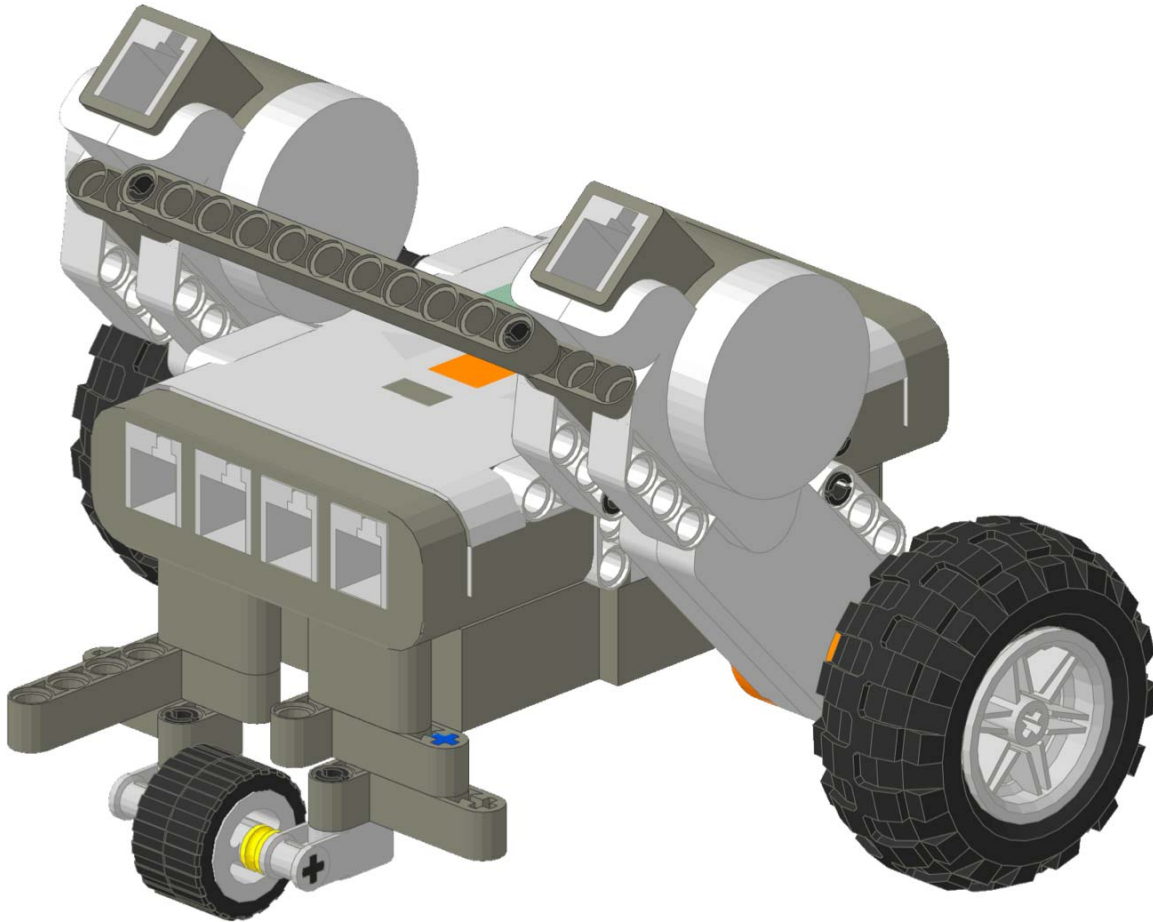


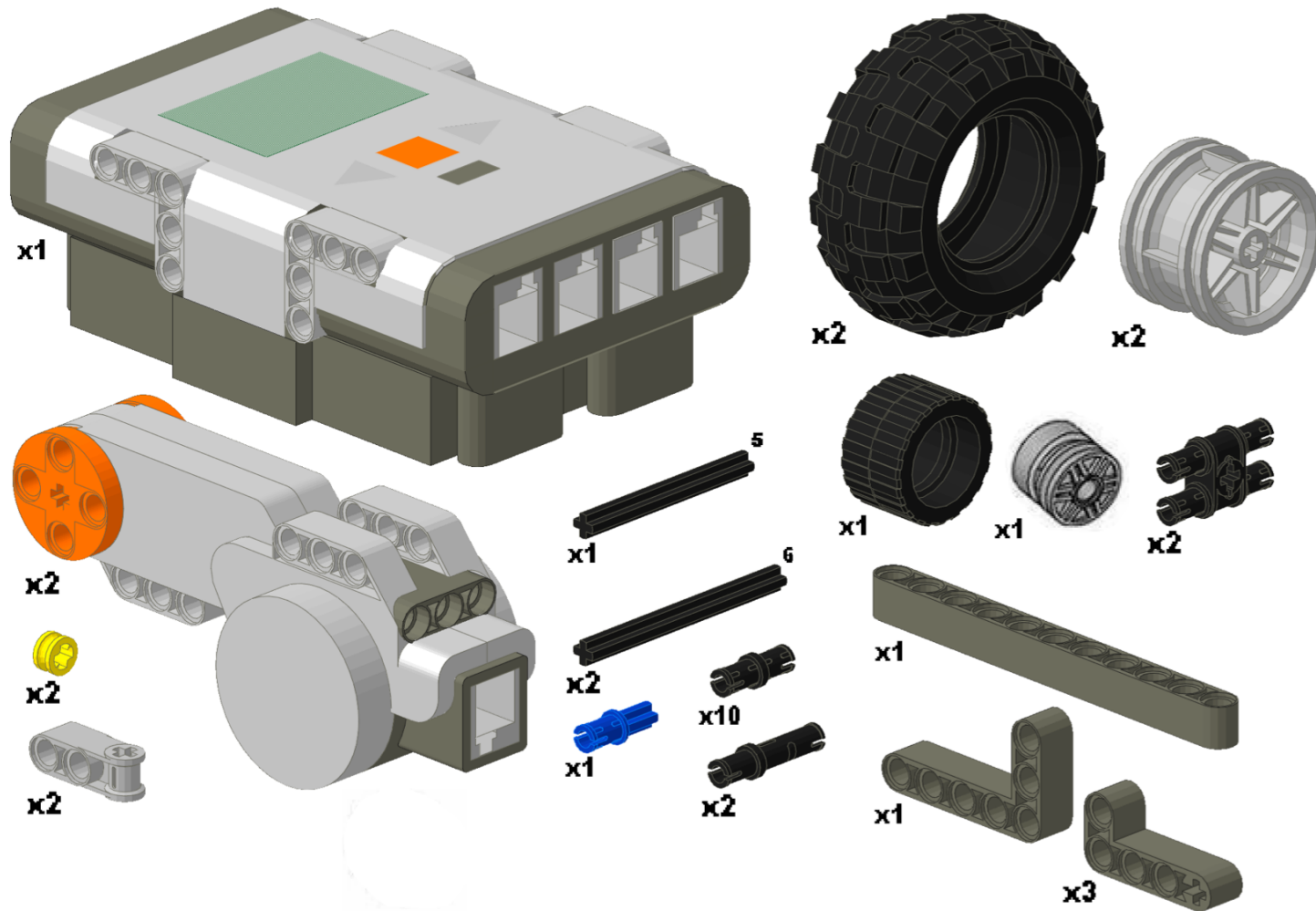
IV. Full Car Model

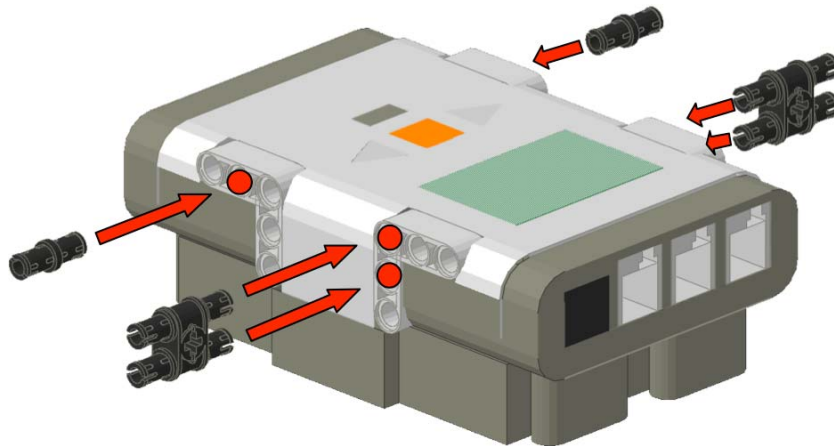


Model Description:

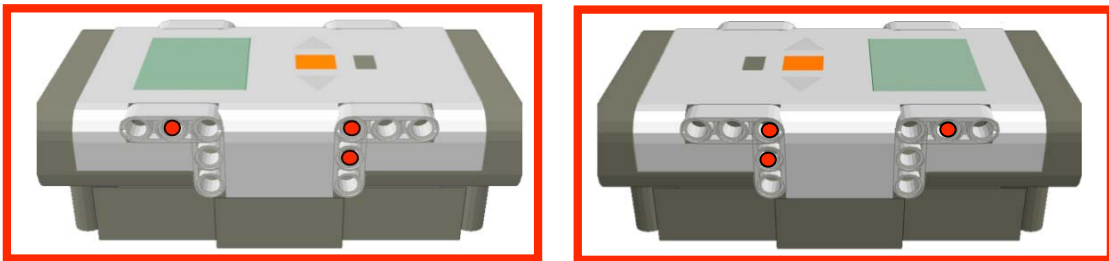
This is a simple, 2 motor car that can be built in less than 15 minutes using the NXT kit. Additionally, all front end setups (Section III) and sensor types can easily be added to this model. The following model displays the single front wheel front assembly.

These are the parts that you will need:

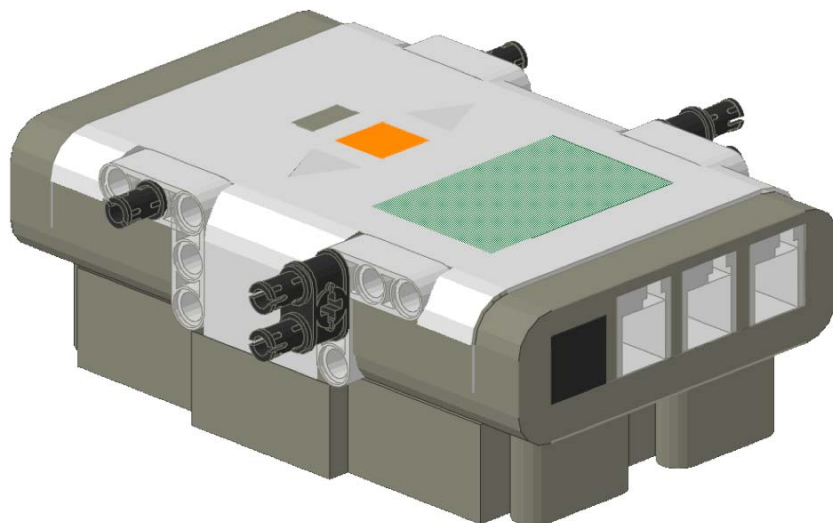


Step# 1

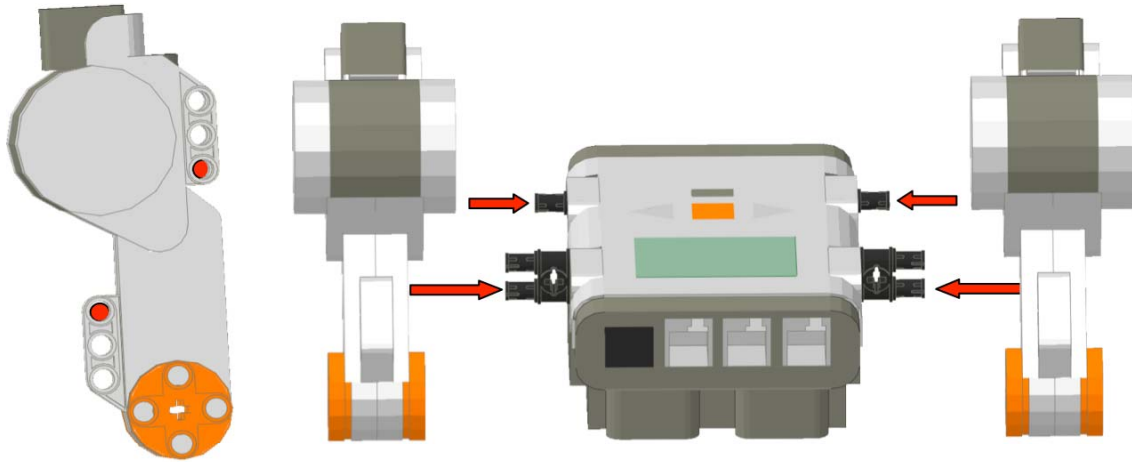
Side Views



Attach a double black connector peg and a single black connector peg to both sides of the NXT. Connect the double peg vertically in the top most holes. The single peg should be connected in the middle horizontal hole. Your NXT should look like the below picture before moving on to the next step.



Step# 2

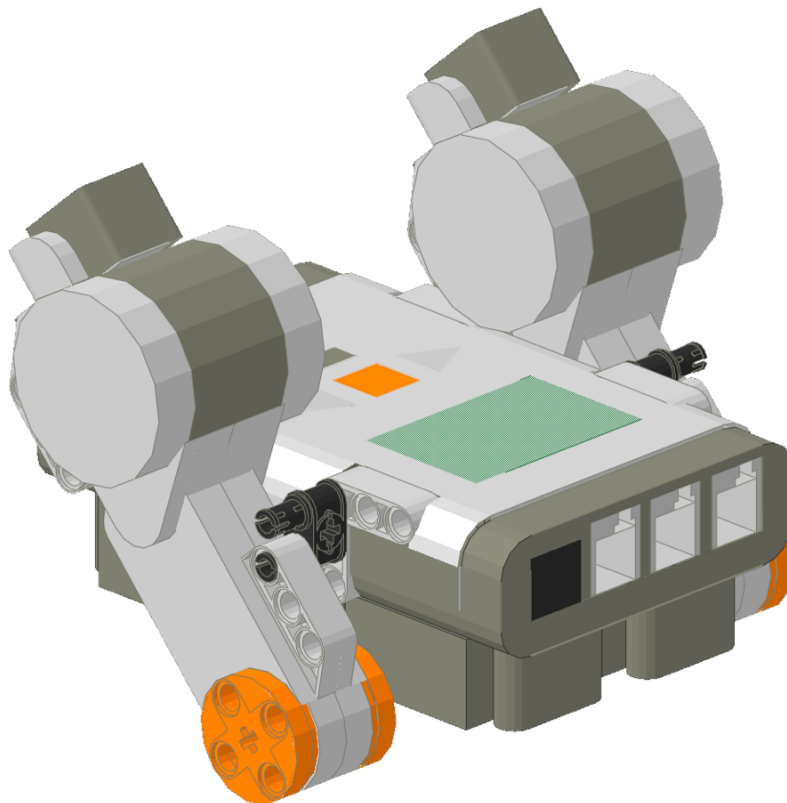


Side View

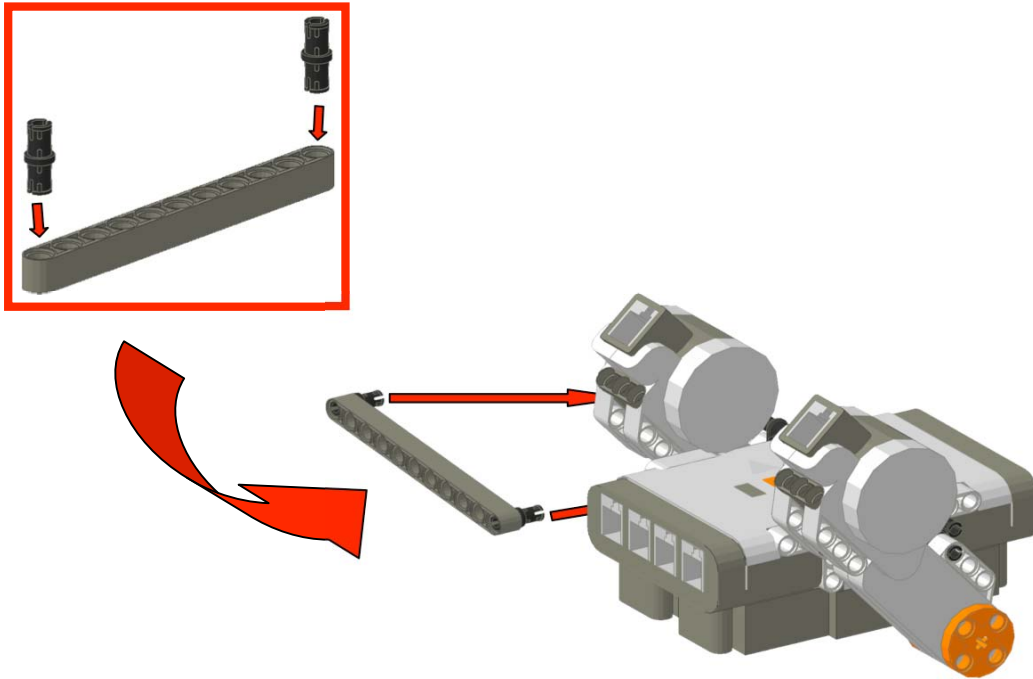
Top View

Attach the motors (one per side) to the NXT using the double black connector pegs and the short black connector pegs attached to the NXT. The **red** dots in the side view identify which holes on the motor attach to the pegs. Your NXT should look like the below picture before moving on to the next step.

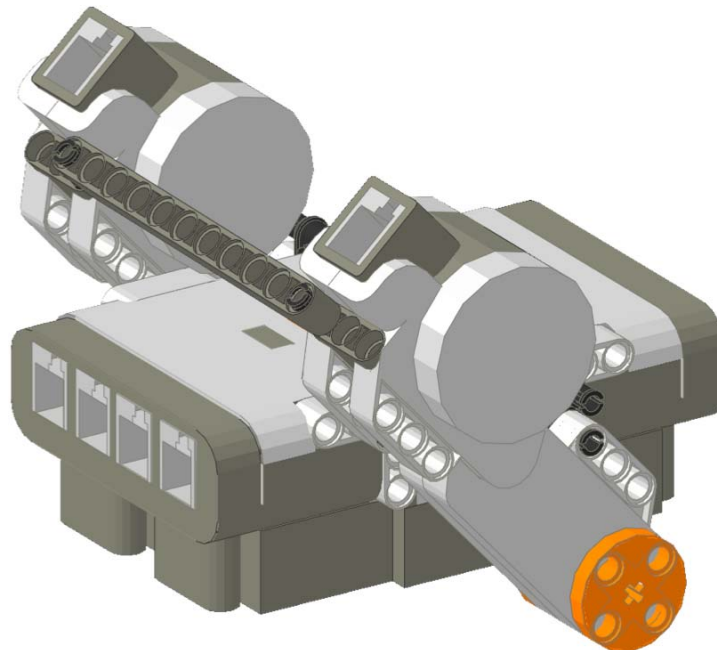
Note: The top connection of the double black connector peg is not connected to anything.



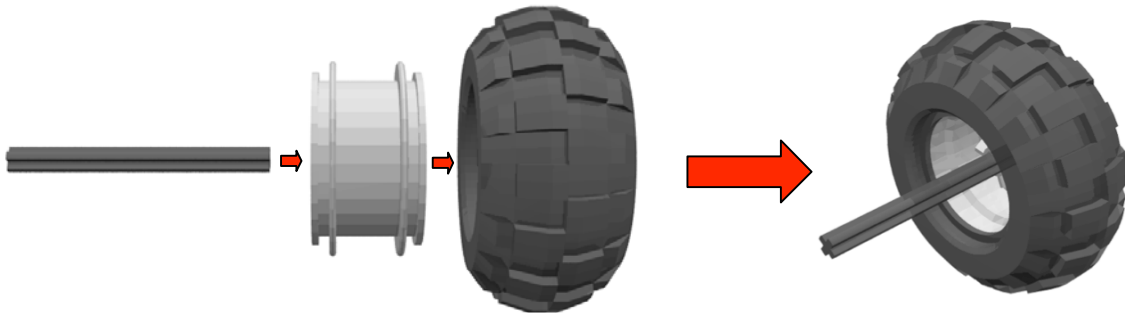
Step# 3



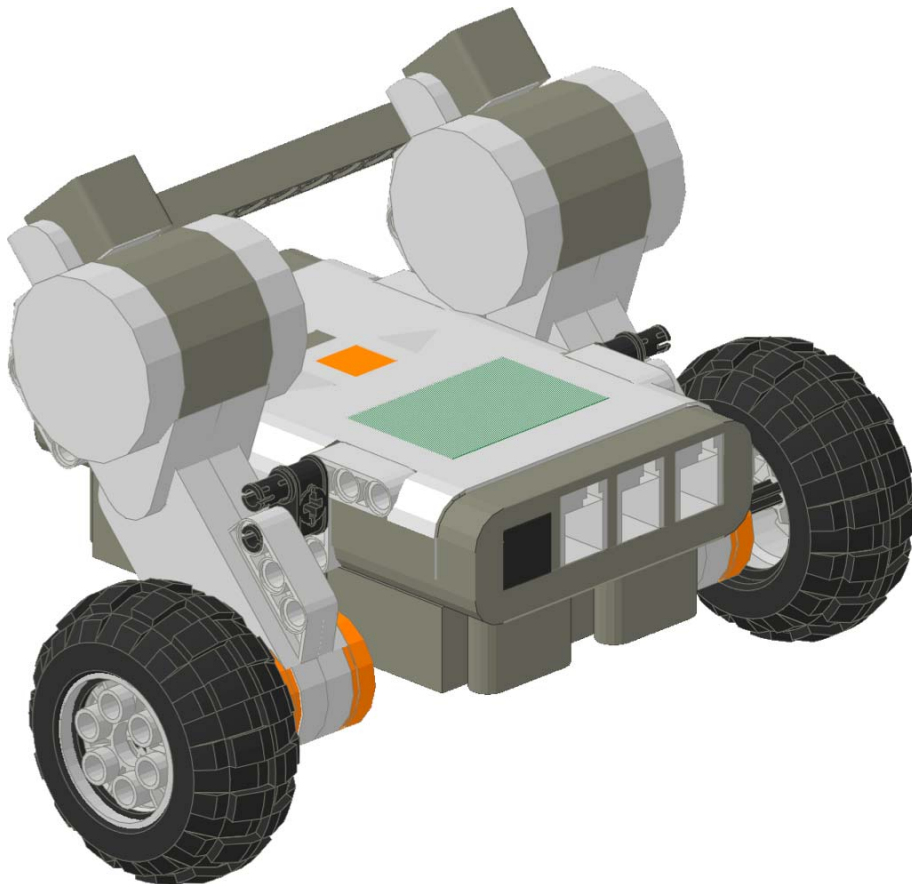
Take an 11-holed rounded beam and attach two short black connector pegs to the outside holes as seen in the **red** square. Connect the pegs to the back of each motor (as identified by the **red** dots) to further support the motors to the NXT. Your NXT should look like the below picture before moving on to the next step.



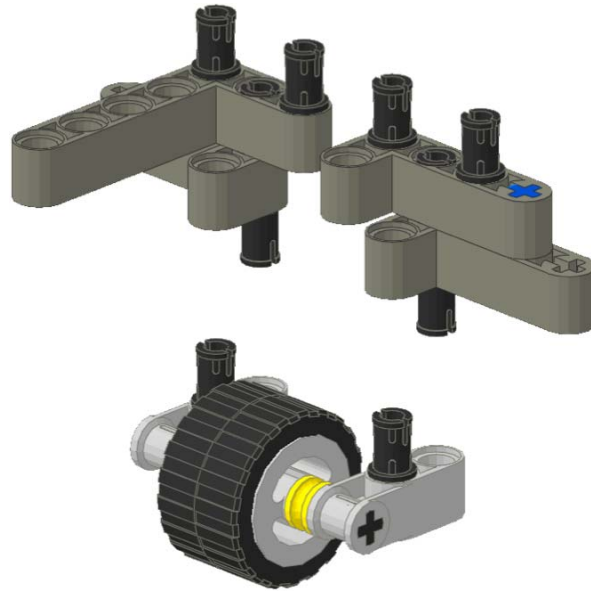
Step# 4



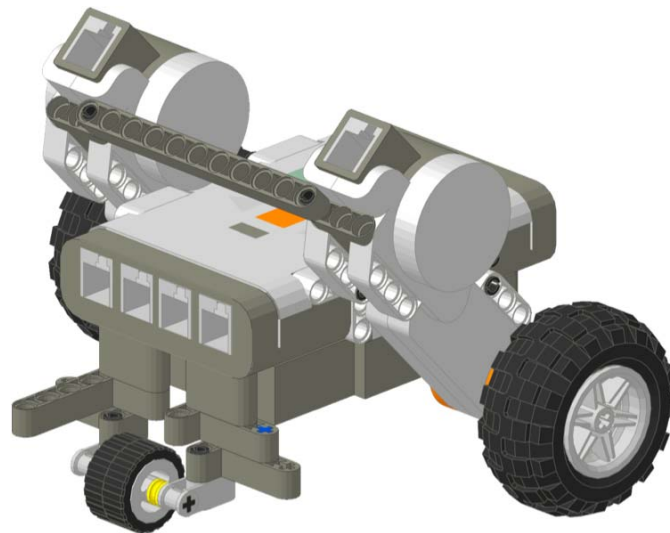
Assemble 2 rear wheel assemblies using a 6 stud axle, a wheel, and a hub. Attach one to each motor as seen below.

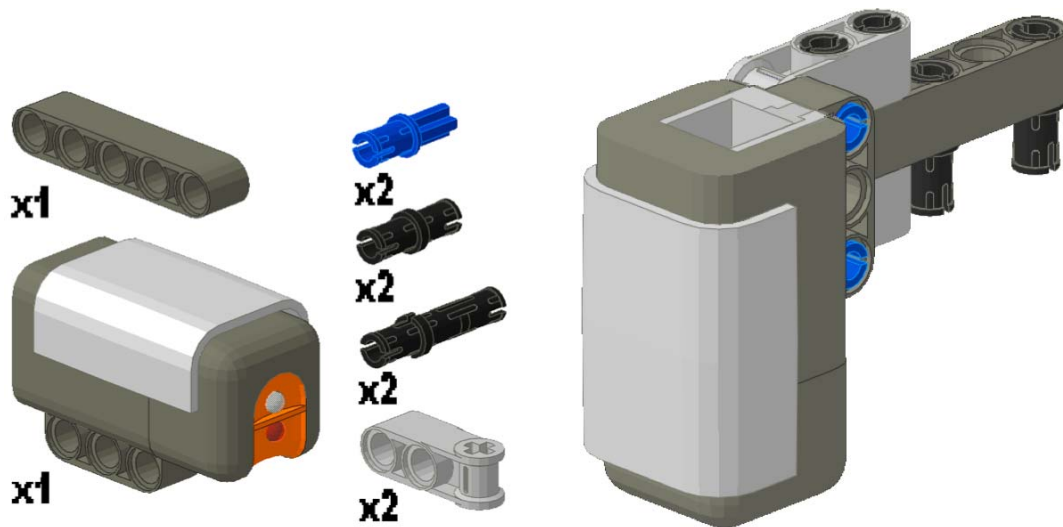


Step# 5

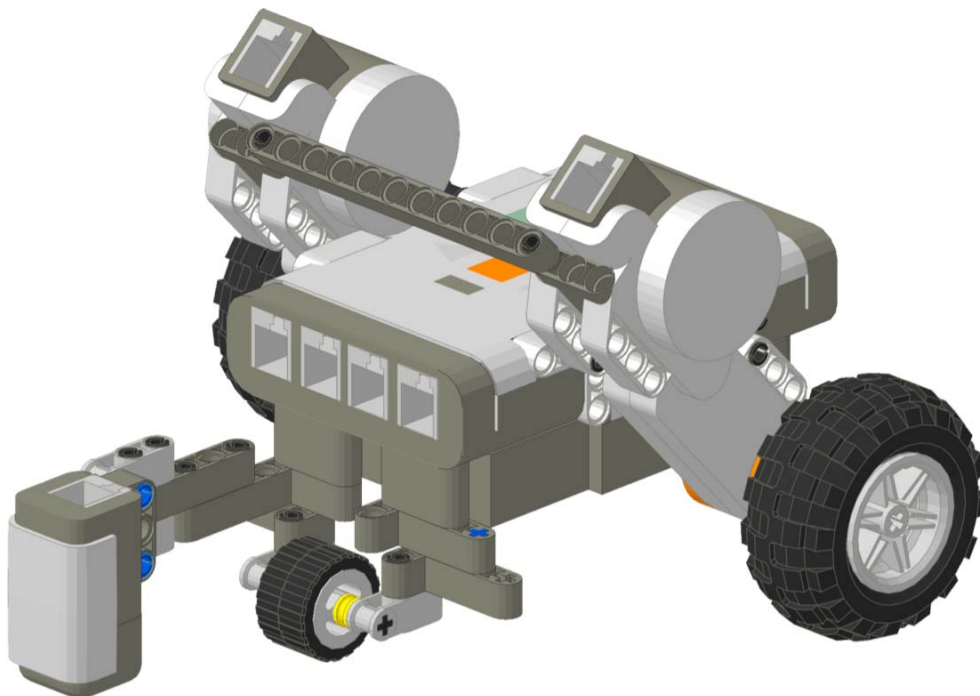


Take an L-beam and attach a black connector peg to the first and third hole on the smaller part of the L. Take a small L-beam and attach a black connector peg to the 1st and 3rd hole on the larger part of the L. In the 2nd hole between the 2 connector pegs on each L-beam, attach an extended black connector peg. Also attach a friction axle to the fourth hole on the small L-beam. Now attach 2 small L-beams to the protruding pins below the other L-beams. Attach a black connector peg to the second hole on the small part of the L. Now attach an axle joiner on each of the protruding connector pegs below the small L-beams. Then, align the wheel between 2 half bushings and slide the 5-hole axle through the axle joiners. Connect the front wheel assembly to the bottom of the NXT at the protruding connector pegs.

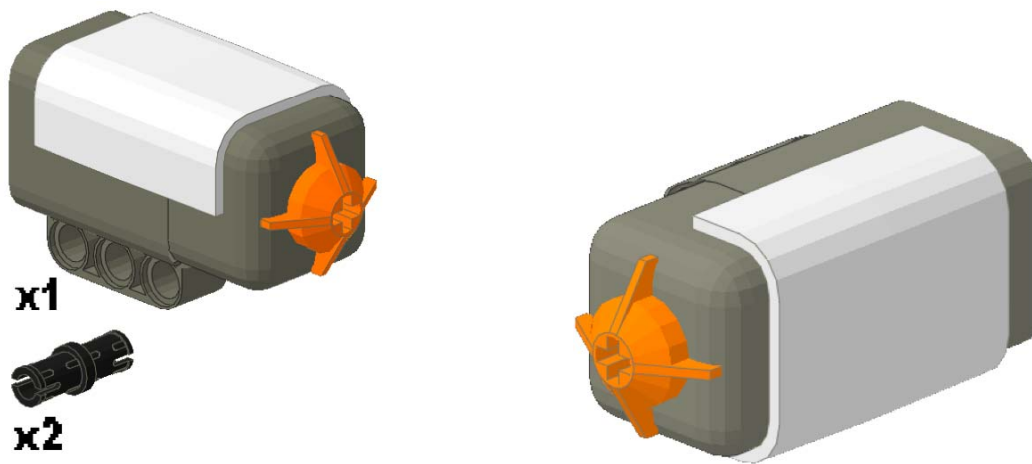


Step# 6 (Optional)

Insert a black connector peg into the 1st and 3rd holes of the 5-hole beam and an extended black connector peg into the 4th and 5th holes. Attach an axle joiner to the extended black connector pegs. Insert a friction axle into each hole of the axle joiners and attach the light sensor to the friction axles. Attach the light sensor to the car from Step #5. The 5-hole beam should connect to the top of the L-beam on the front wheel assembly.



Step# 7 (Optional)



Attach the two black connector pegs to the first and third holes of the touch sensor. Attach the touch sensor assembly to the car from Step #5. The sensor should attach to the top of the L-beam on the front wheel assembly.

