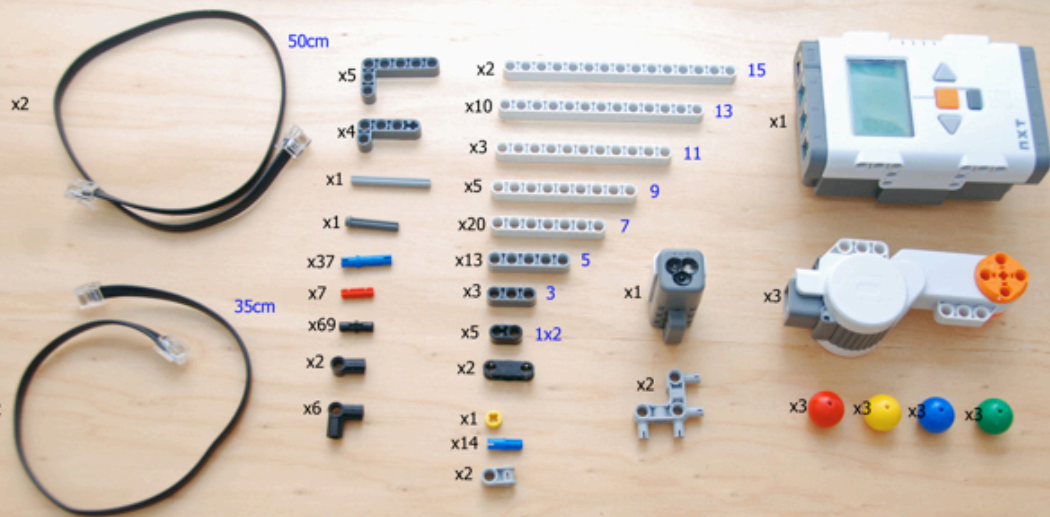
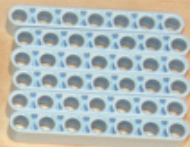
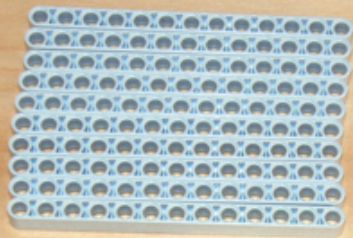


Colour Sorter 3 parts List



Stage 1



x10



x10

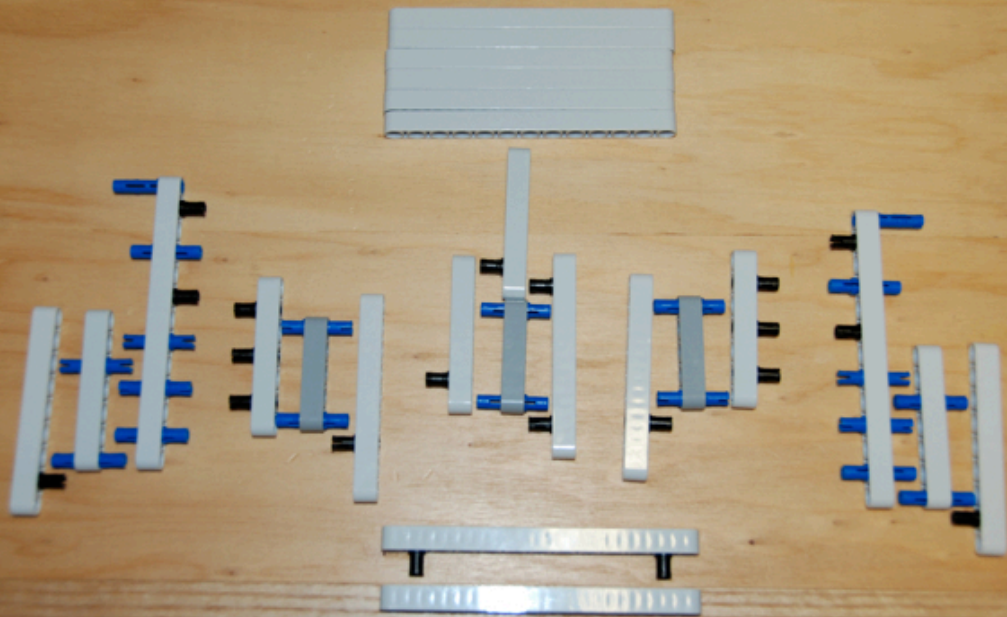


x10

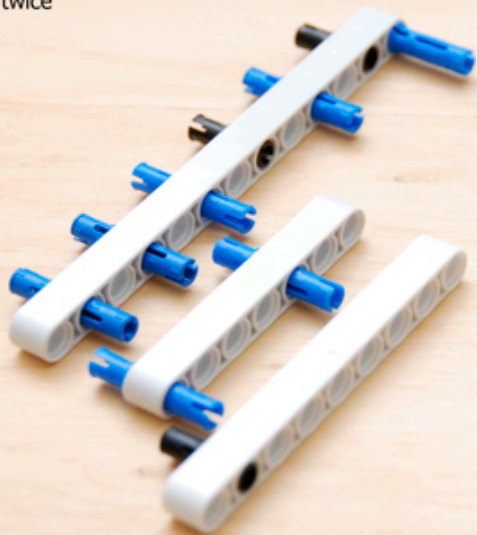


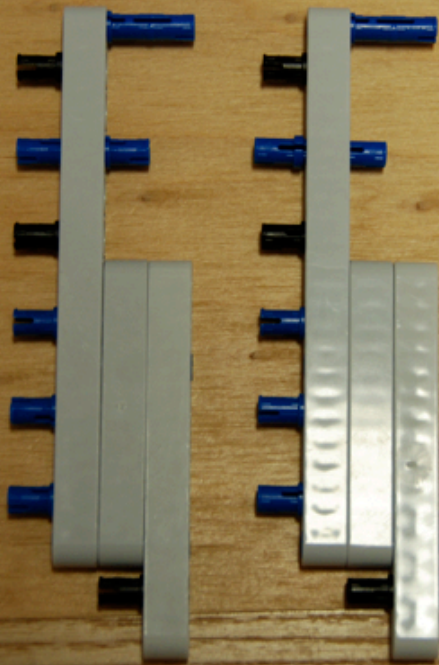
x10

Overview
(building instructions follow)

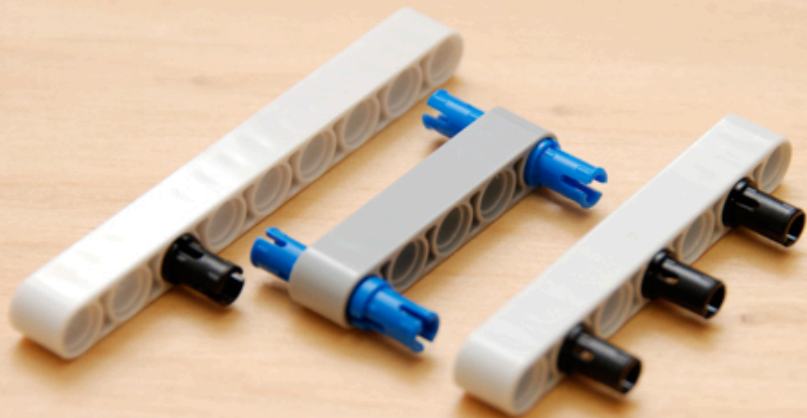


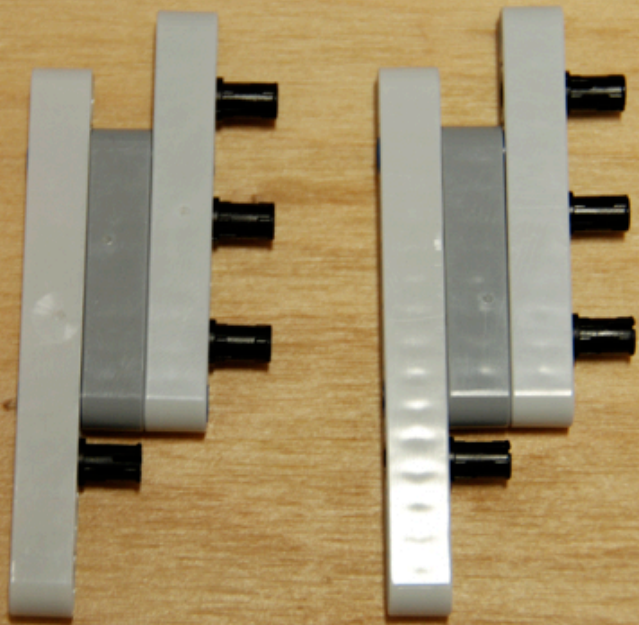
Make this twice

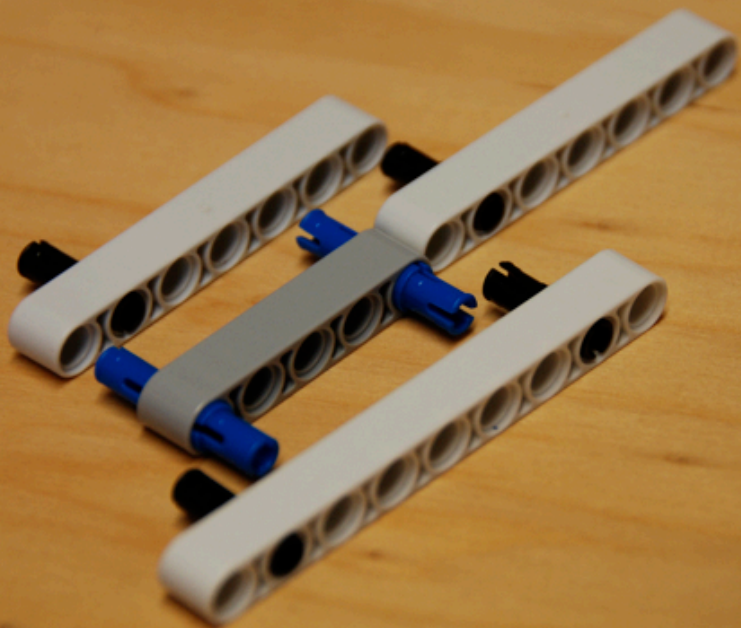




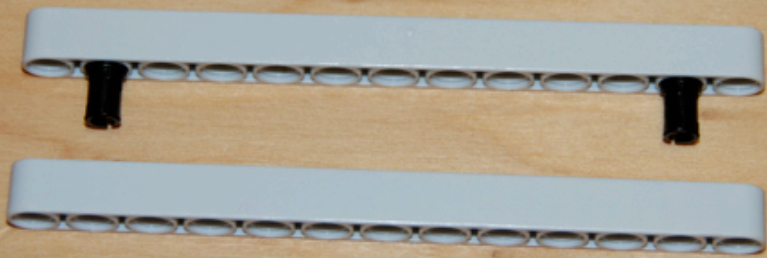
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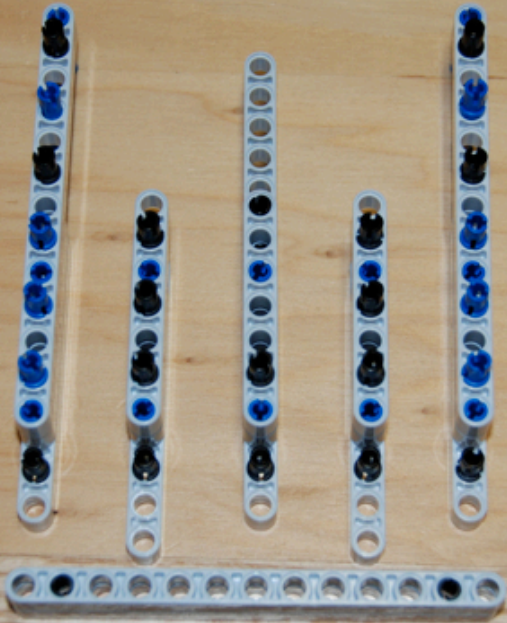


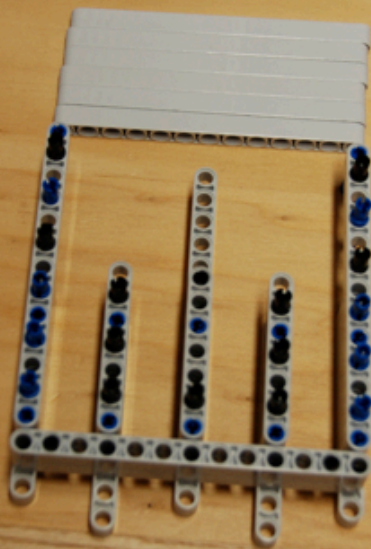


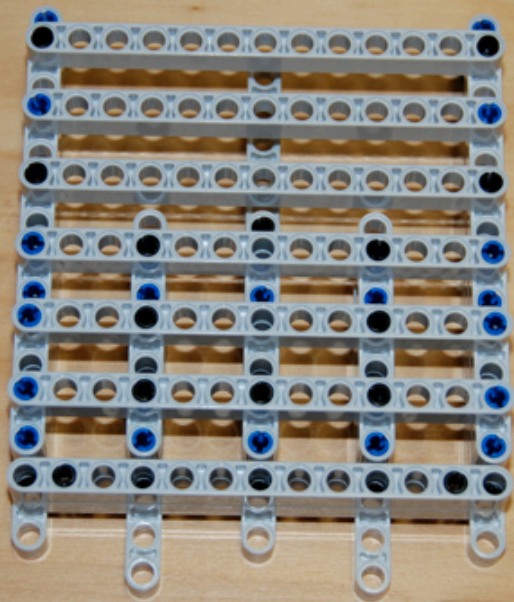








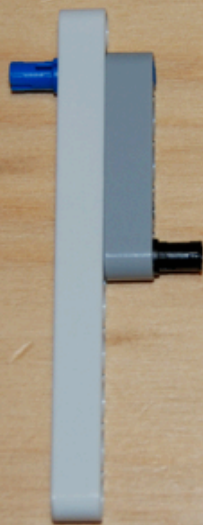


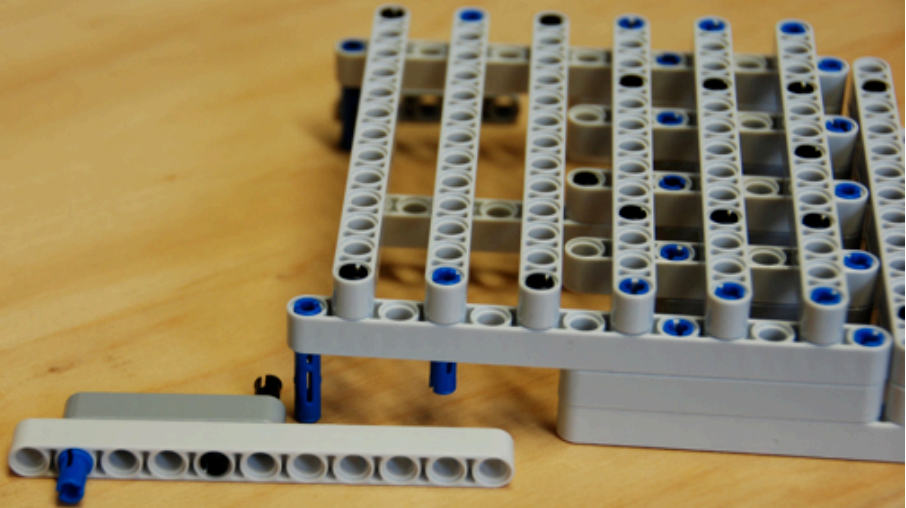


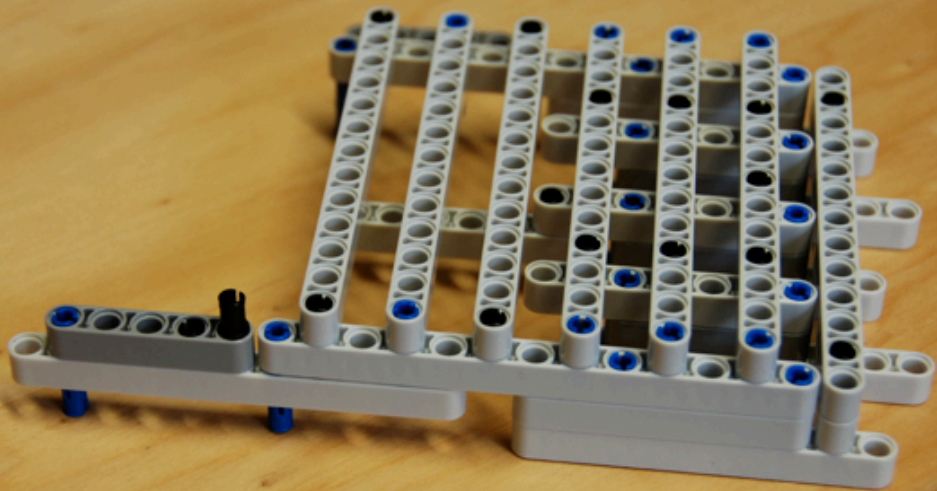
Stage 2

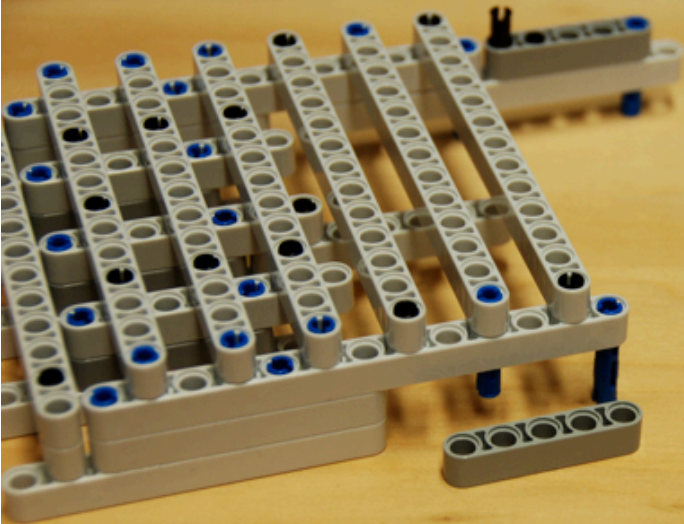


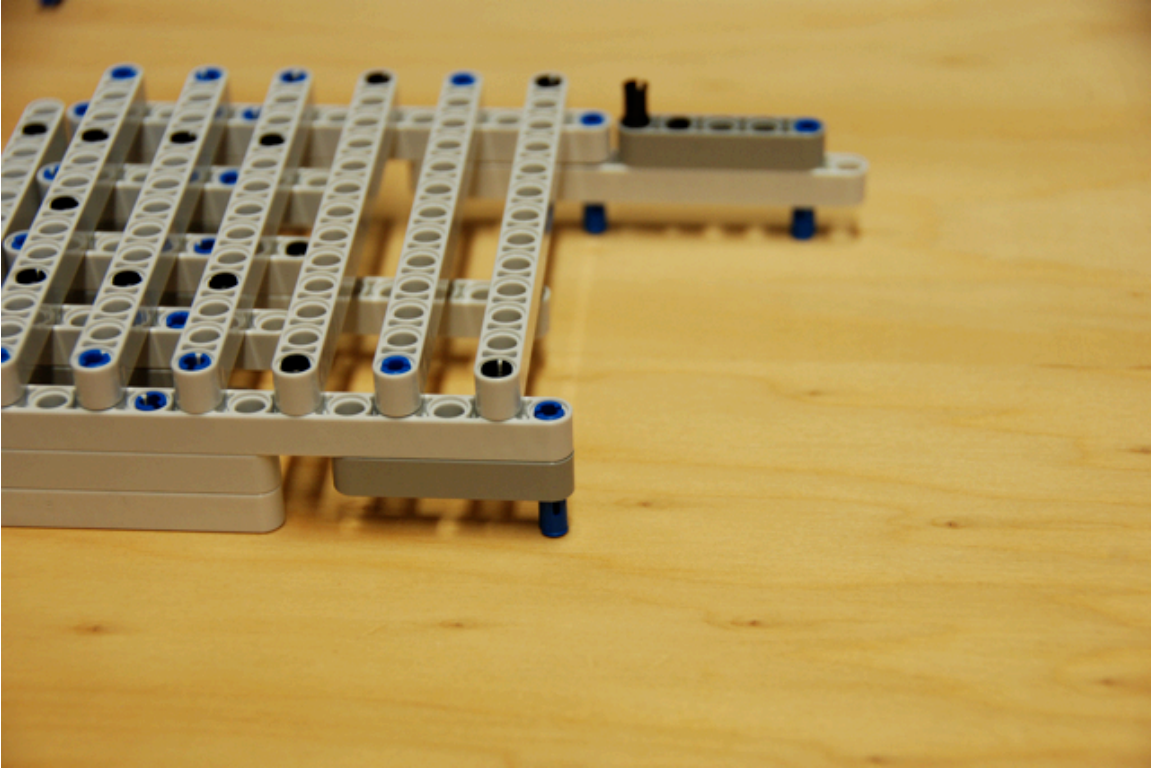


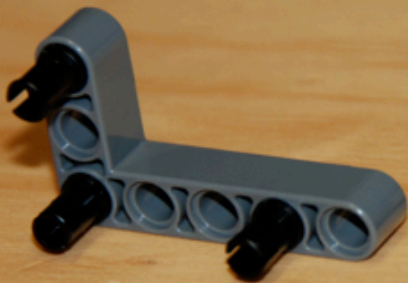


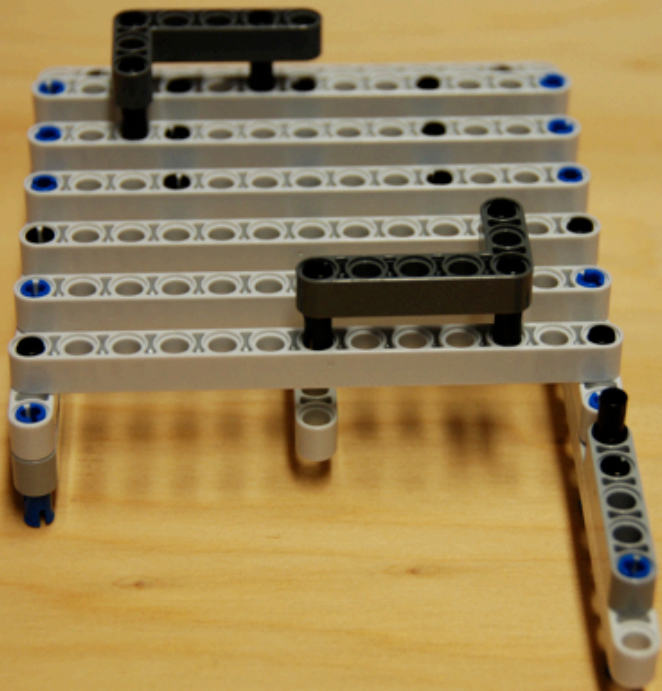


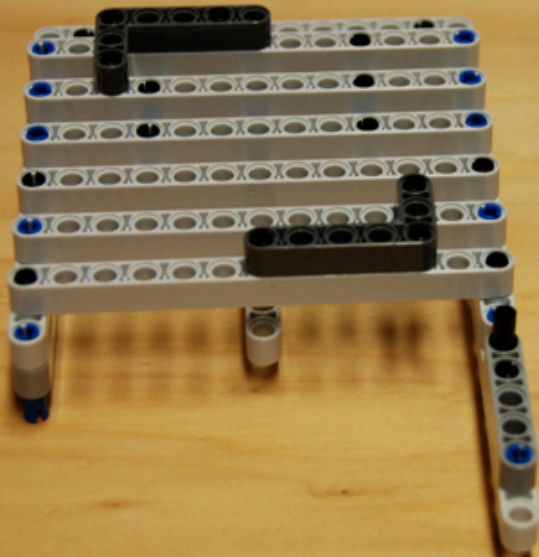




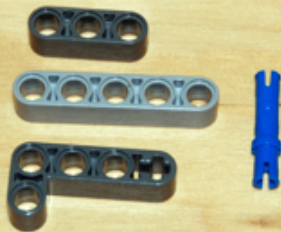




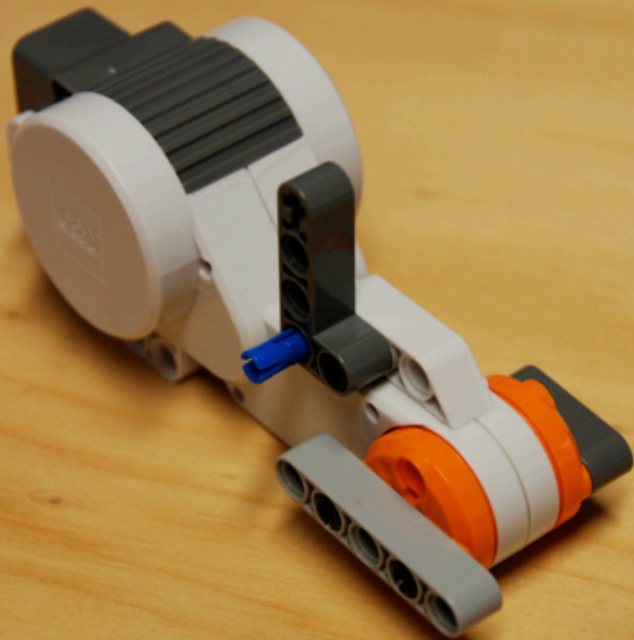


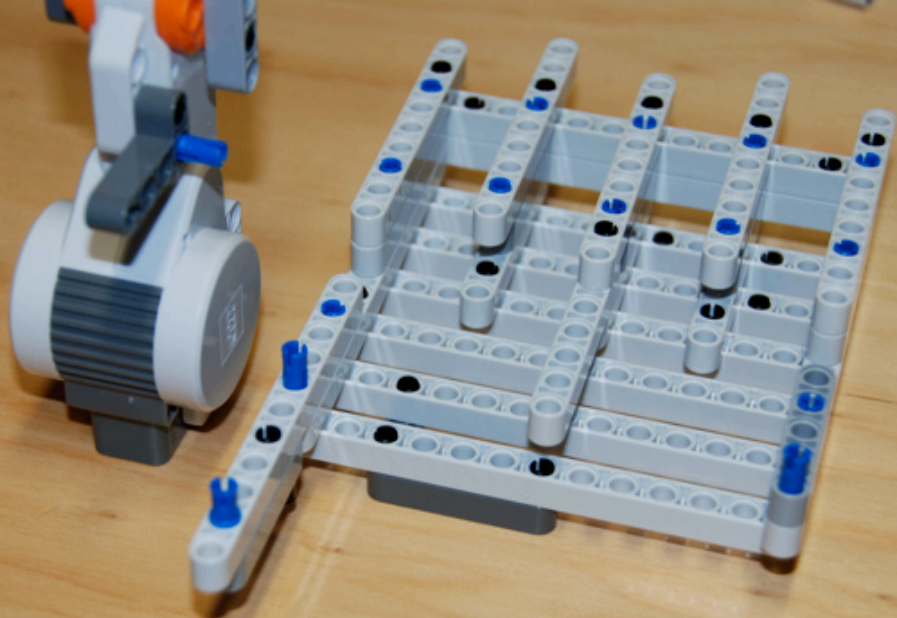


Stage 3





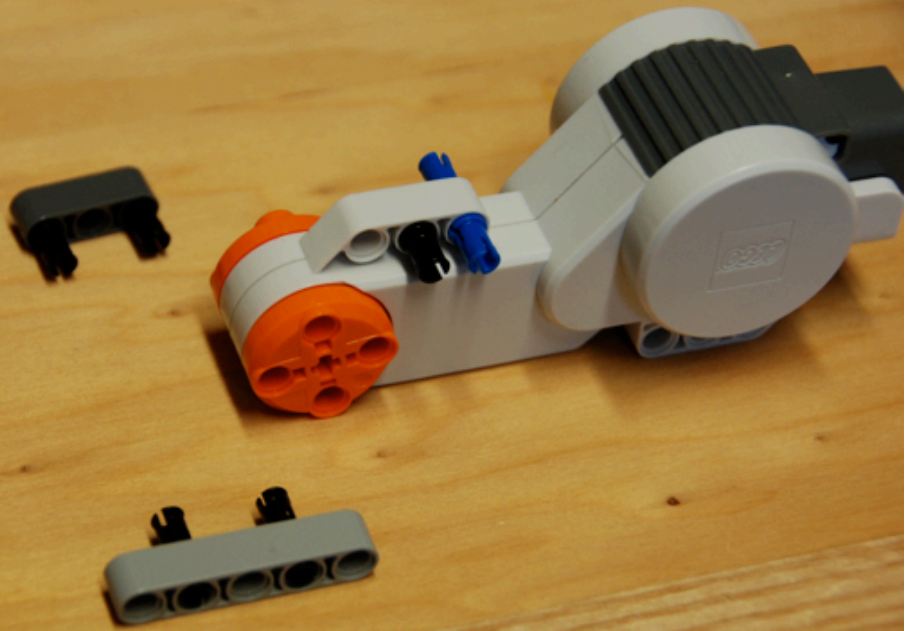


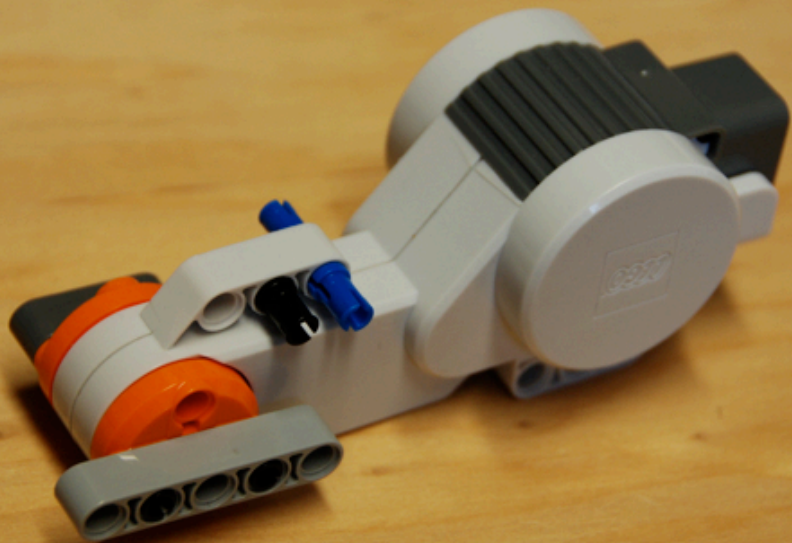




Stage 4





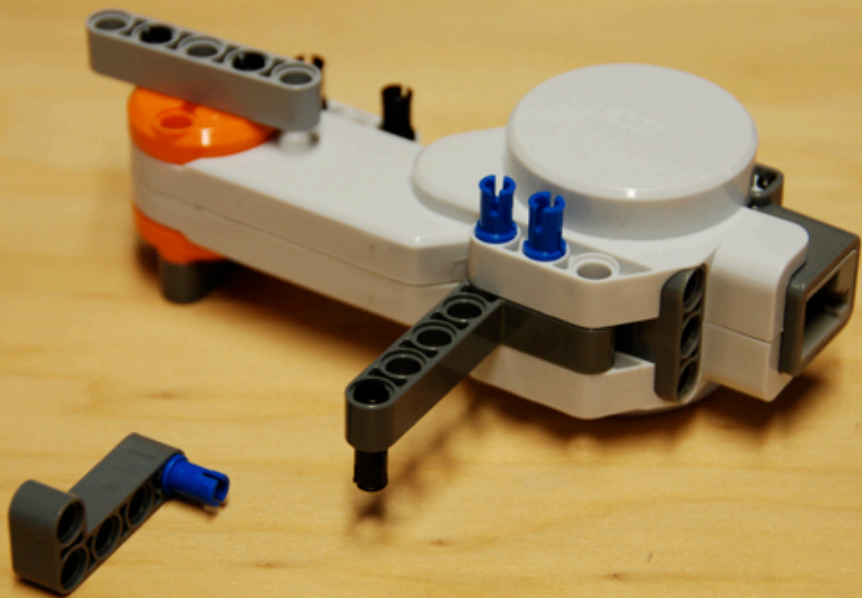


Stage 5







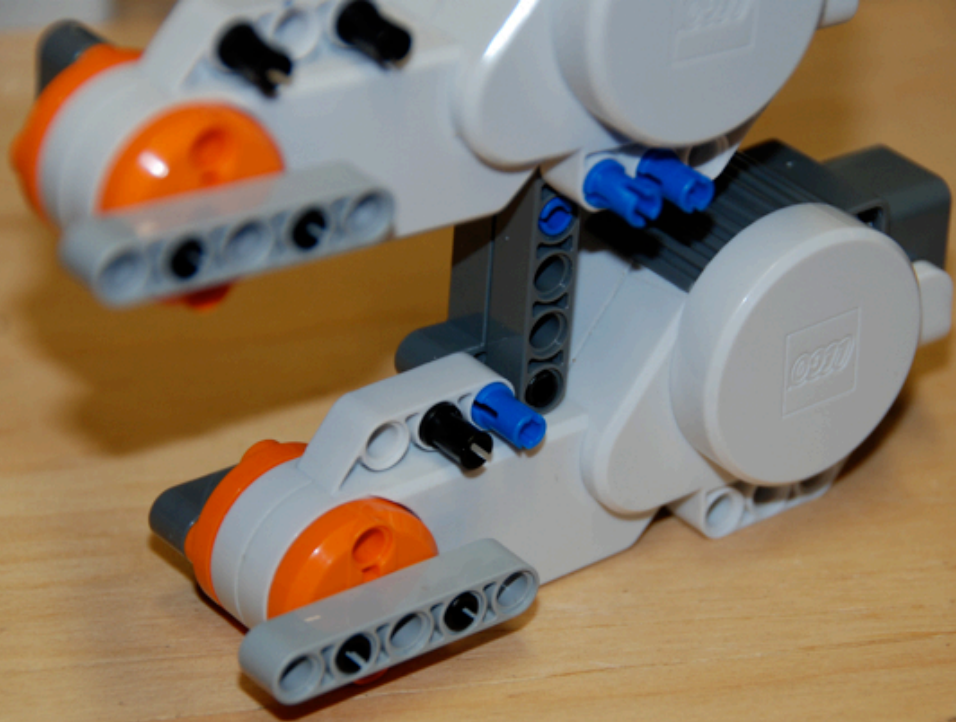


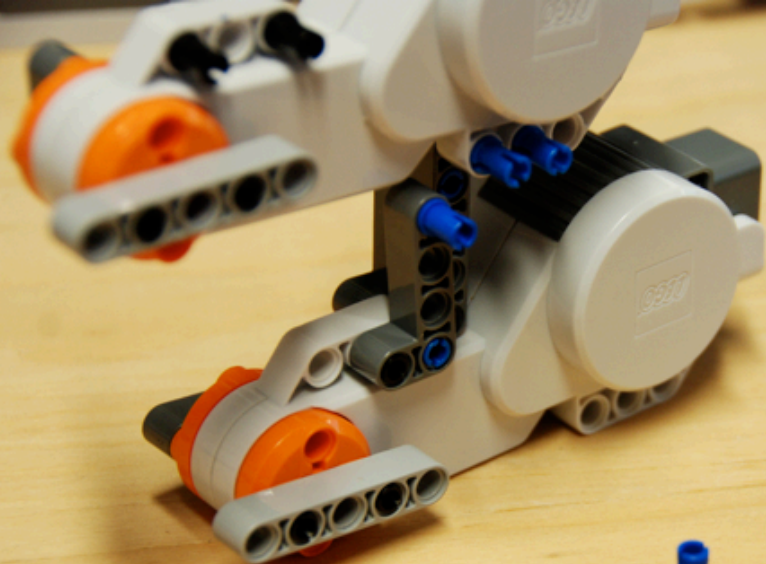


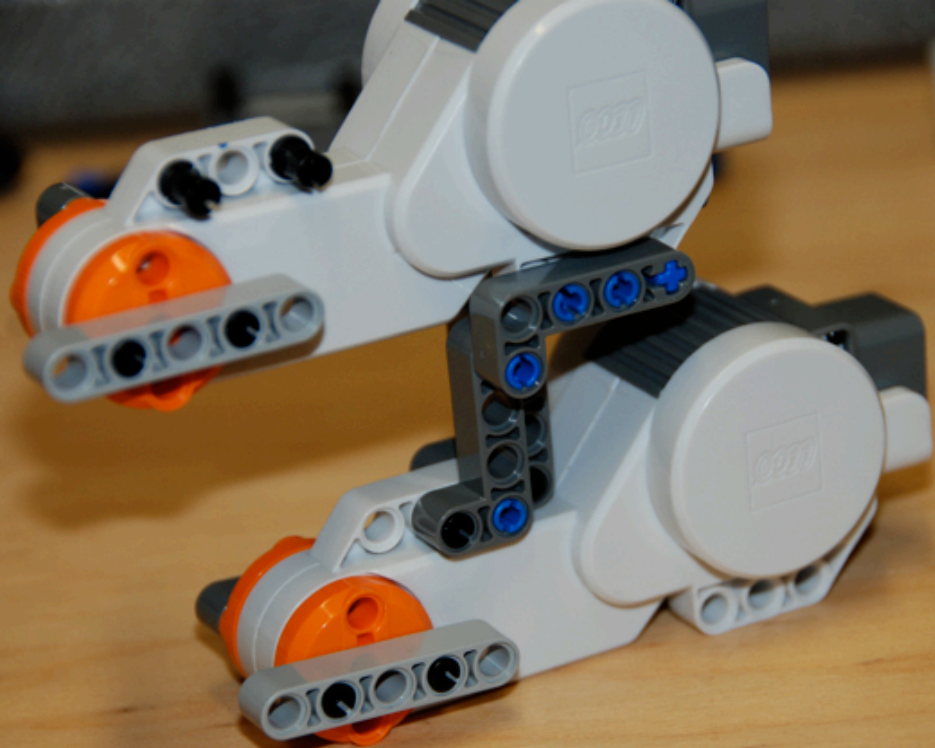
Stage 6



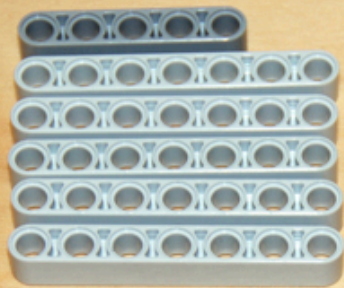




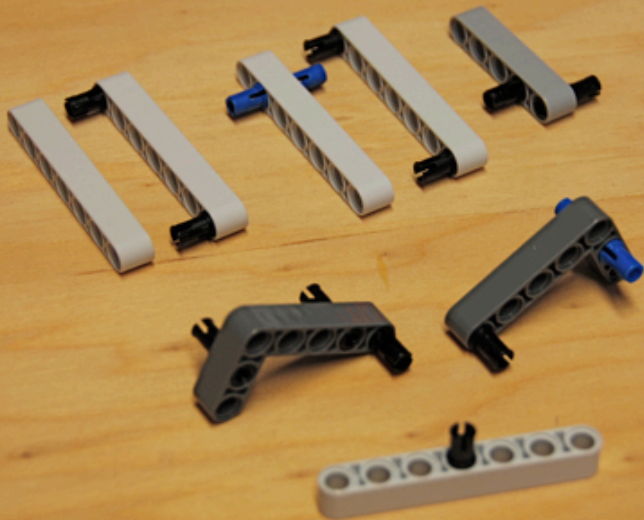


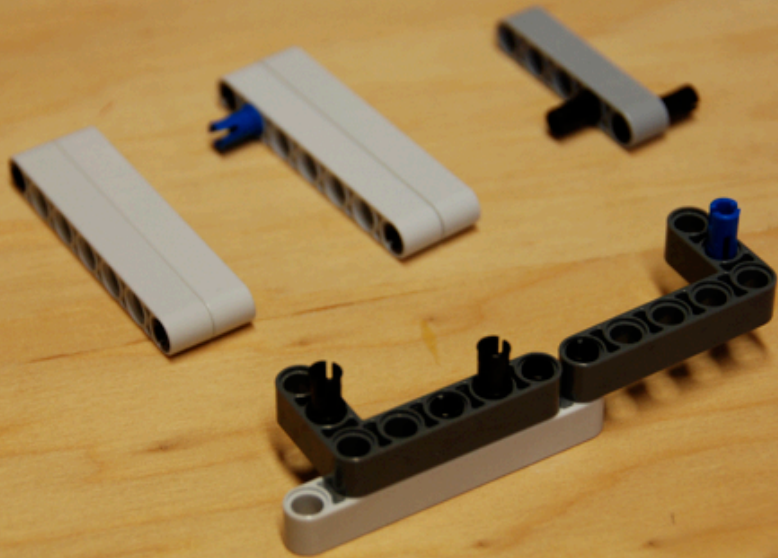


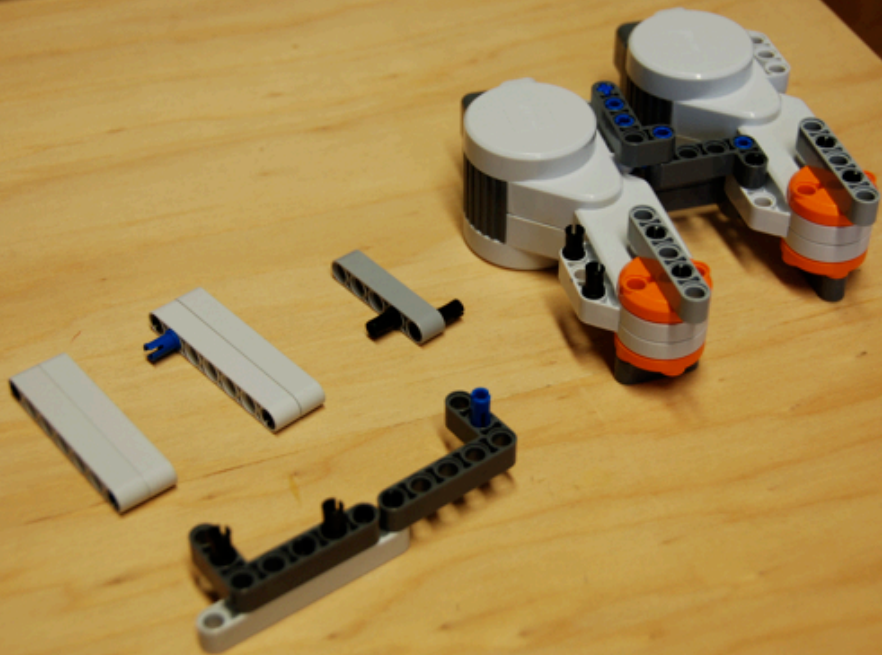
Stage 7

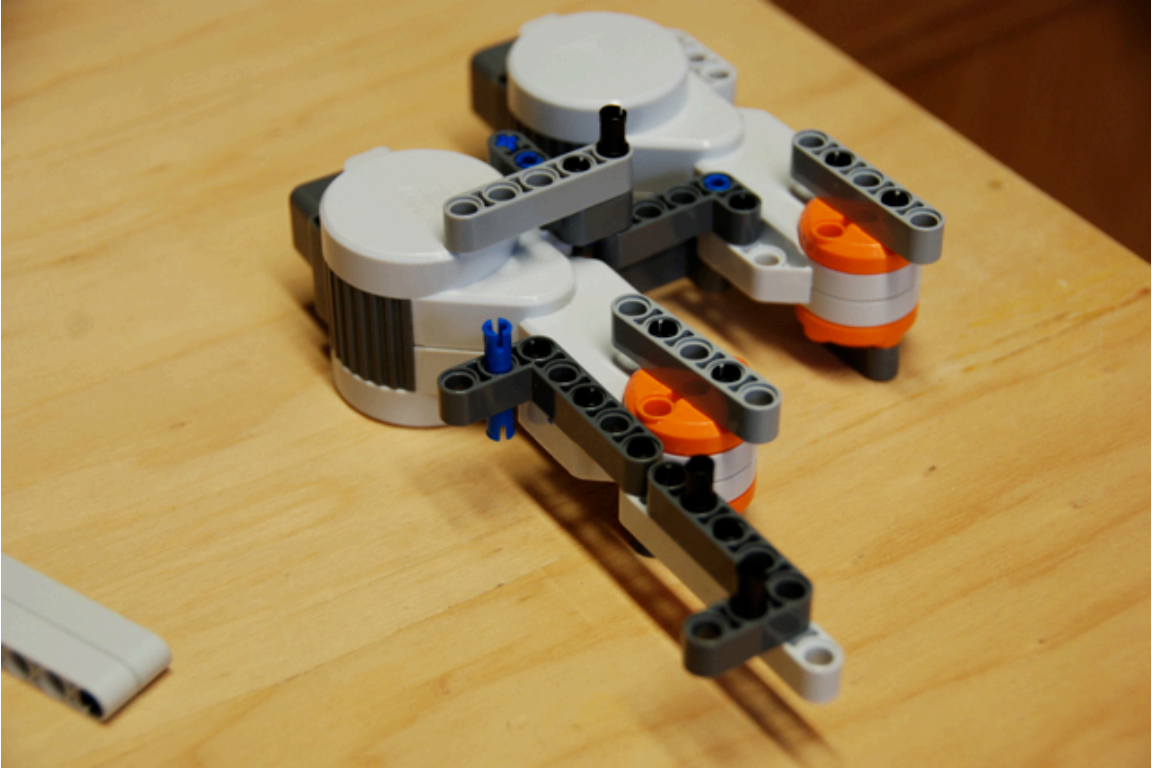


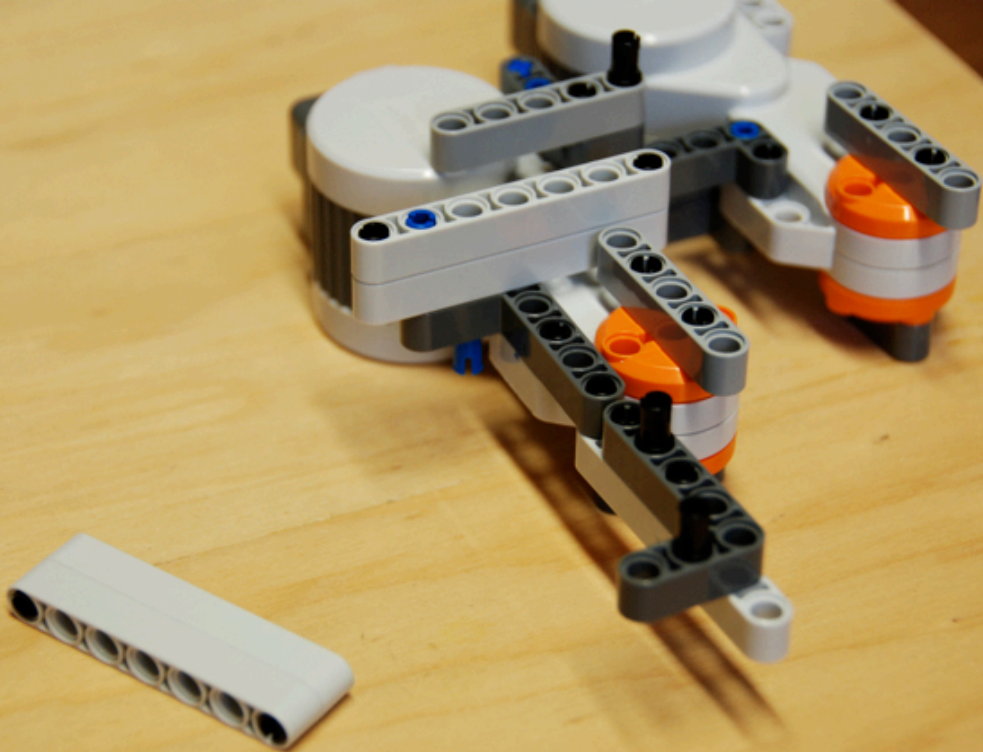
x11





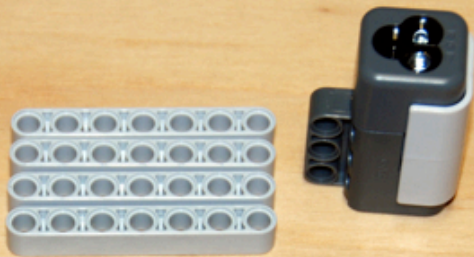


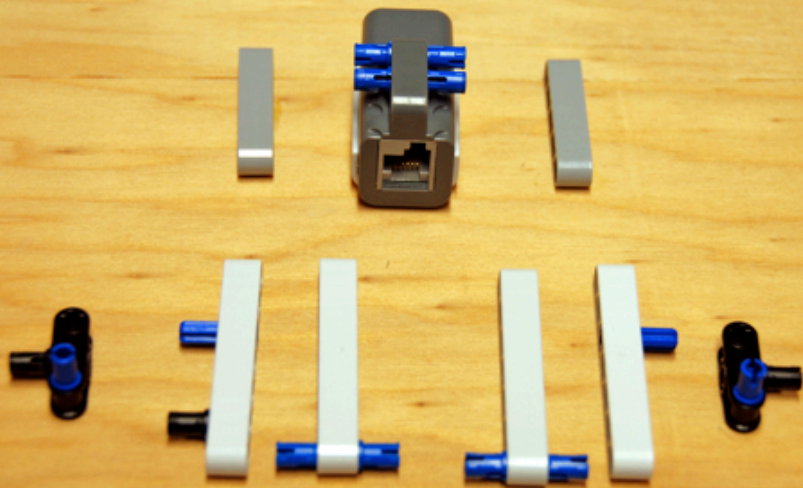


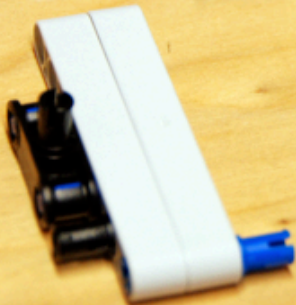




Stage 8





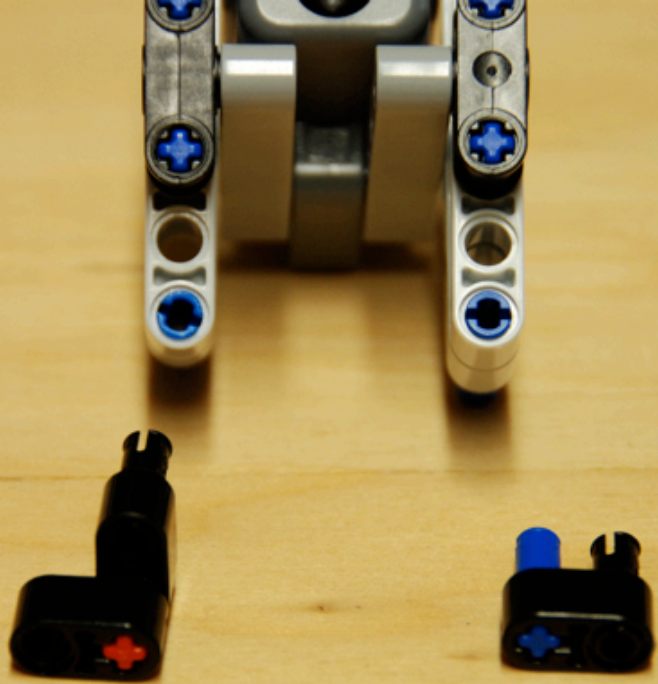


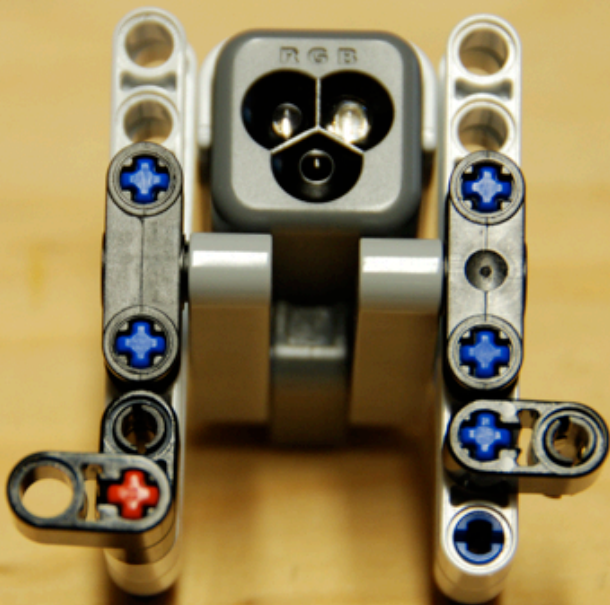


Stage 9

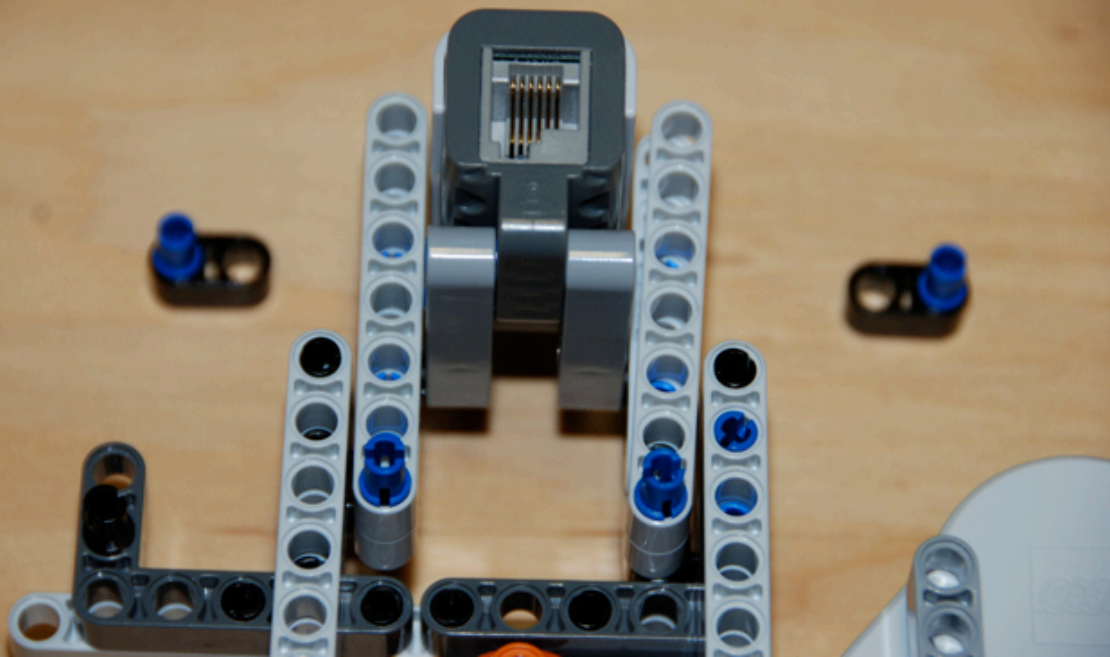


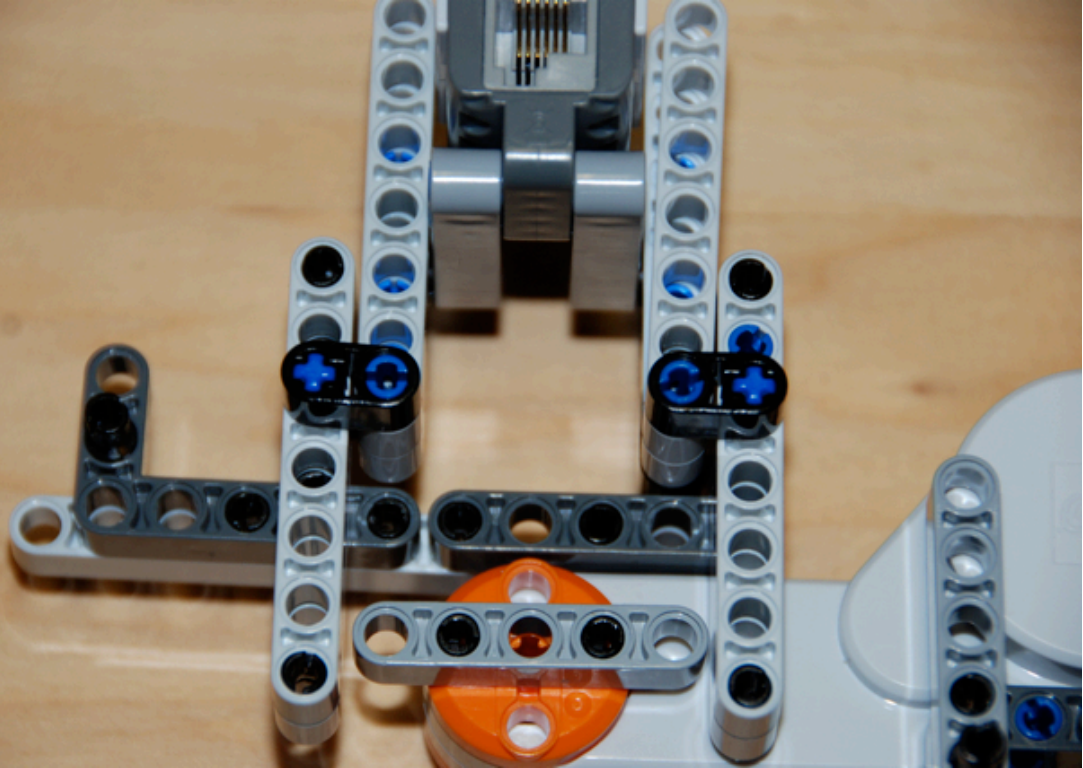


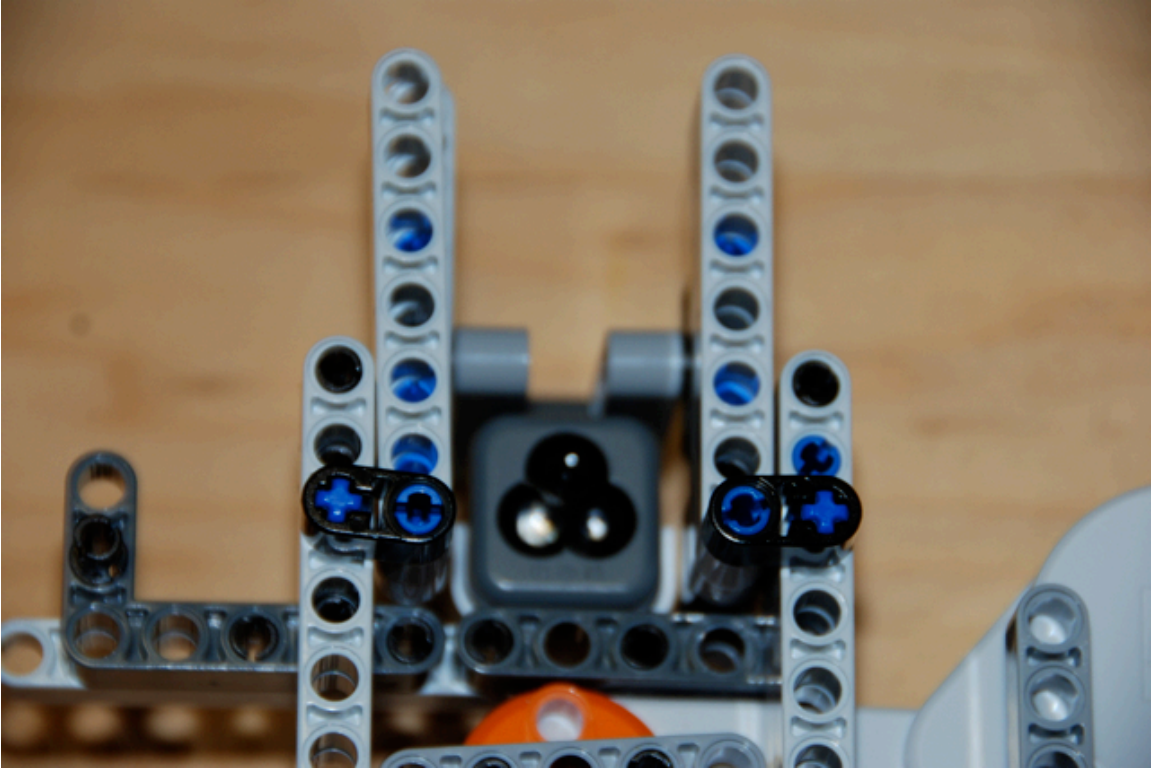






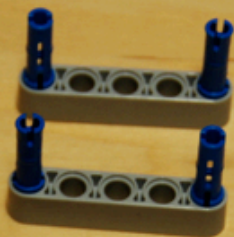


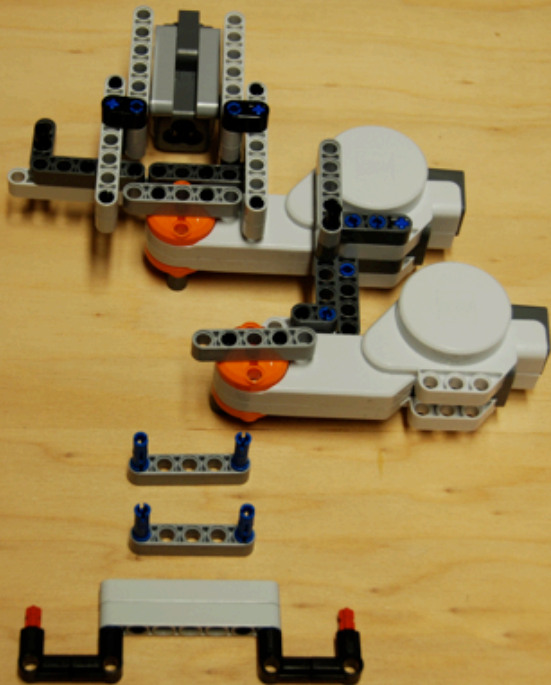


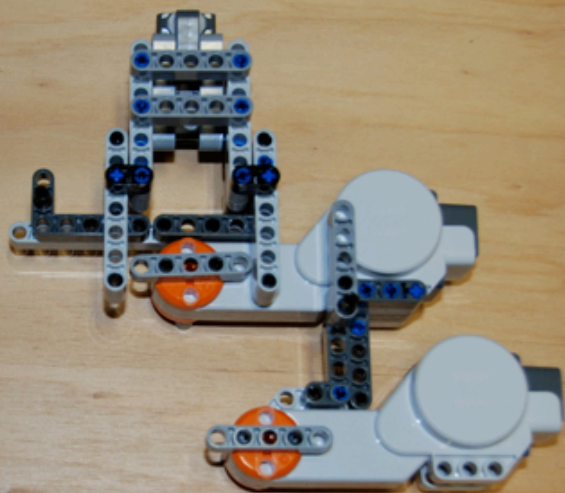


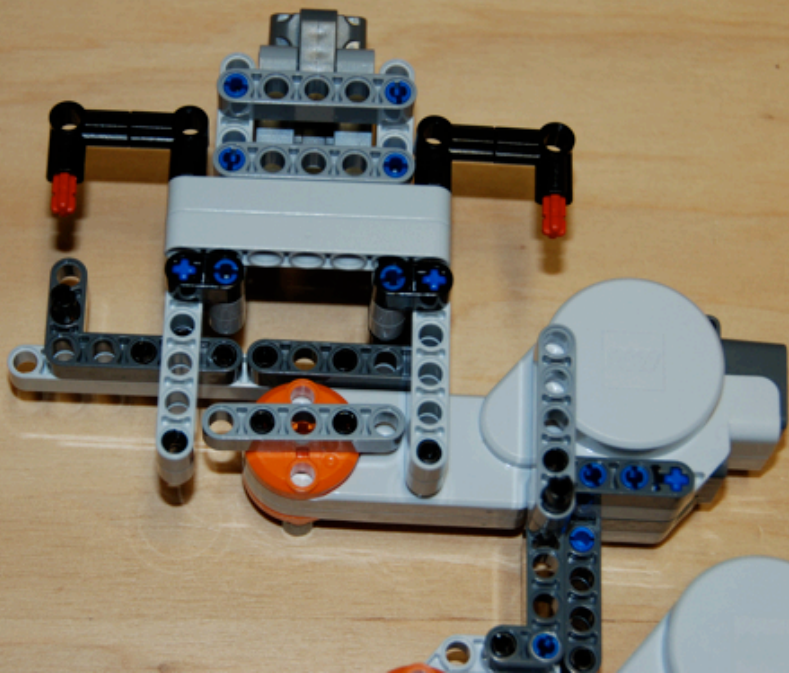
Stage 10

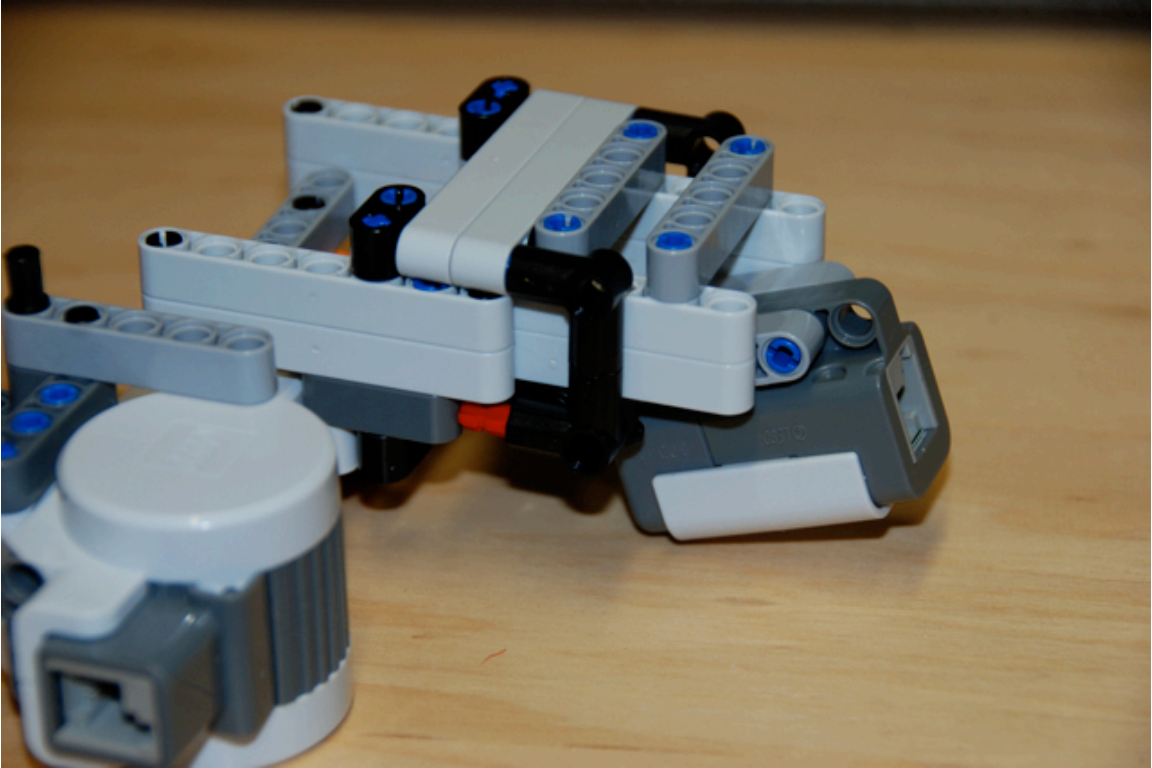






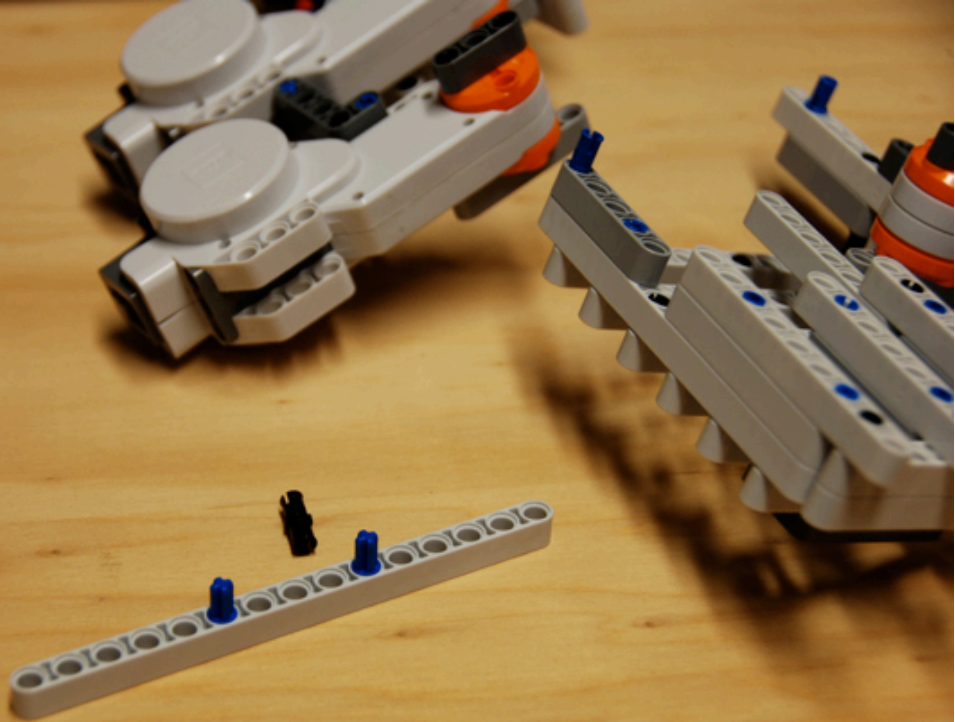




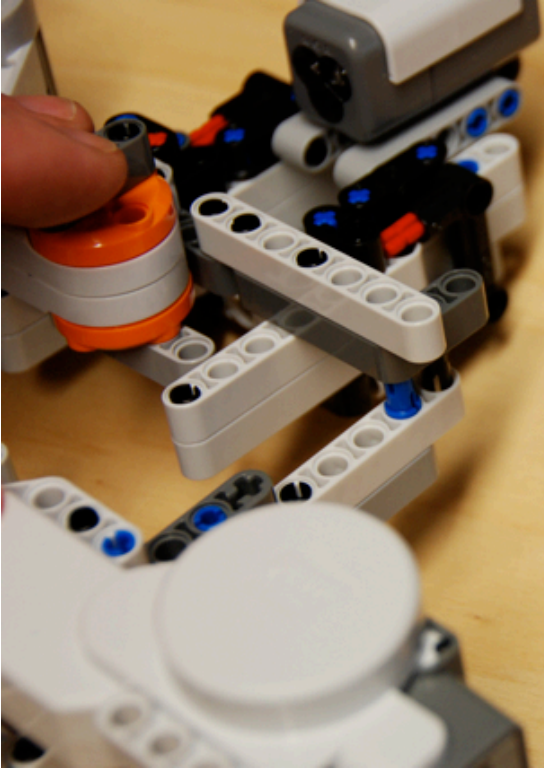


Stage 11

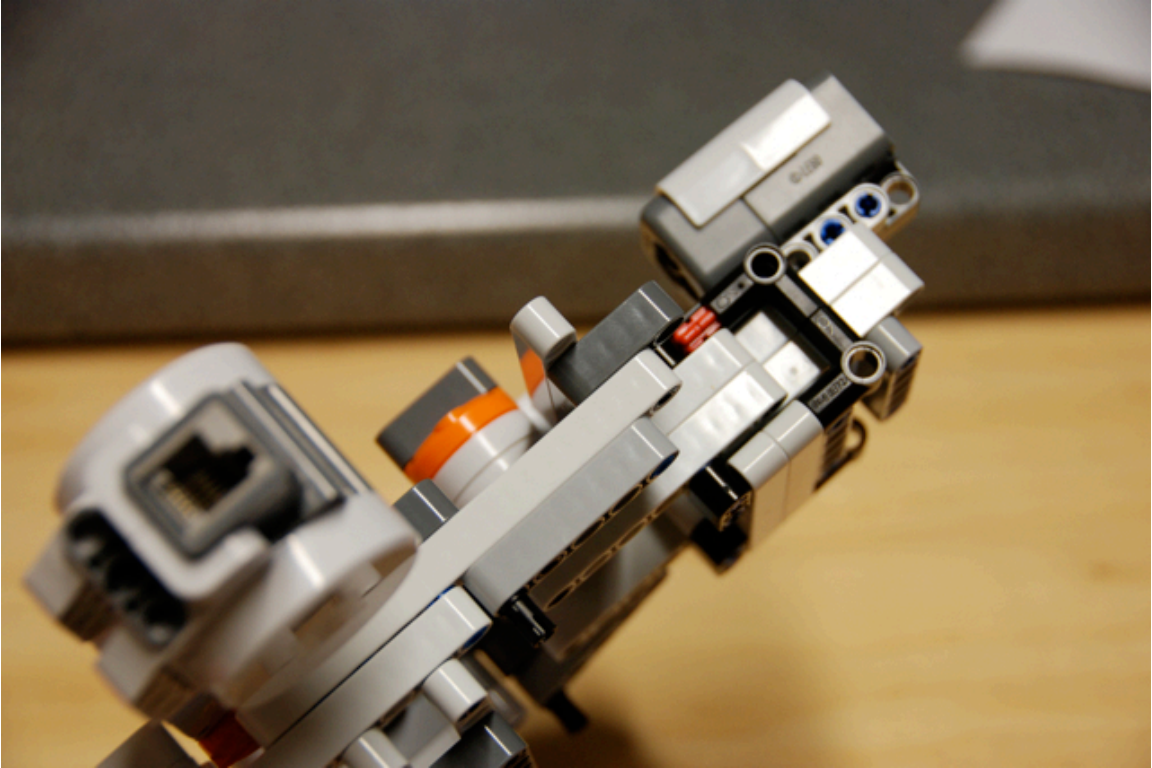




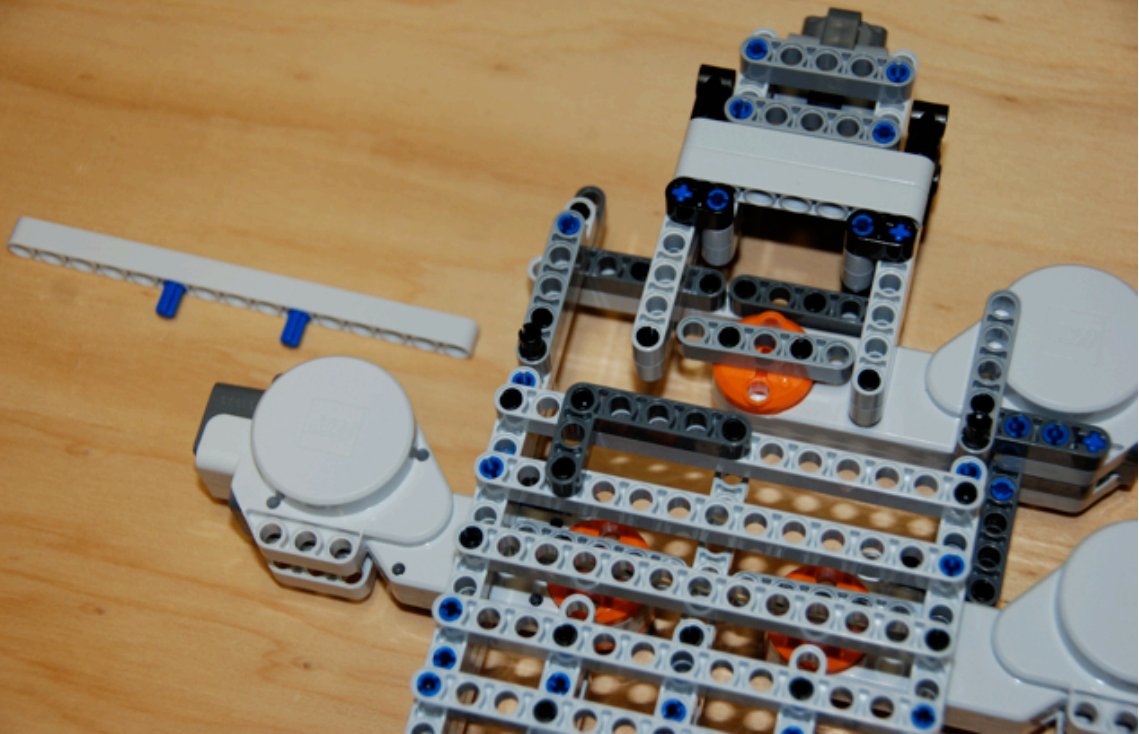


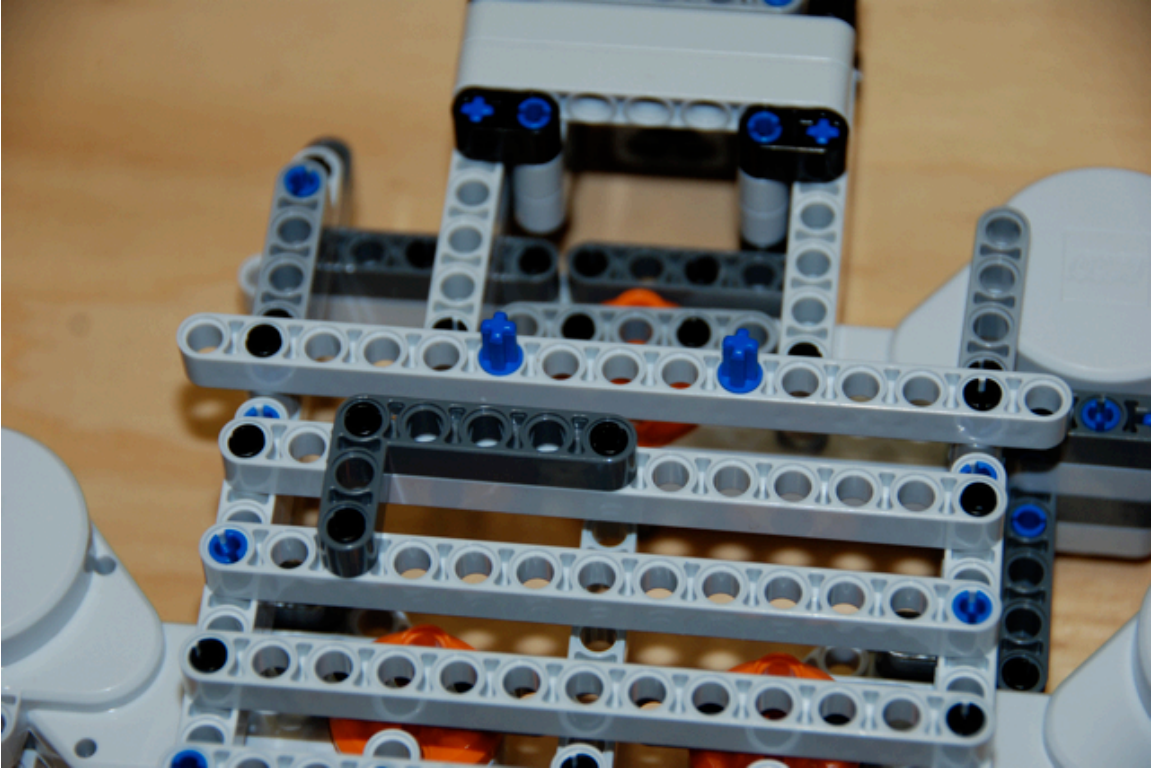




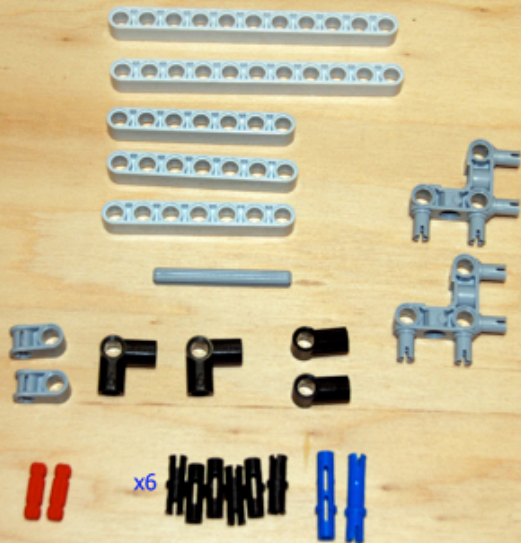


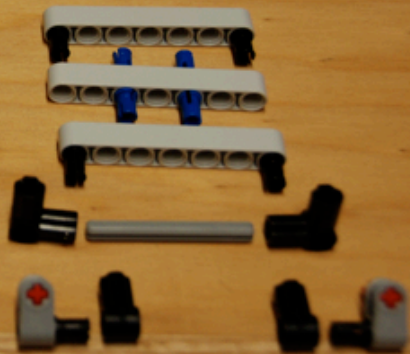
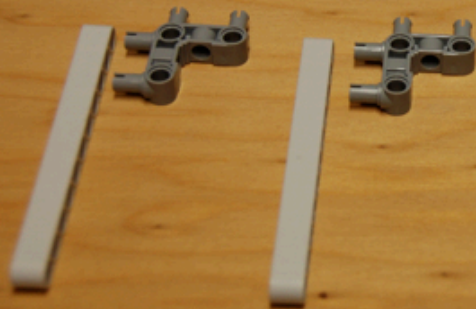




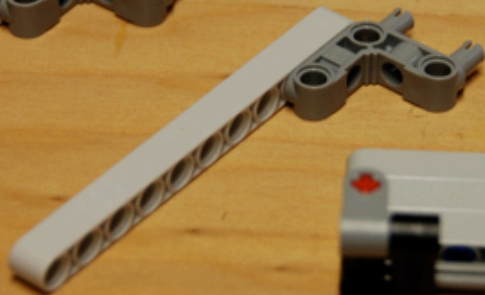
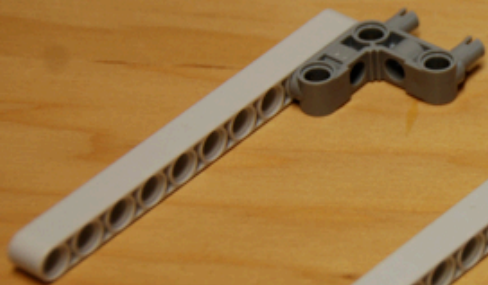


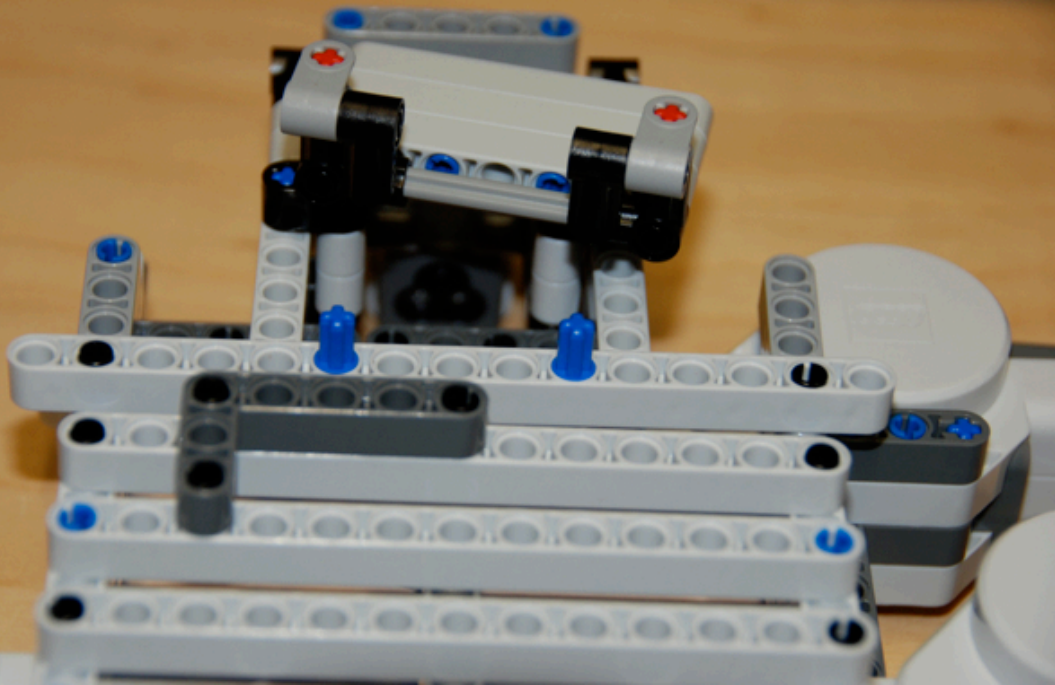
Stage 12

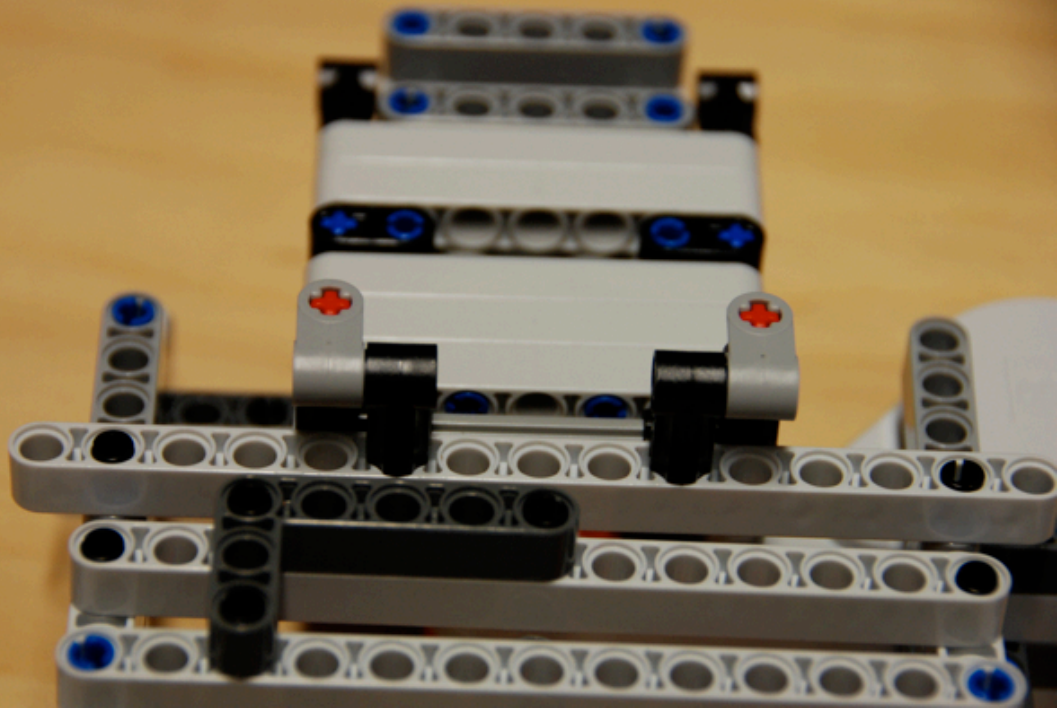














Stage 13



50cm

50cm

35cm

35cm

A

B

3

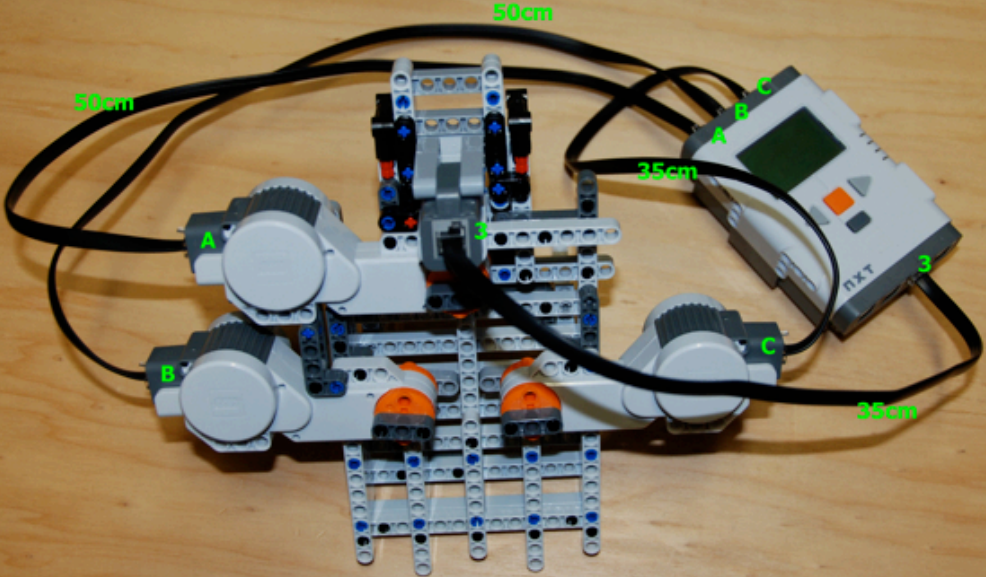
C

A

B

C

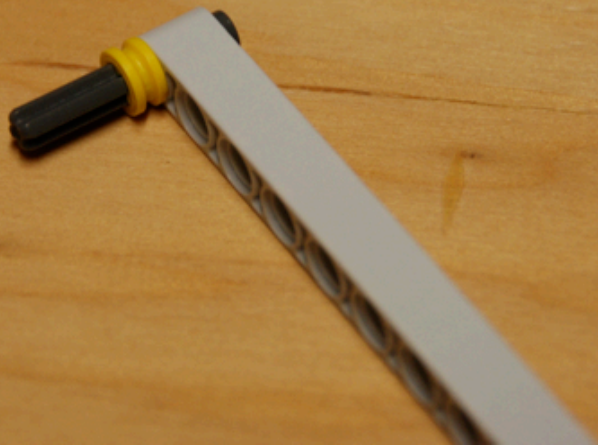
3

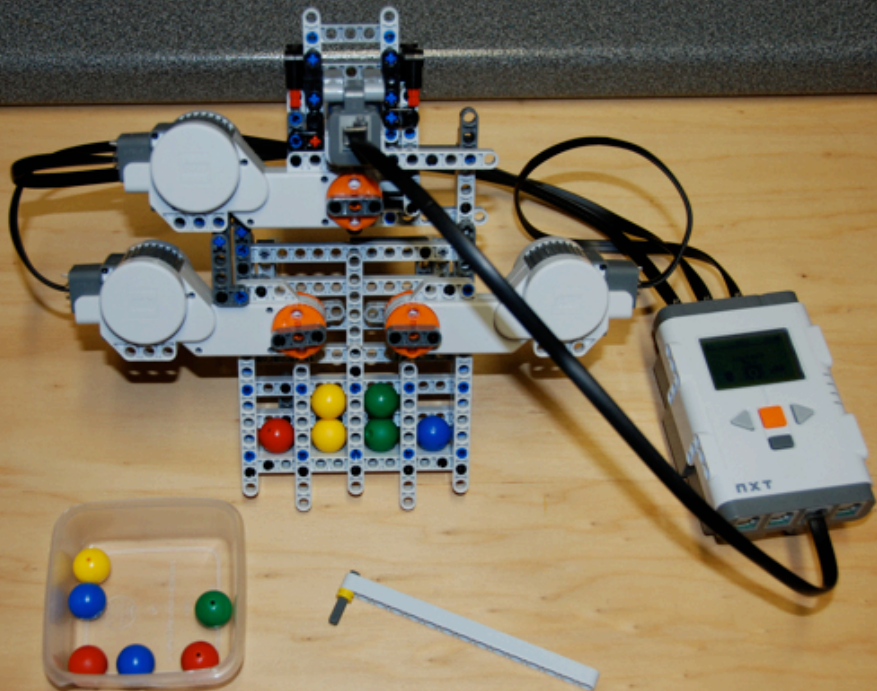


Stage 14









Notes on Colour Sorter 3

This design is based on that shown in a youtube video by DrCEM1 at <http://www.youtube.com/watch?v=qdCLRbVuKZI>

I have built a similar robot based on this video and produced these building instructions and program which are all my own work.

The Zamor Sphere balls that Lego supply in the NXT2 kit are about two "bricks" in diameter, and consequently they can stick in a channel of this width. This means that the robot requires a certain amount of flexibility, and the design does not brace things too rigorously so that there is sufficient play to allow the balls to drop through the robot.

I advise you to work the robot manually to start with, turing the motors using the three beams on the front, and check that the balls can pass through OK. You may need to flex some bricks to let this happen. I have built the robot several times now and it is not too difficult to set it up so that the balls drop OK. You may find that they bind in the lower collecting channels, but usually the next ball will push them down.

The "retriever" lets you pull the balls out after a run, without disturbing the positioning of the parts.

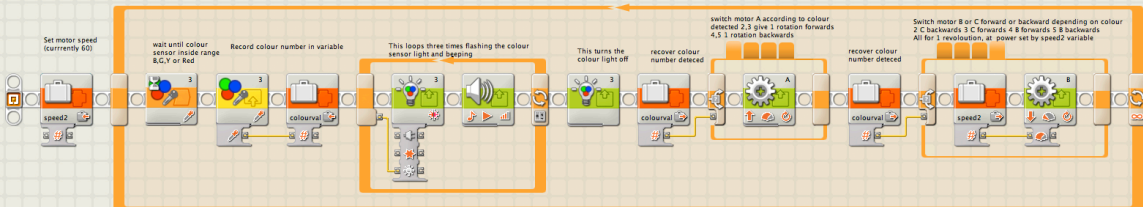
I have also experimented with the value of the speed2 variable in the program, and with the tilt of the whole robot, which you can adjust by repositioning the two back support beams. If you make it too steep the balls may bounce out.

Have fun, and let me know how you get on with this. Also, why not have a look at my other two colour sorting robots all on <http://r.newman.ch/lego> Contact details on the site,

Colour Sorter Robot, based on a design by DiCEM on youtube <http://www.youtube.com/watch?v=qdCLRbVuKZI>

The program uses two variables, speed2 which is used to adjust the power of the two lower motors, and colourval which holds the number of the last colour ball detected 2=blue 3=green 4=yellow 5=red

Program loops indefinitely until stopped by the grey cancel button



Motor A is top motor under colour sensor
Motor B is left hand lower motor
Motor C is right hand lower motor
(all from front view)

Colour Sensor is on input port 3