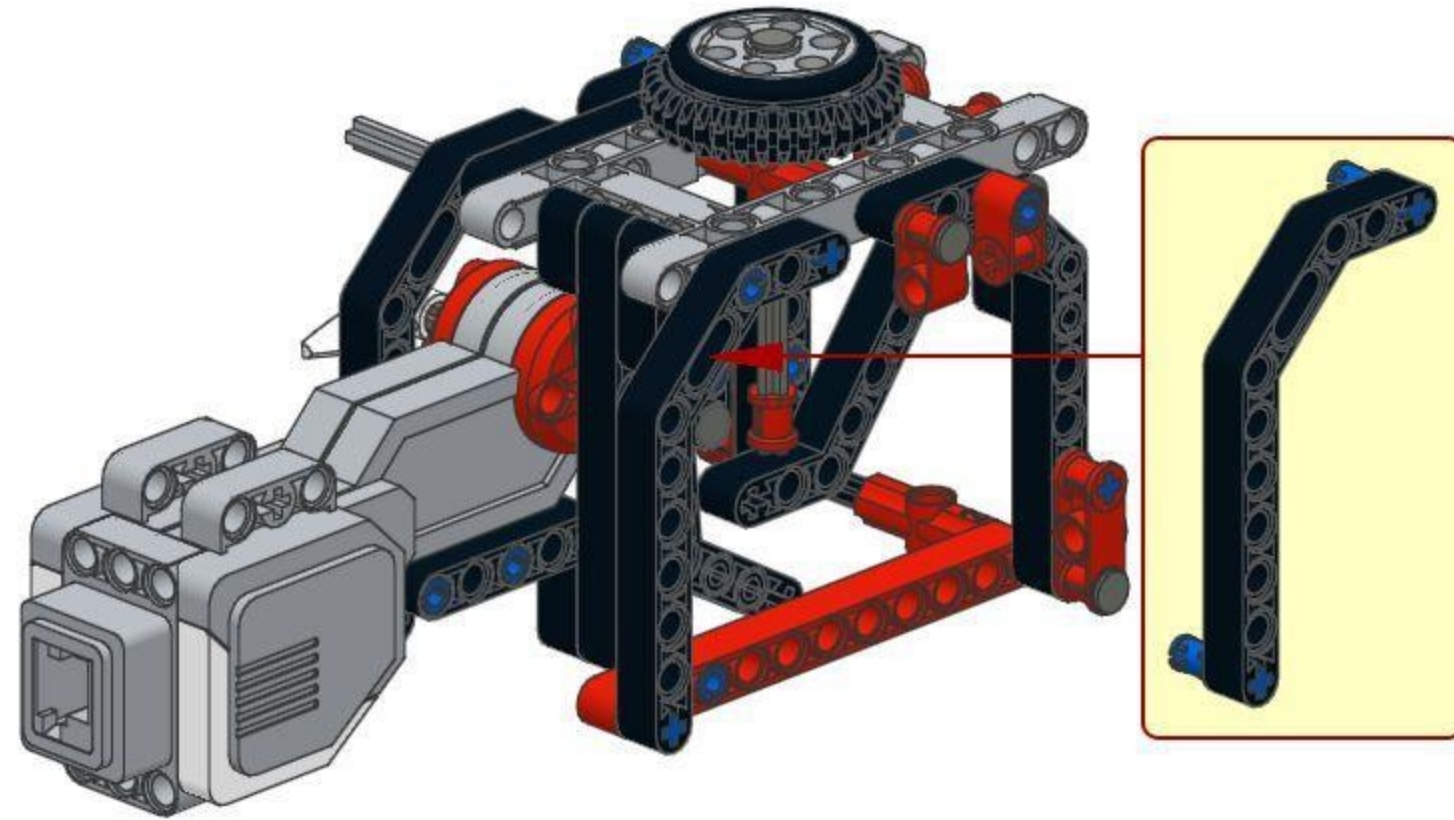
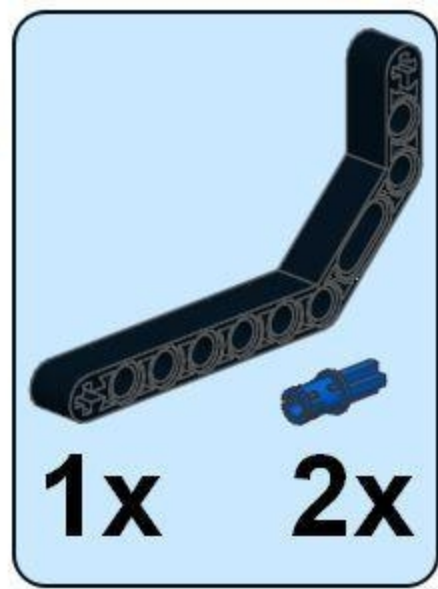


1
2
3

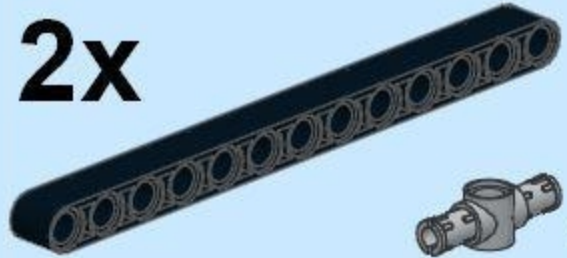





A yellow rounded rectangle containing three sub-diagrams. Diagram 1 shows a red L-shaped Technic beam with a blue axle pin inserted into its top hole. Diagram 2 shows a black L-shaped Technic beam with a grey axle inserted into its bottom hole. Diagram 3 shows the black L-shaped beam from diagram 2 with a red 1x10 beam attached to its bottom hole.

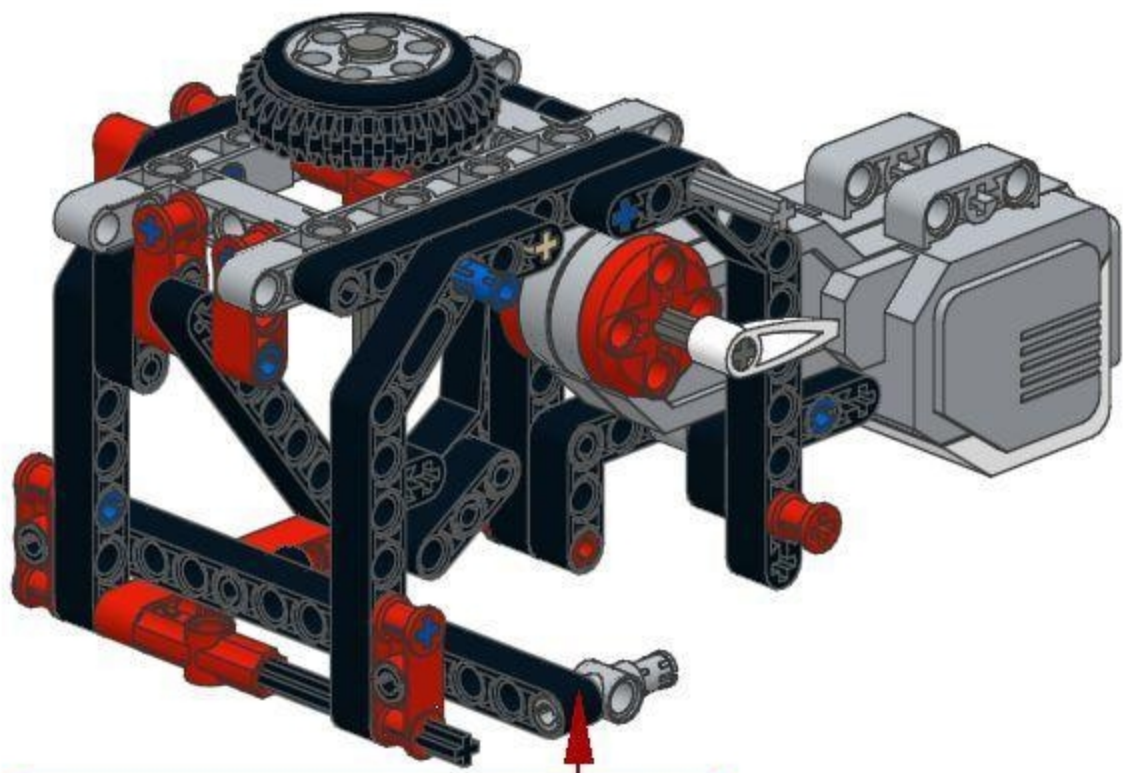
19



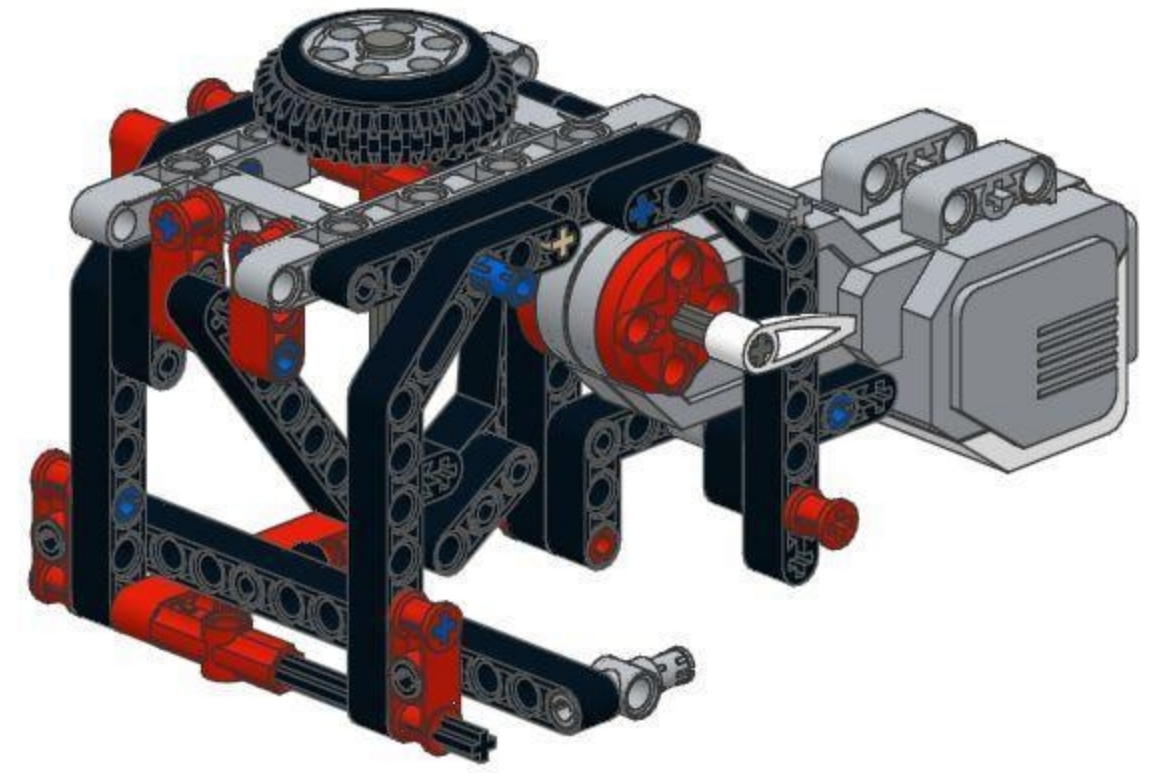
20

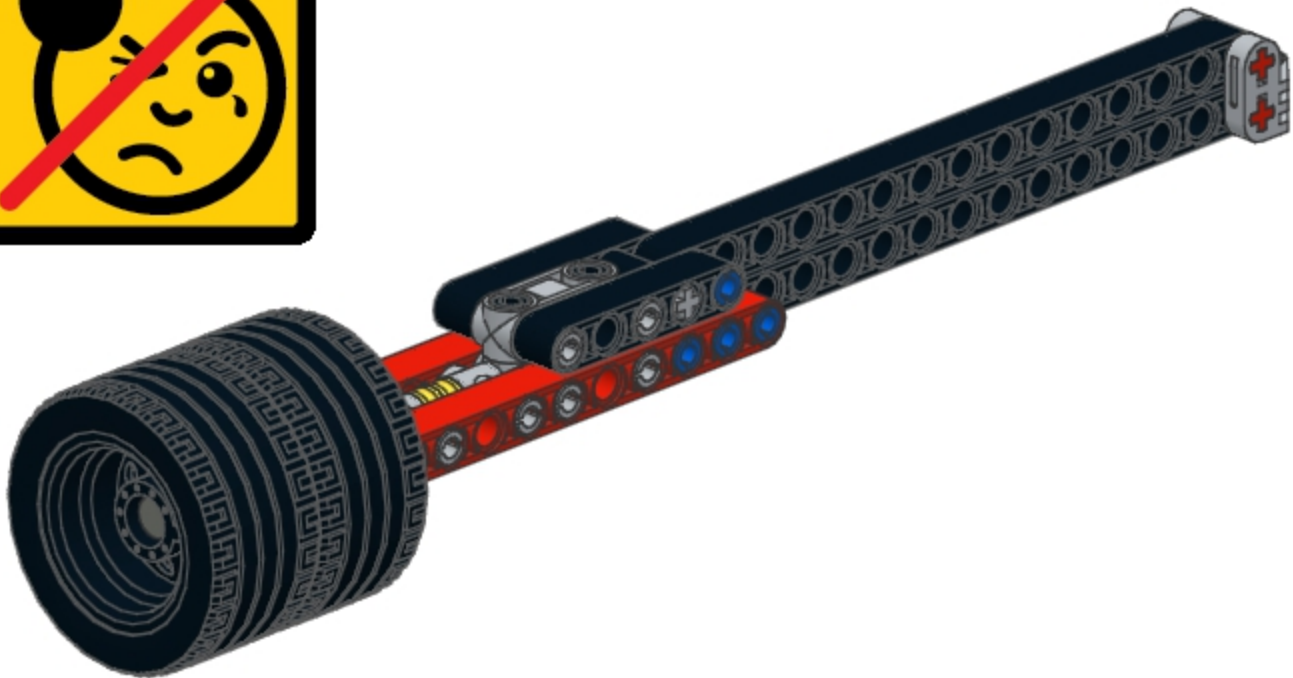
- 1x 
- 2x 
- 1x 
- 1x 

13

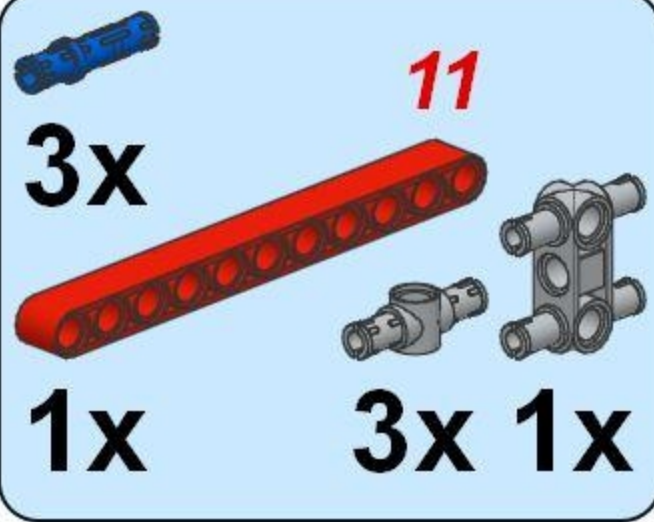


1





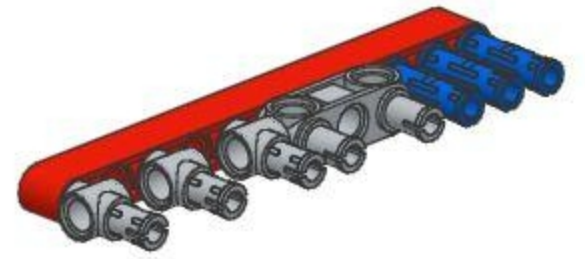
1



3x ¹¹

1x 3x 1x

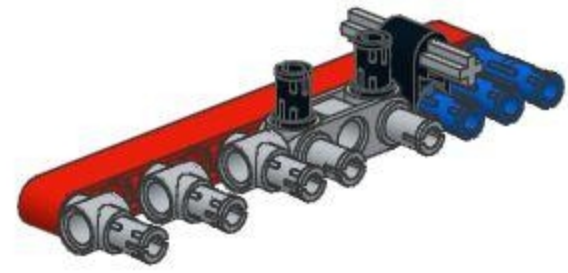
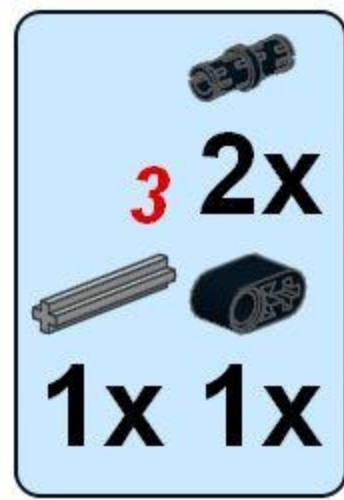
This block contains a parts list for step 1. It includes a small blue pin, a long red Technic beam with 11 holes, a grey Technic bush, and a grey Technic cross connector. The quantities are listed as 3x for the blue pin, 1x for the red beam, 3x for the grey bush, and 1x for the grey cross connector. The number 11 is written in red above the red beam.



2

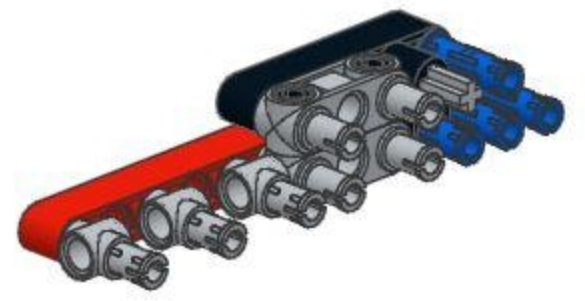
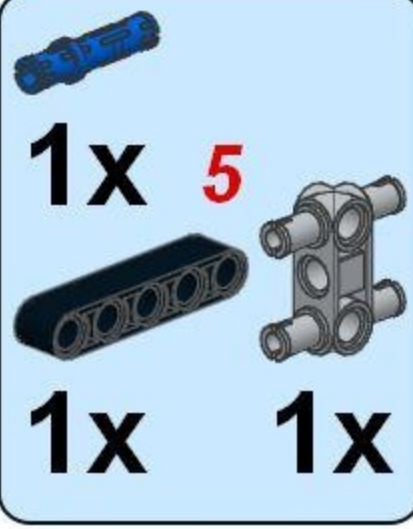
3 2x

1x 1x



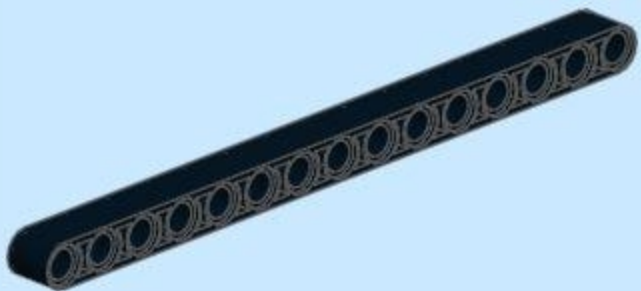
3

1x 5
1x 1x

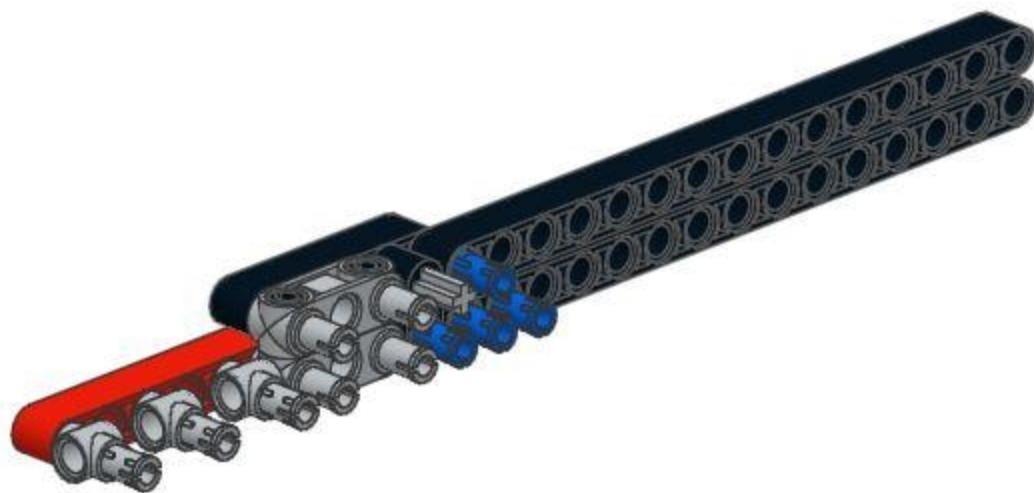


4

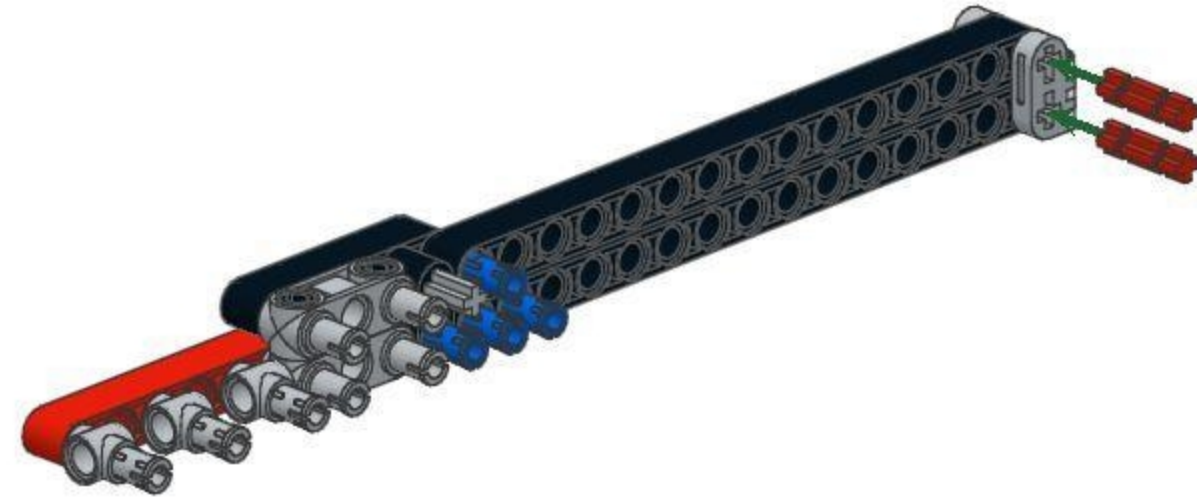
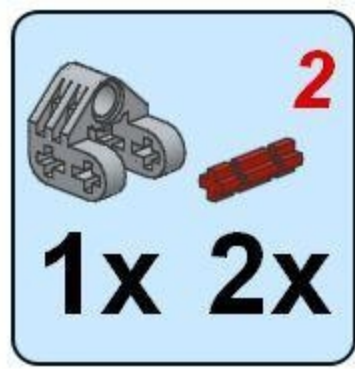
15



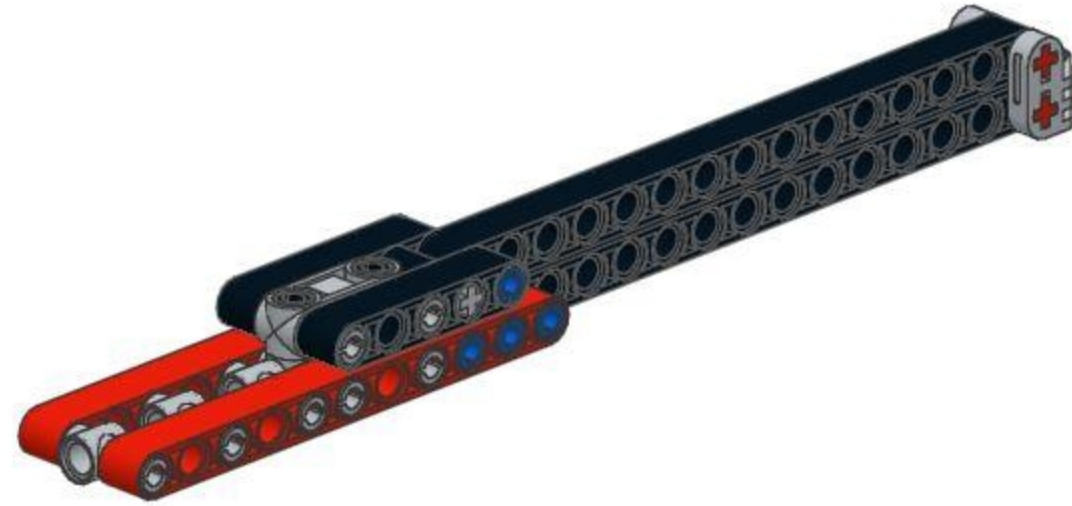
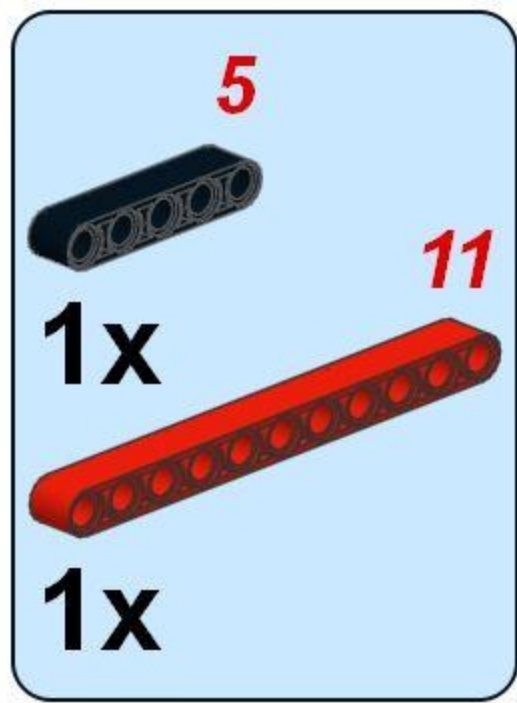
2x



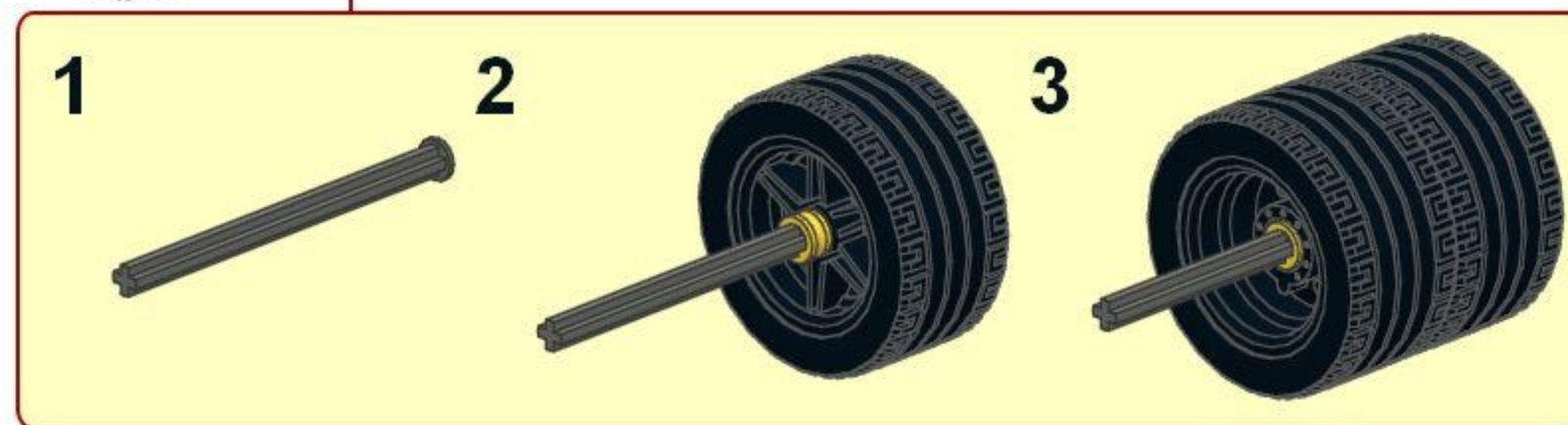
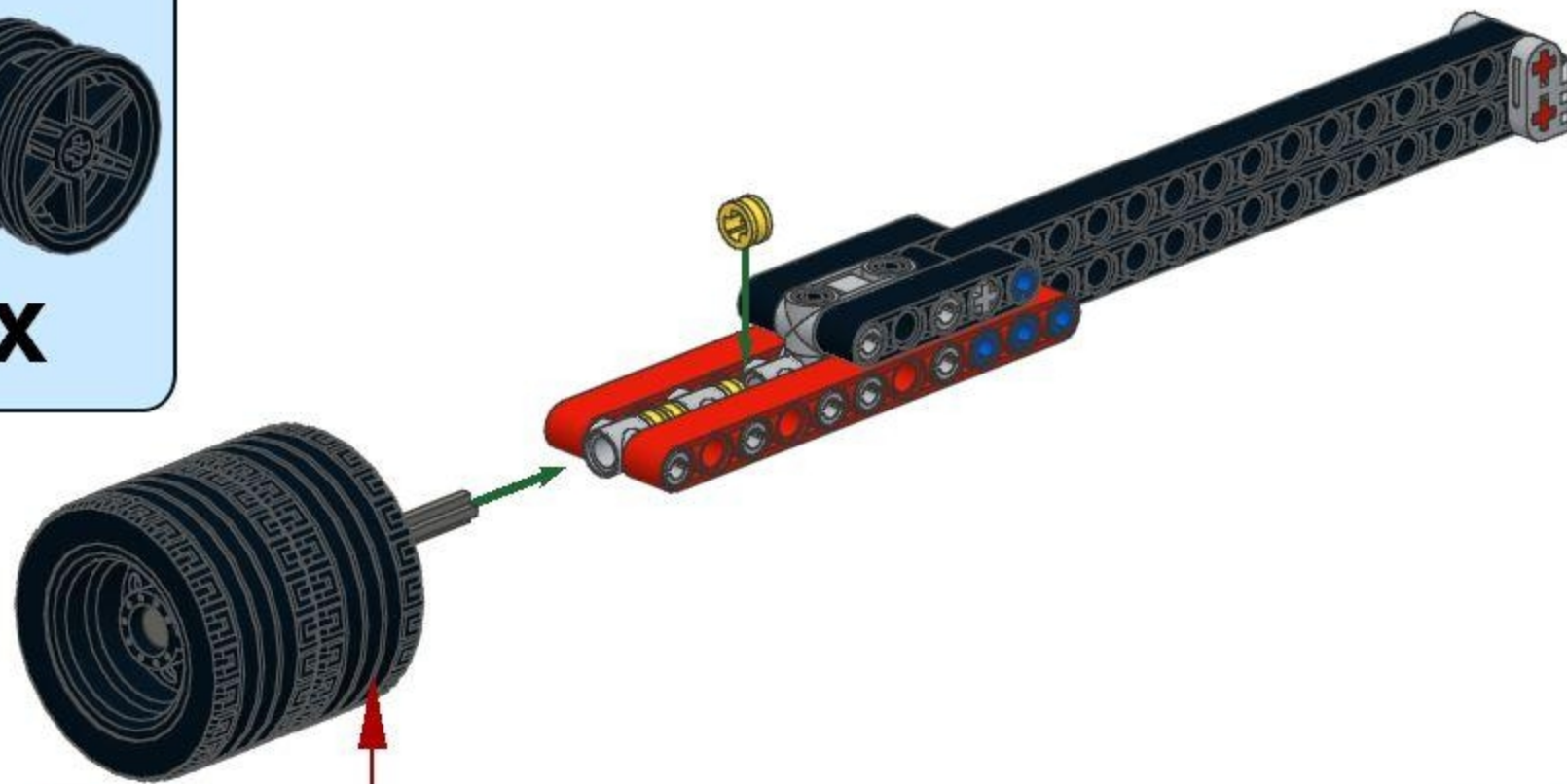
5



6

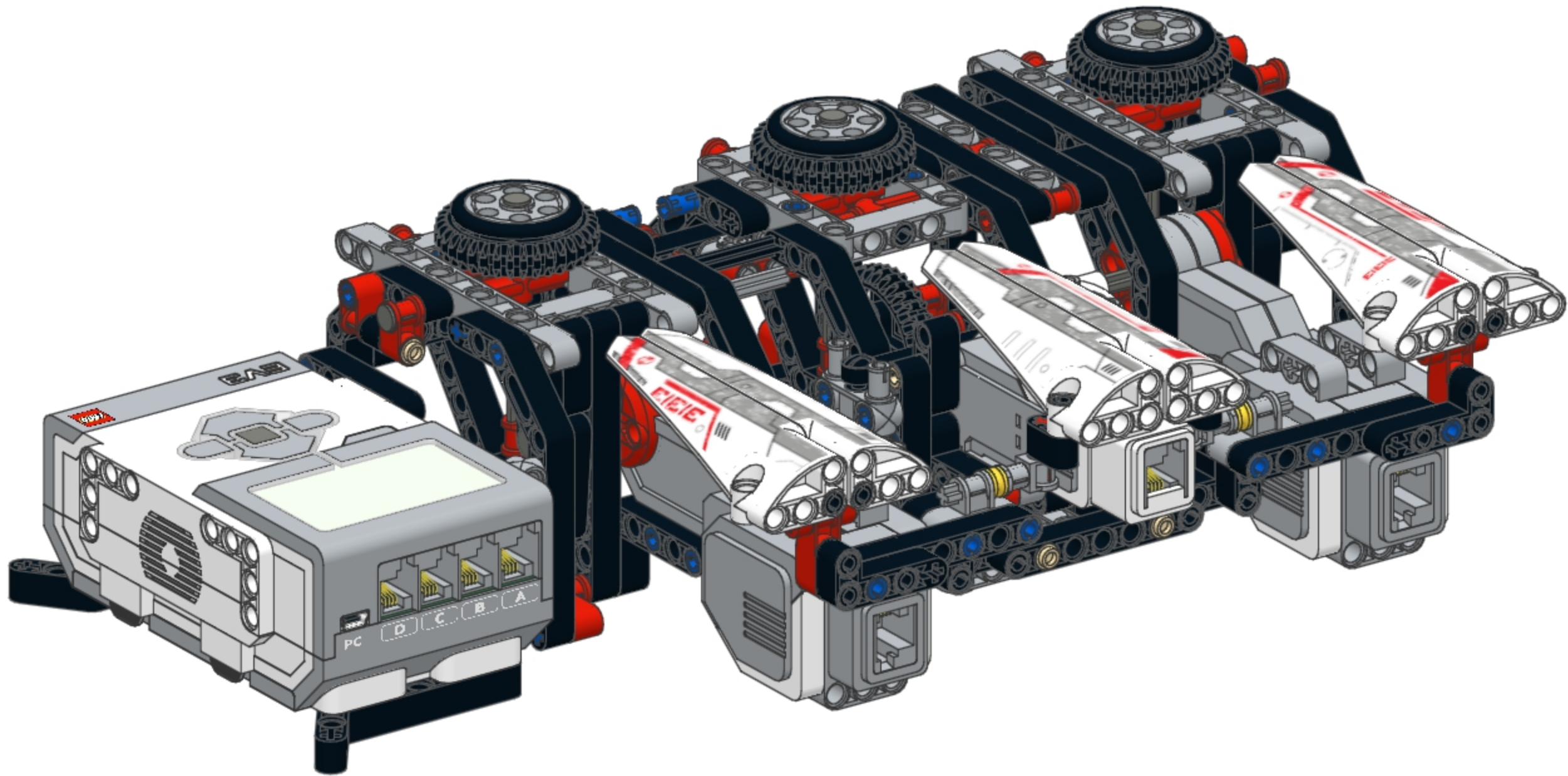


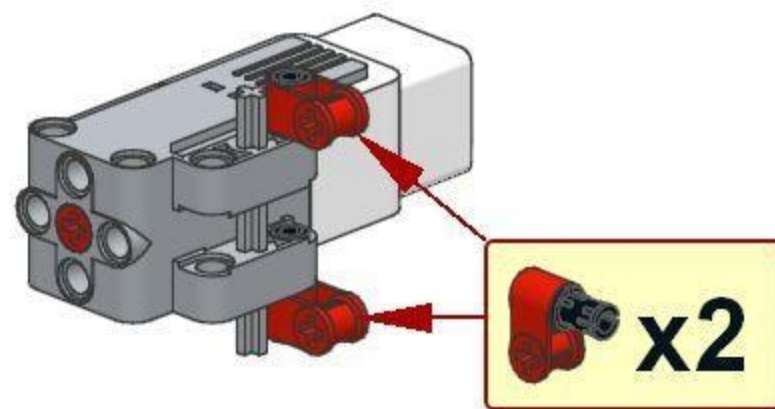
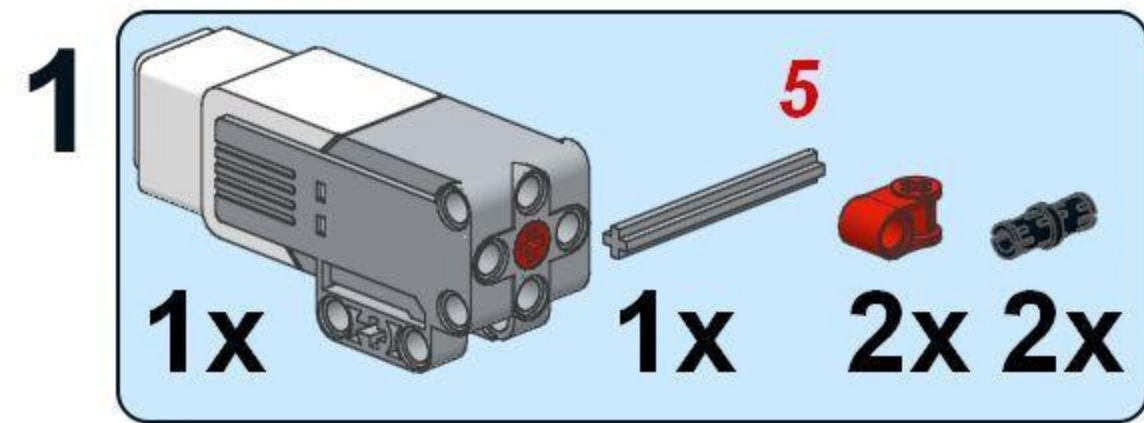
7

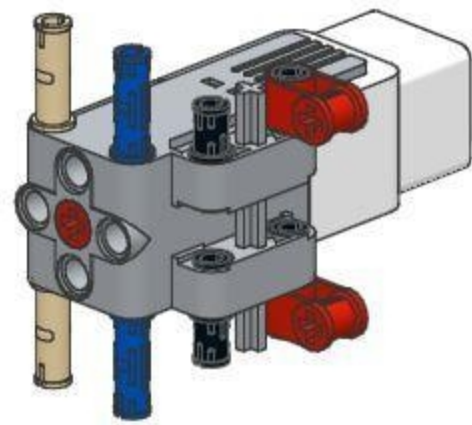
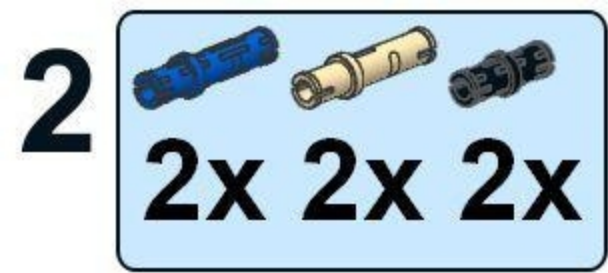


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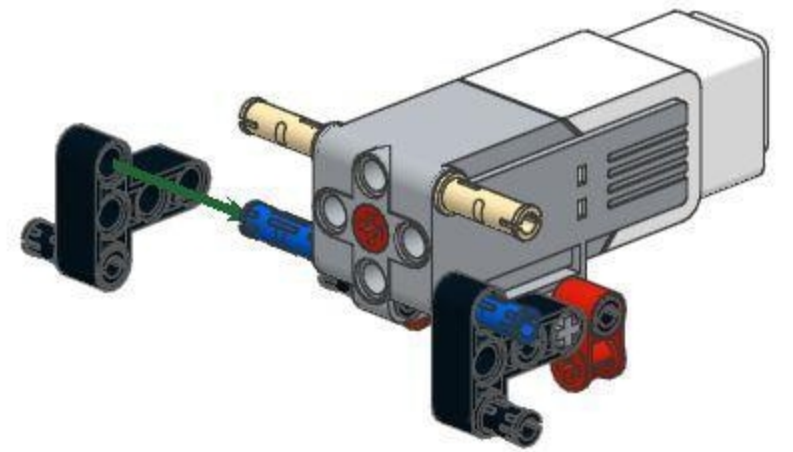




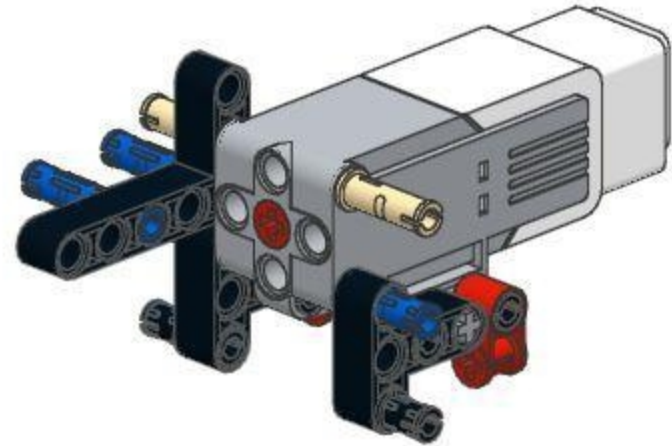




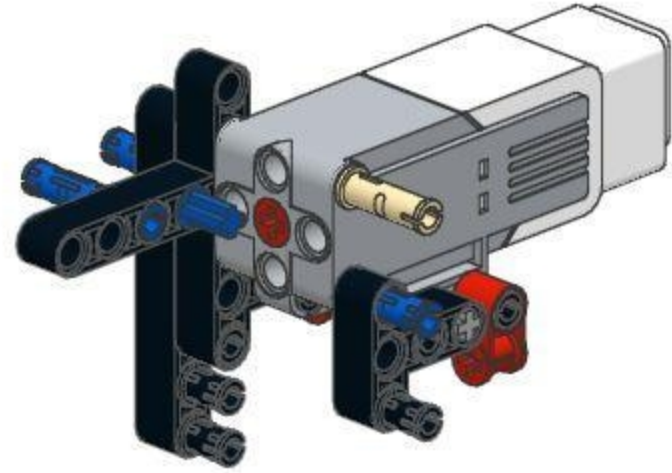
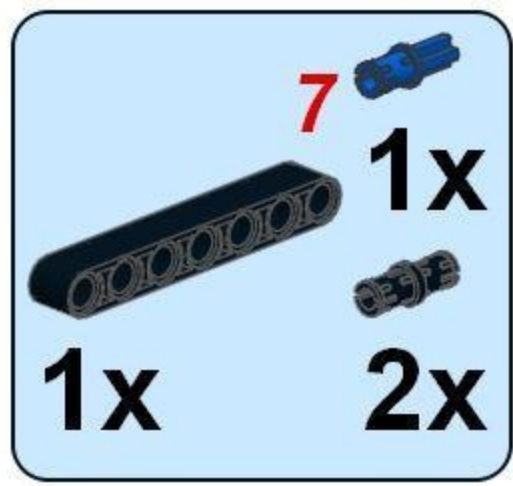
3



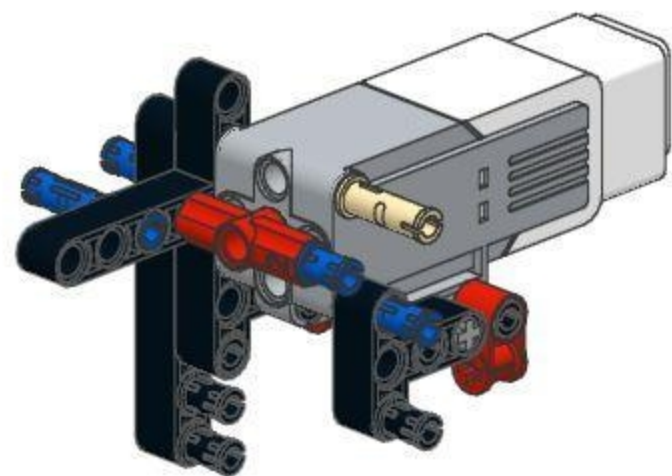
4



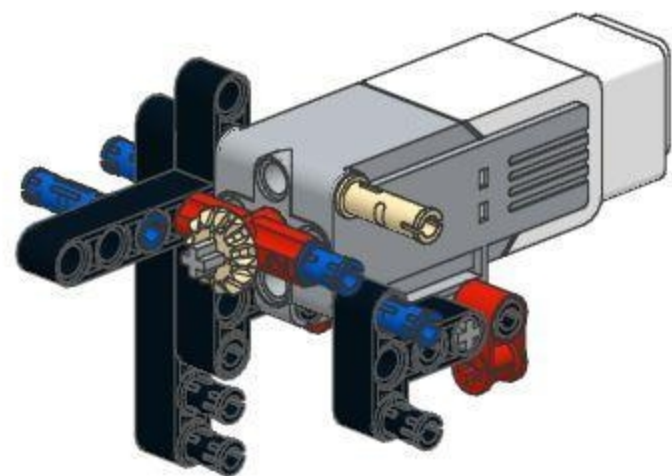
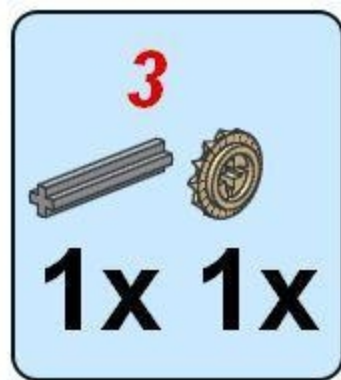
5



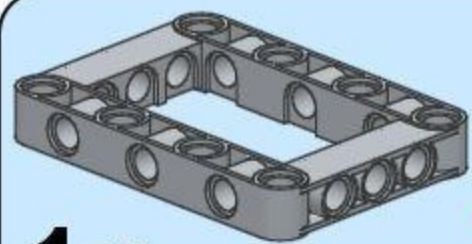
6
1x 1x



7



8

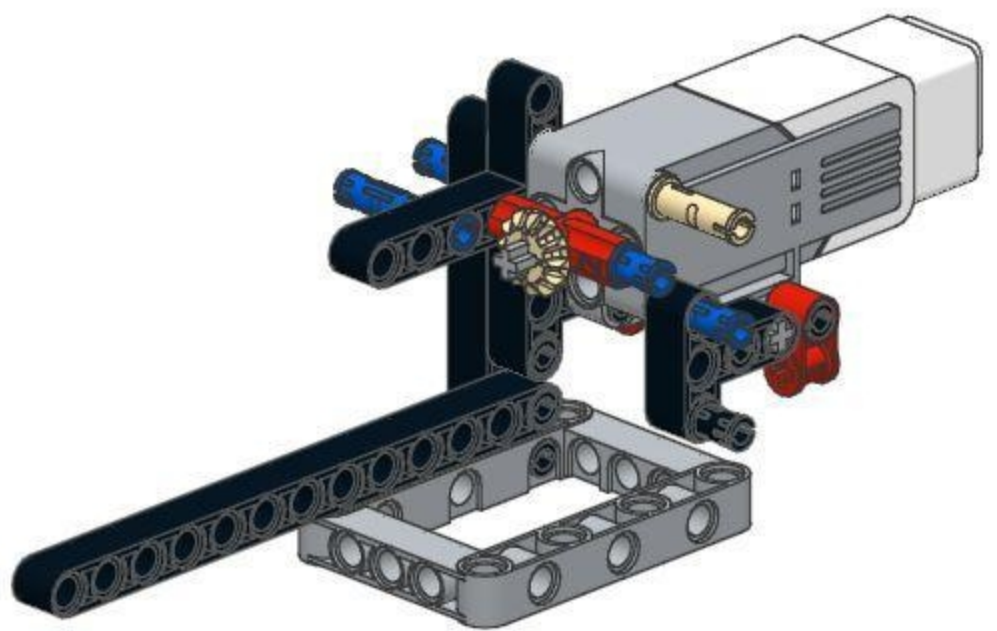


1x

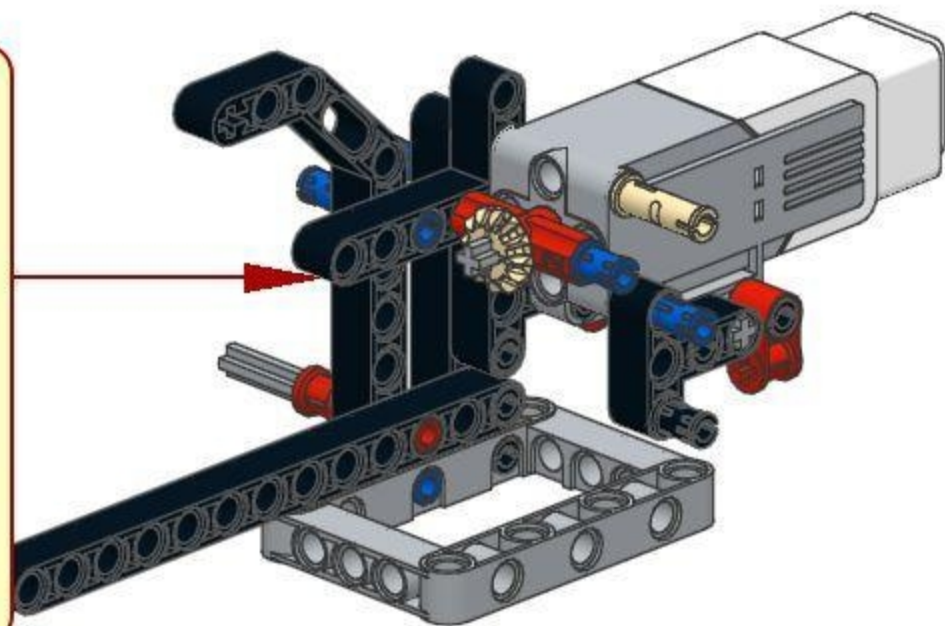
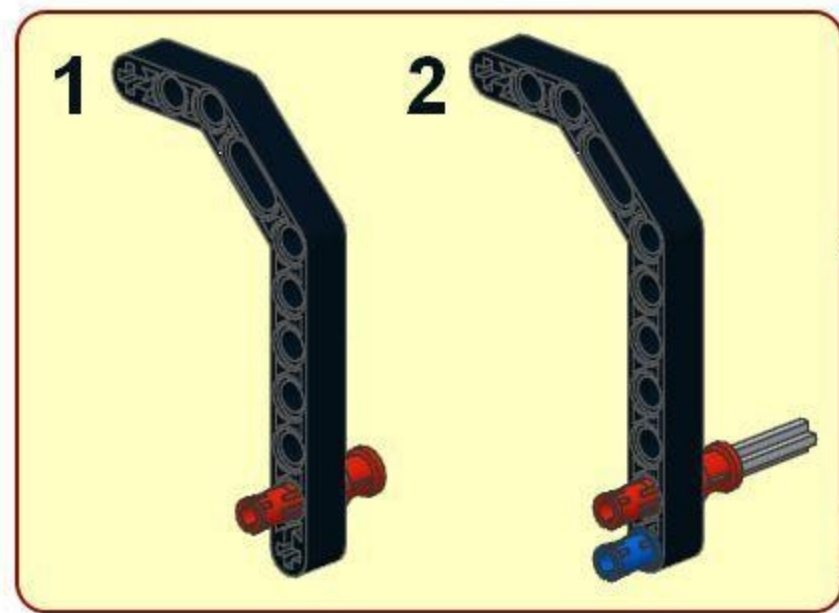
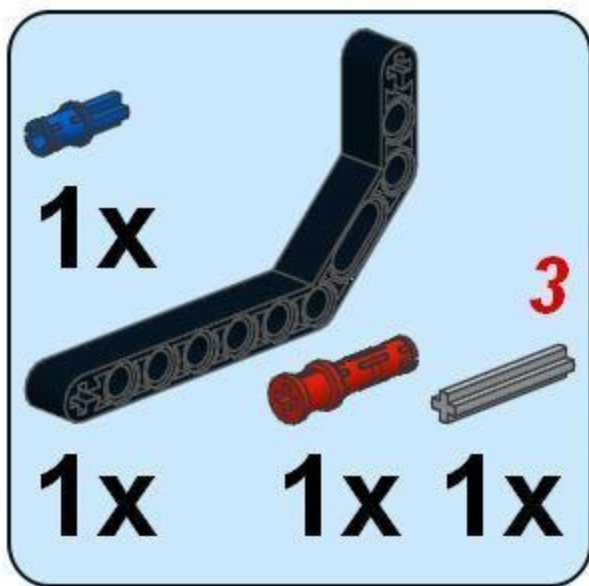
13



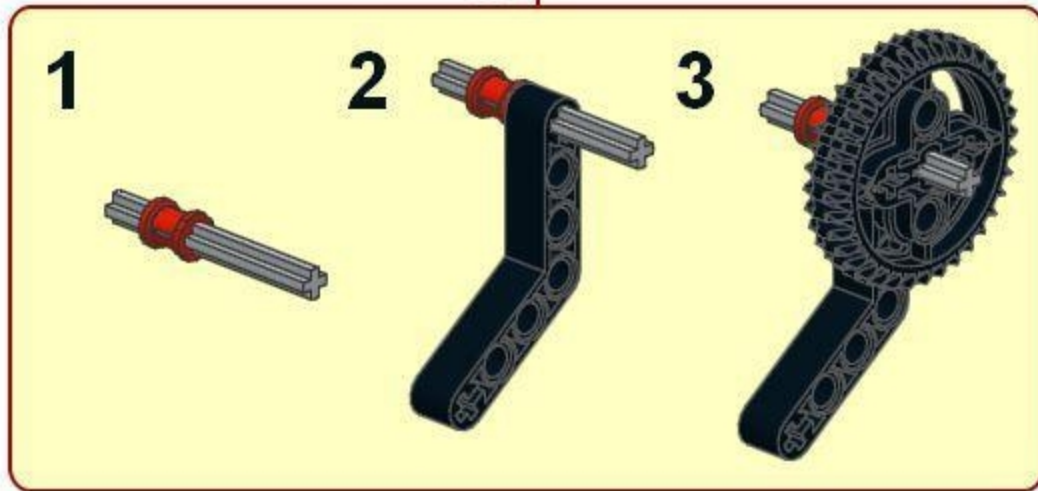
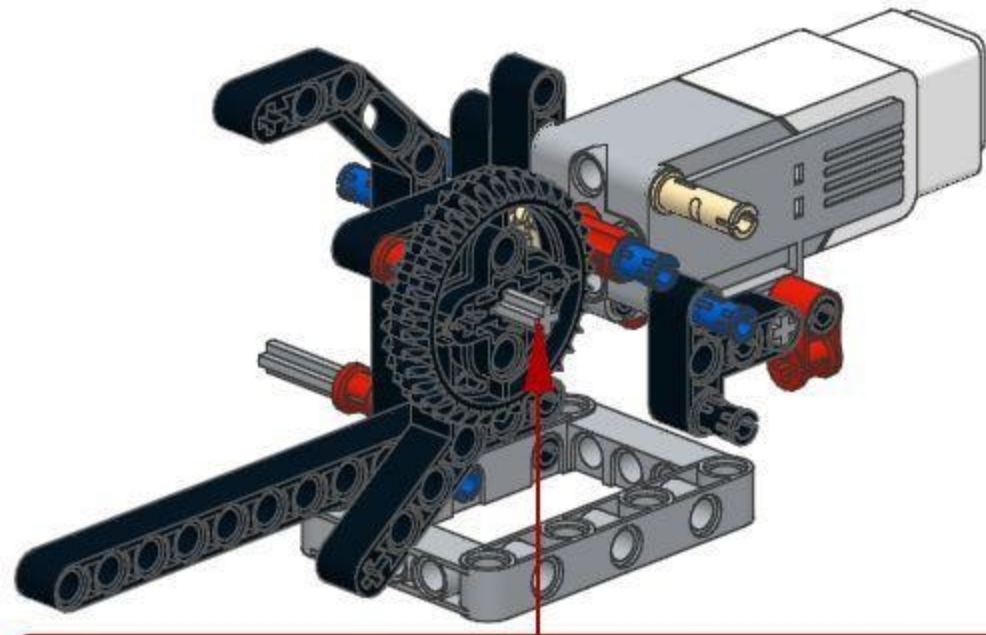
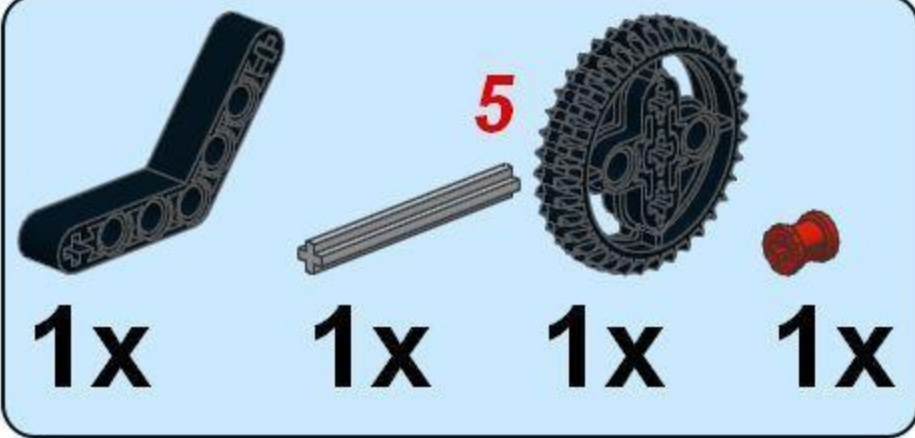
1x



9



10



11



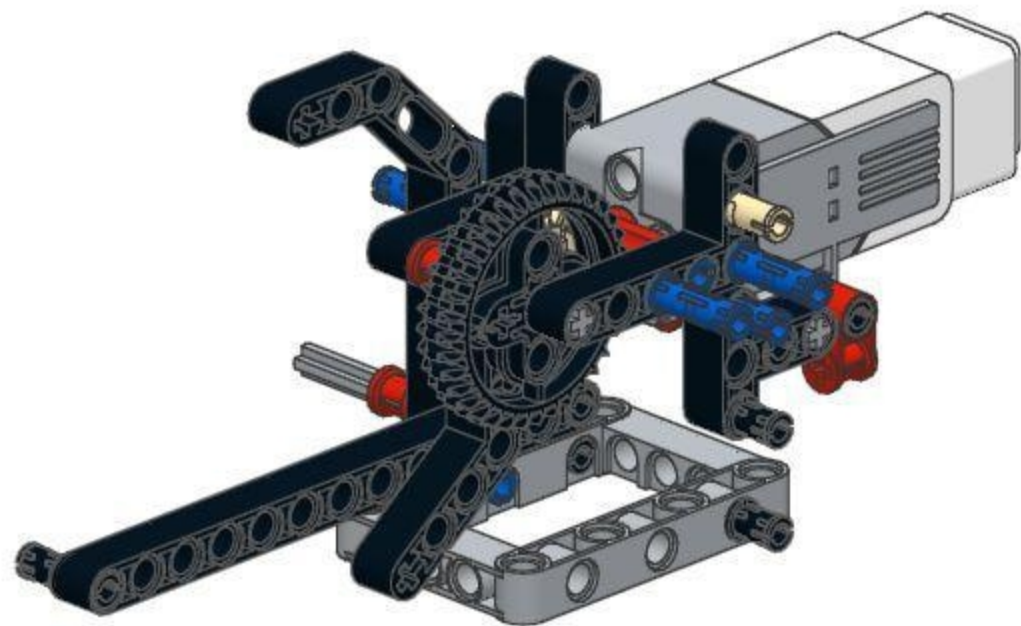
2x



2x

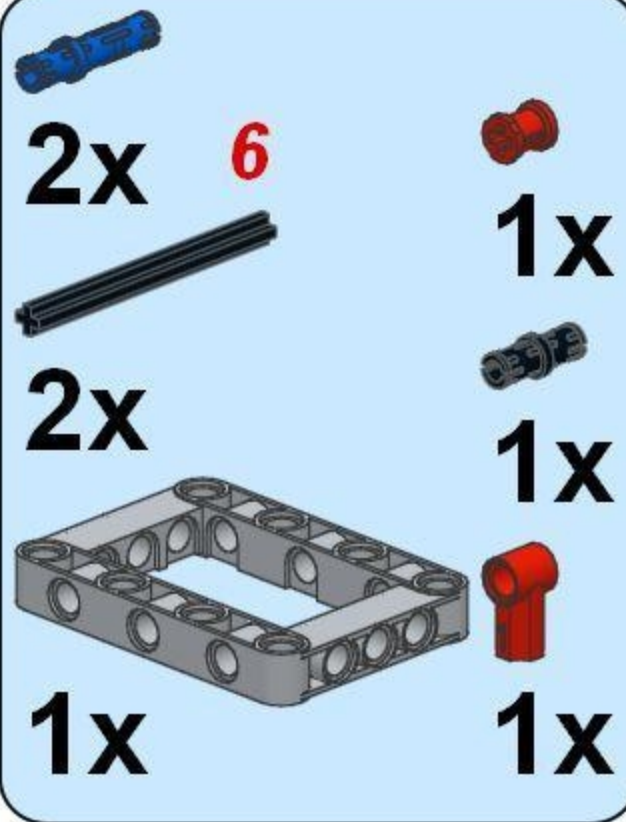


1x



12

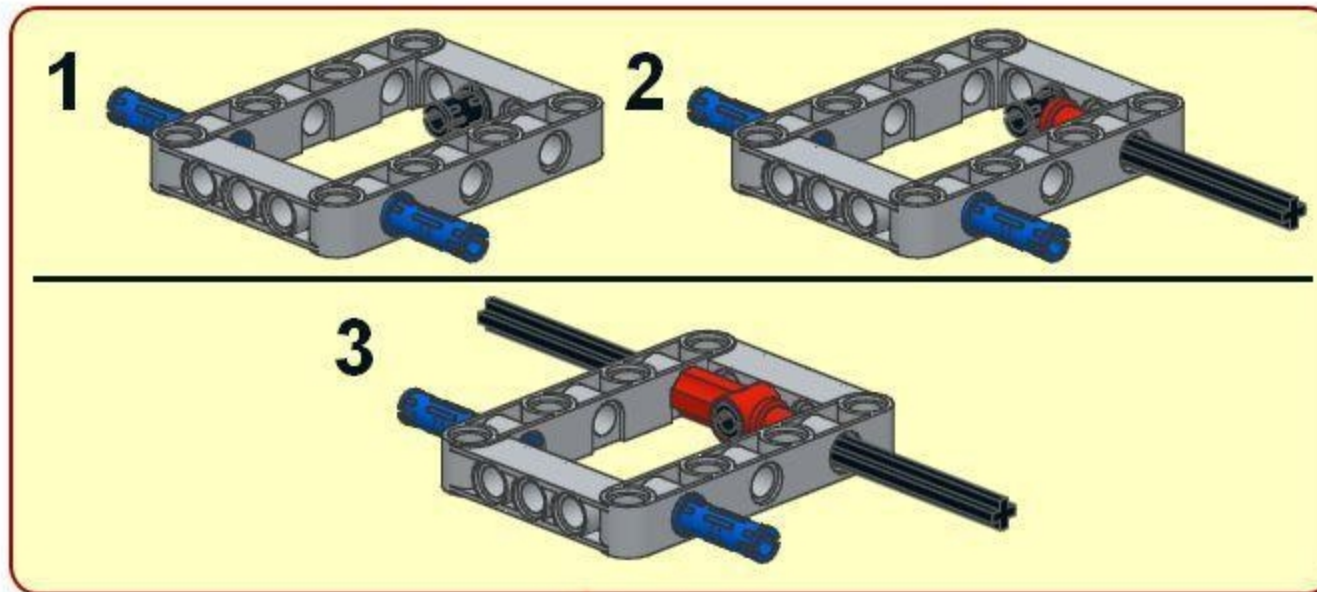
2x ⁶
2x
1x
1x



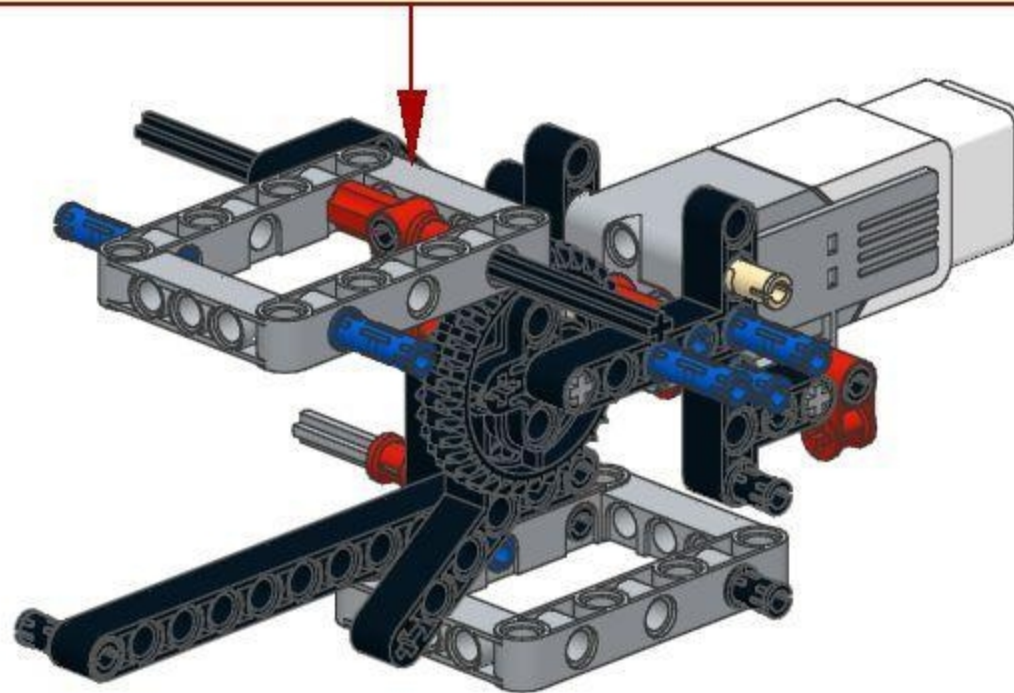
A parts list for step 12, enclosed in a light blue rounded rectangle. It lists the following components: 2x blue pins, 6 black pins, 2x grey Technic axles, 1x red bush, 1x grey Technic axle pin, 1x red bush, and 1x grey Technic axle. The number '6' is written in red above the black pins.

1 2

3

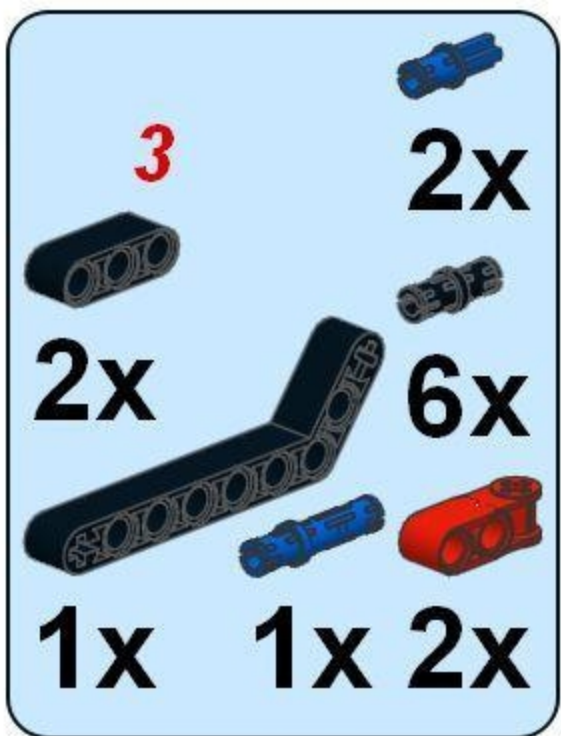


Three numbered assembly steps (1, 2, and 3) shown in a yellow rounded rectangle. Step 1 shows a grey Technic frame with two blue pins inserted into the top and bottom edges. Step 2 shows a black axle being inserted into the frame, with a red bush being placed on the axle. Step 3 shows the red bush being pushed onto the axle until it is seated against the frame.

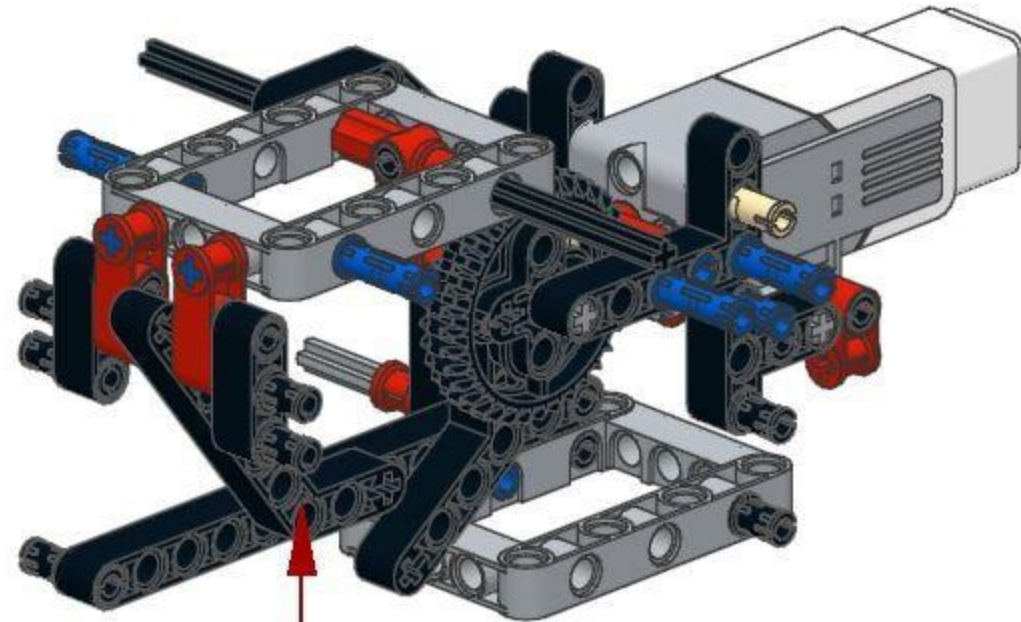


13

3
2x
2x
1x
1x 2x

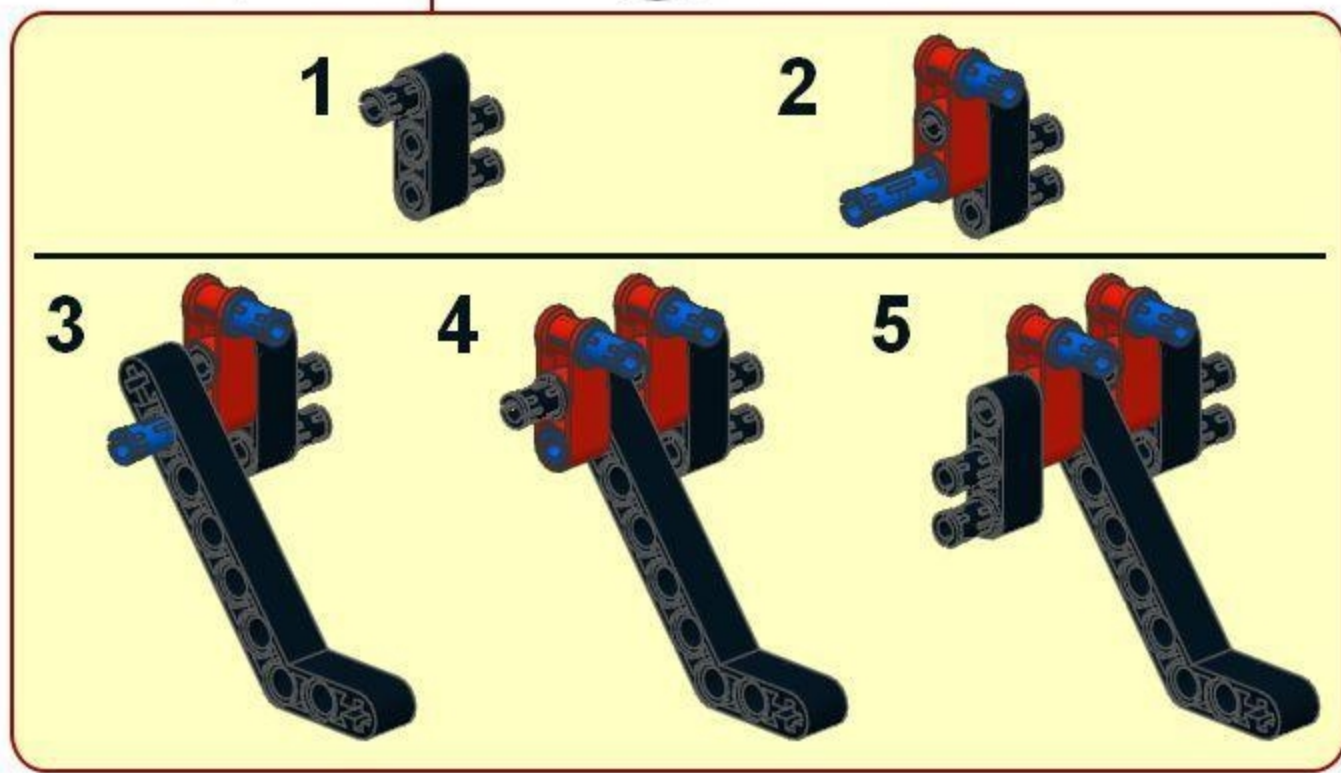


A parts list for step 13, enclosed in a light blue rounded rectangle. It lists the following components: 3 black Technic axles, 2x black Technic axles with a hole, 2x black Technic axles with a hole and a notch, 1x blue Technic pin, 1x grey Technic pin, 2x red Technic pins, and 2x black Technic pins. The quantities are listed to the right of each component.



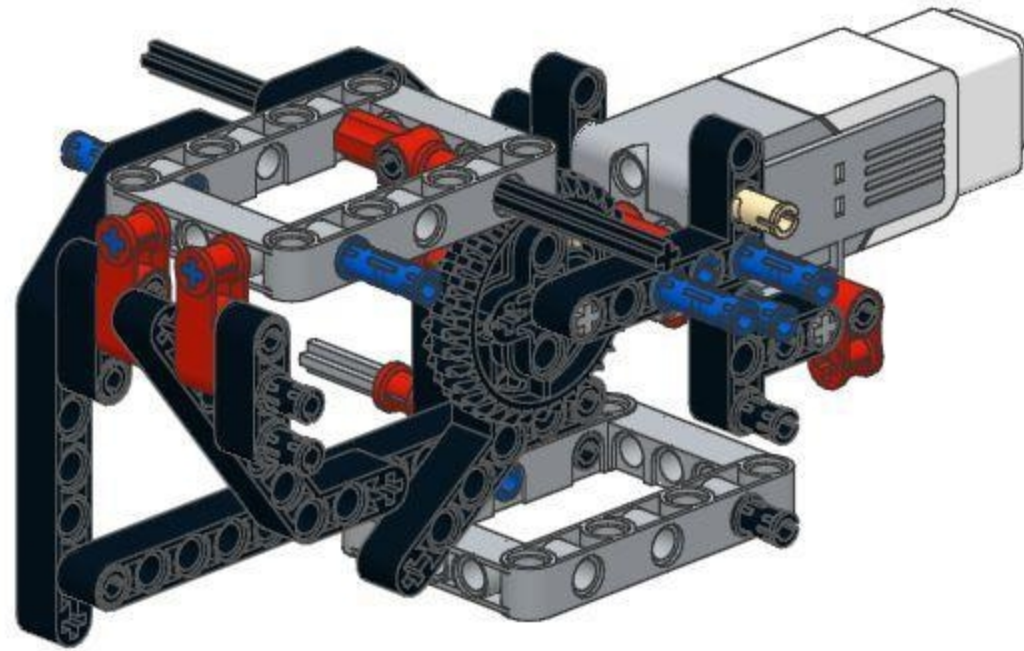
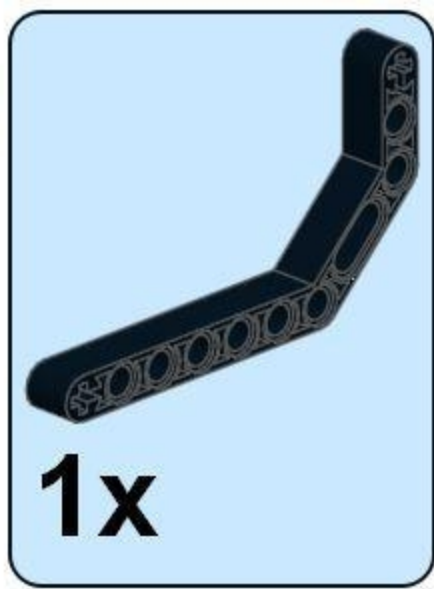
1 2

3 4 5



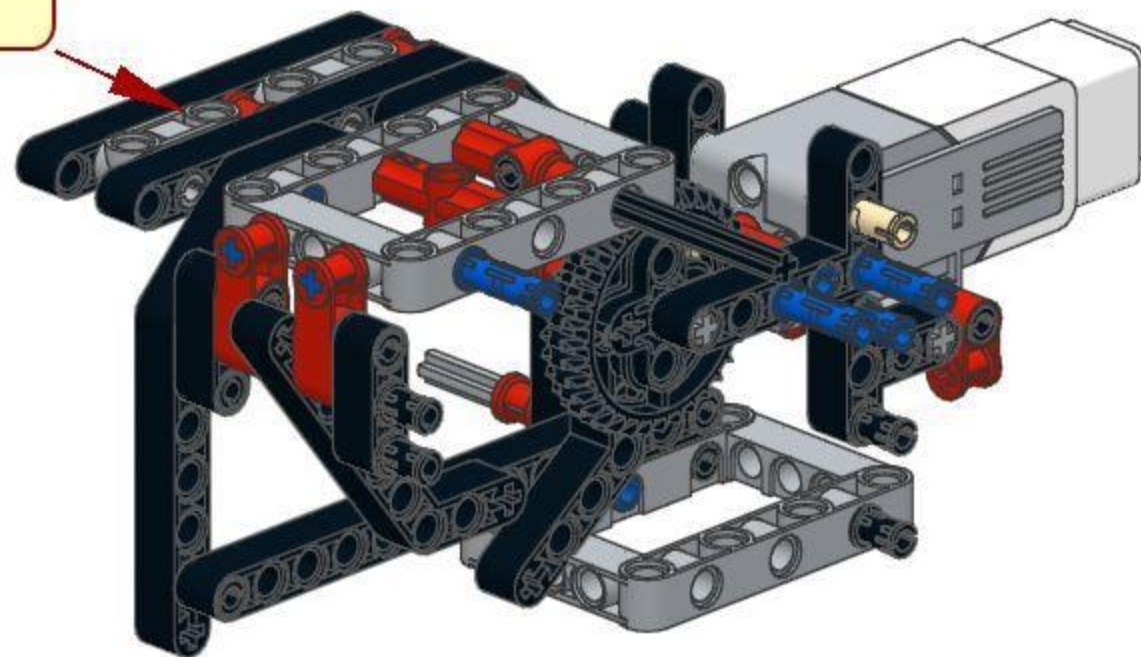
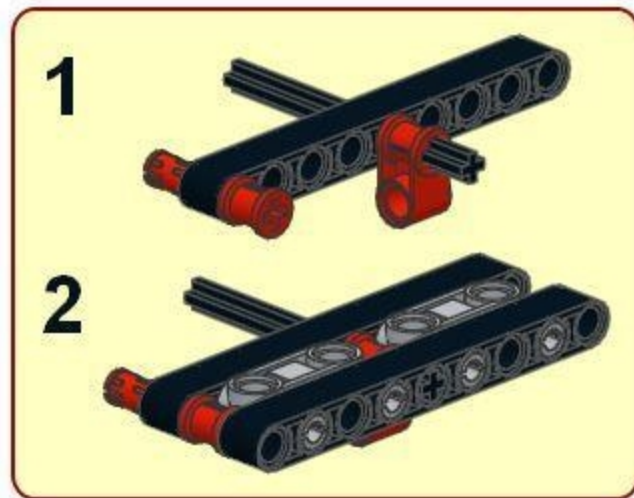
A sequence of five numbered diagrams showing the assembly of a component. Step 1 shows a black Technic axle with a hole being inserted into a red Technic pin. Step 2 shows a blue Technic pin being inserted into the axle. Step 3 shows a black Technic axle with a hole and a notch being inserted into the assembly. Step 4 shows a red Technic pin being inserted into the axle. Step 5 shows a black Technic pin being inserted into the axle. The diagrams are set against a yellow background.

14



15


- 1x ⁶
- 1x ⁹
- 2x ^{1x}
- 1x ^{1x}
- 2x ^{2x}



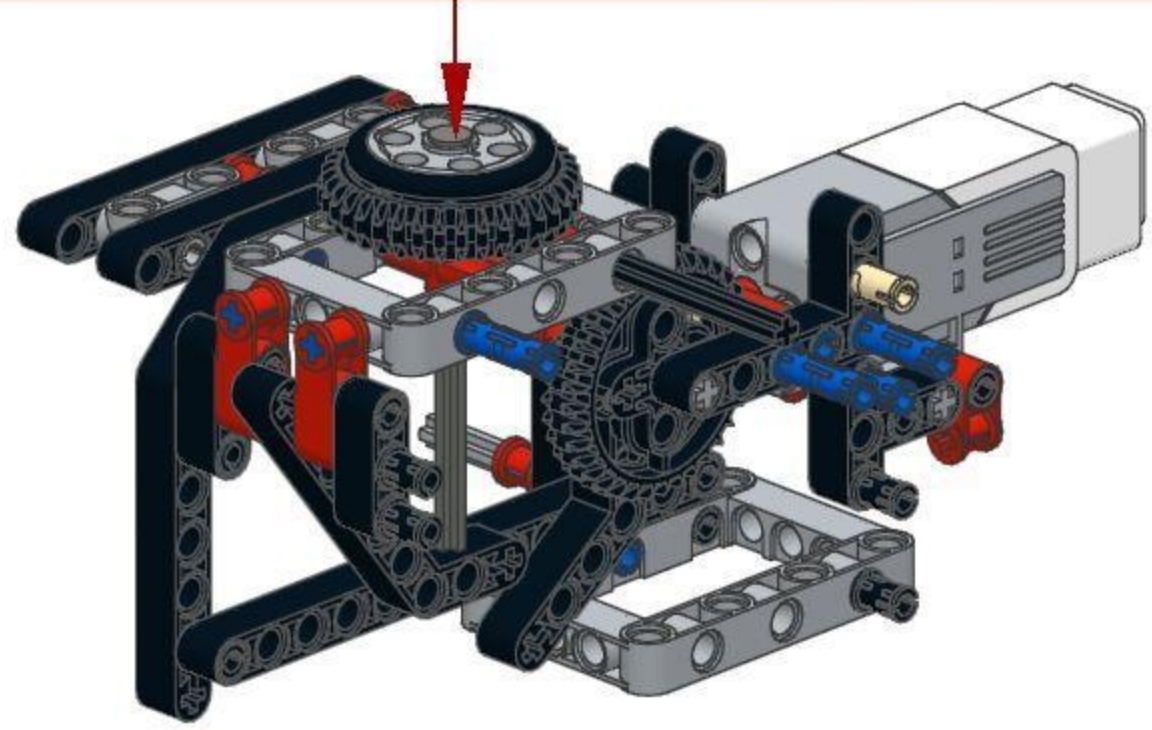
16



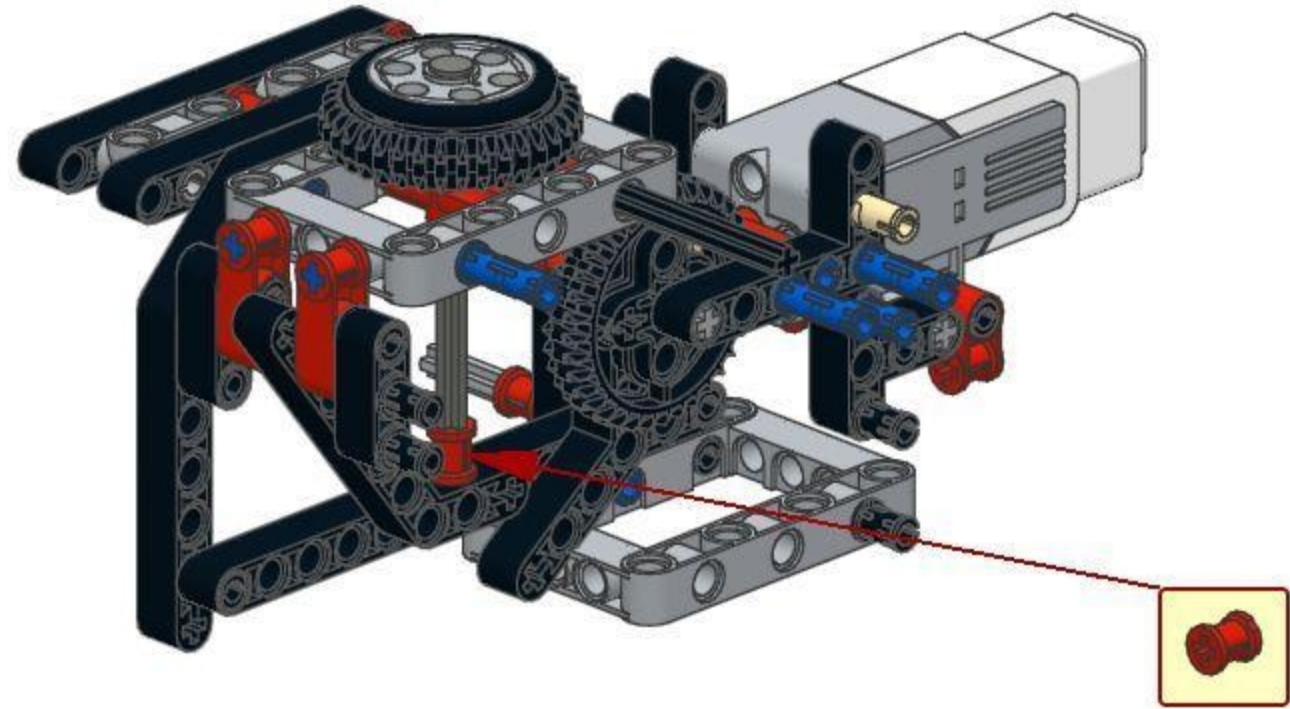
1x  1x 
1x  8 
1x  1x 



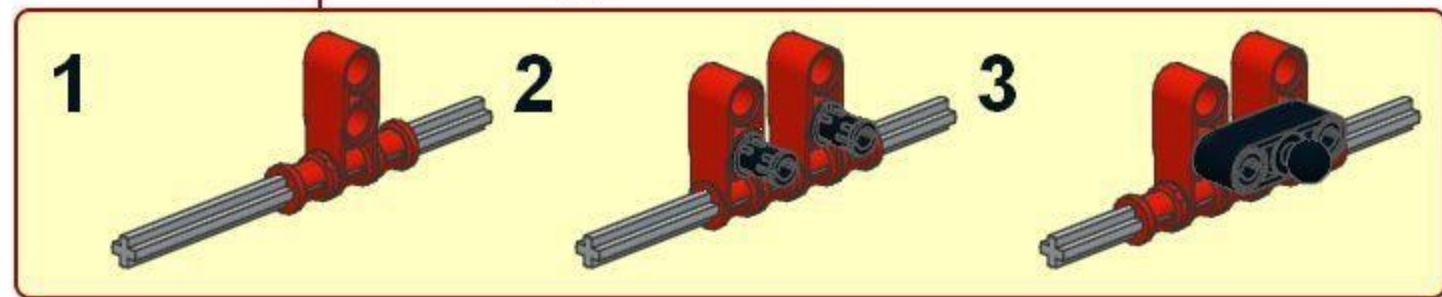
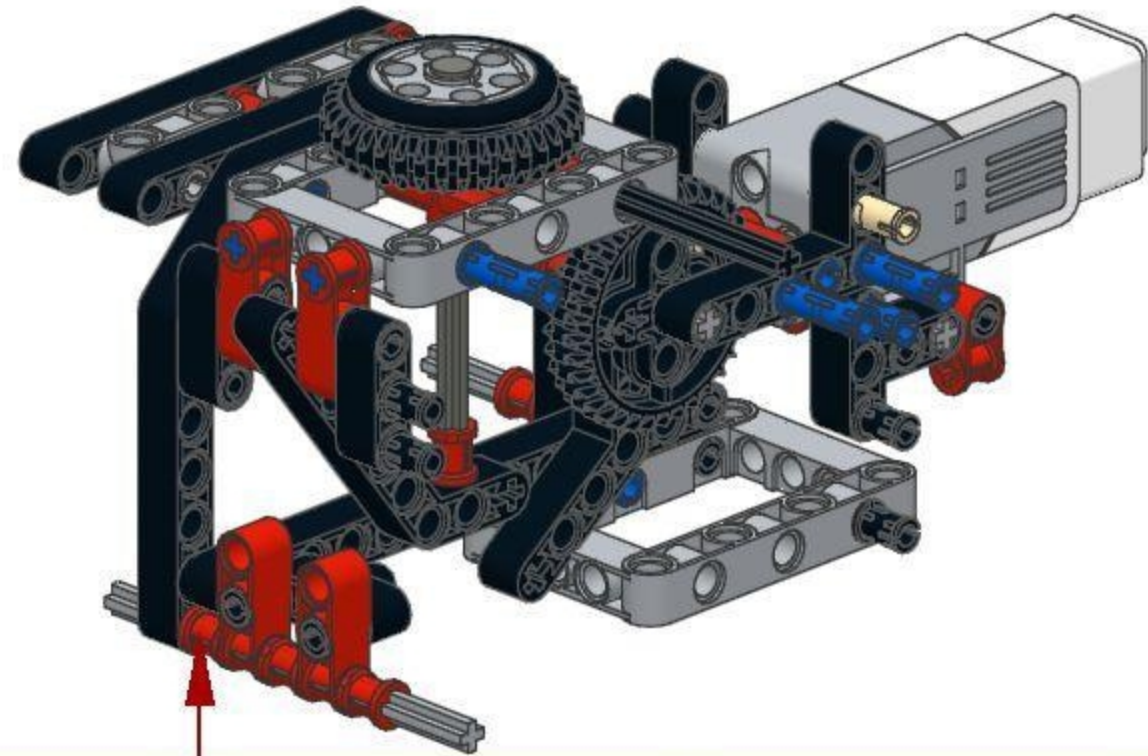
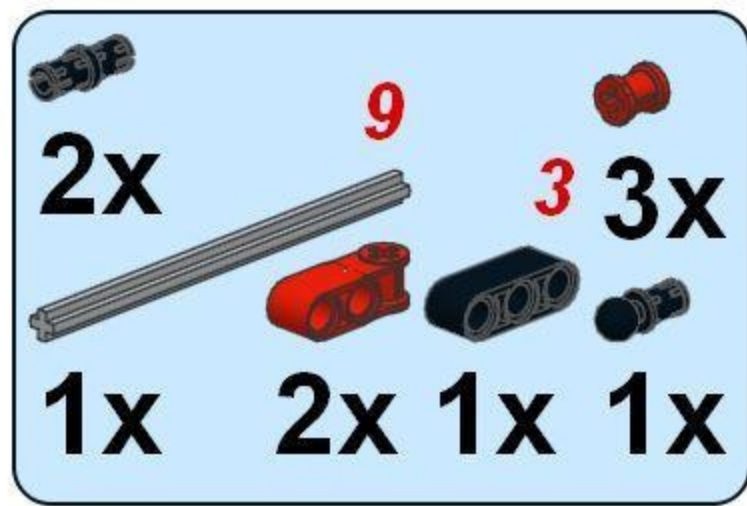
1  2  3 



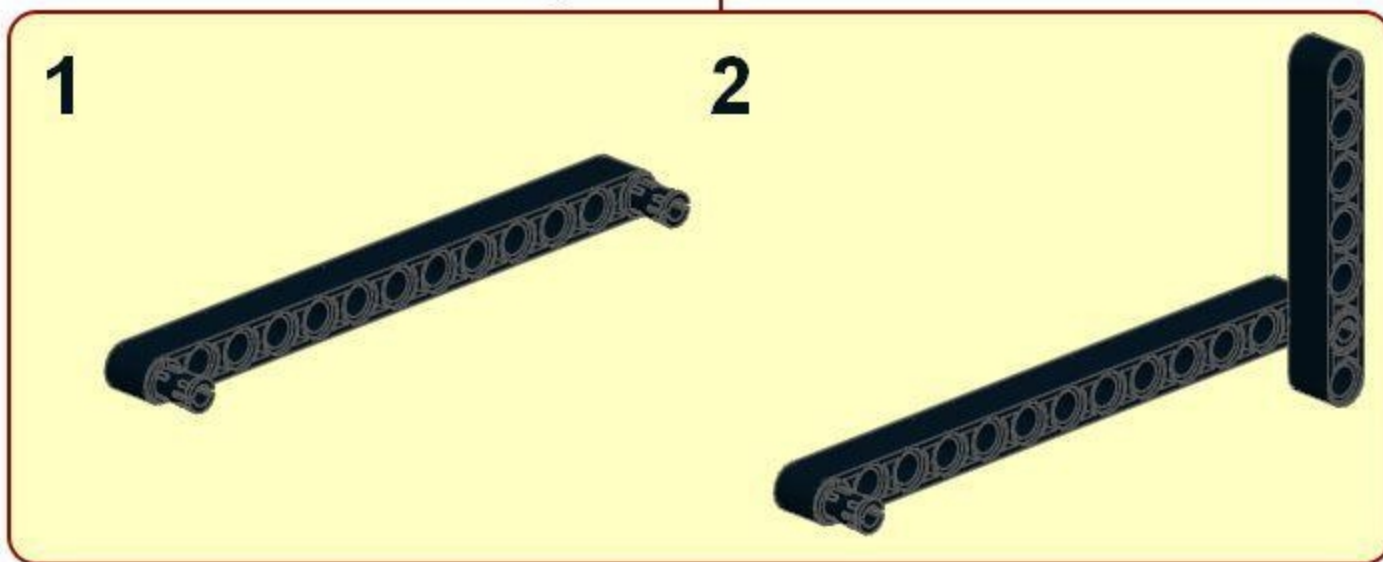
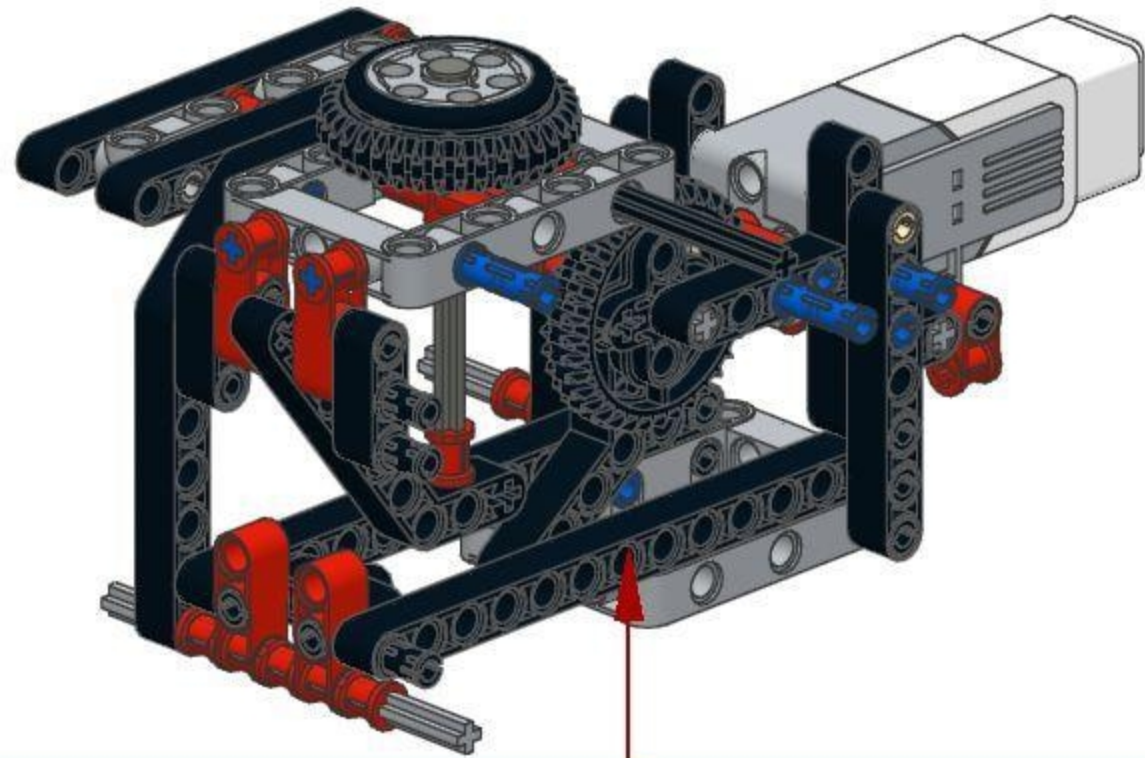
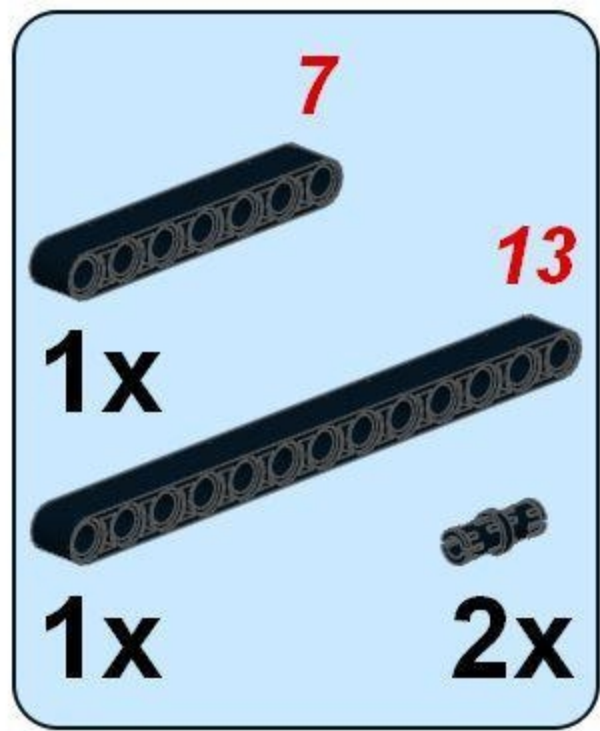
17 
1x



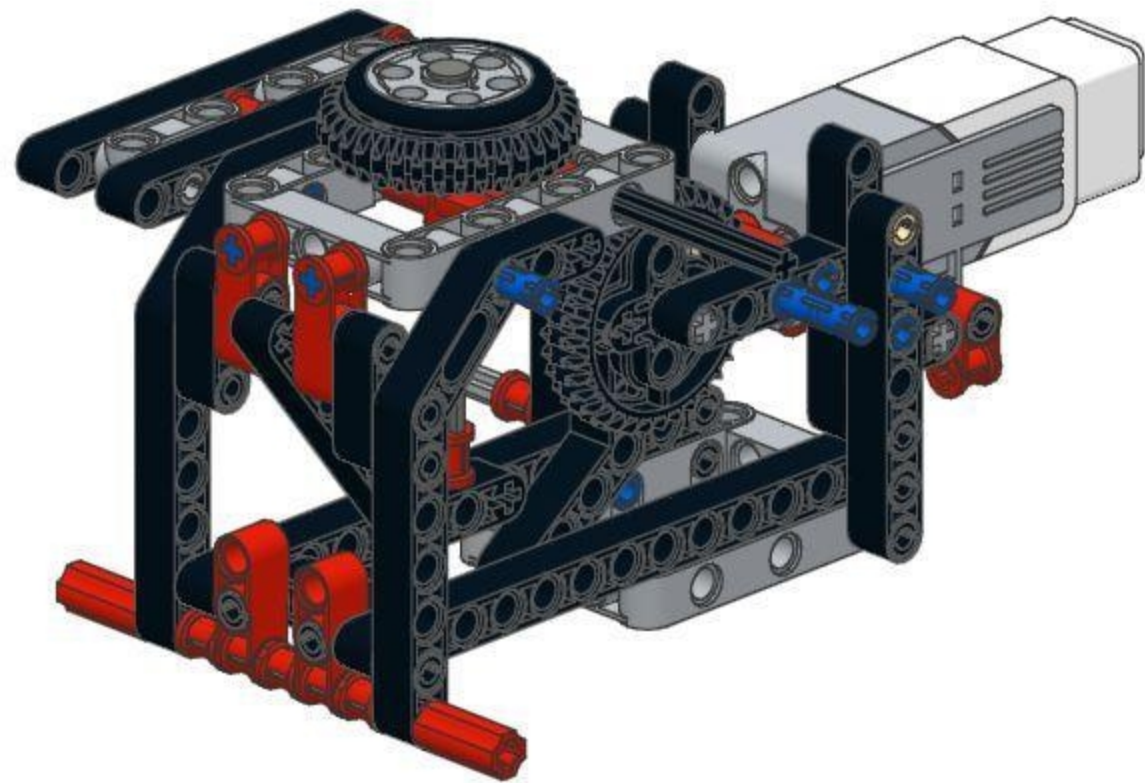
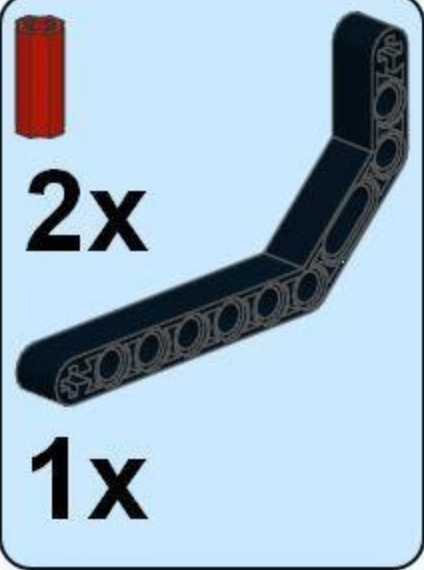
18



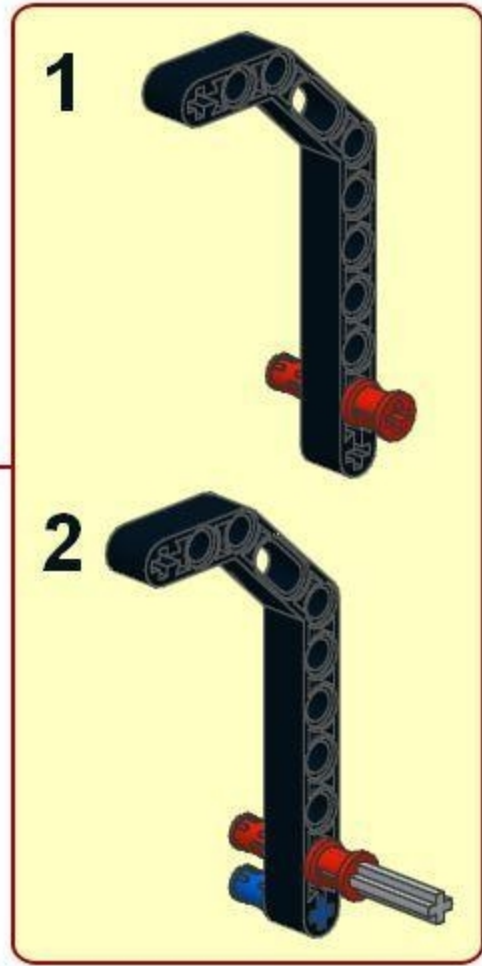
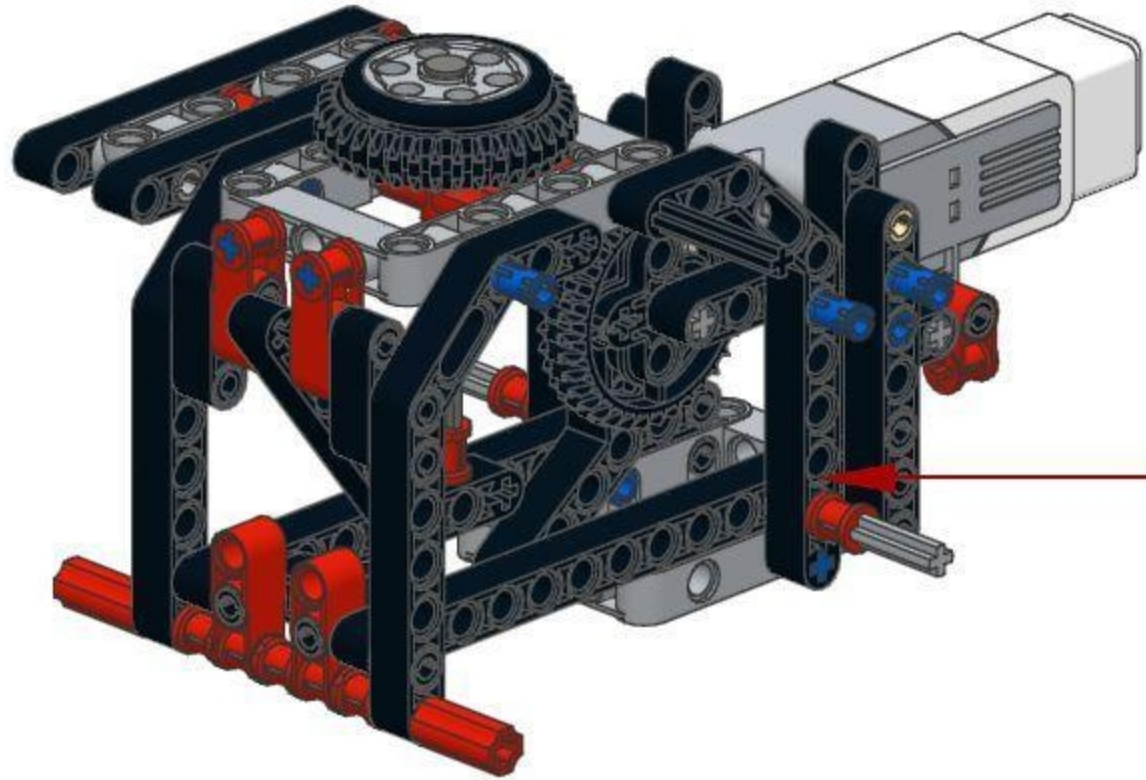
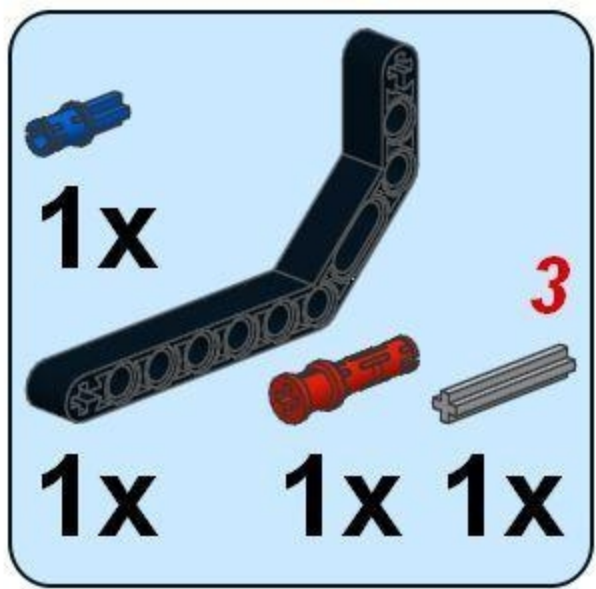
19



20

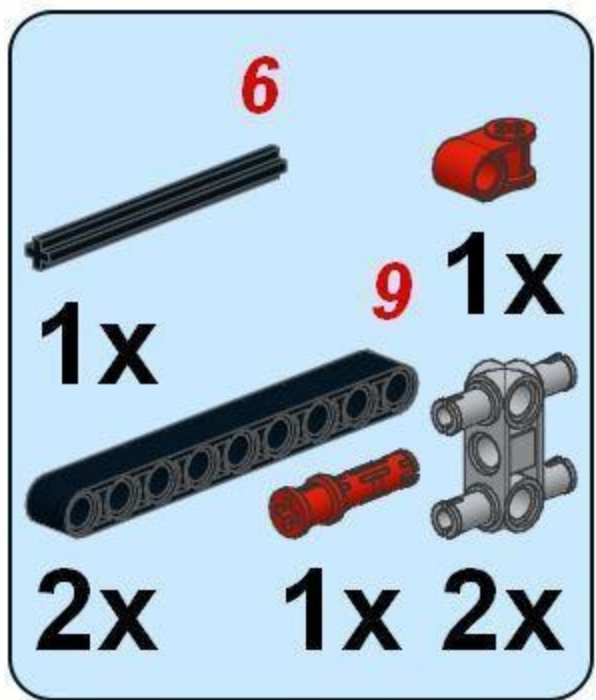


21

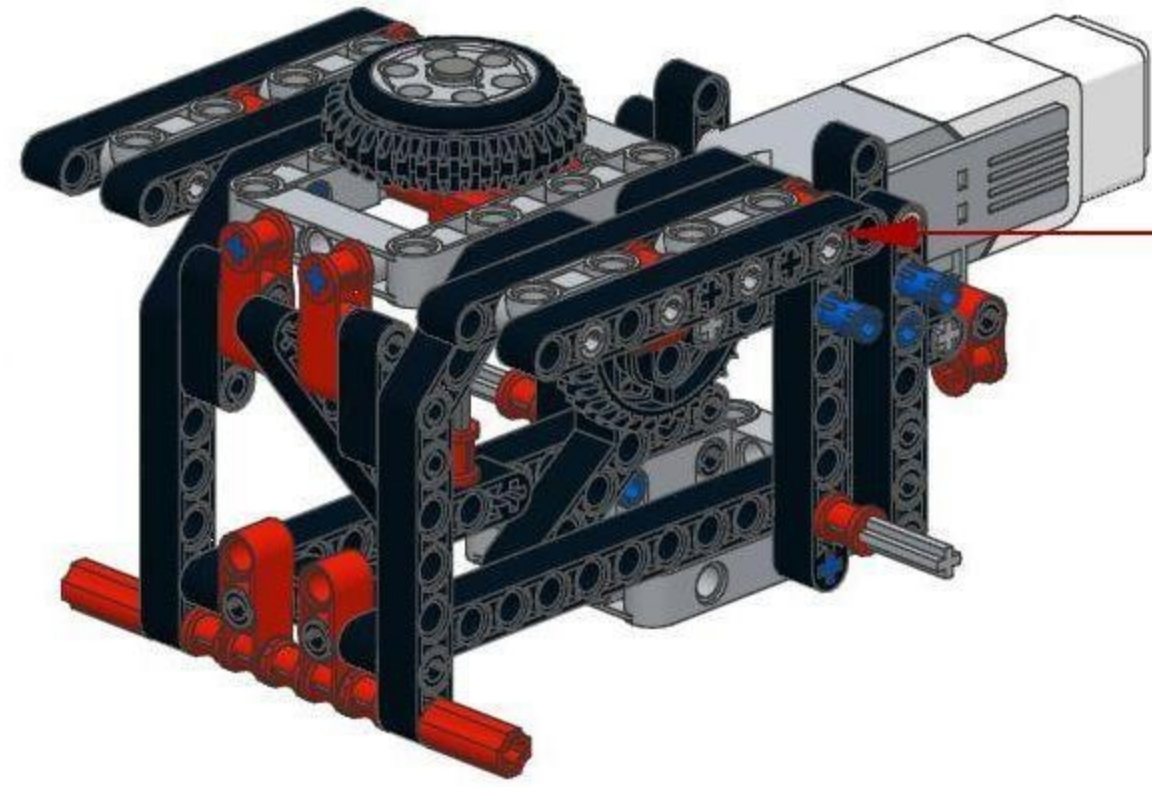


22

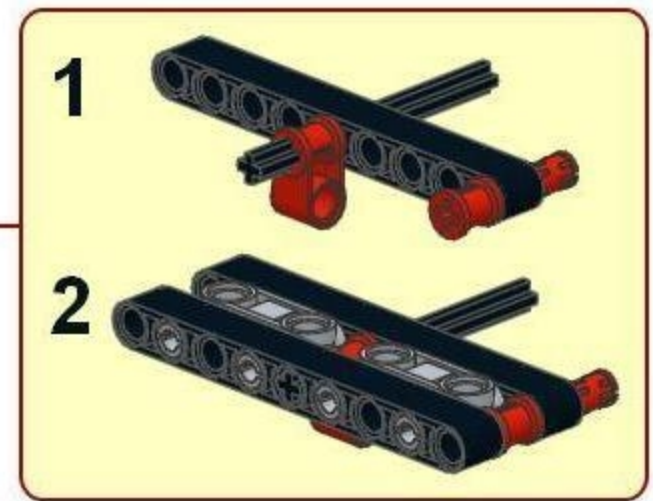
6
1x
2x
9
1x
2x



A light blue rounded rectangle containing a list of parts. At the top left is a long black axle with the number '6' in red above it. Below it is a black 1x9 Technic beam with the number '1x' to its left. To the right of the beam is a red 1x3 Technic connector with the number '9' in red above it. Below the beam is a red 1x3 Technic pin with the number '1x' to its right. To the right of the pin is a grey 1x3 Technic connector with the number '2x' to its right. At the bottom left is a red 1x3 Technic pin with the number '2x' to its left.

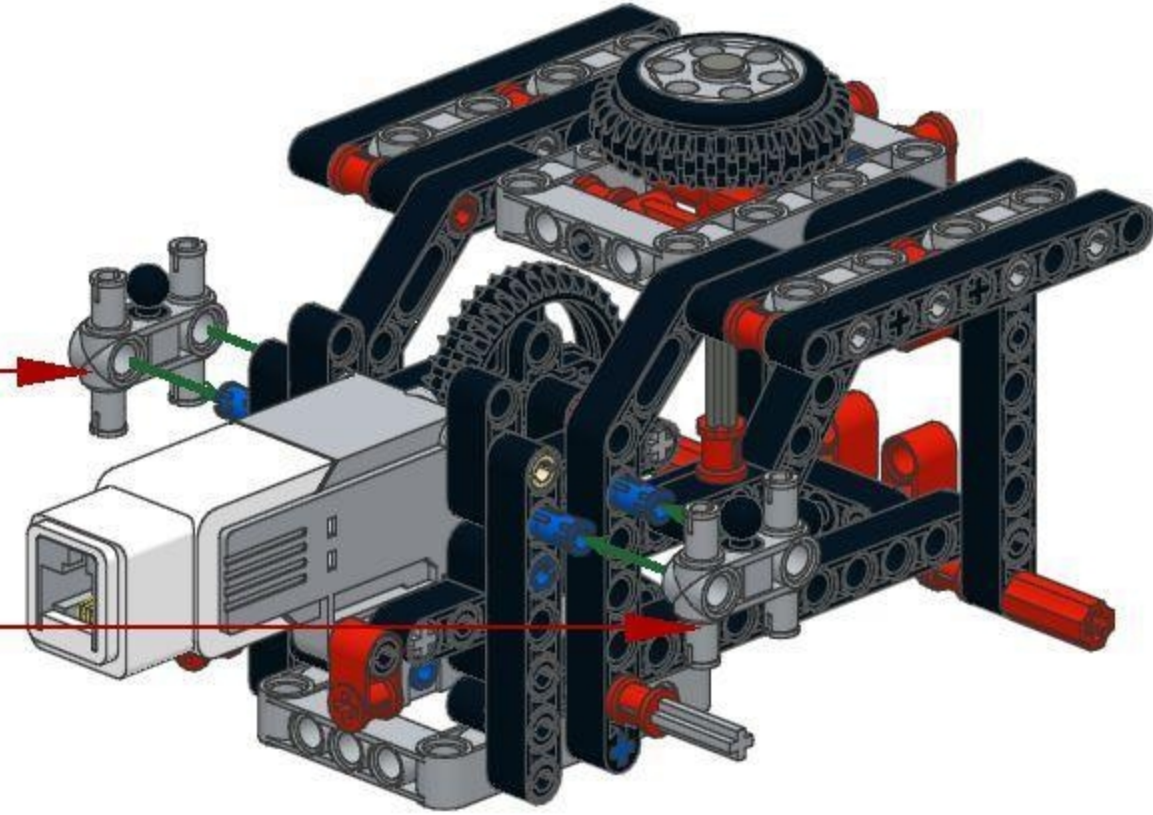


1
2

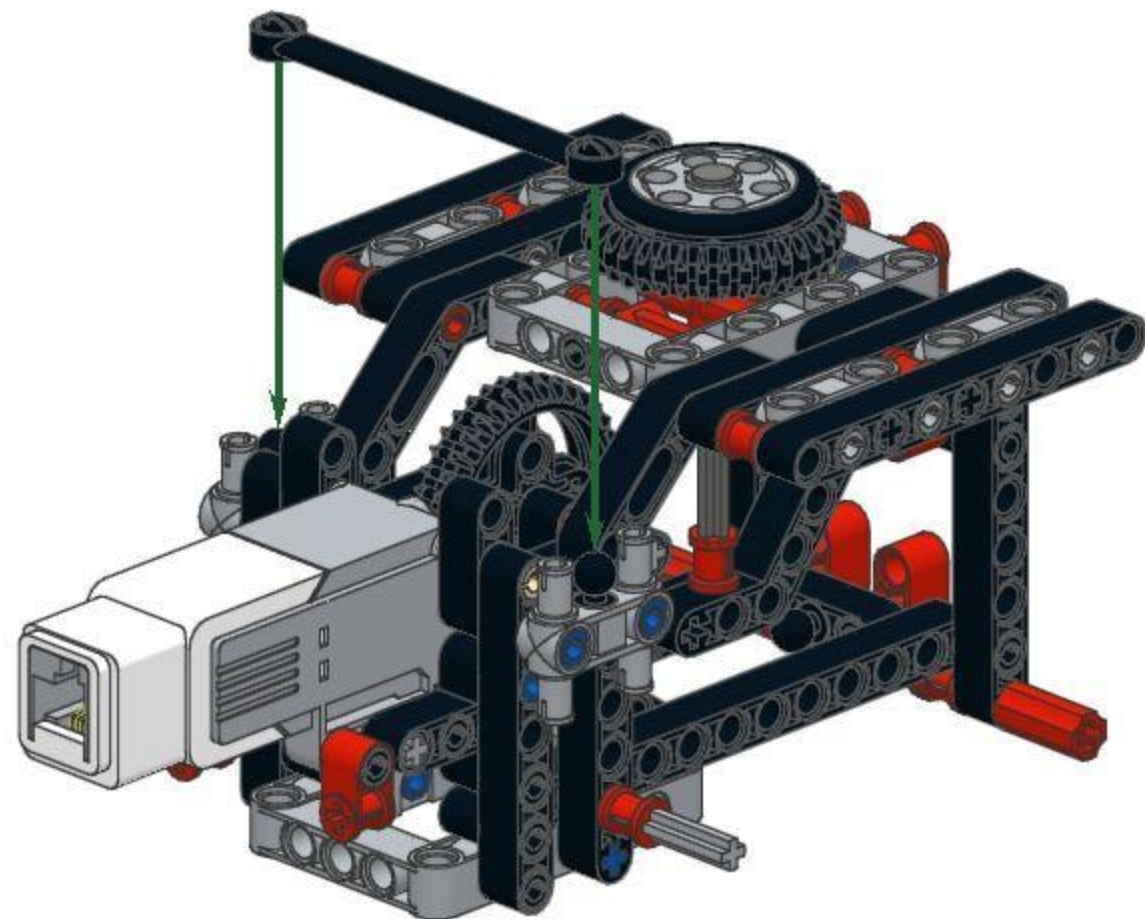


A yellow rounded rectangle containing two sub-diagrams. Diagram 1 shows a black 1x9 Technic beam with a red 1x3 Technic connector and a red 1x3 Technic pin inserted into it. Diagram 2 shows a black 1x9 Technic beam with a red 1x3 Technic pin inserted into it.

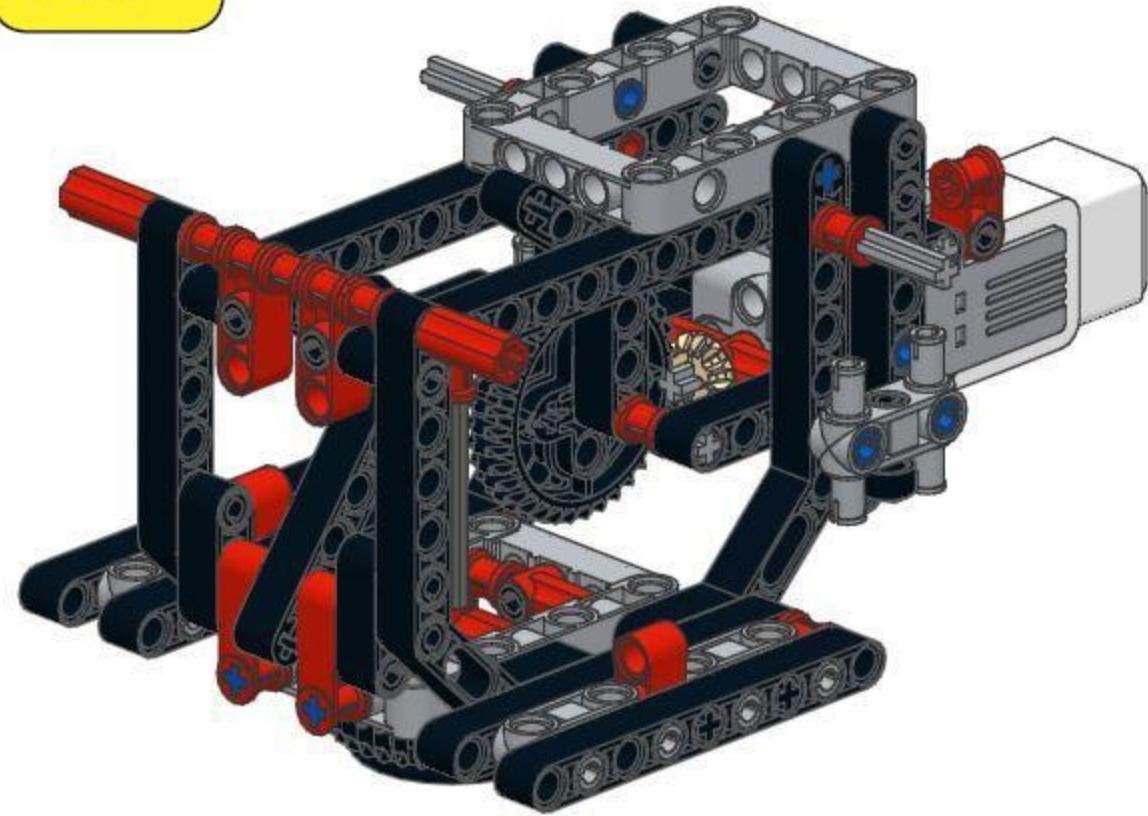
23






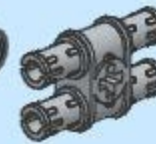


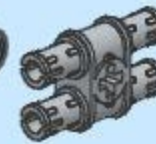
24

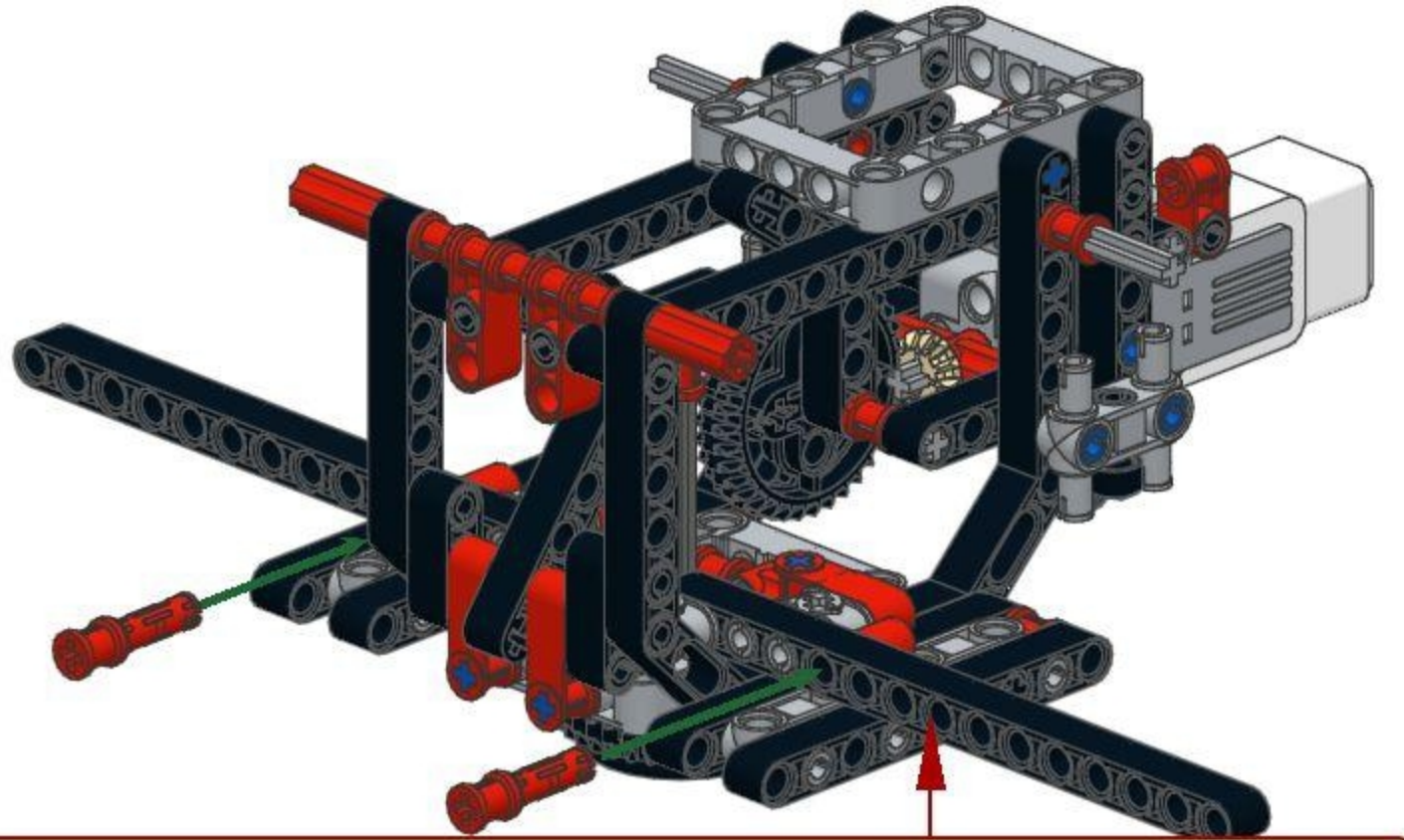








25



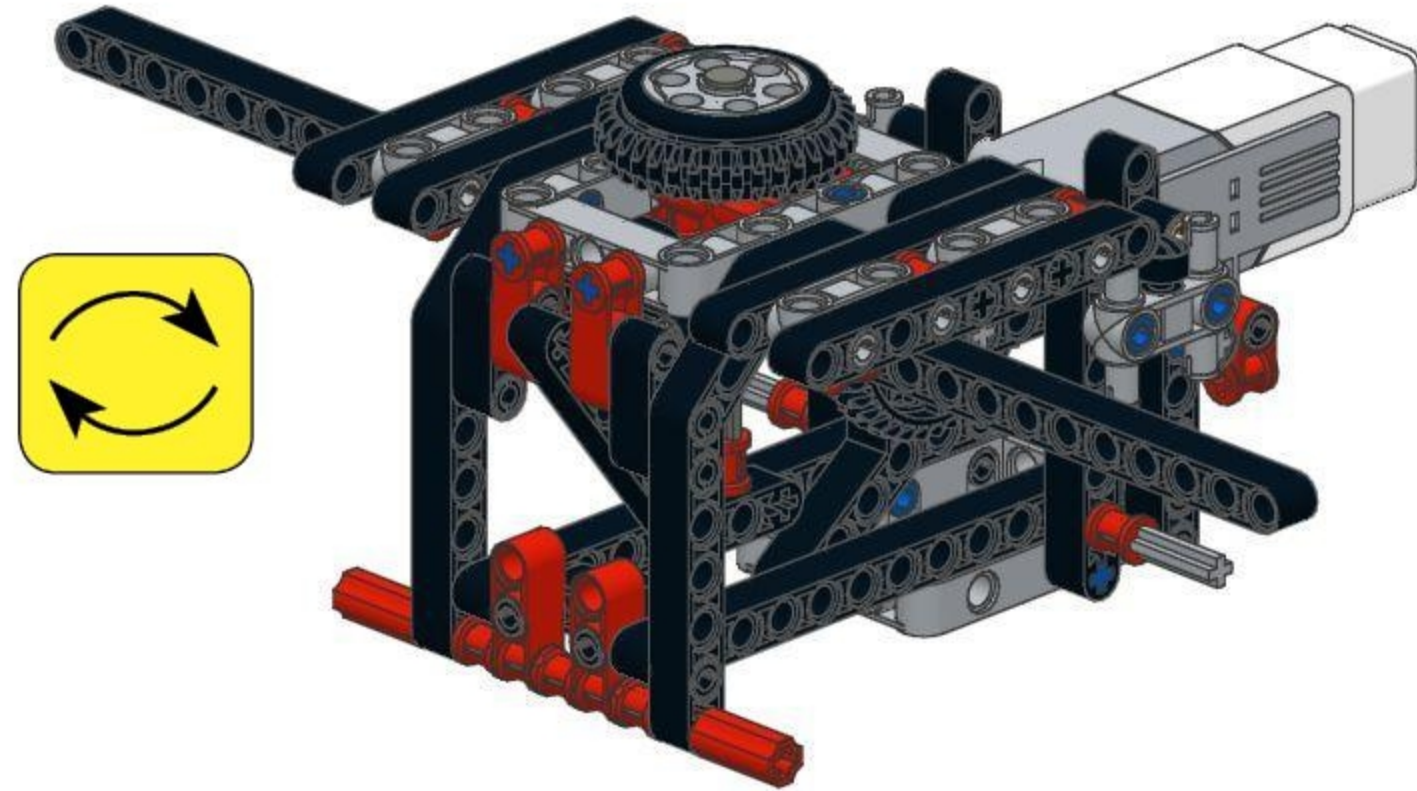
26

2x  15  2x  5  2x  1x  4x 








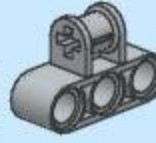


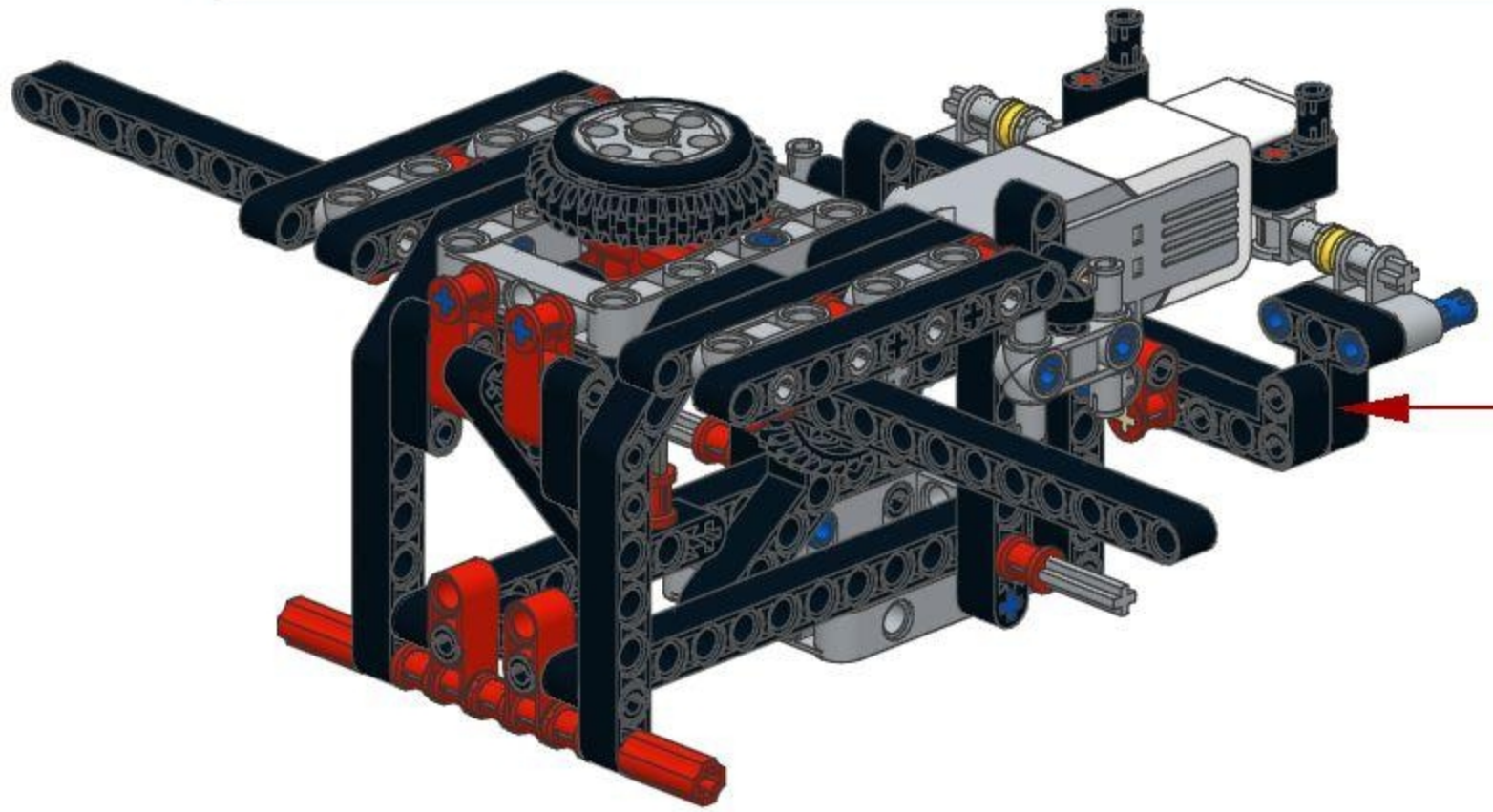
1  2   3   

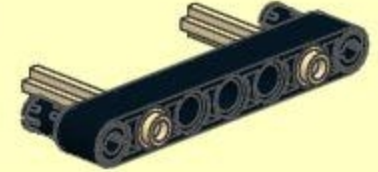
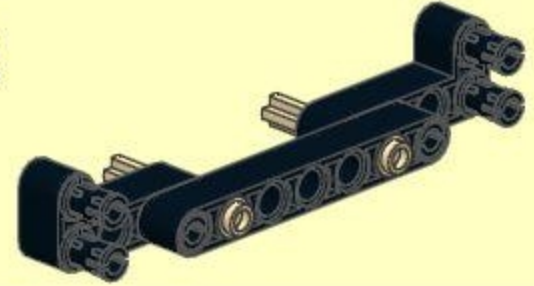
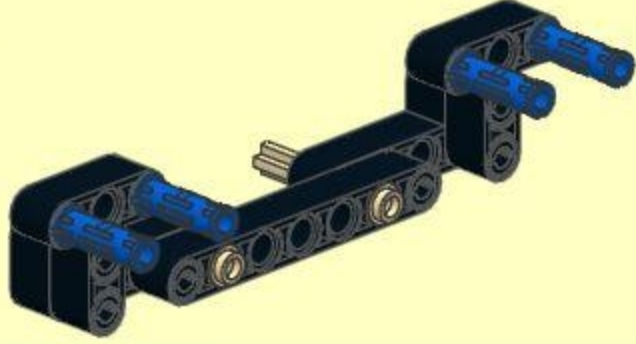
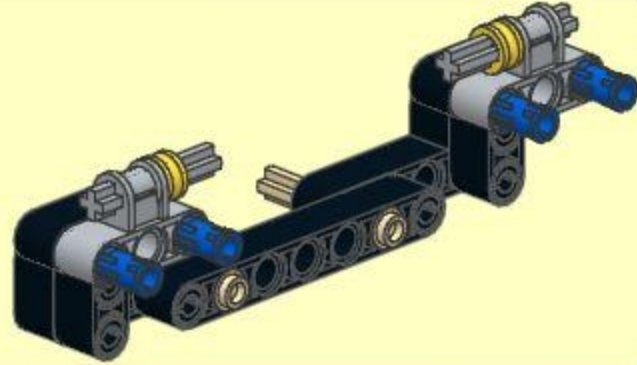
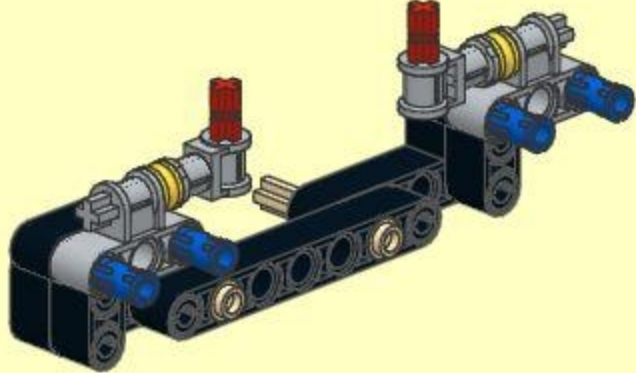
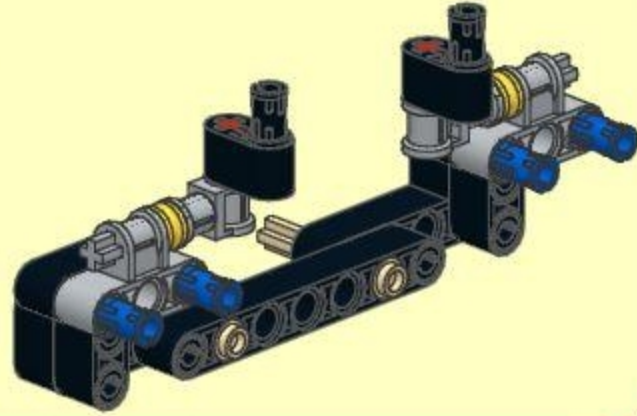
27



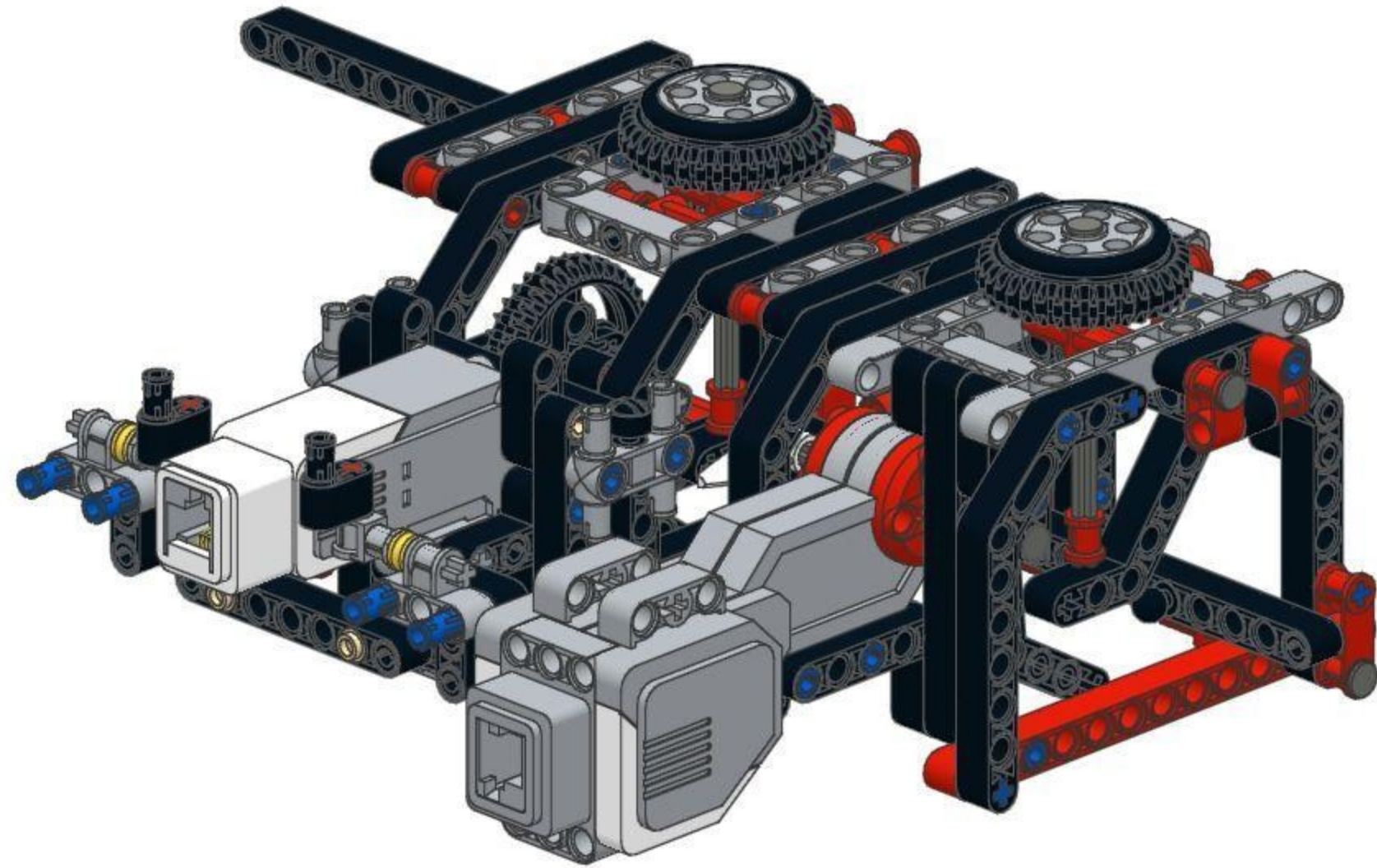
28

							
4x	7	2x	2x				
				3	3	2	2x
1x	2x	2x	2x	2x	2x	2x	8x



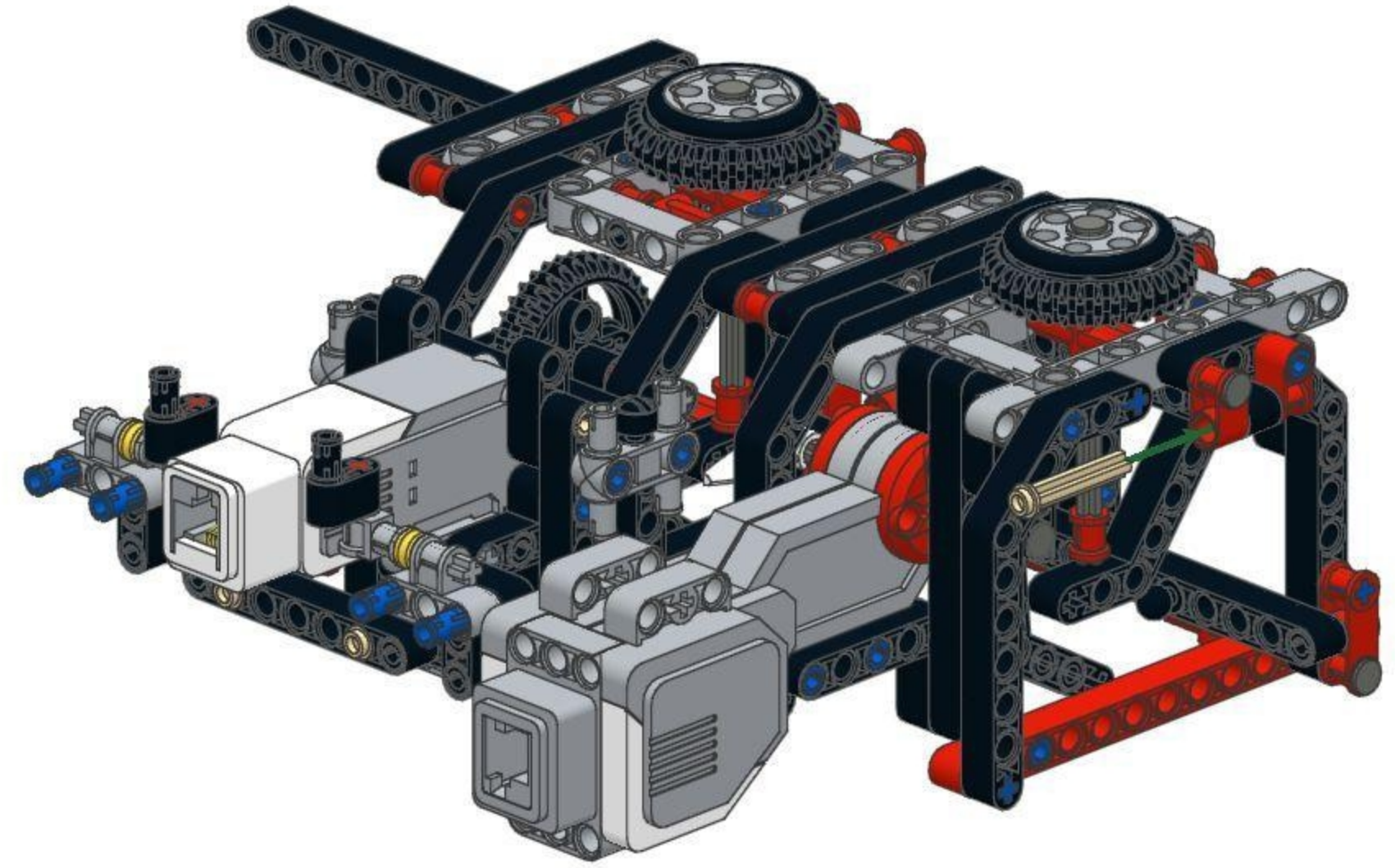
1		2	
3		4	
5		6	

2

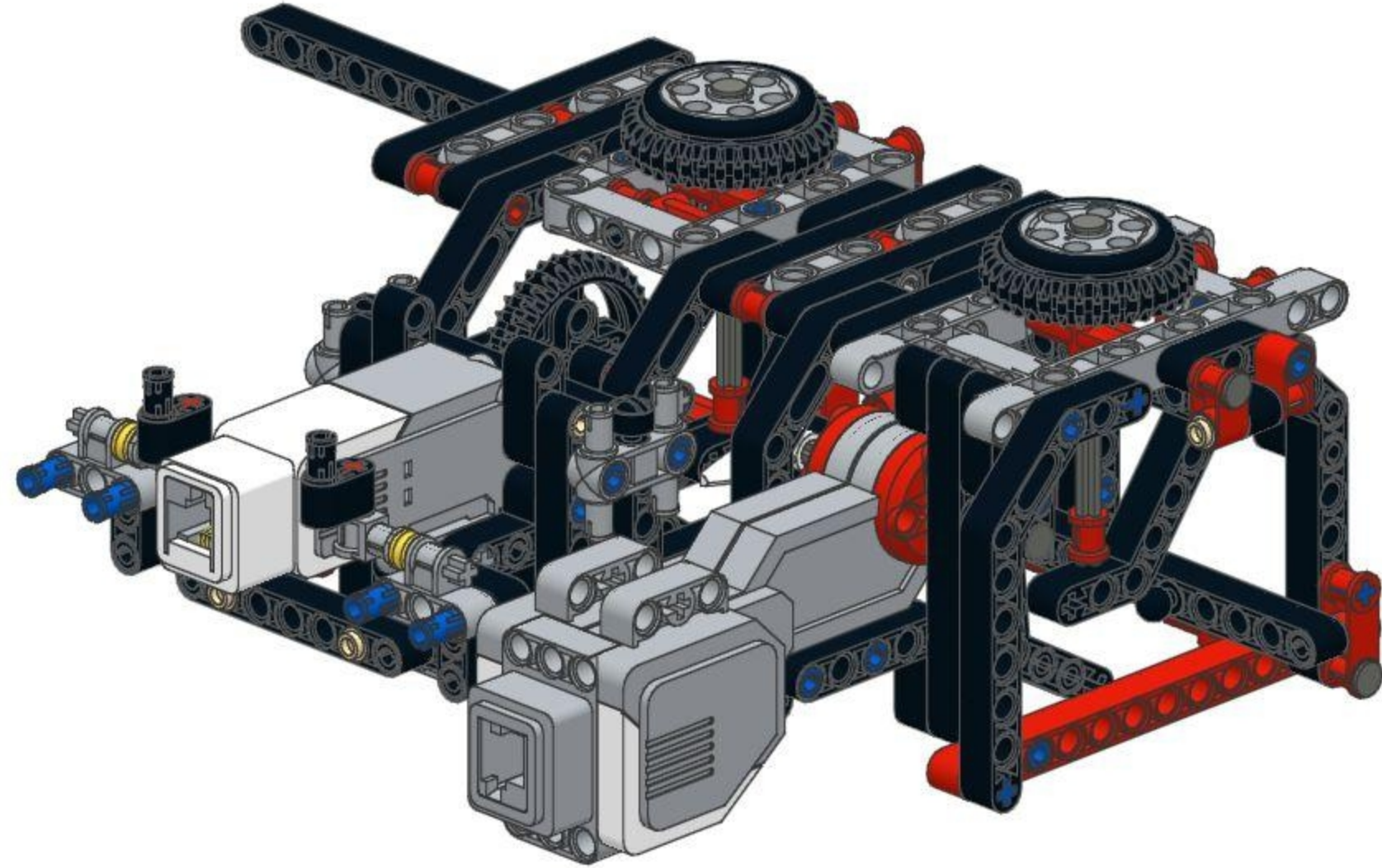


3

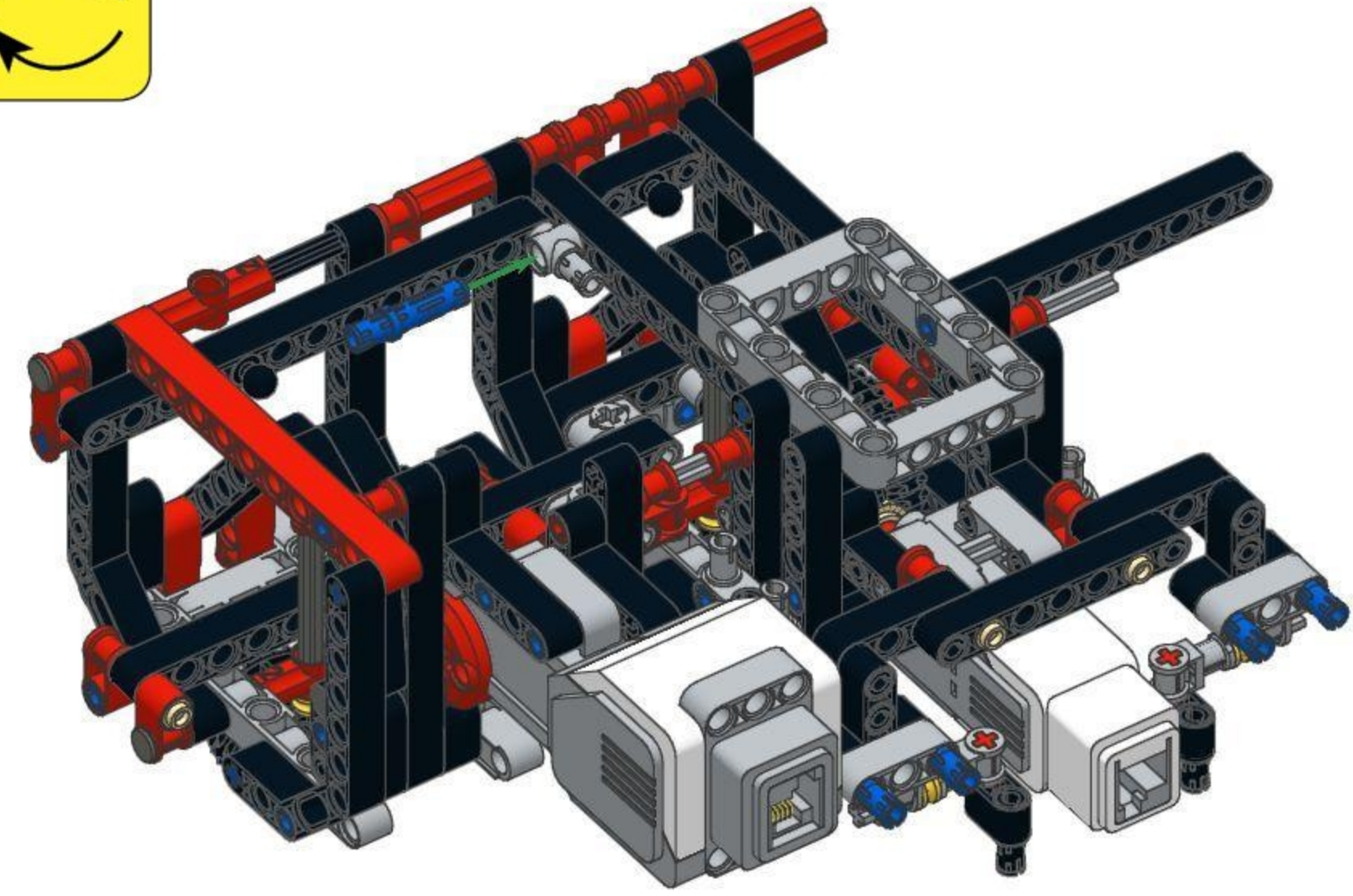
3
1x



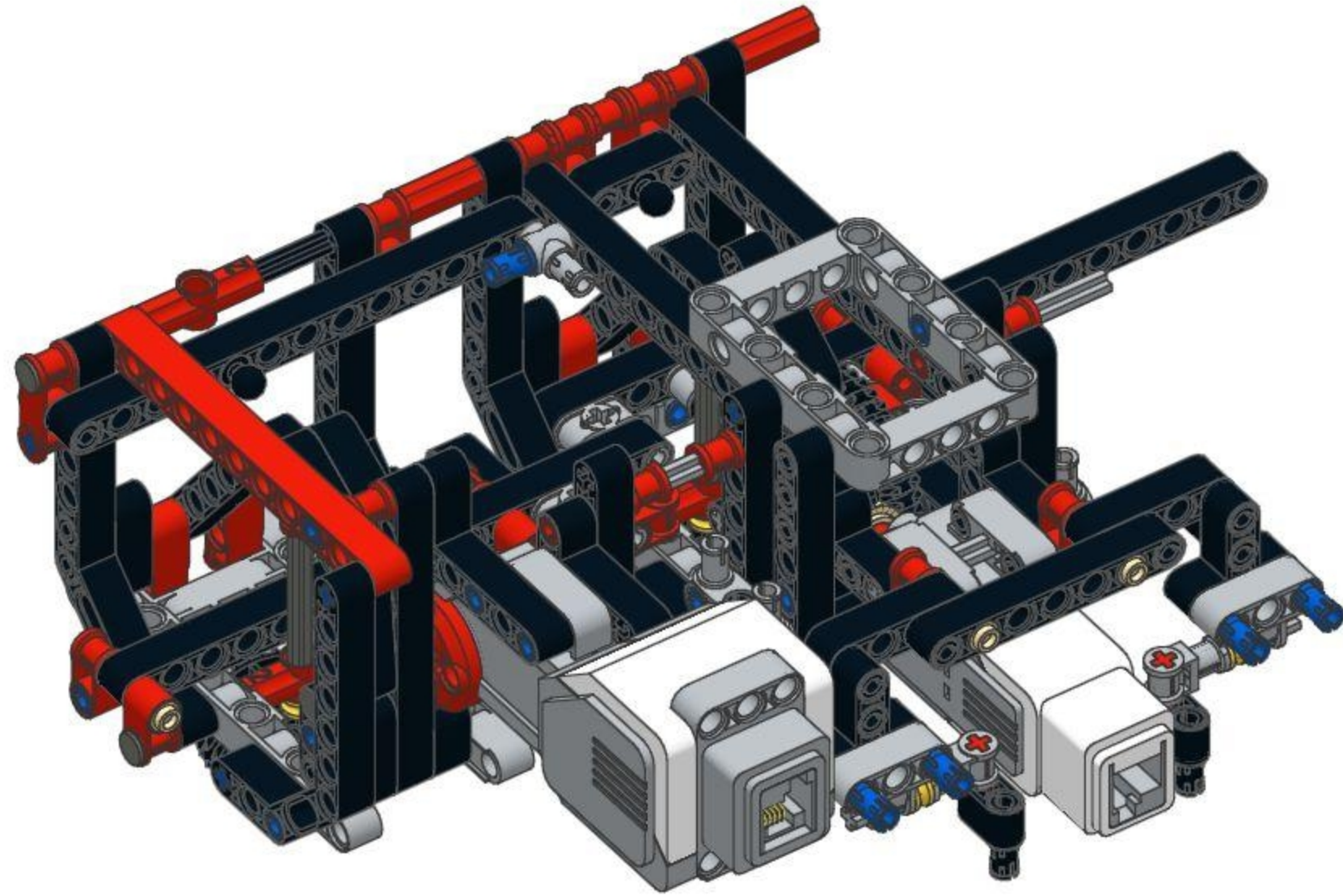
4



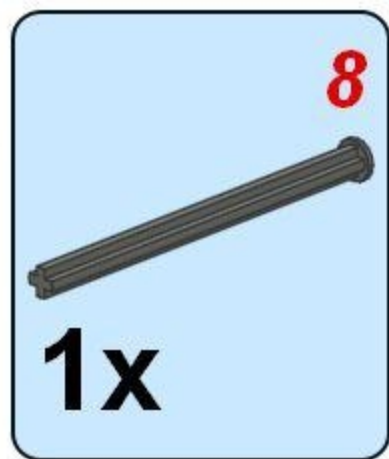
5



6



1

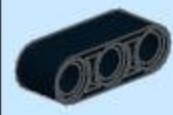


2



3

3



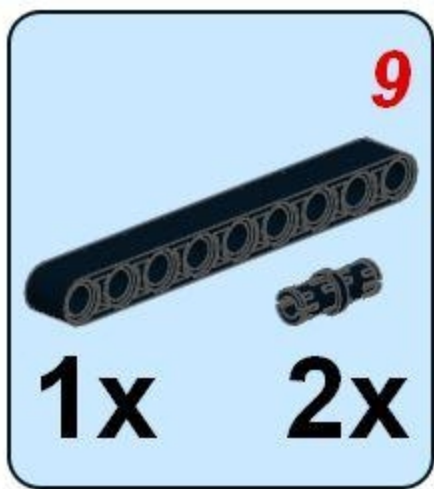
1x



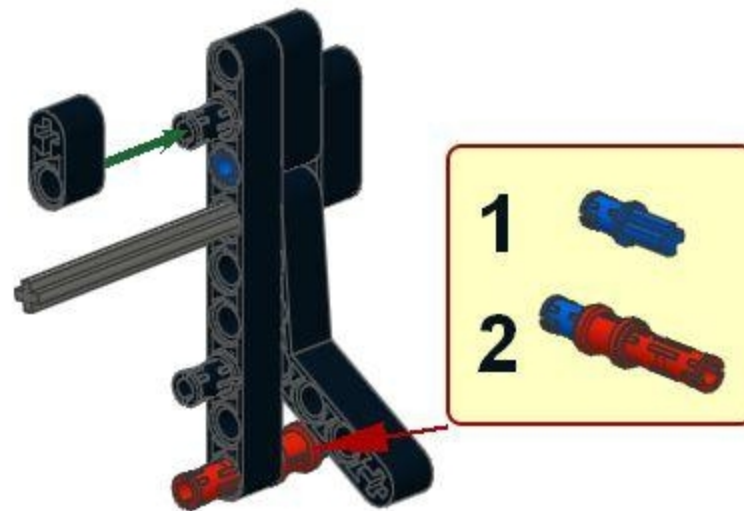
1x

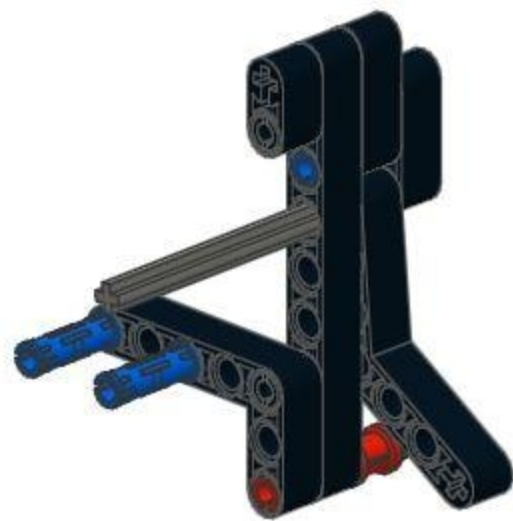
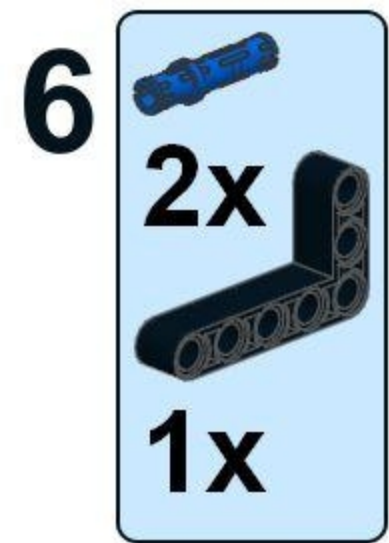


4

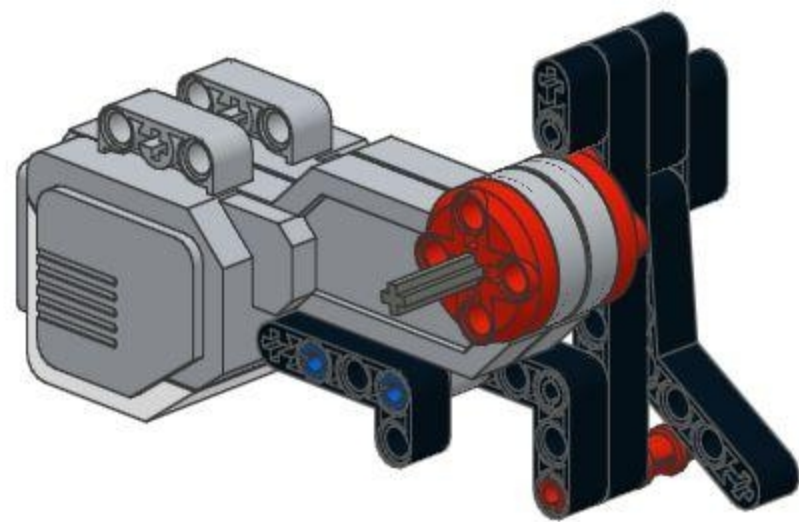
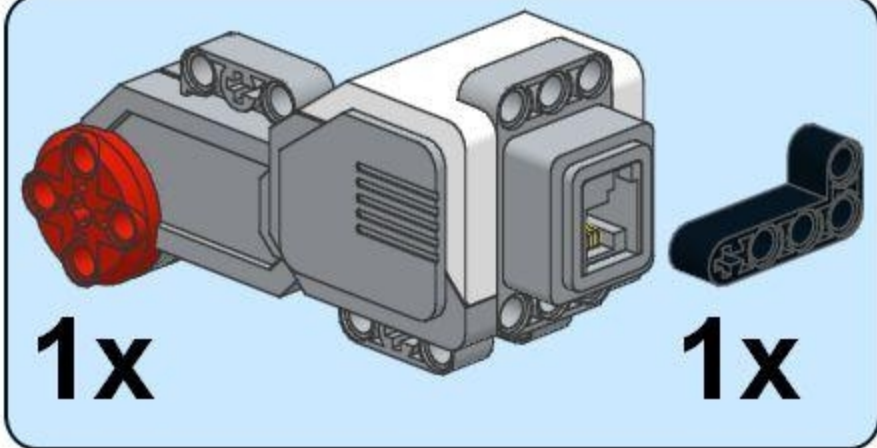


5





7

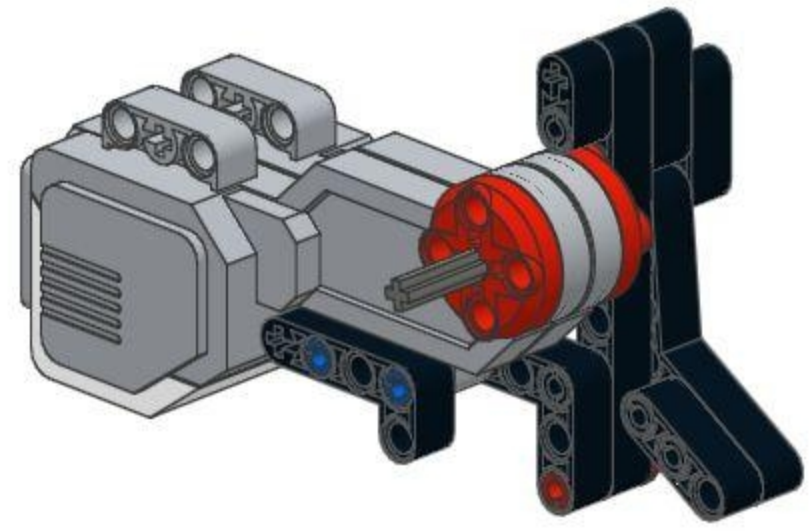


8

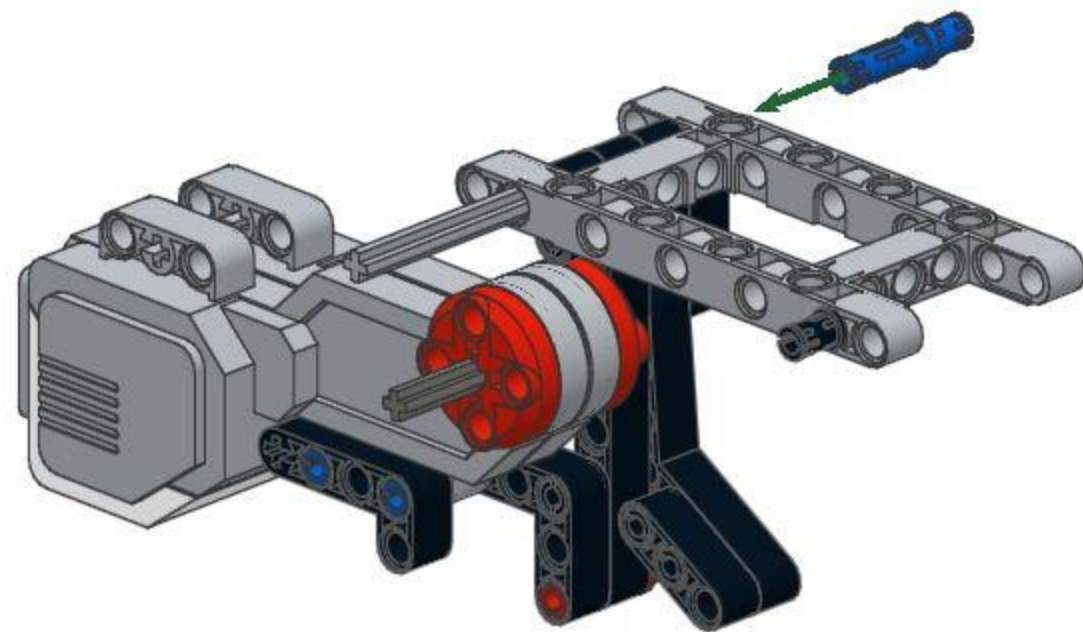
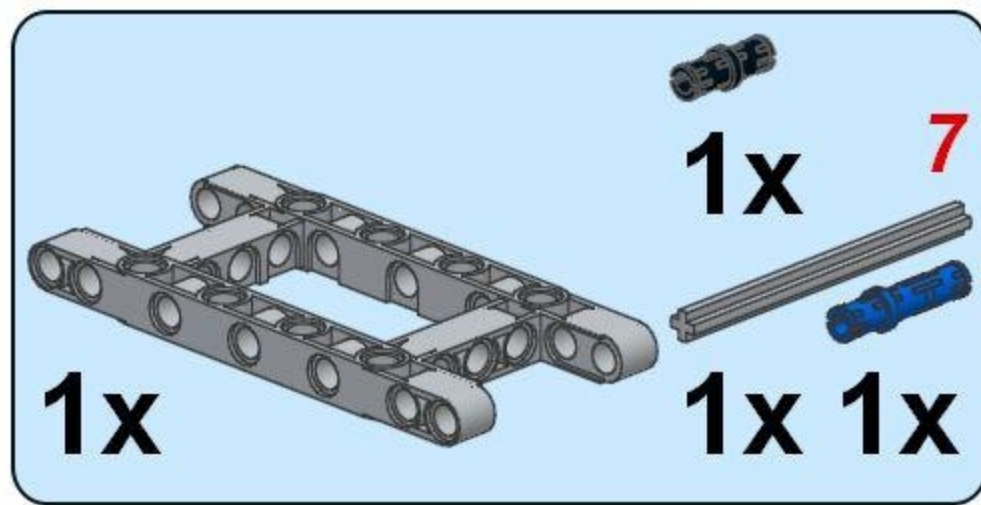
3



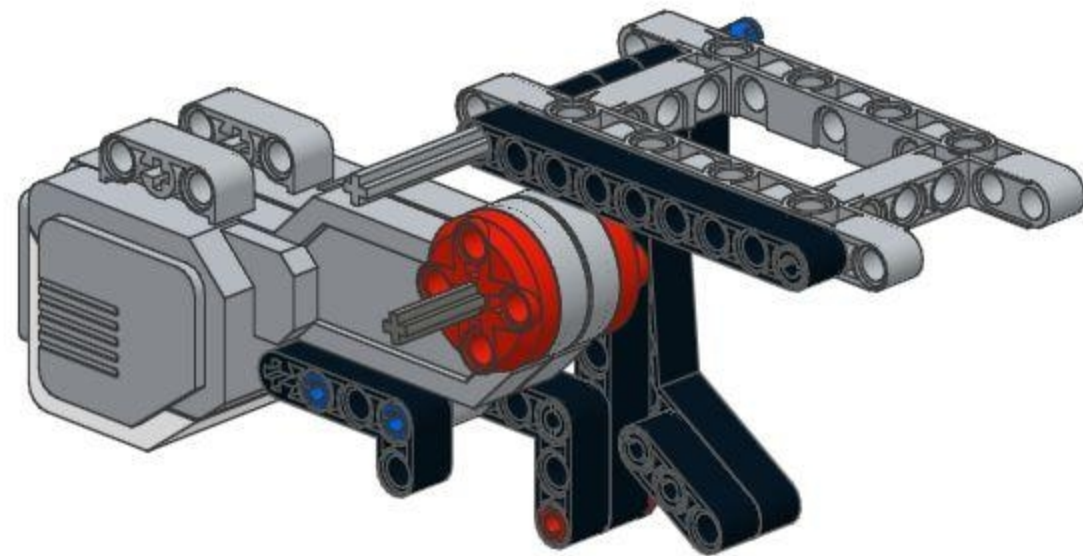
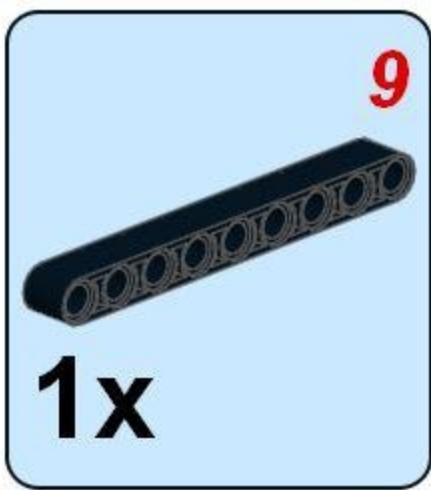
1x 2x



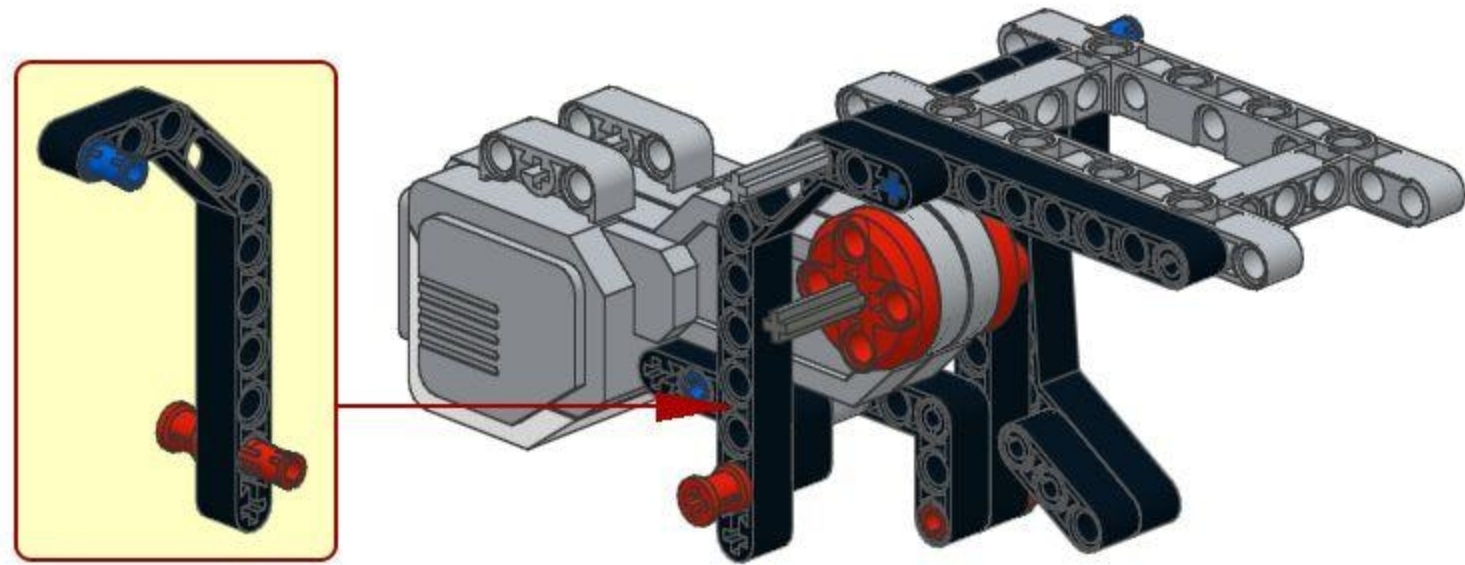
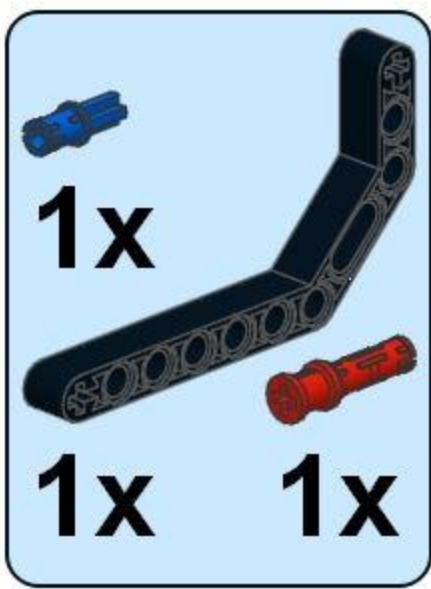
9




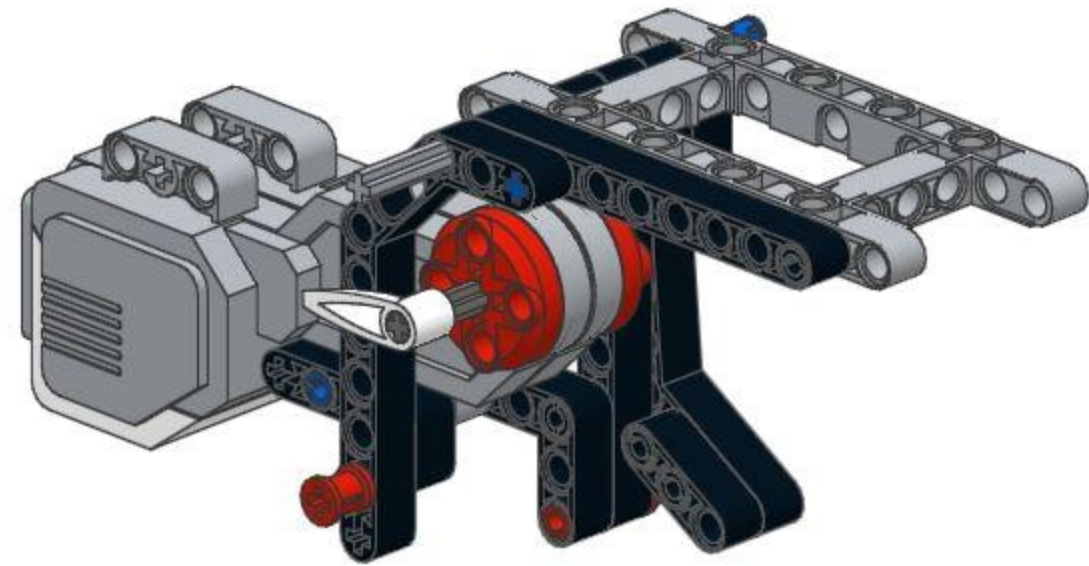
10



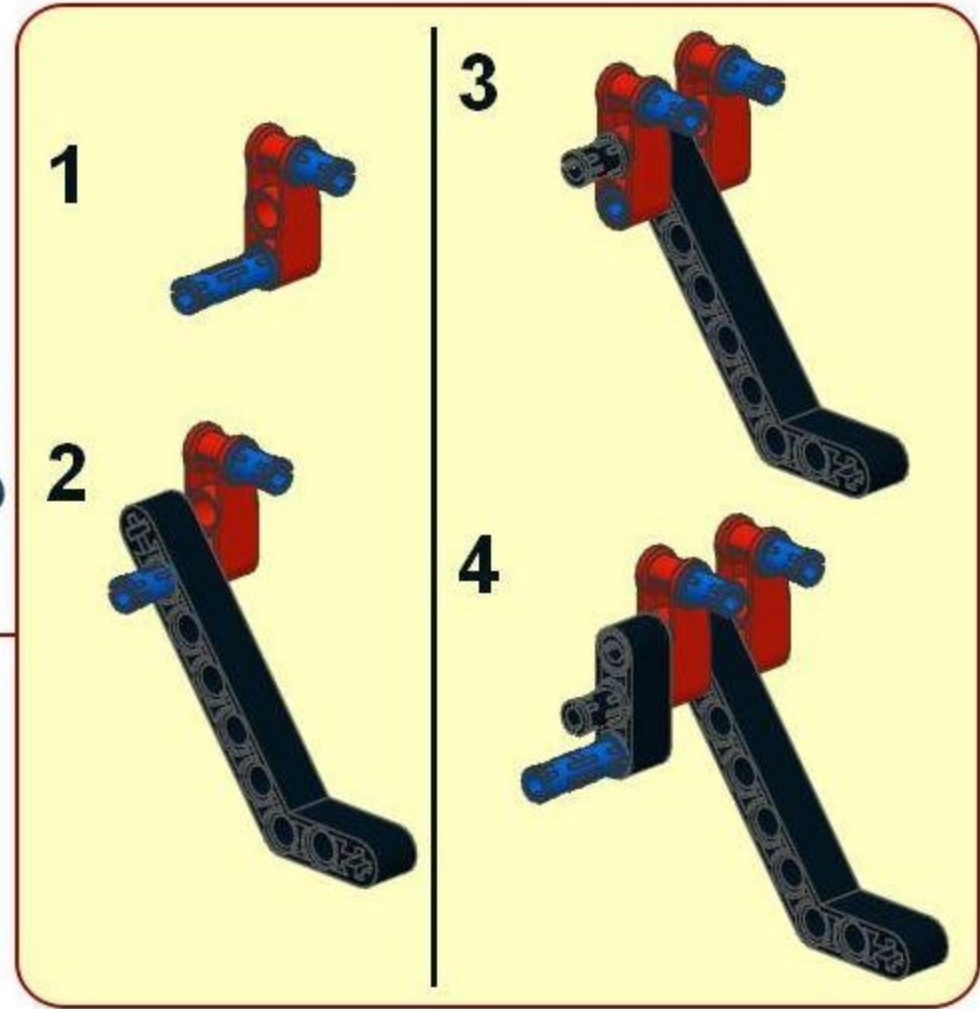
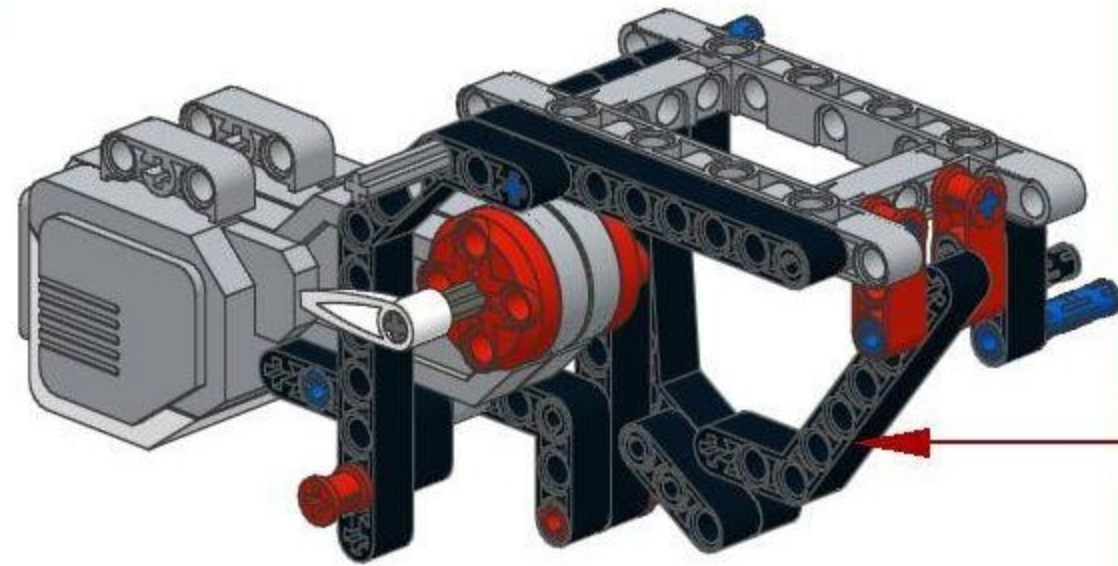
11







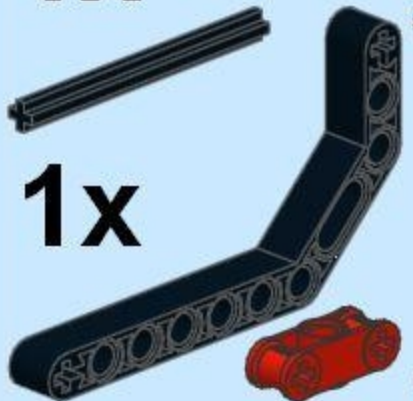



12 
1x

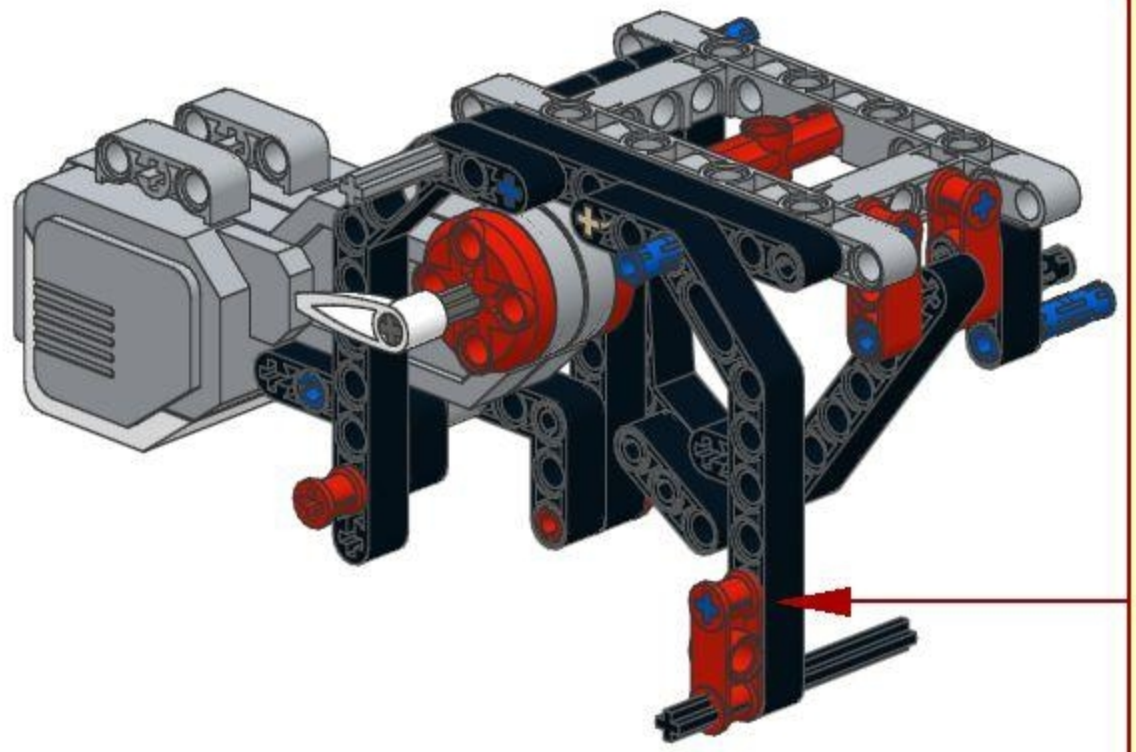









13



14

	
1x	1x
	
6	1x
	
1x	4
	
1x	1x
	
1x	1x

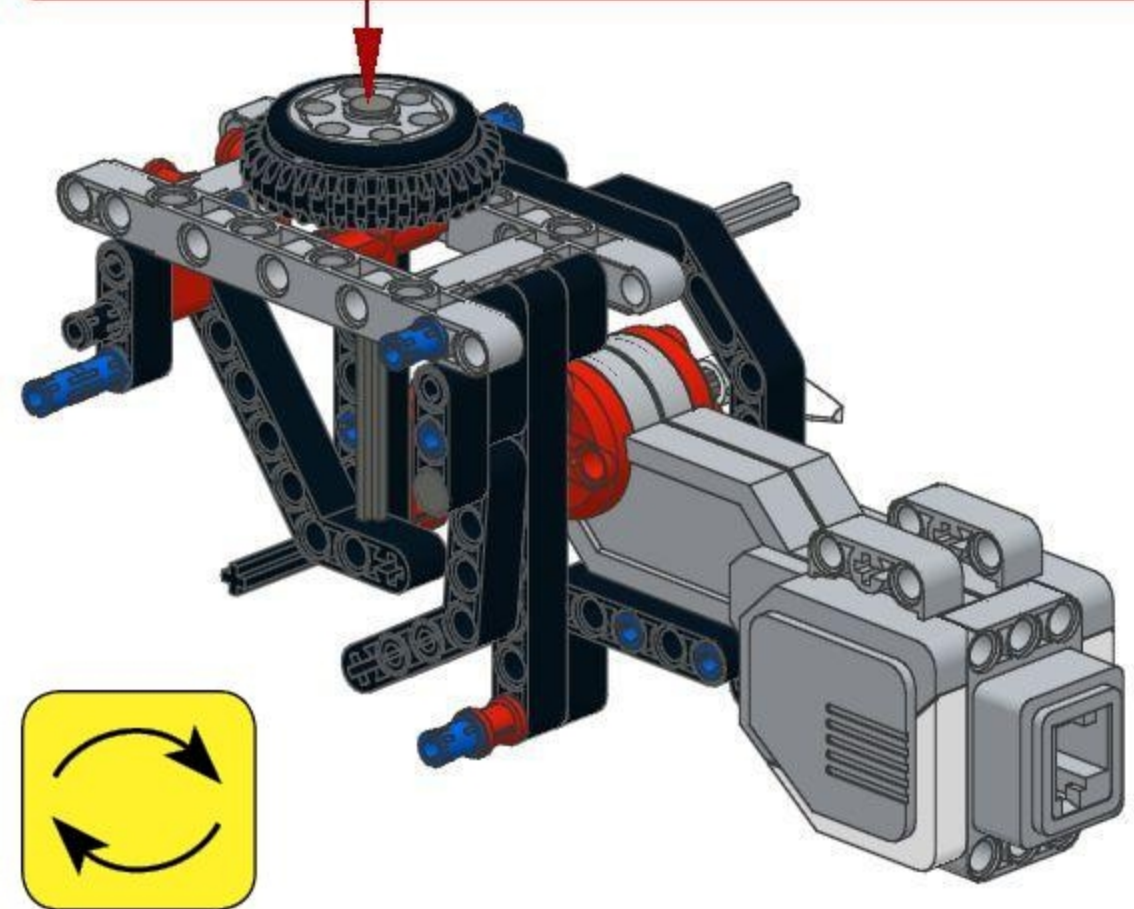



1	
	
2	
	
	
	
	


15

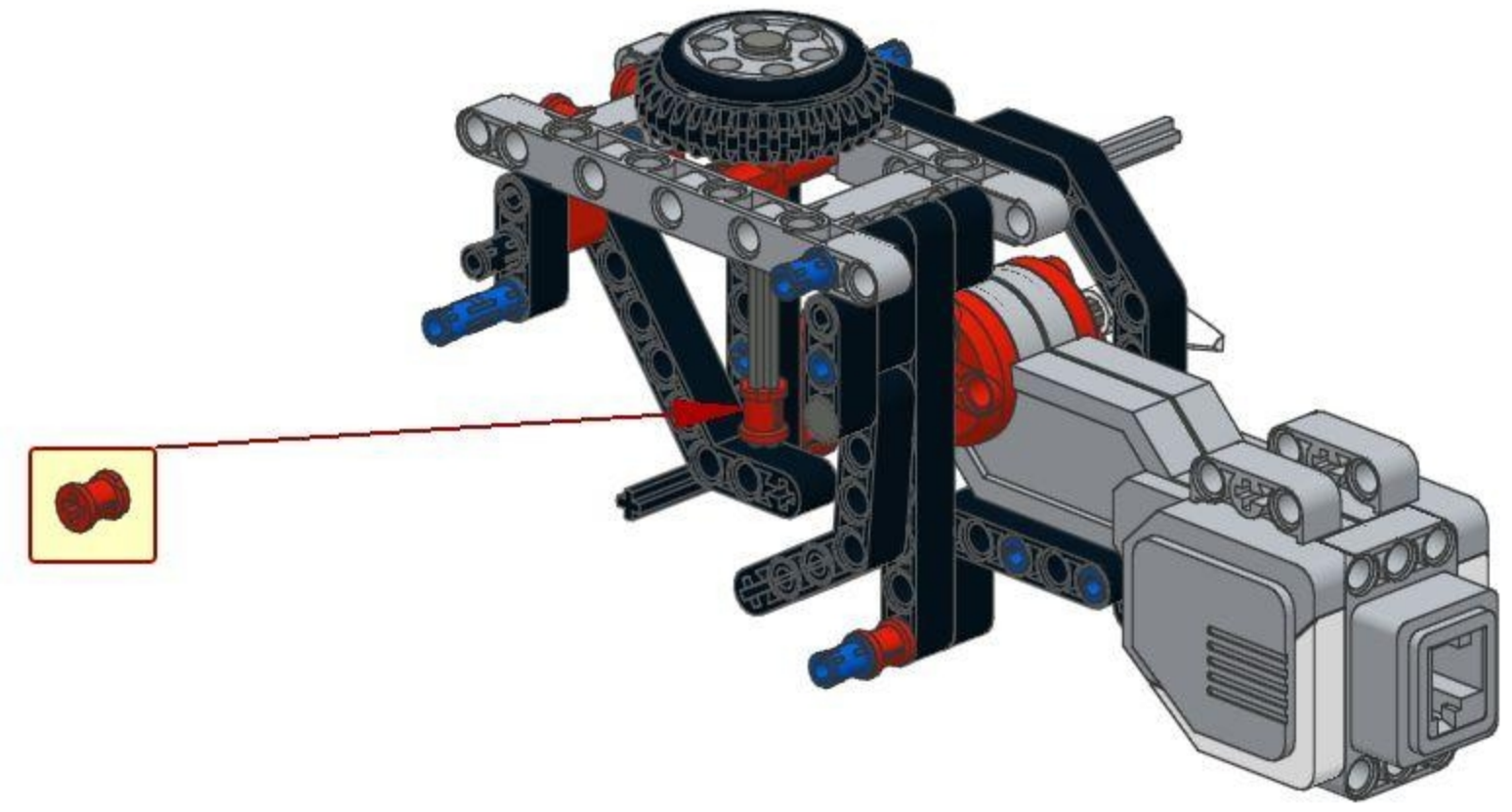
1x  1x 
1x  8 
1x  1x  1x

1  2  3 

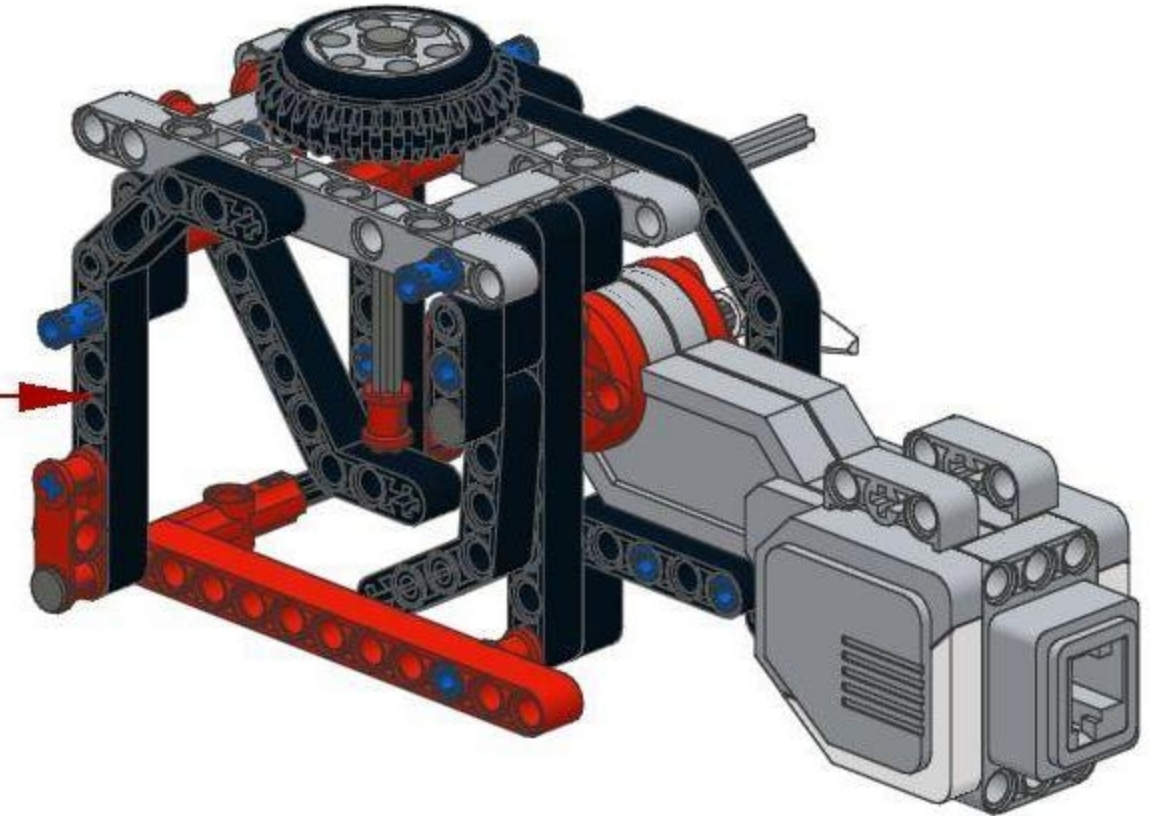
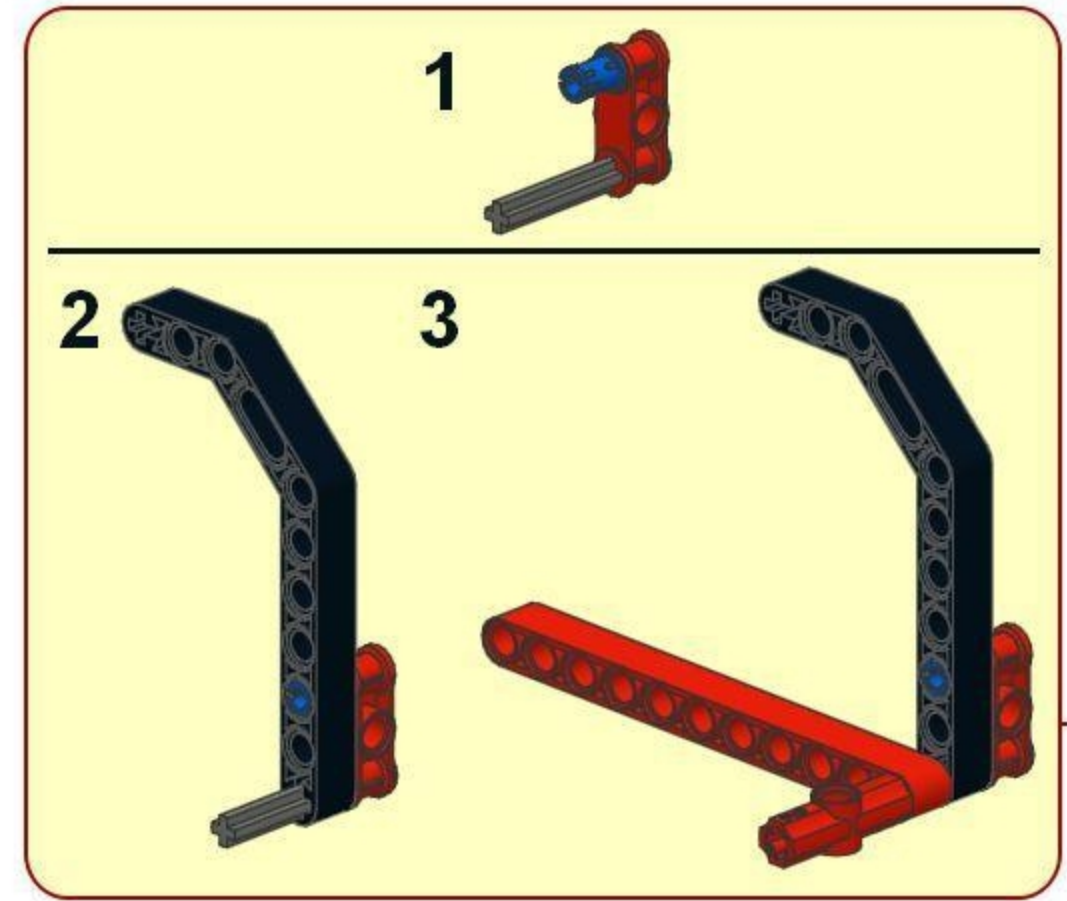
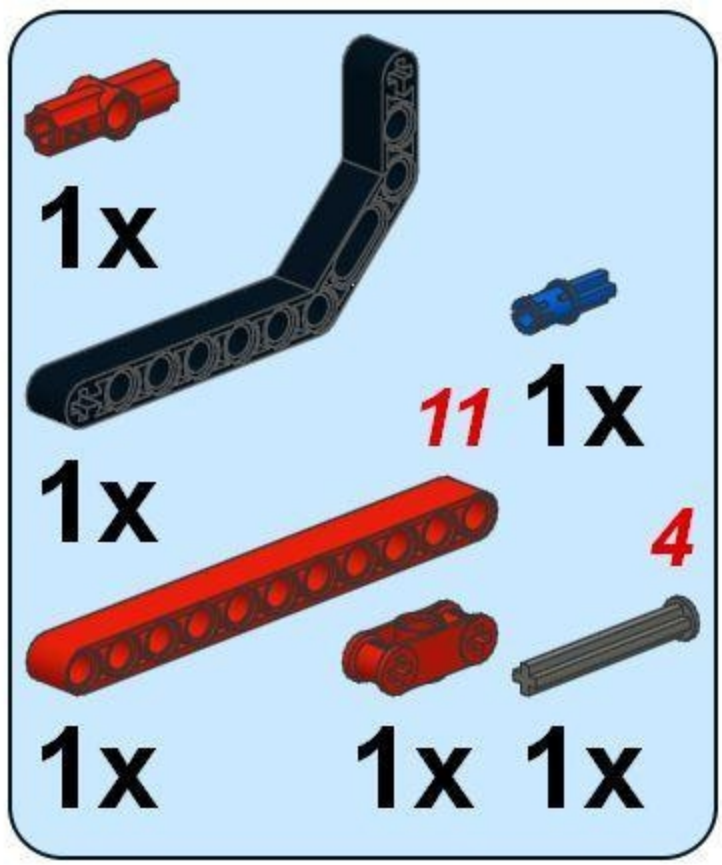




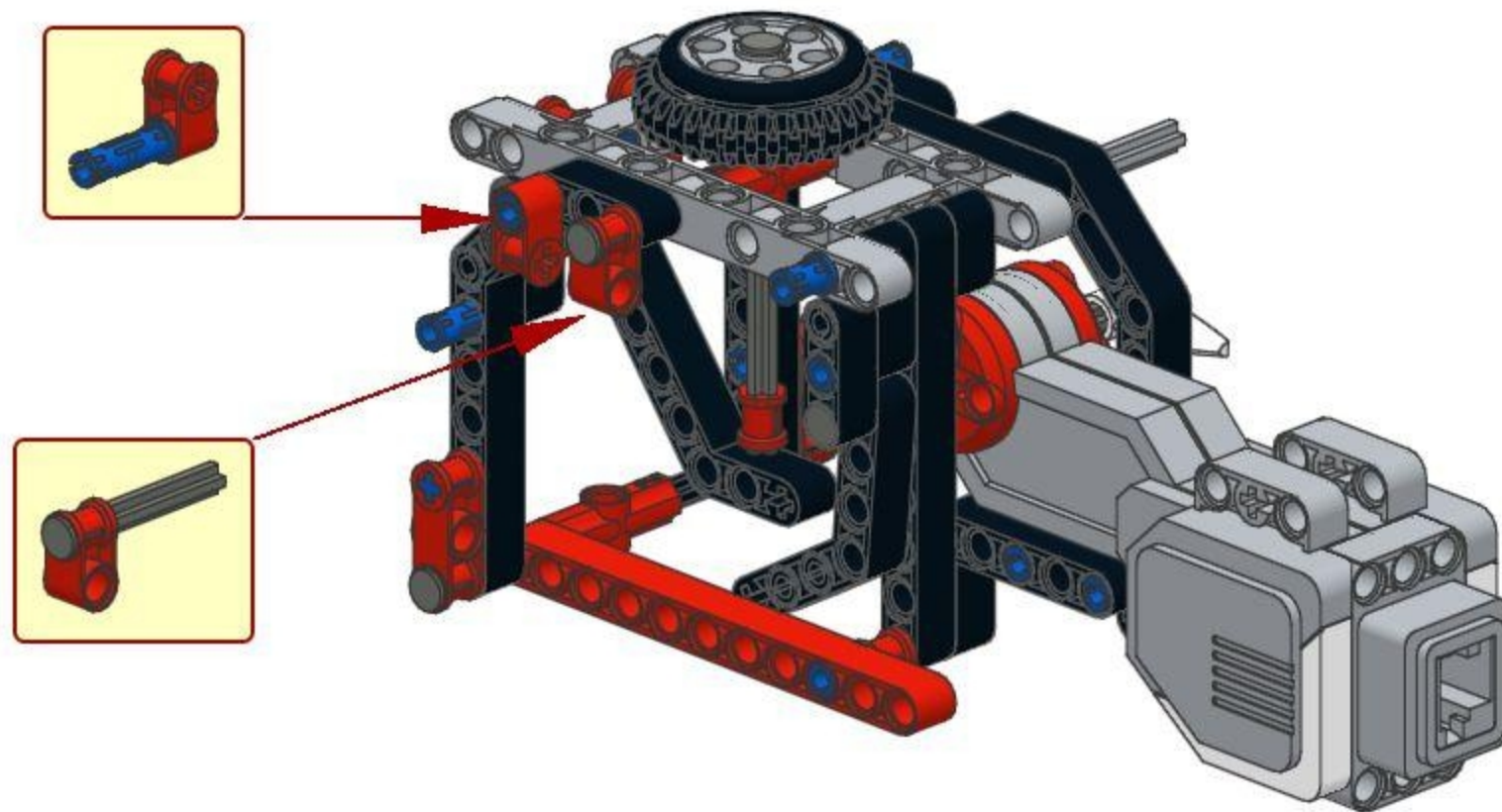
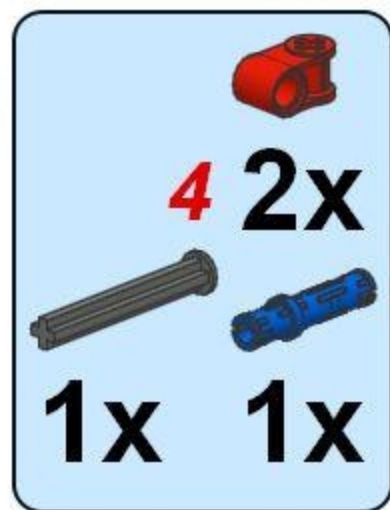
16  1x



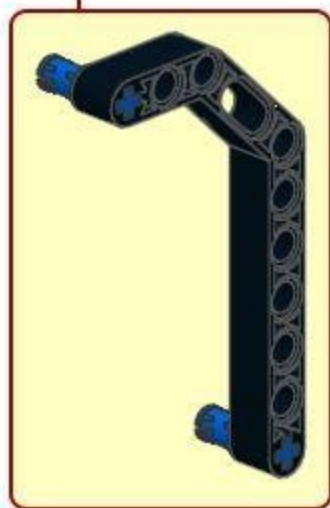
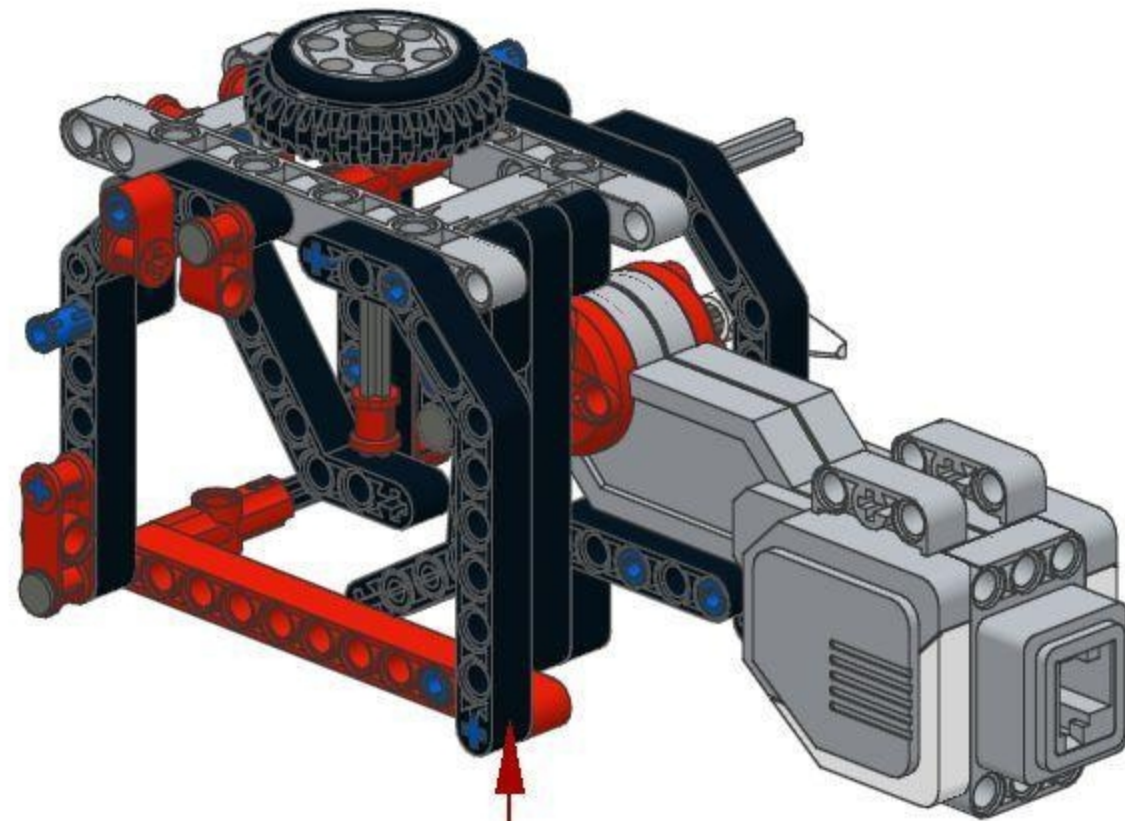
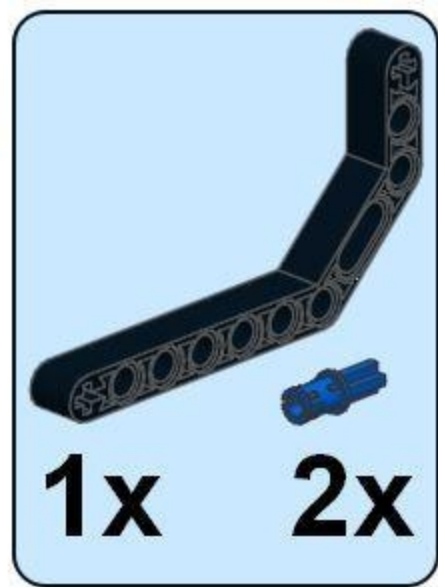
17



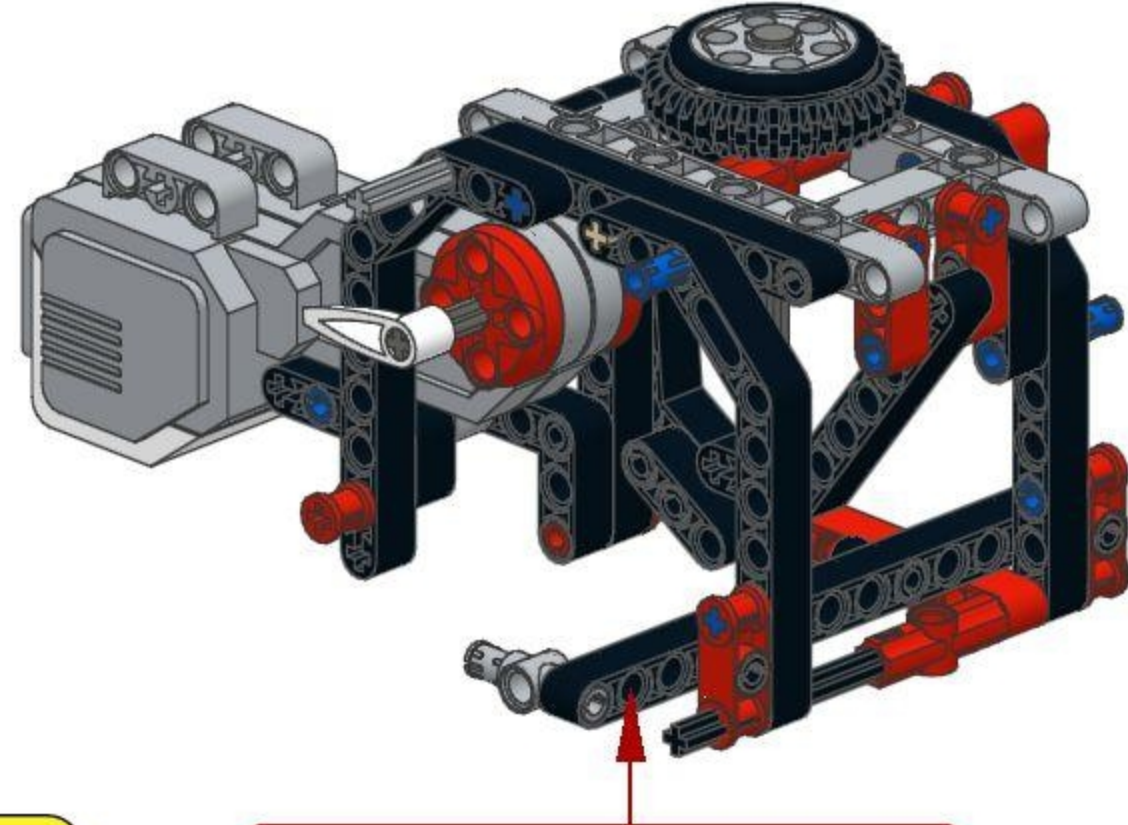
18



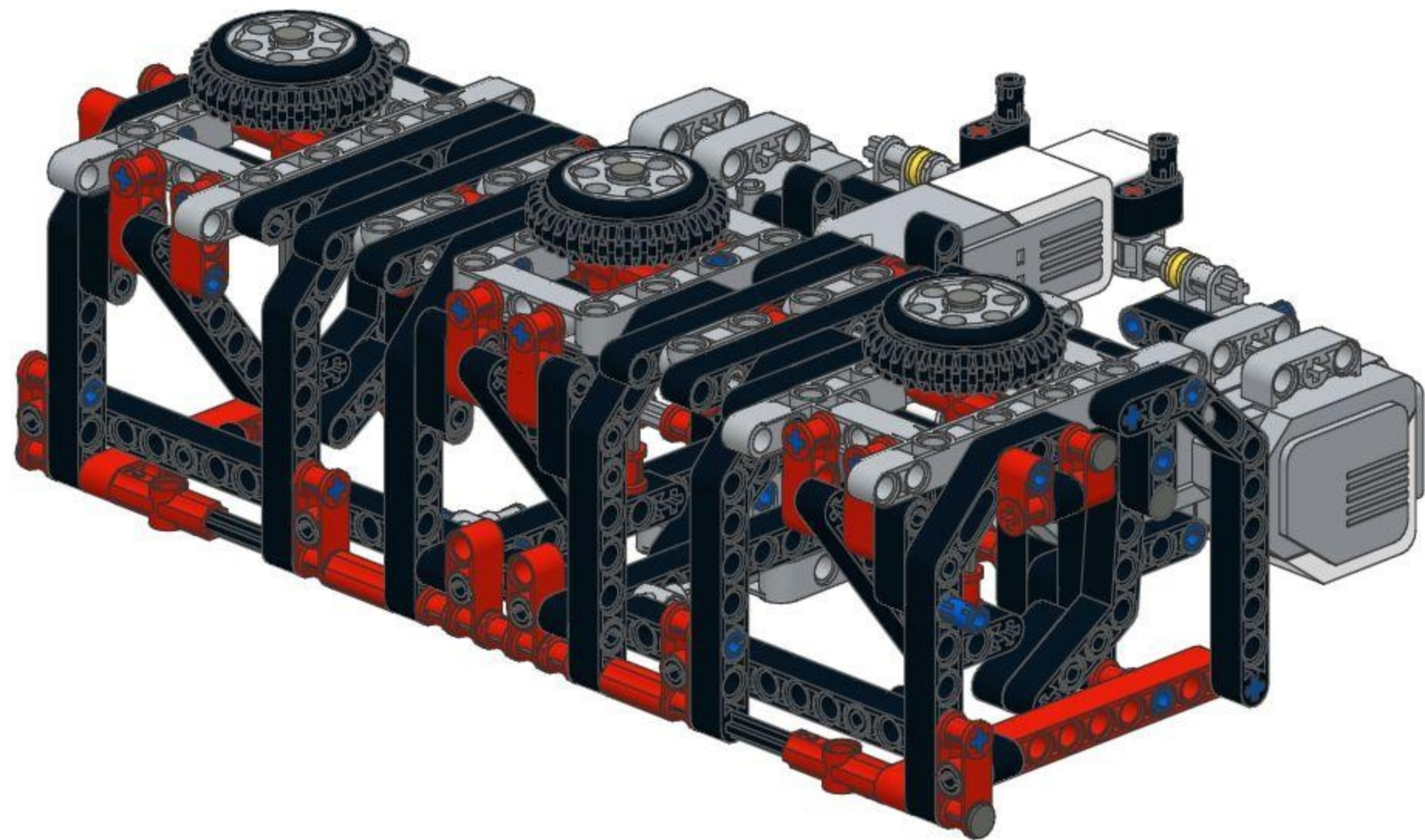
19



20

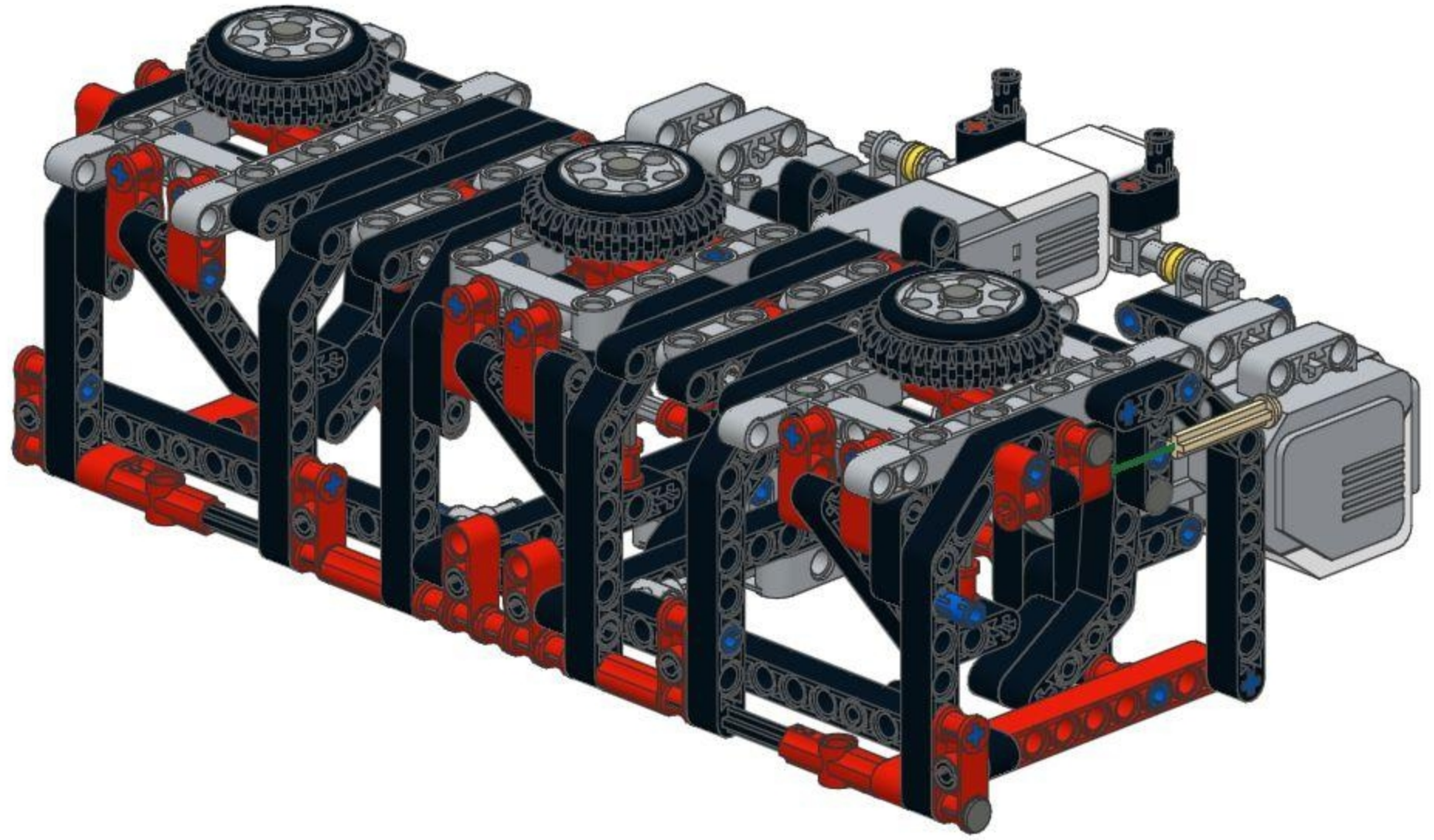


7

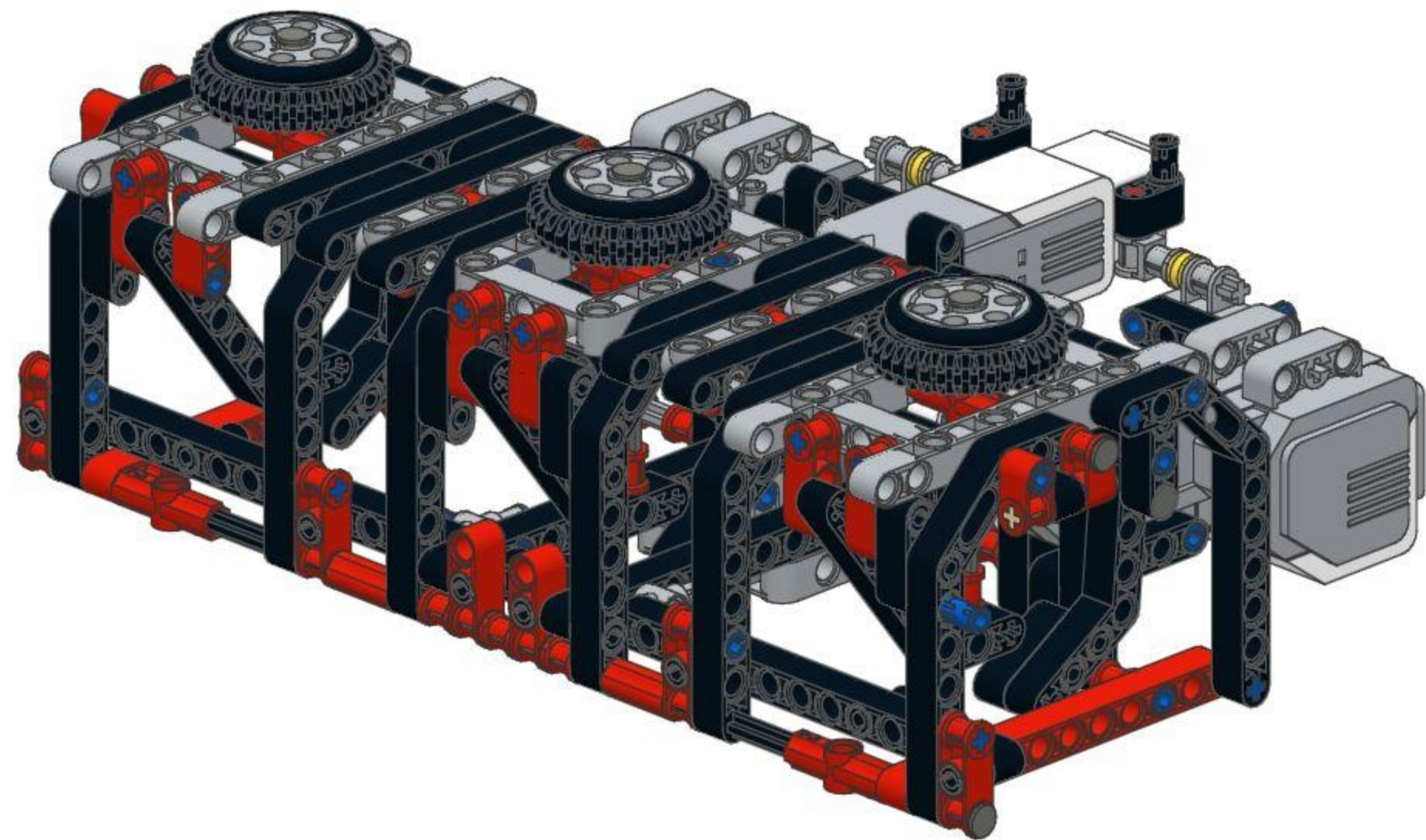



8

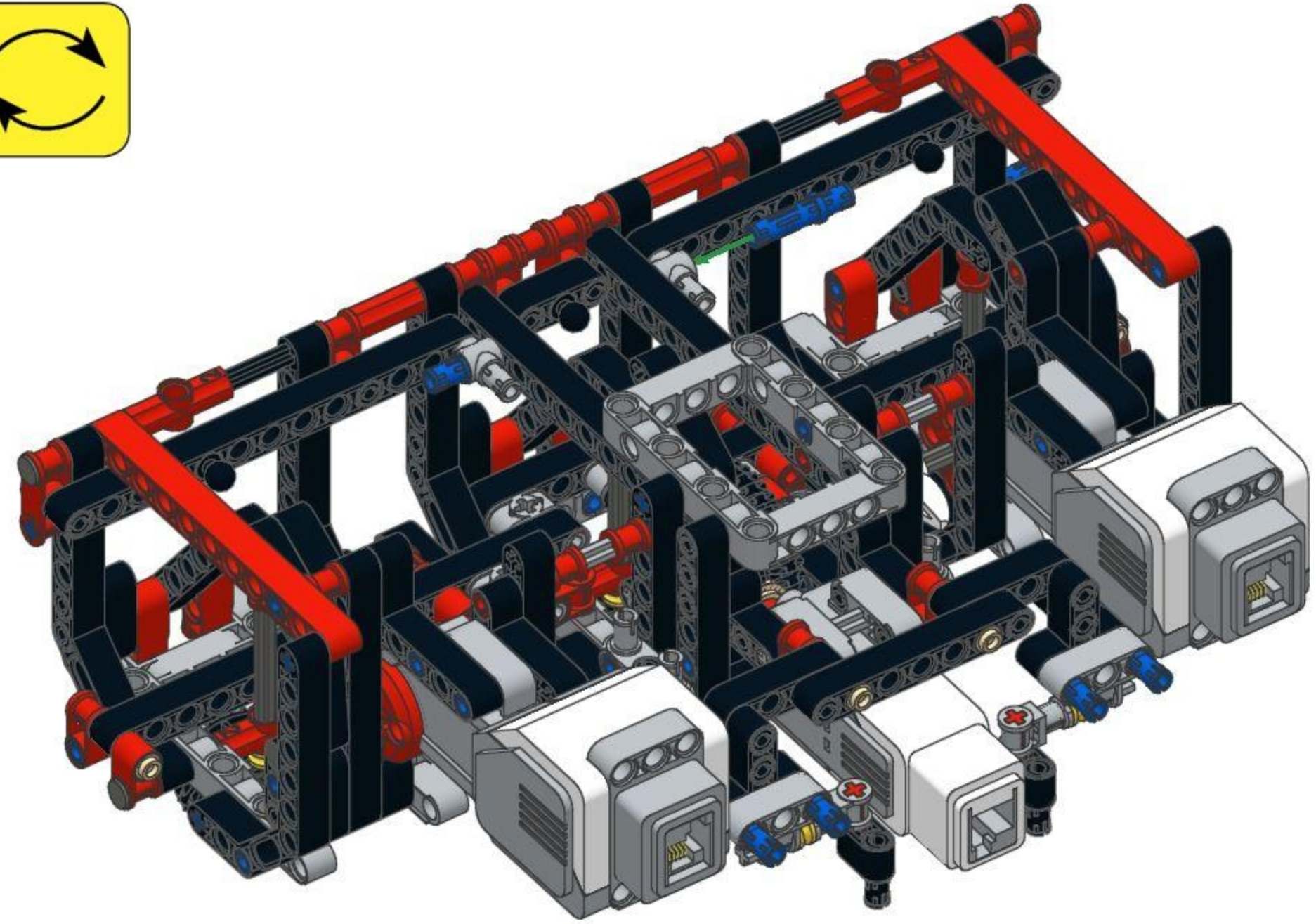
3
1x



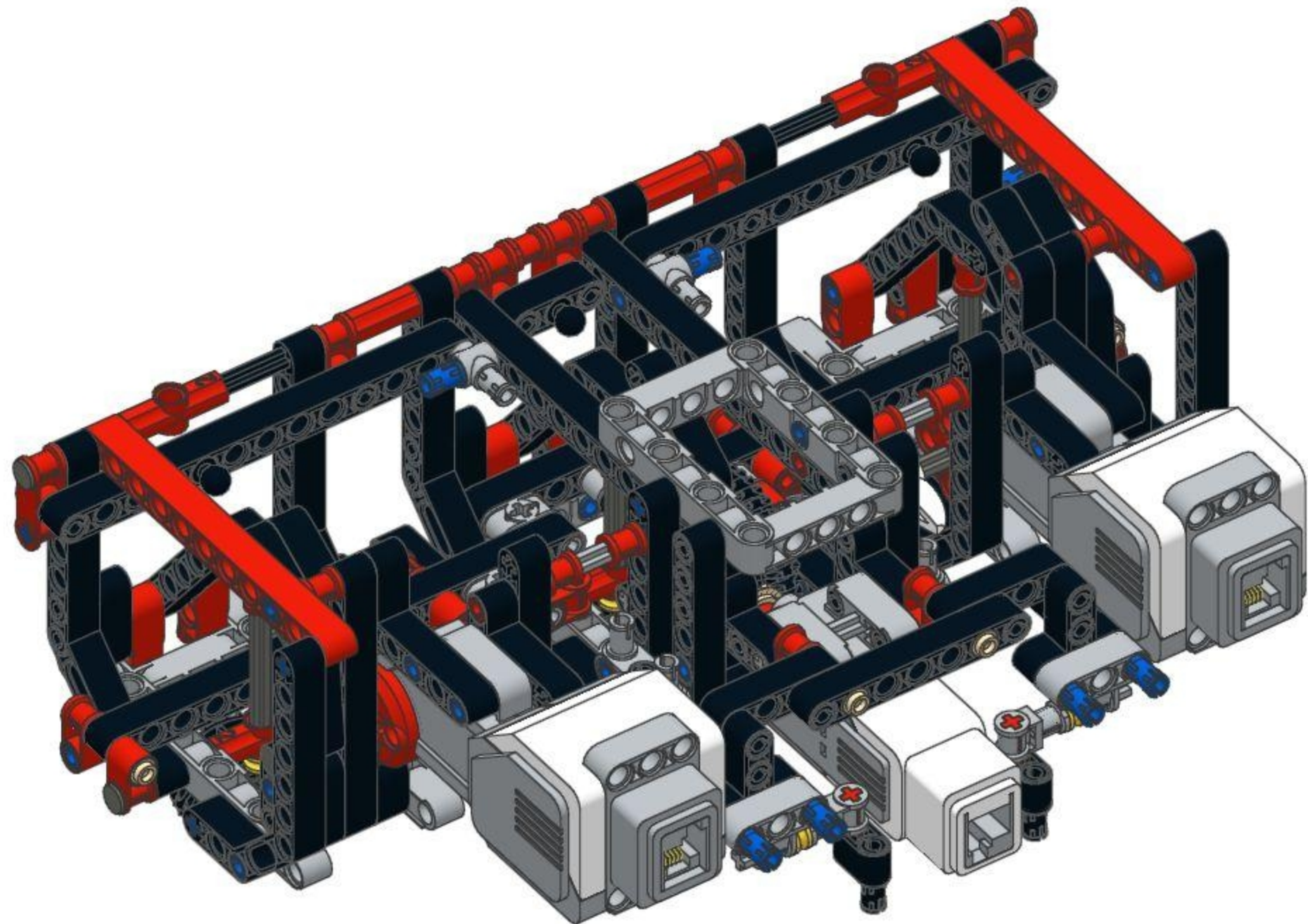
9



10 
1x

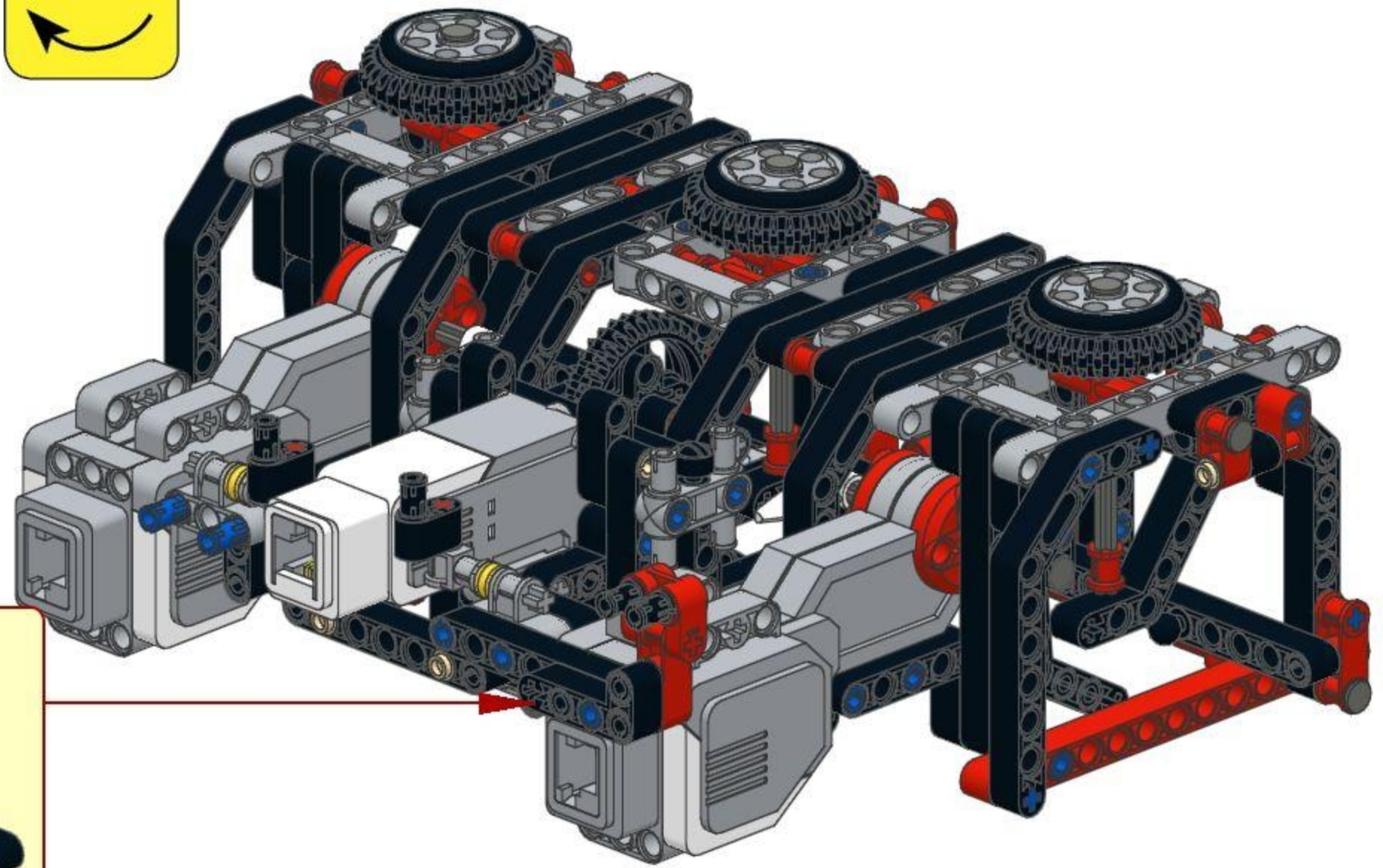


11



12

1x	6x	6x
1x	1x	1x
1x	1x	2
	1x	1x



1

2

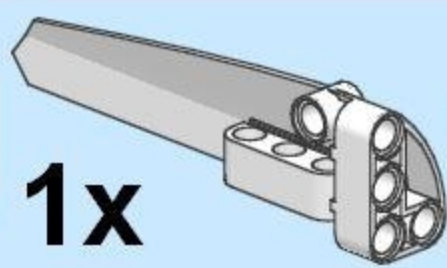
3

13

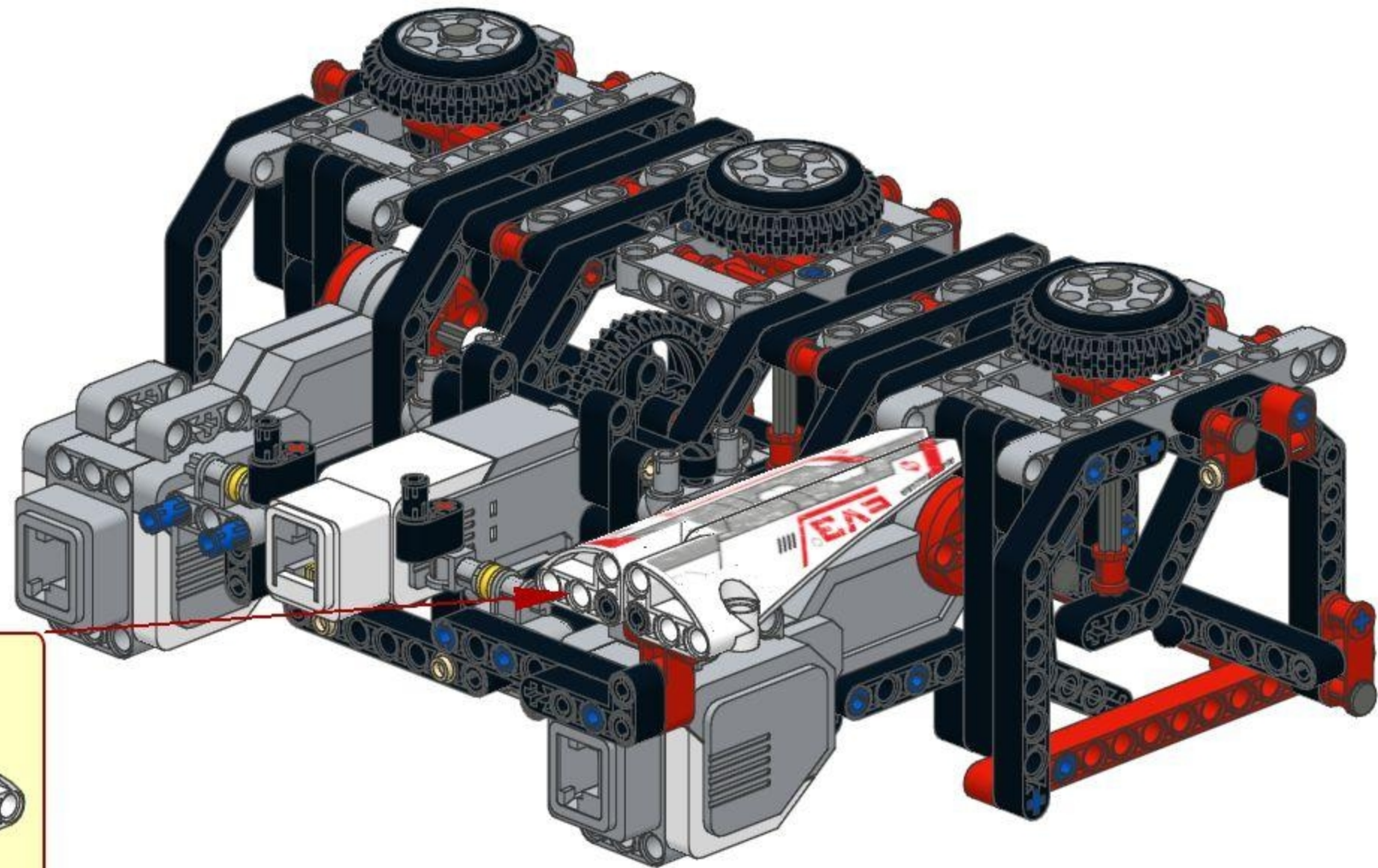
1x



1x



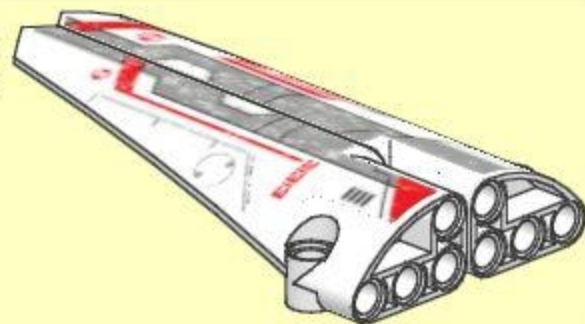
2x



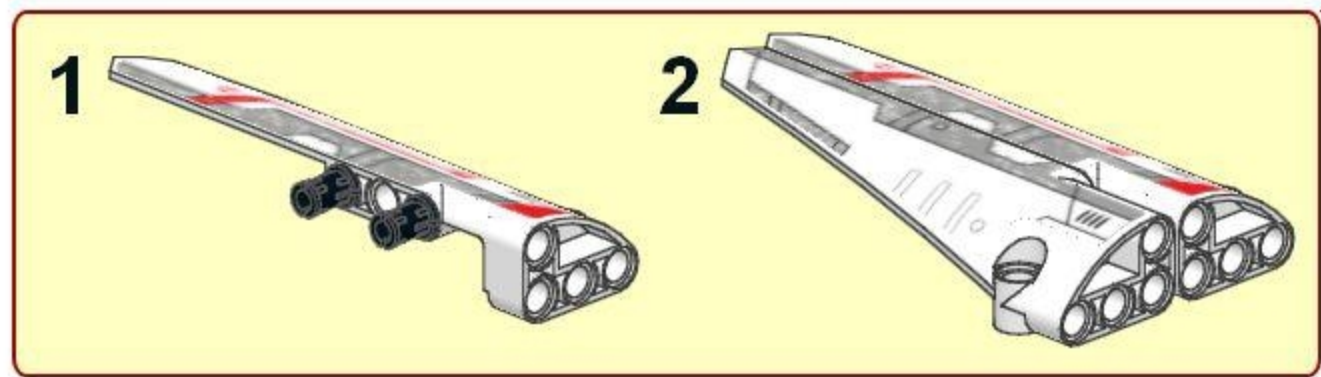
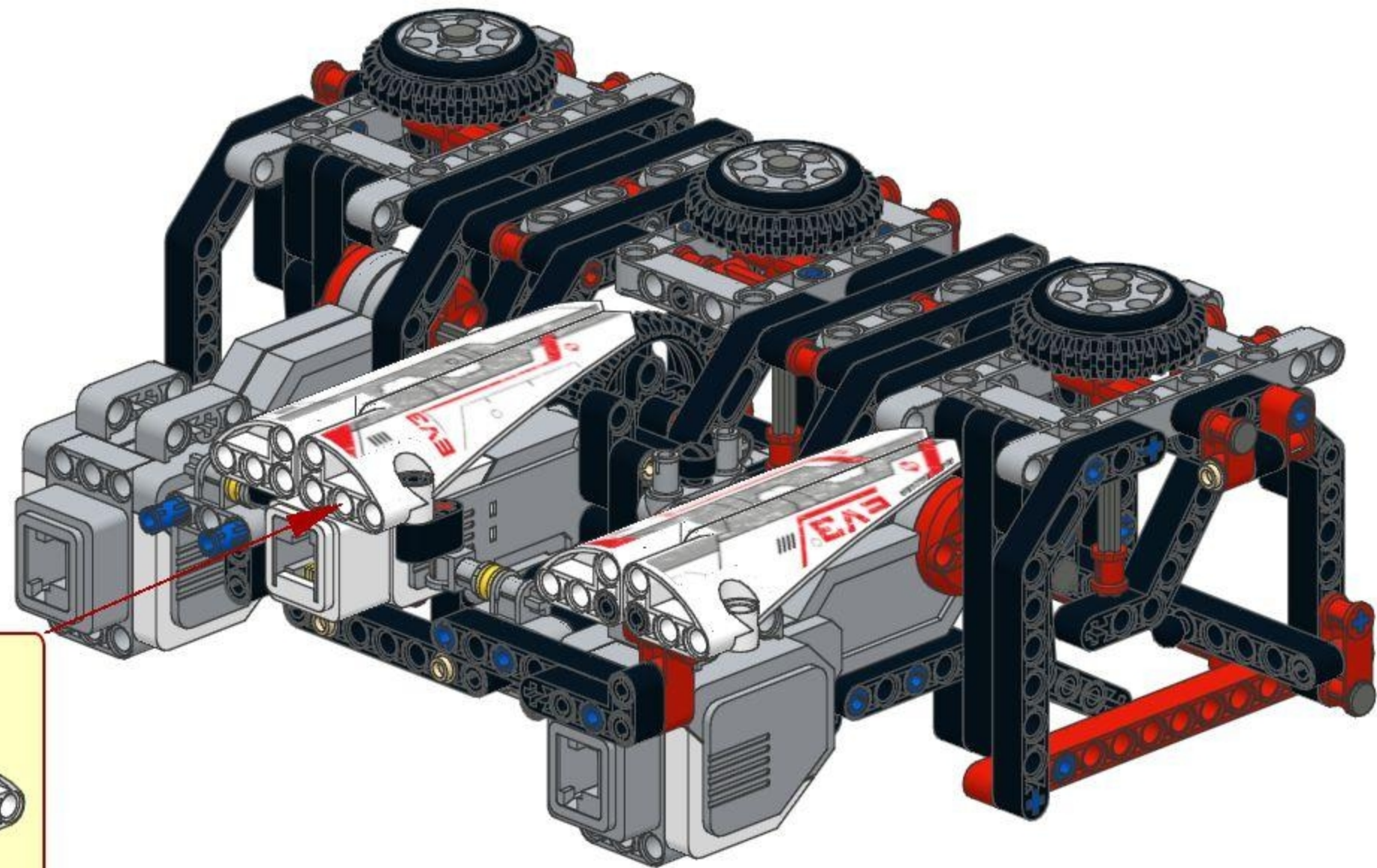
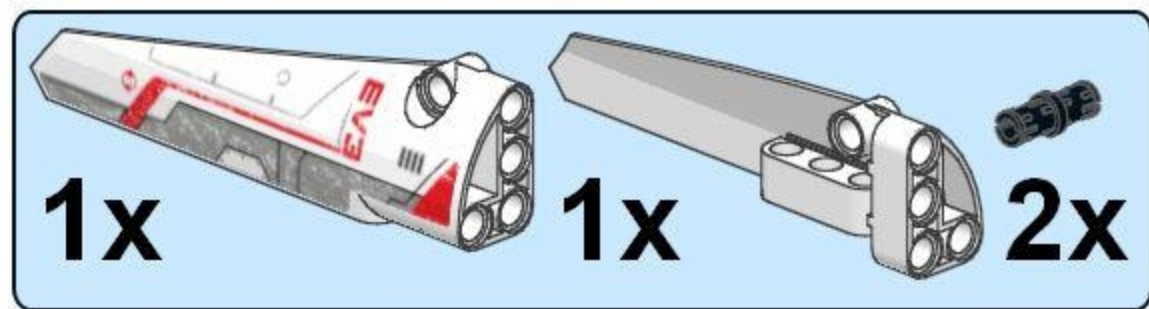
1



2

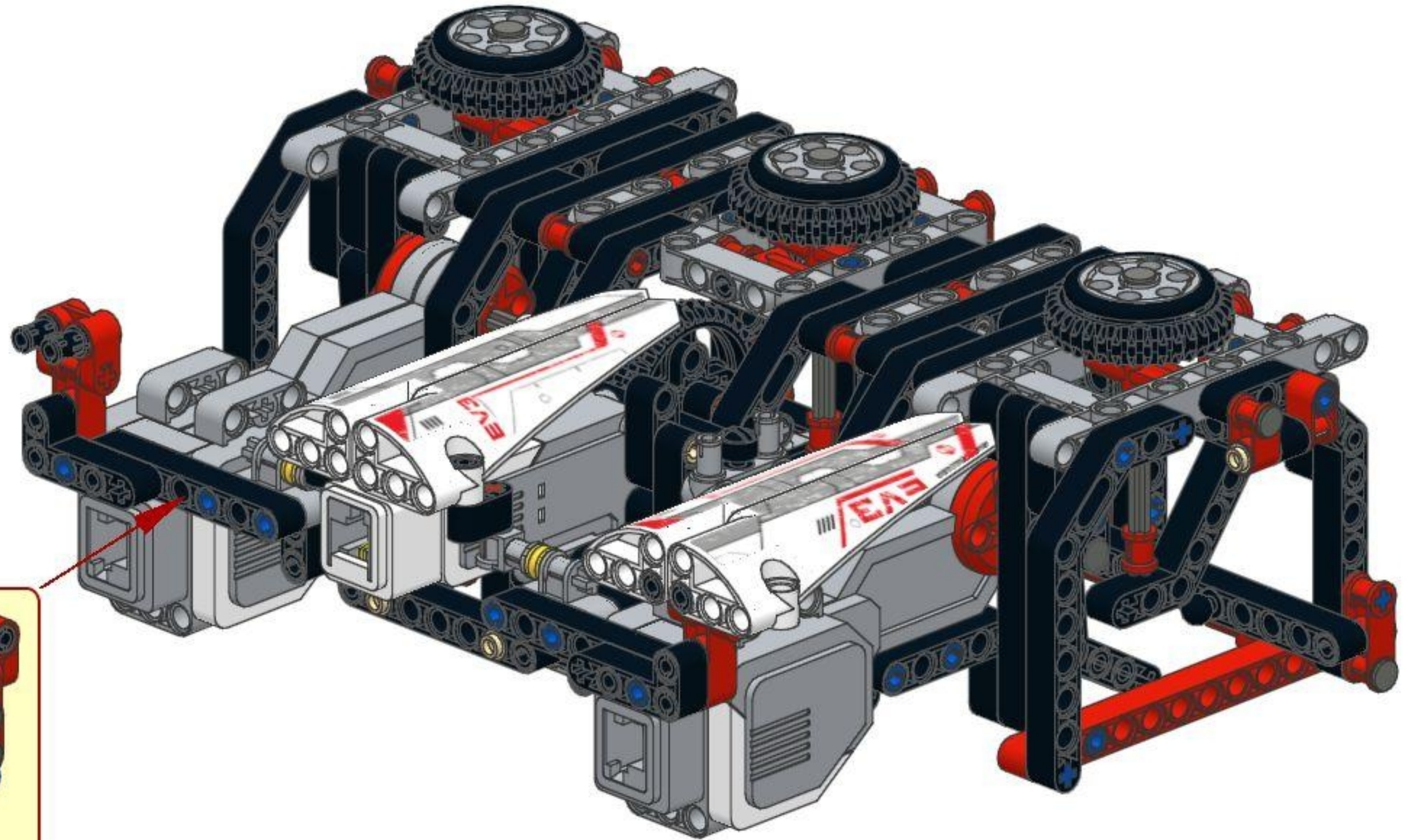


14



15

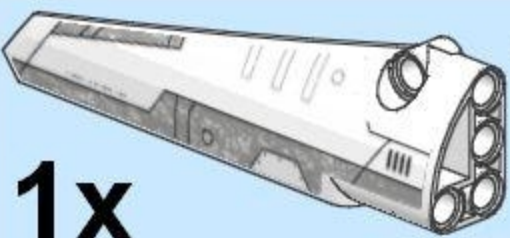
1x	6x	6x
1x	1x	1x
1x	1x	1x



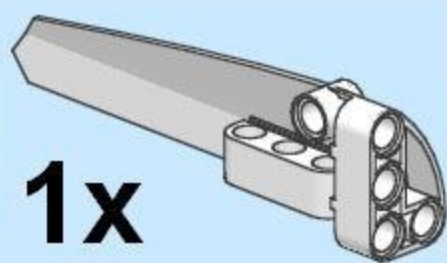
1	2	3

16

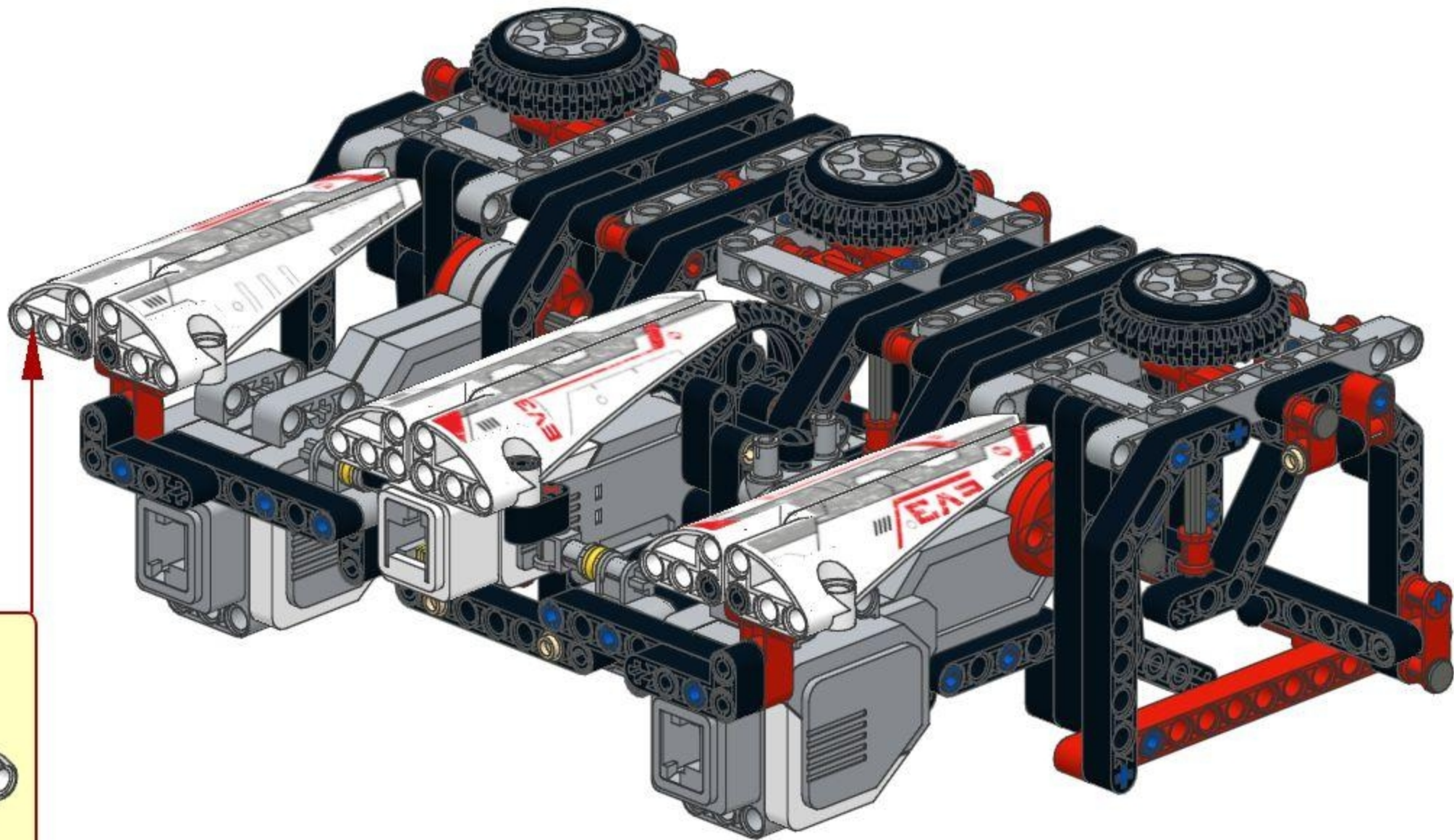
1x



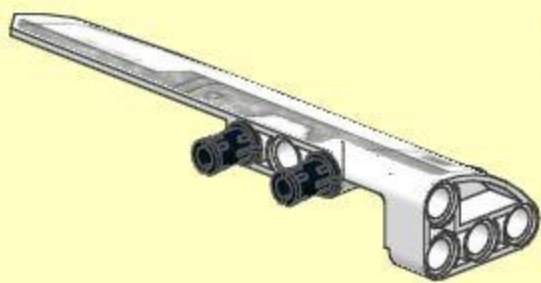
1x



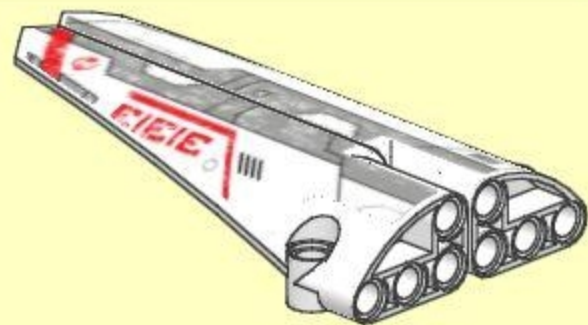
2x



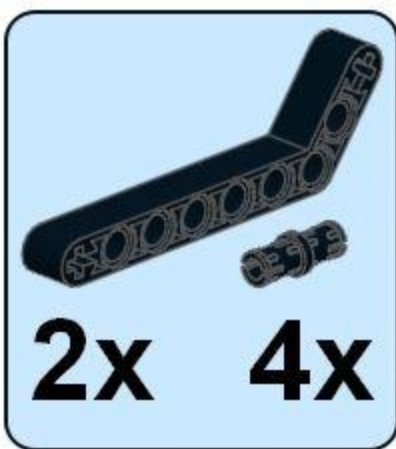
1



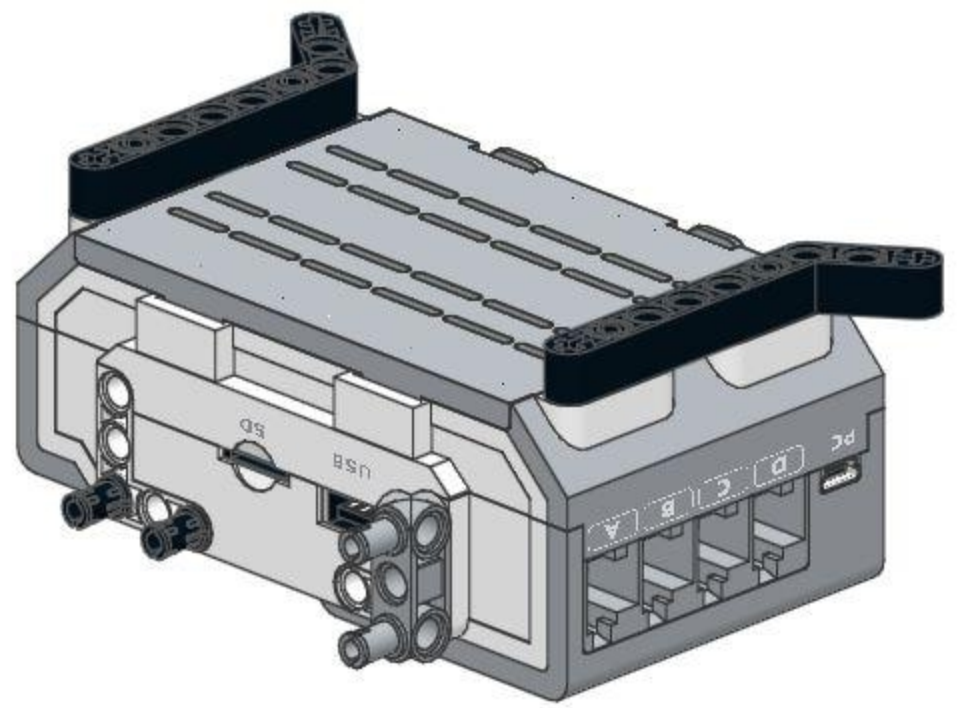
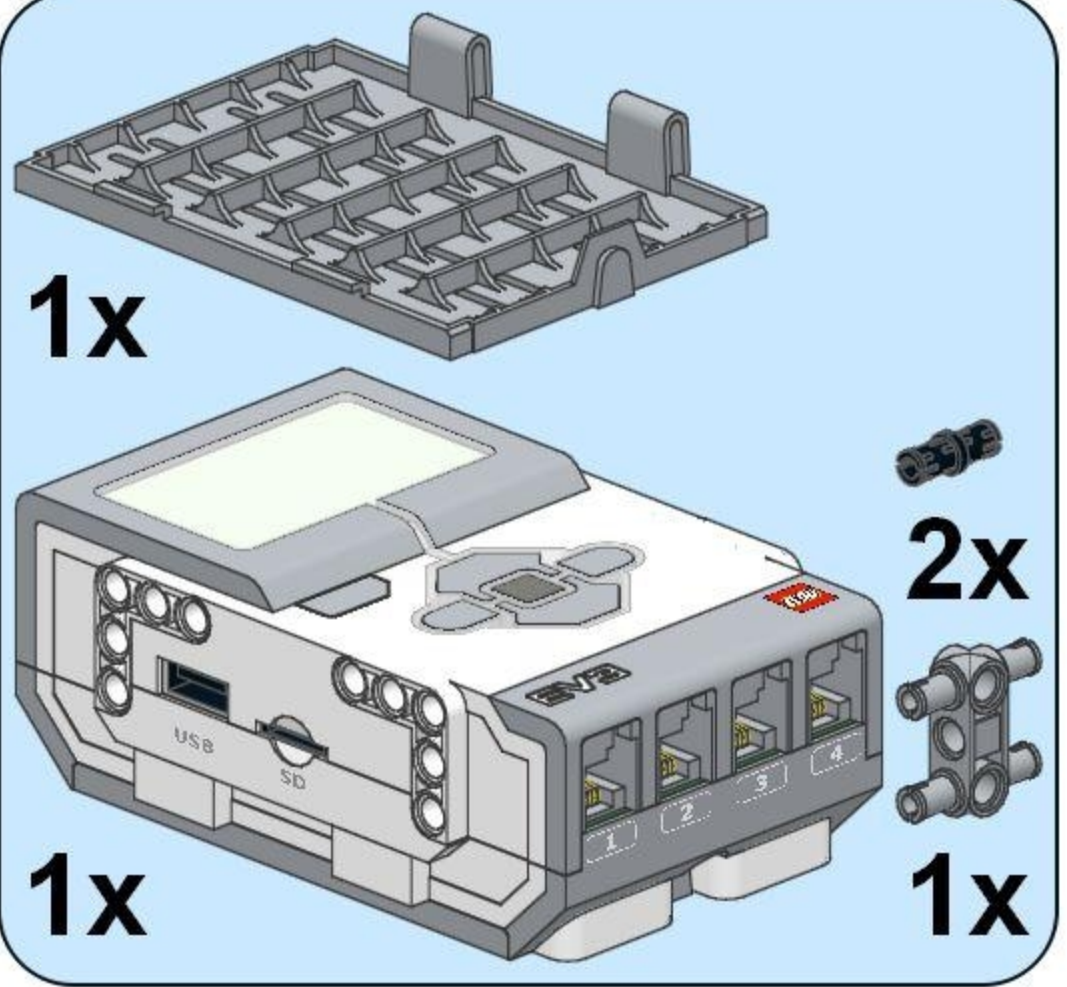
2



1

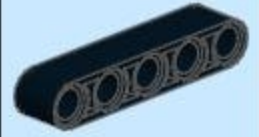


2

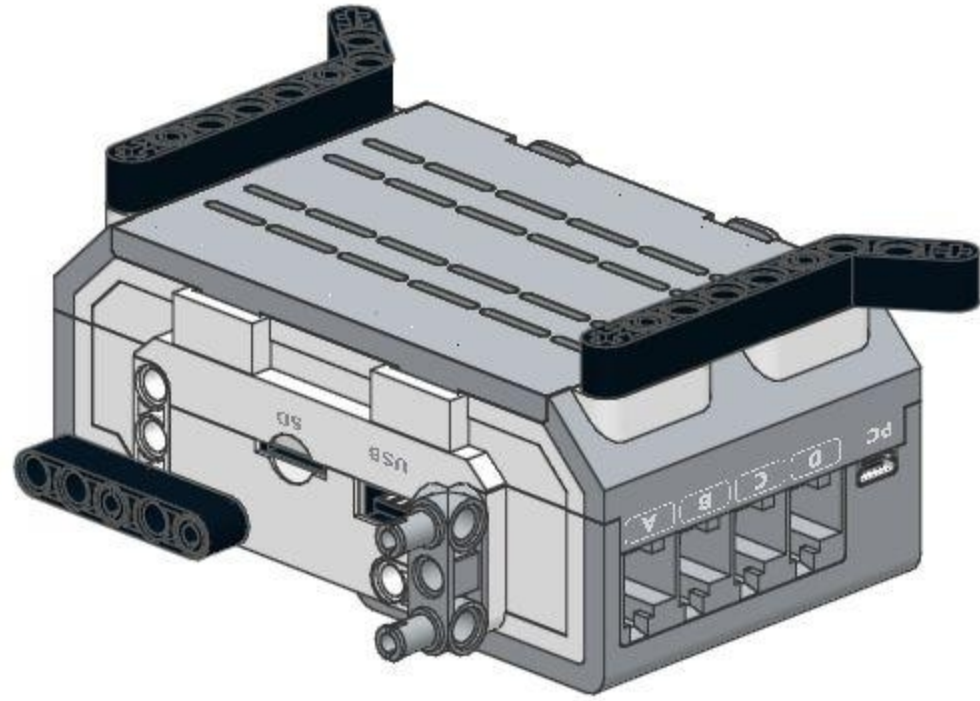


3

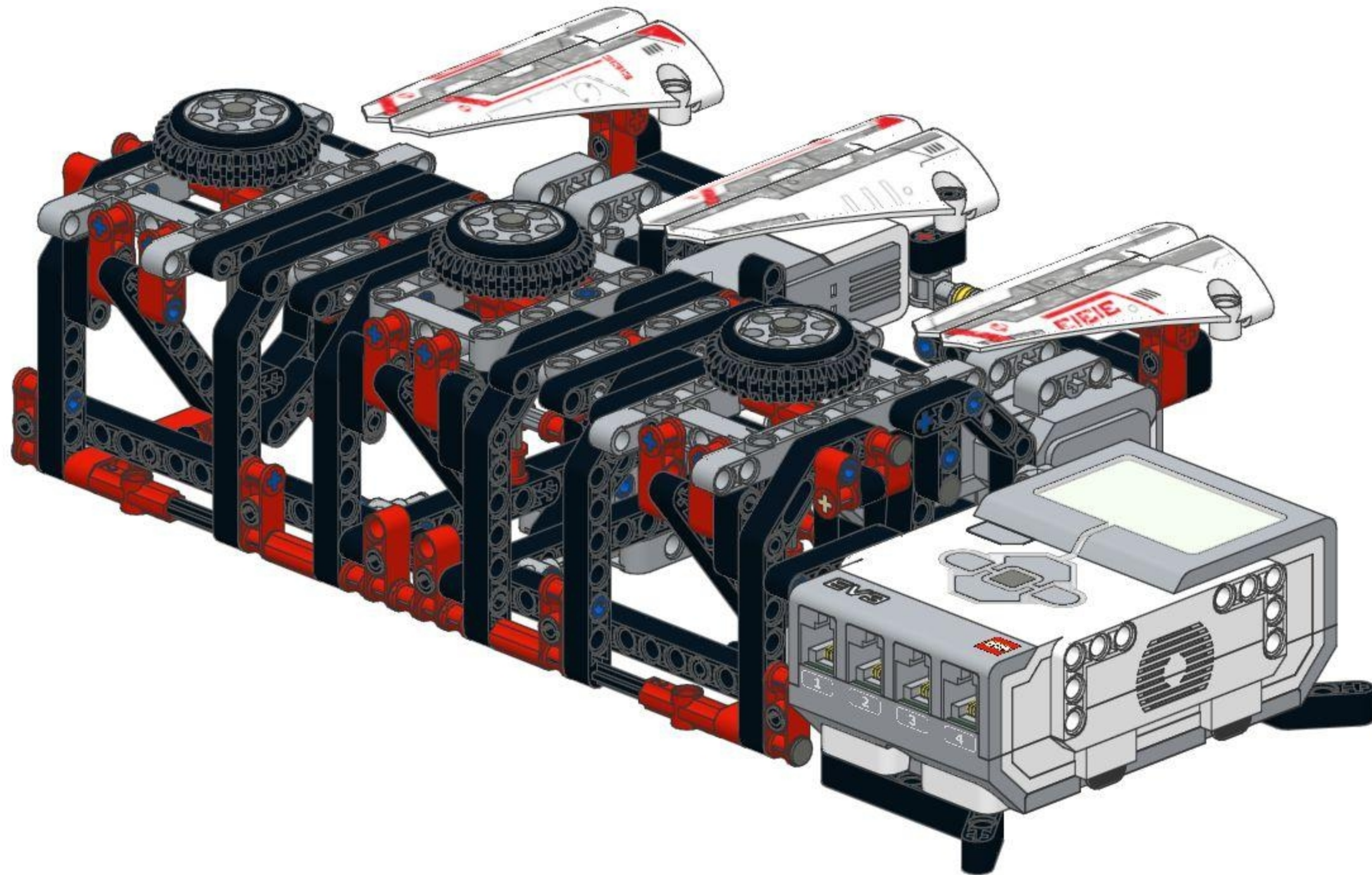
5



1x

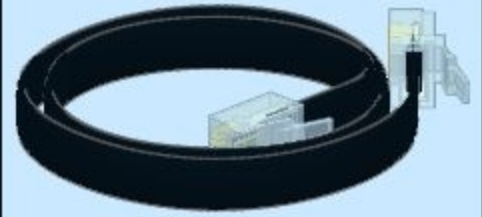


17

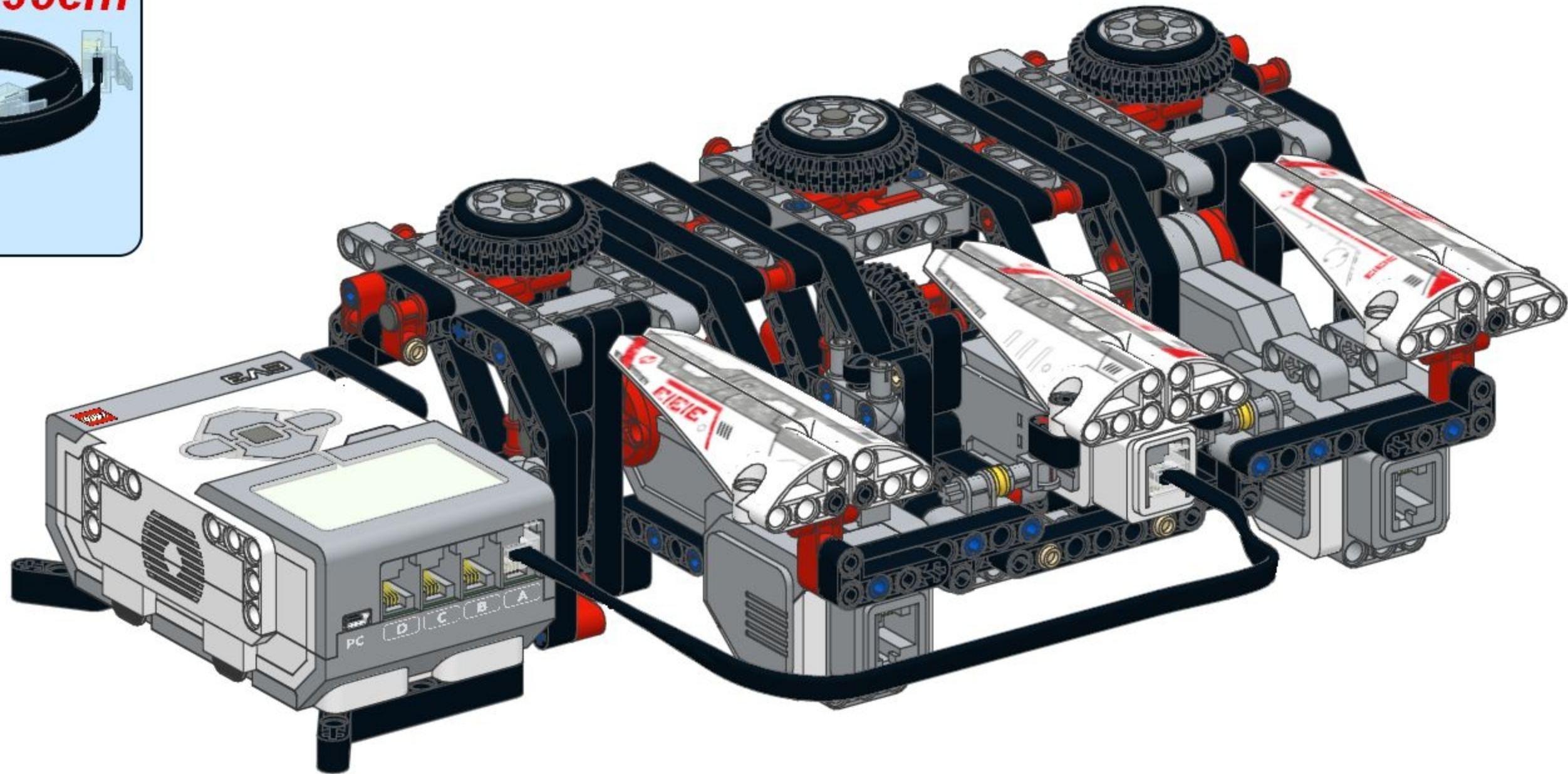


18

35cm

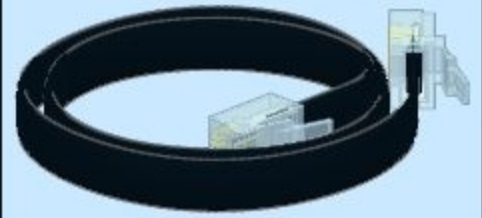


1x

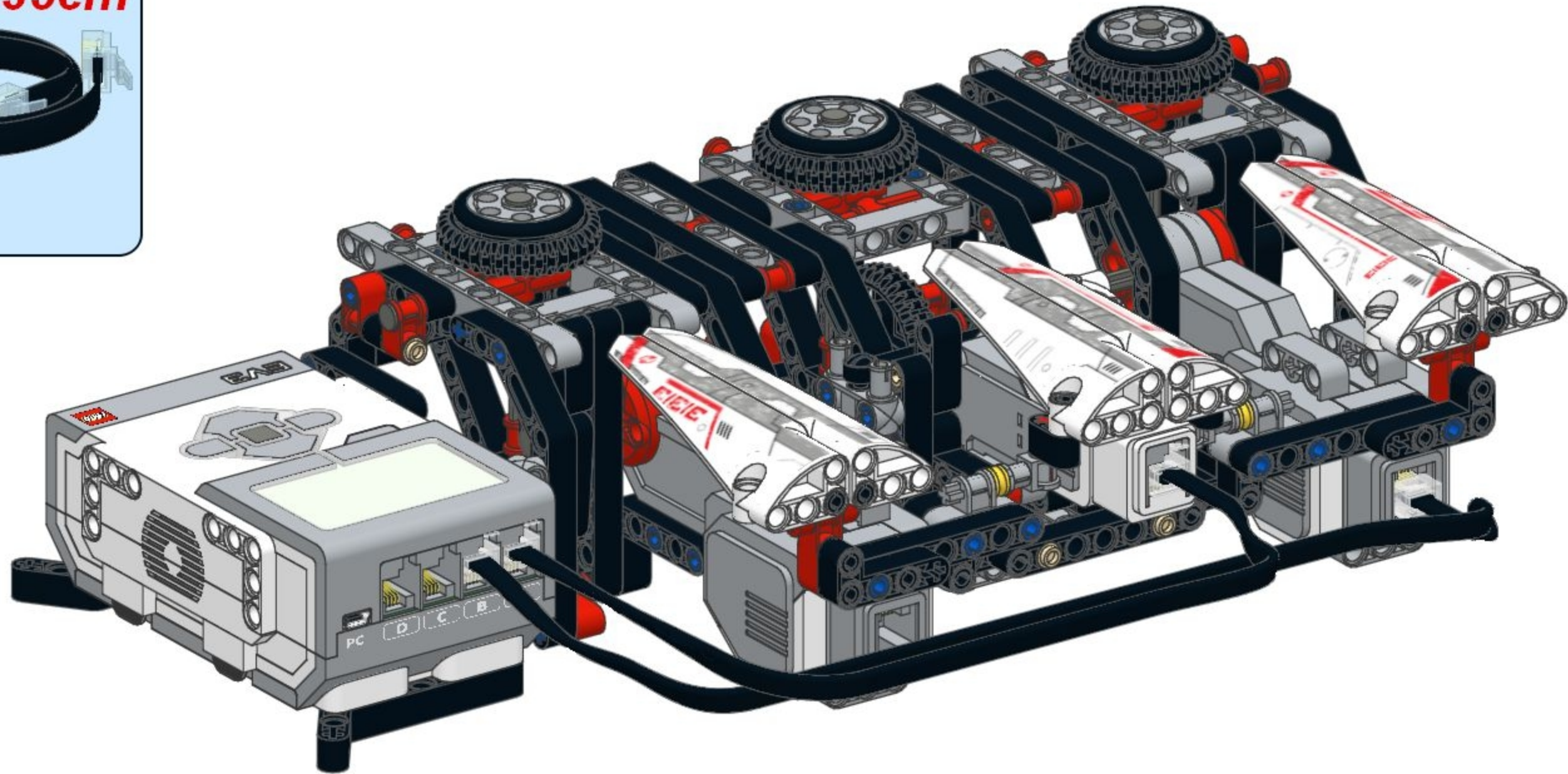


19

35cm

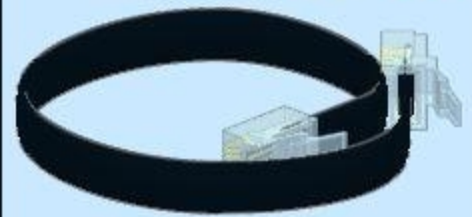


1x

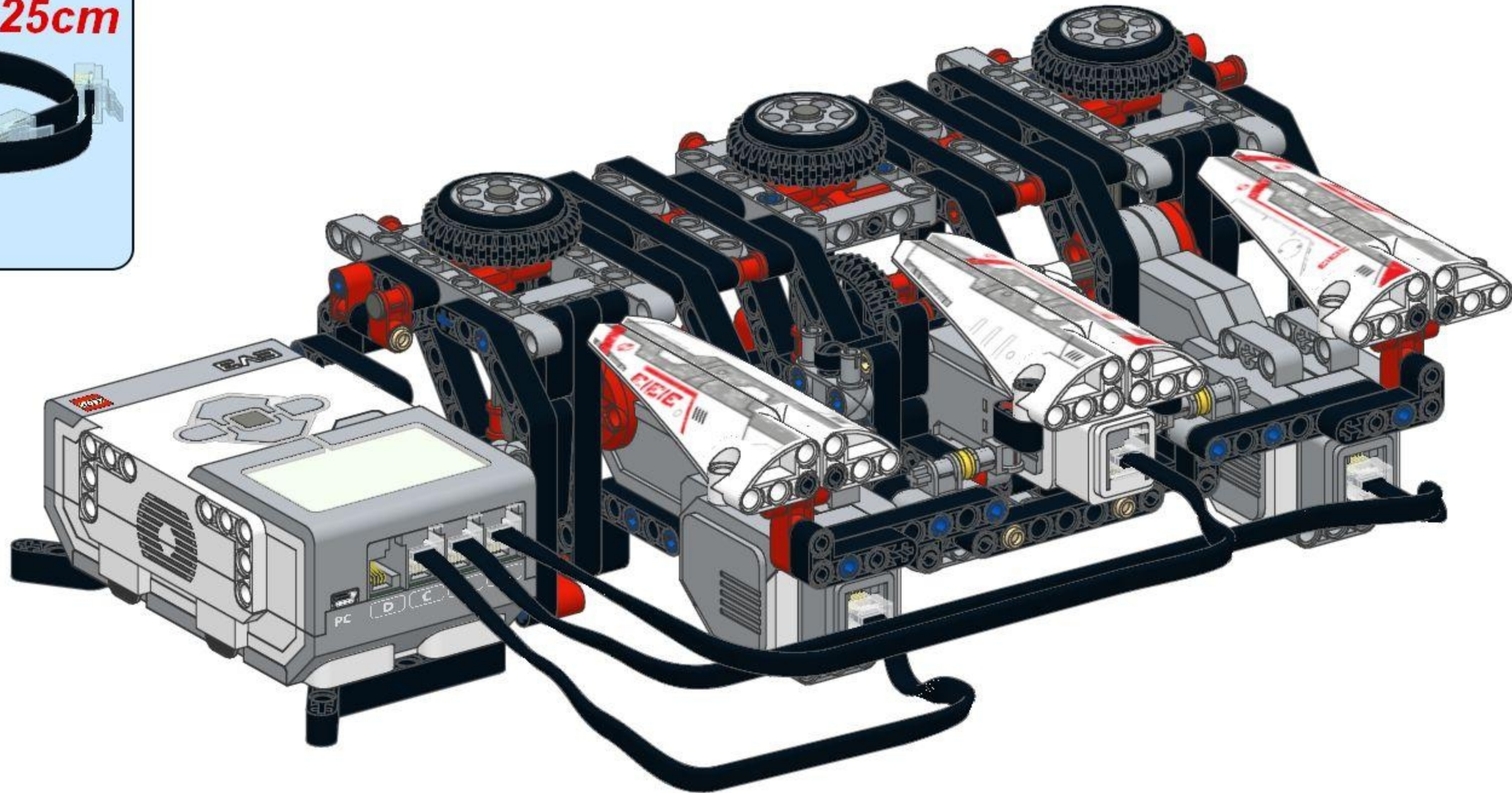


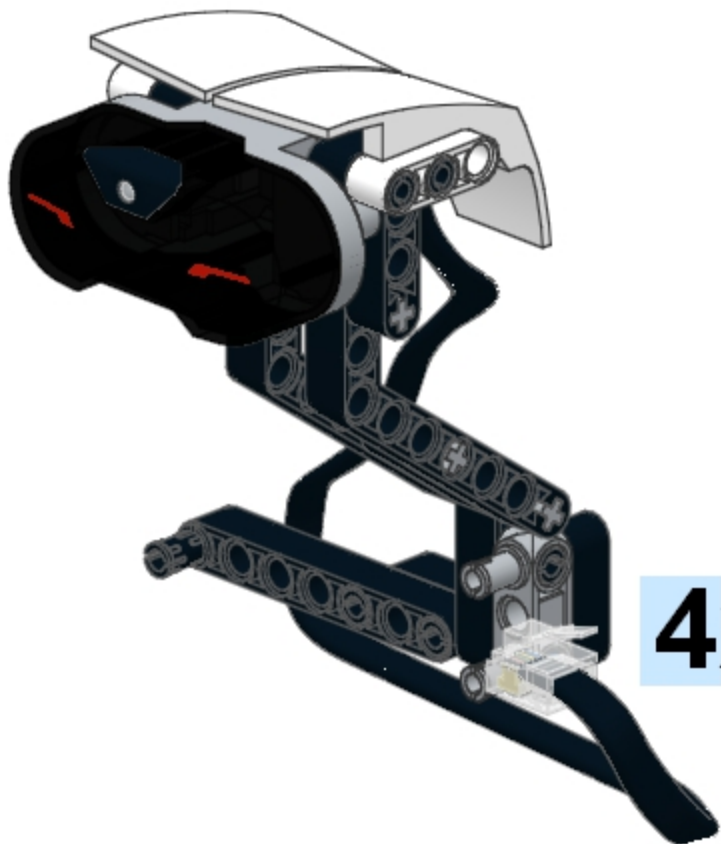
20

25cm

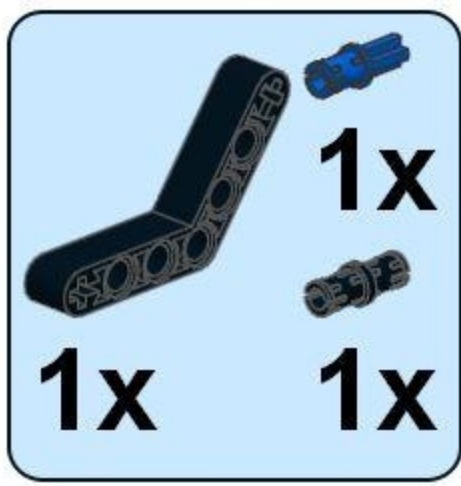


1x

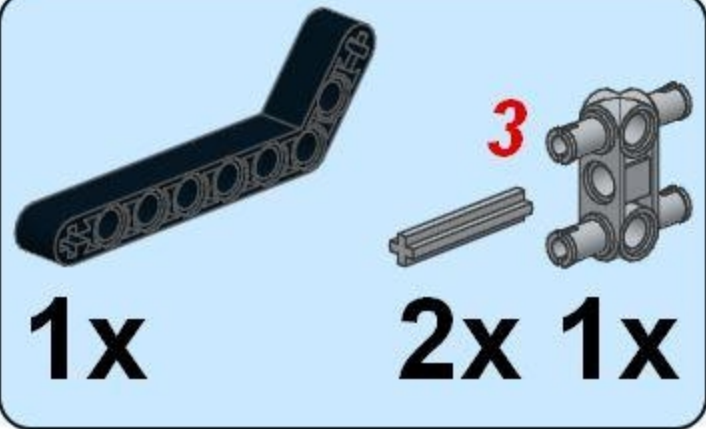




1



2



1x 2x 1x

3

This block contains a parts list for step 2. It features a dark grey L-shaped Technic beam (1x5 holes) with the quantity '1x' below it. To its right is a grey Technic axle with the quantity '2x' below it. Further right is a grey Technic connector (1x3 holes) with the quantity '1x' below it. A red number '3' is positioned above the axle, indicating its length.



3



2x



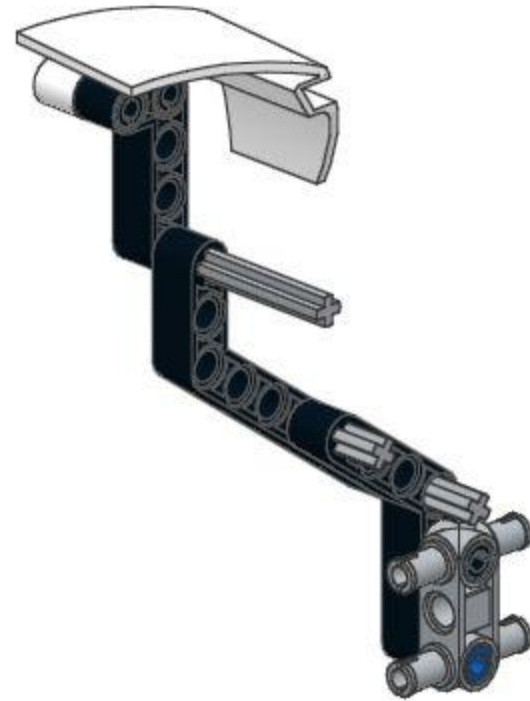
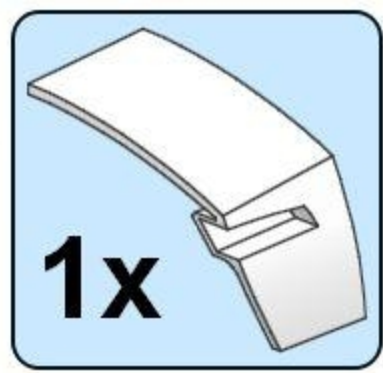
1x 5



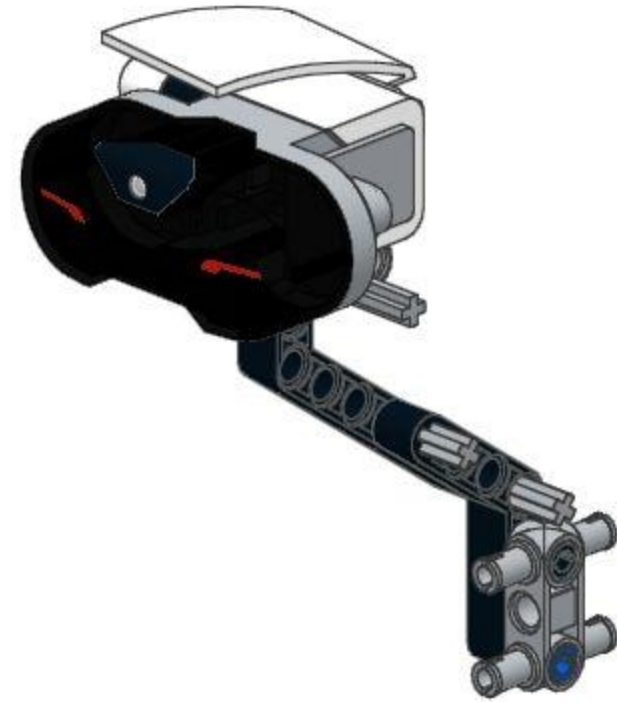
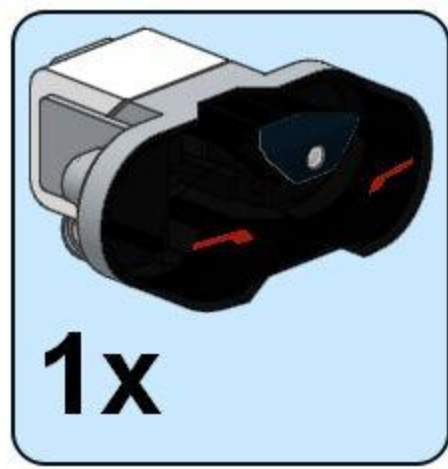
1x



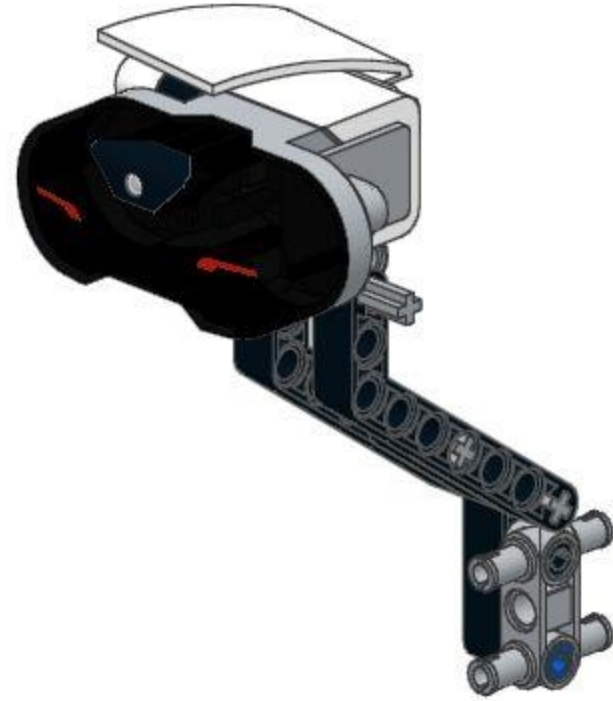
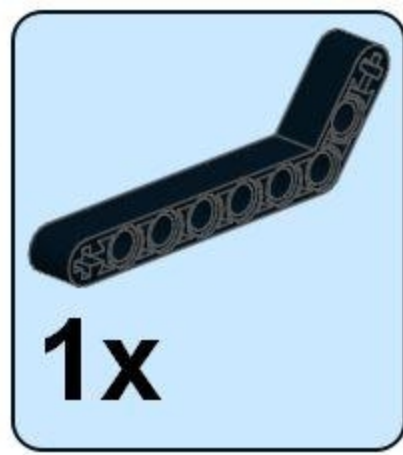
4



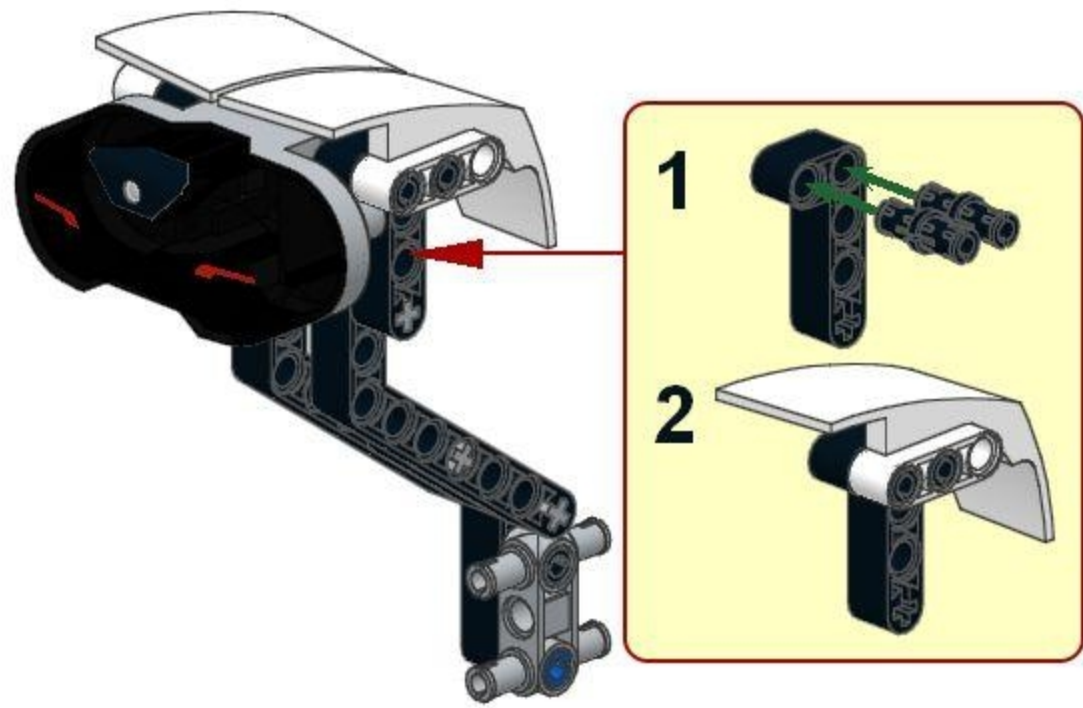
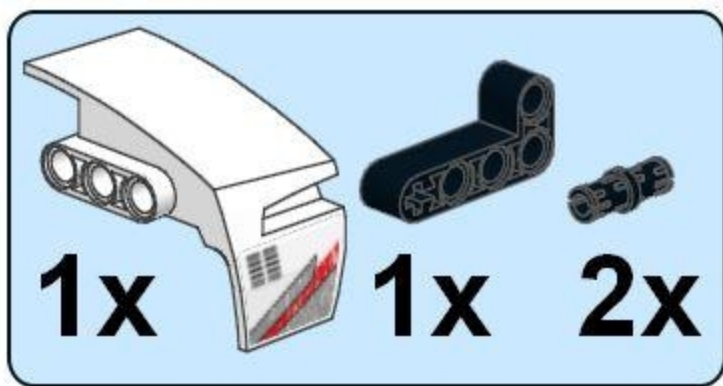
5





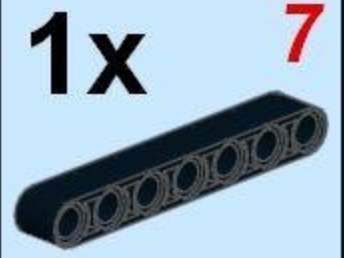

6



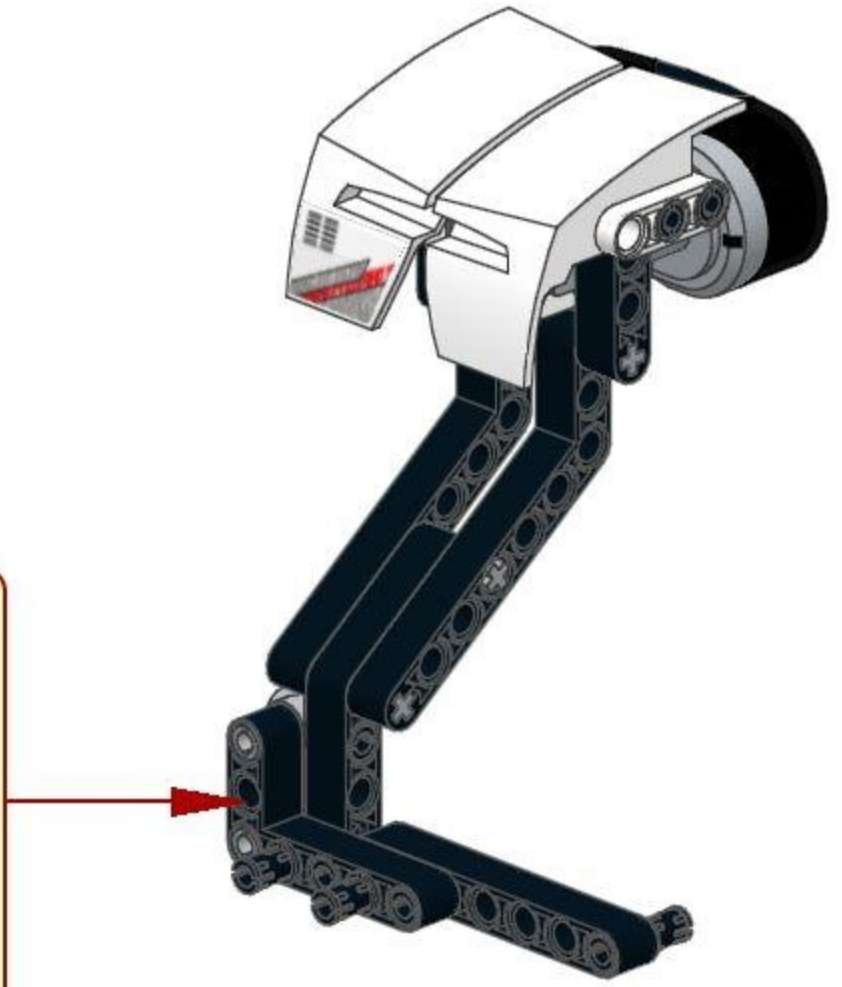
7



8

-  5x
-  1x
-  1x
-  1x

- 1 
- 2 



9

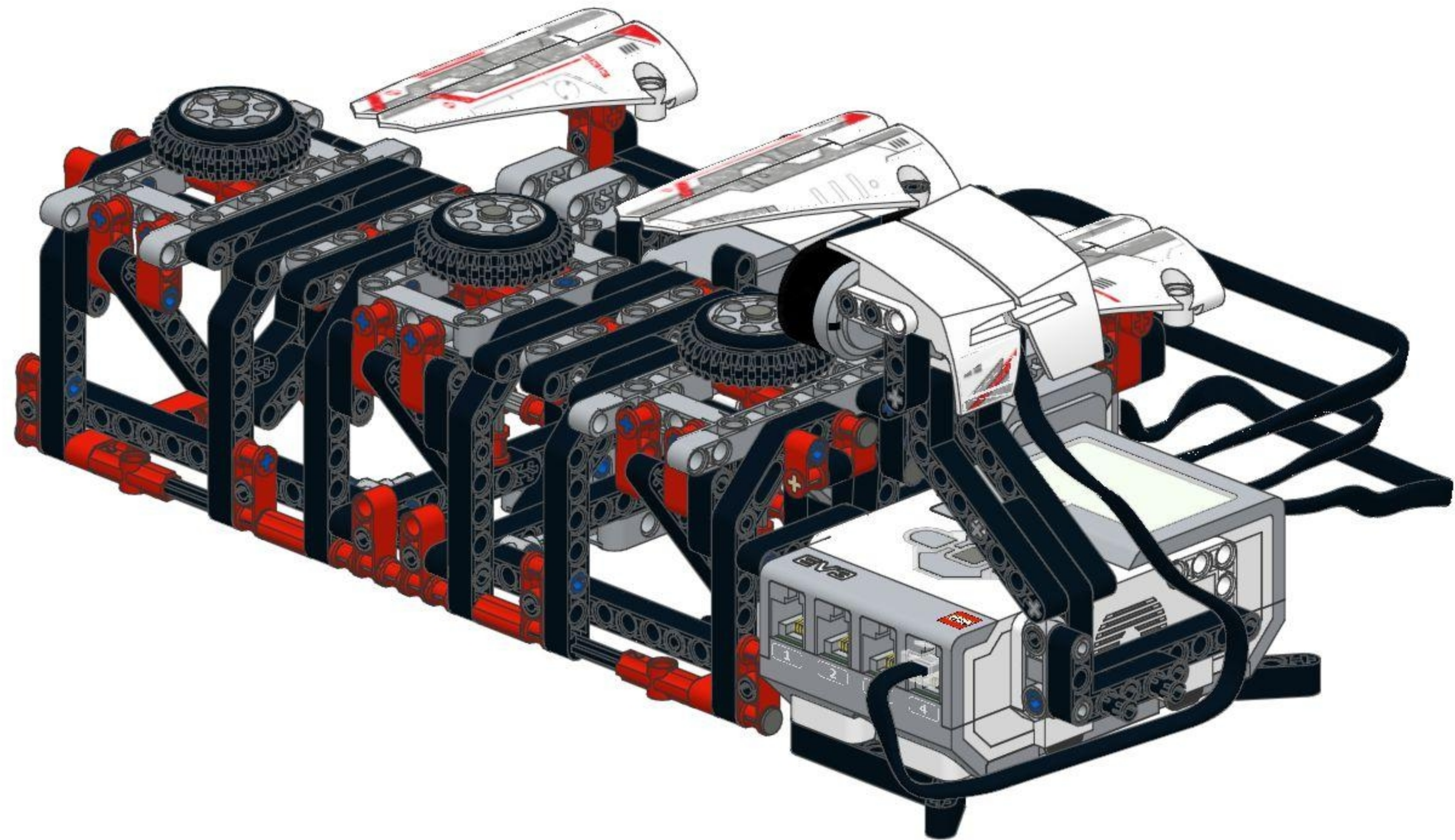
25cm

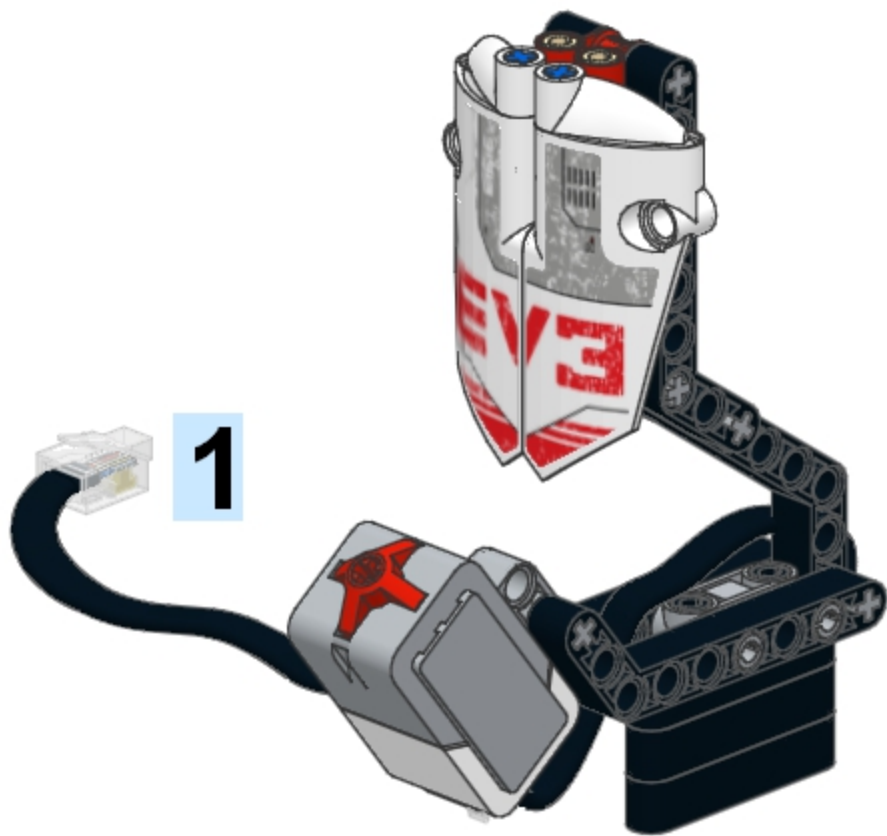


1x

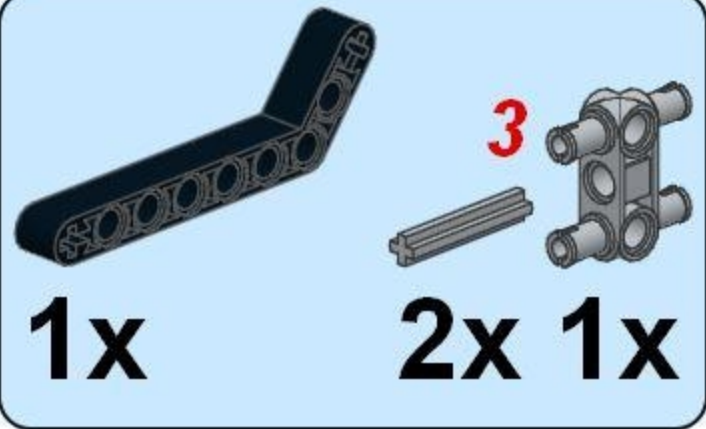


21





1



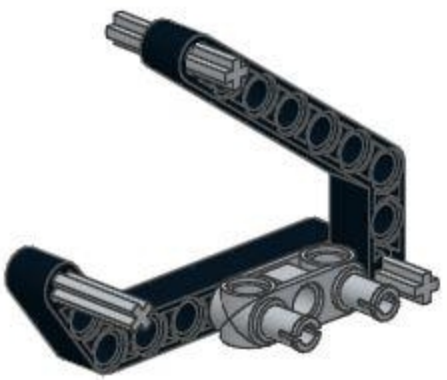
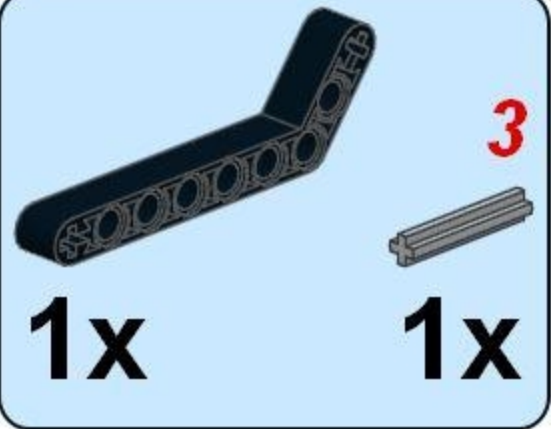
1x 2x 1x

3

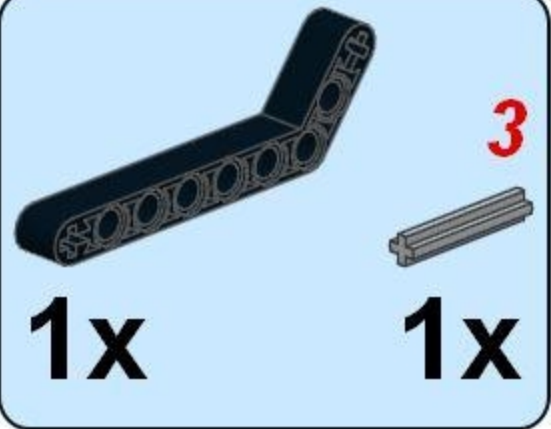
This block contains a parts list for step 1. It features a light blue background with a black border. On the left is a black L-shaped Technic beam with 6 holes. To its right are two grey Technic pins and one grey Technic cross connector. A red number '3' is positioned above the pins. Below the beam is the text '1x', and below the pins and connector is the text '2x 1x'.



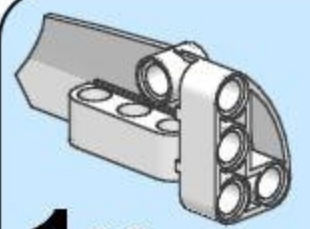
2






3









4

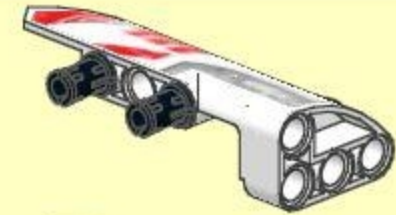
1x 


2x  2x 

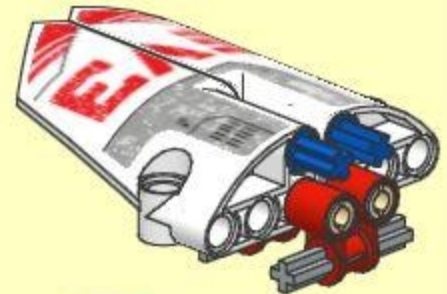
1x 

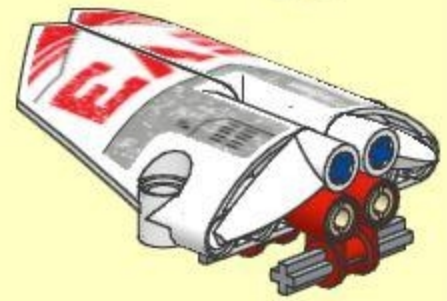
2x  2x  2x 

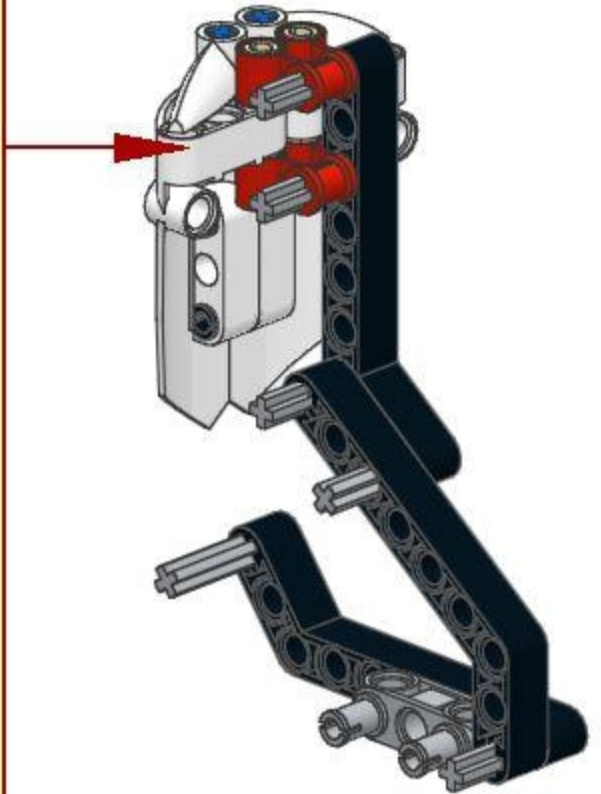
2x  2x  2x 

1 

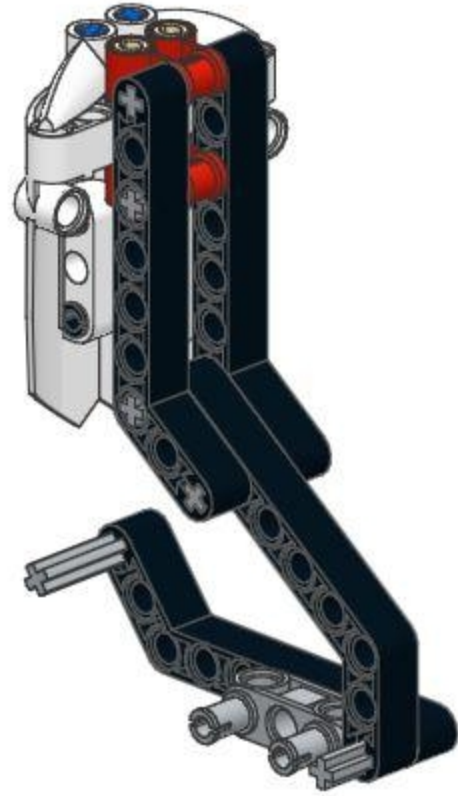
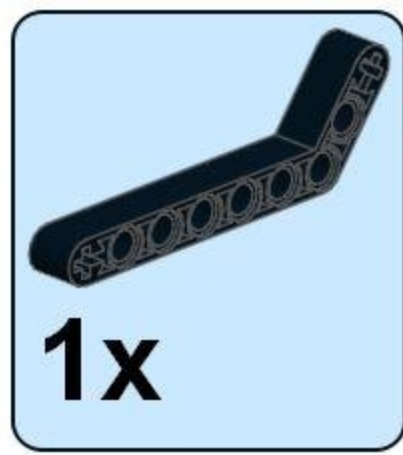
2 

3 

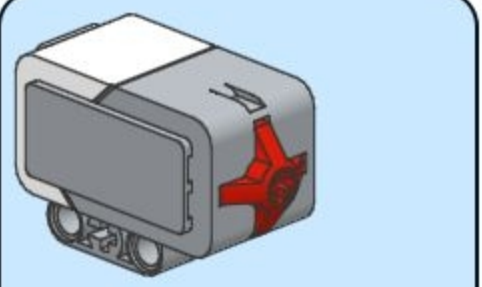
4 



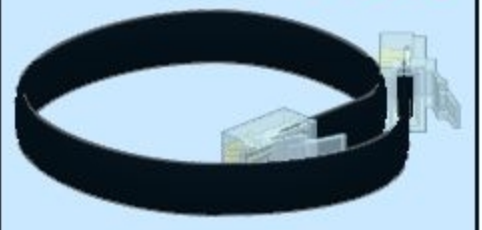
5



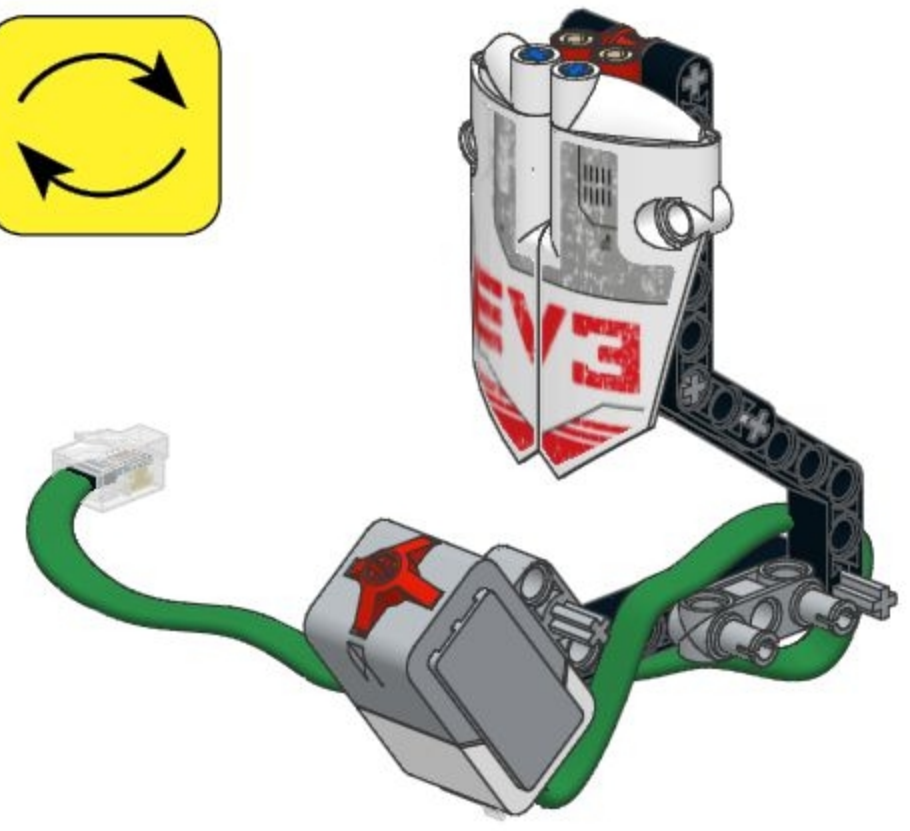
6



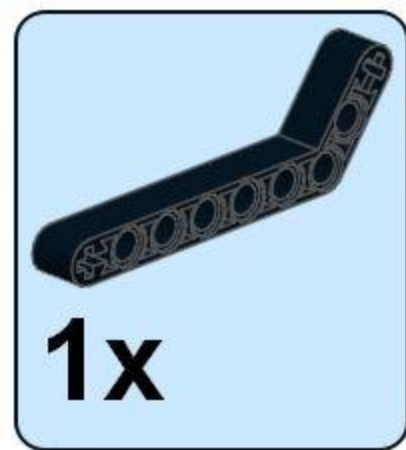
1x 25cm



1x



7



8

-  2x
-  2x **5**
-  3x

