

9797 NXT LEGO Kit: Basic Car Building Instructions

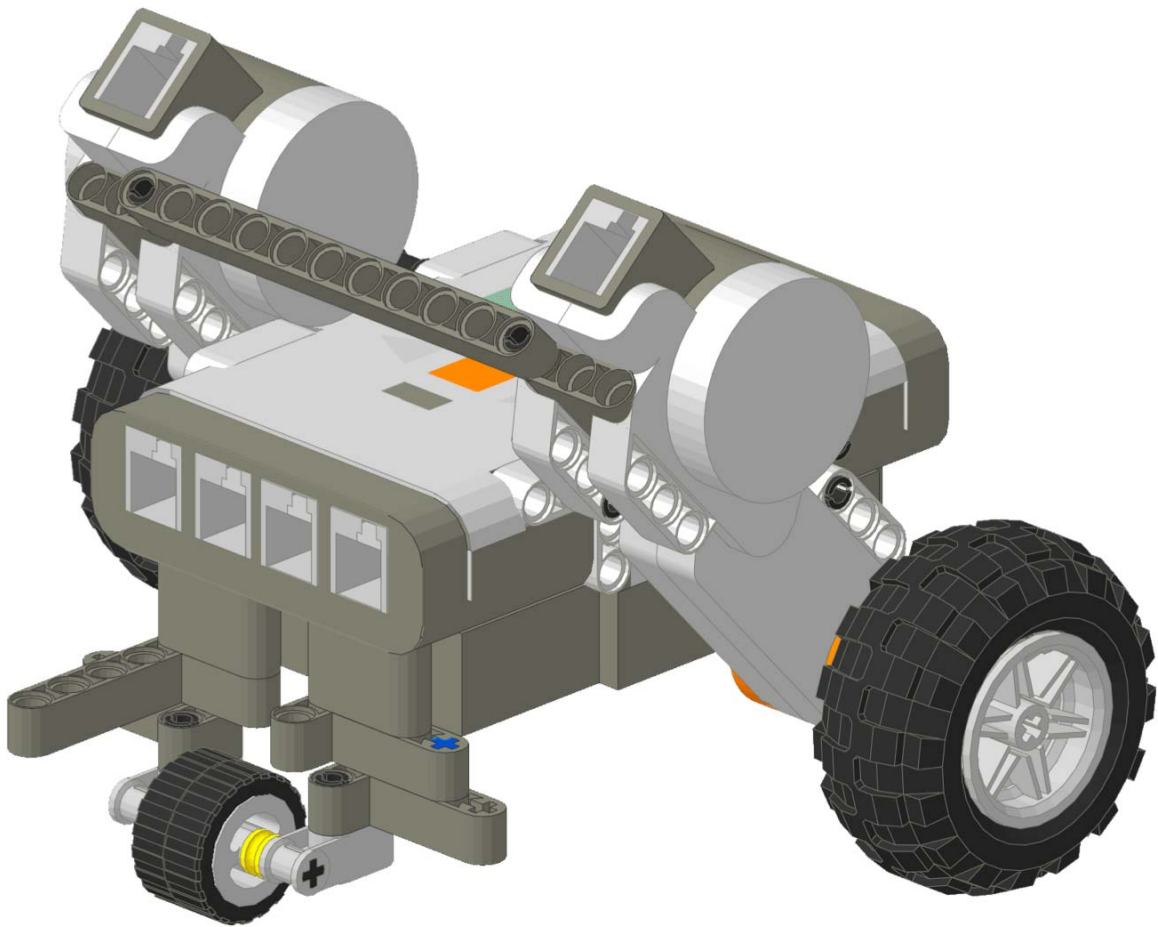
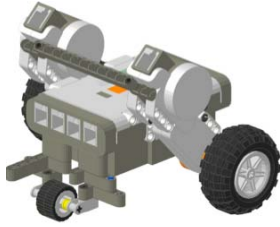


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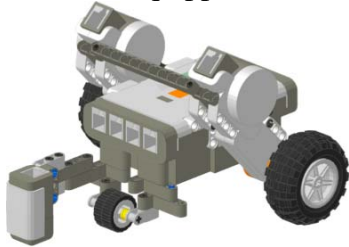
A. 2-Motor Car

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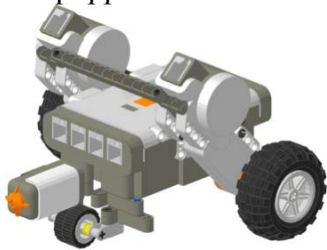
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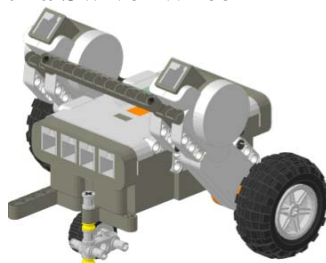
D. 2-Motor Car Equipped With a Skid 'Wheel'

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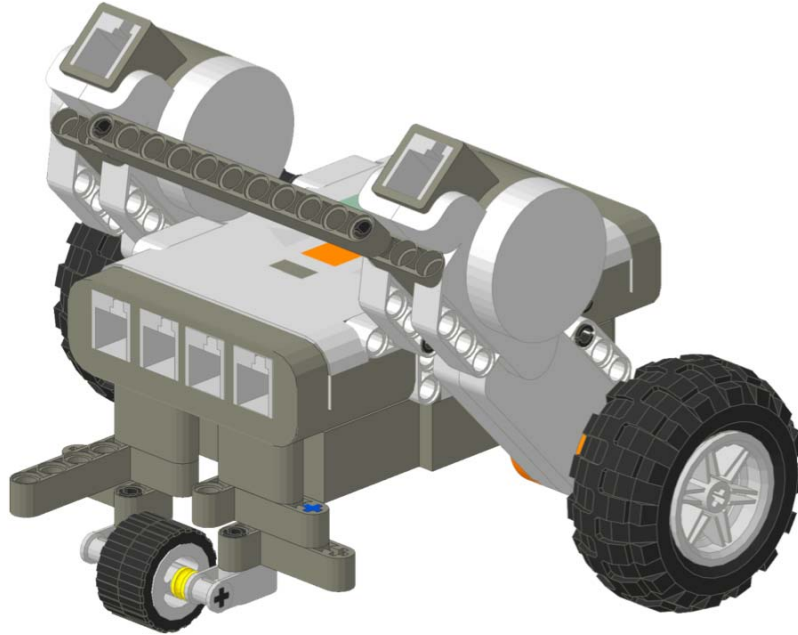


E. 2-Motor Car Equipped With a Swivel Wheel

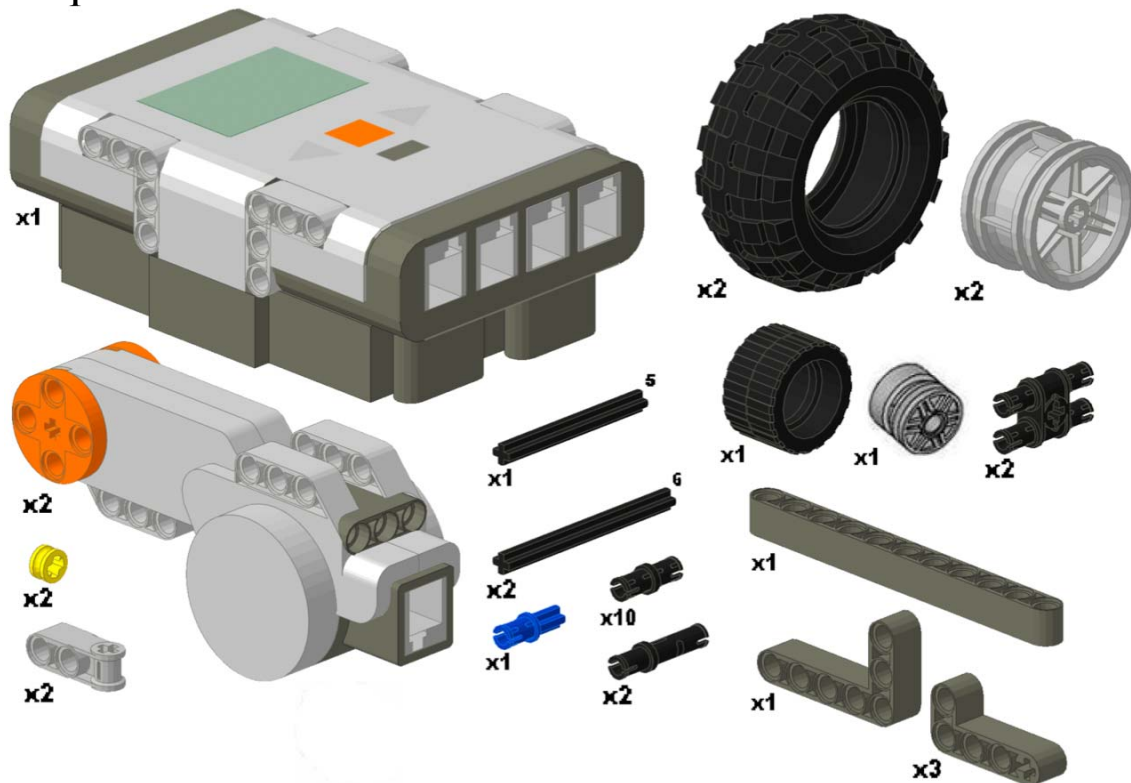
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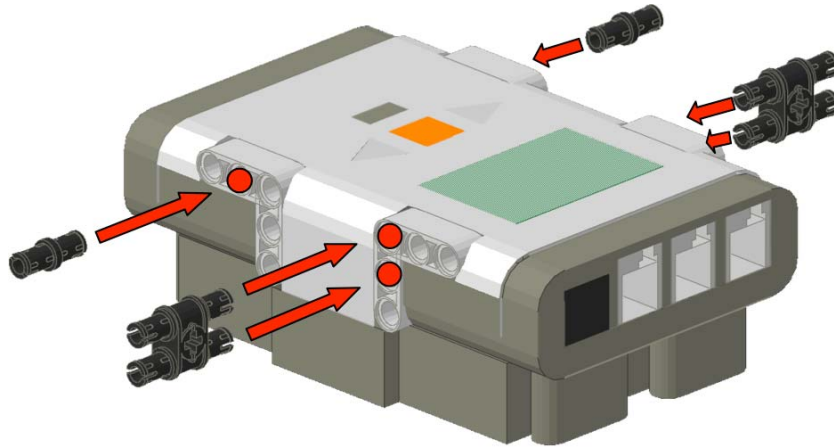
A. 2-Motor Car



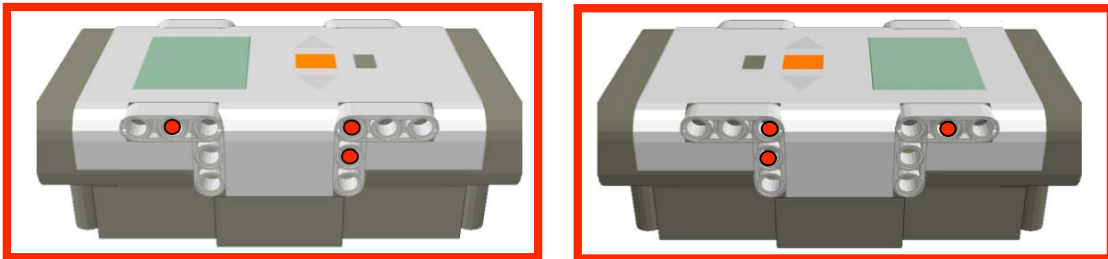
Required Pieces:



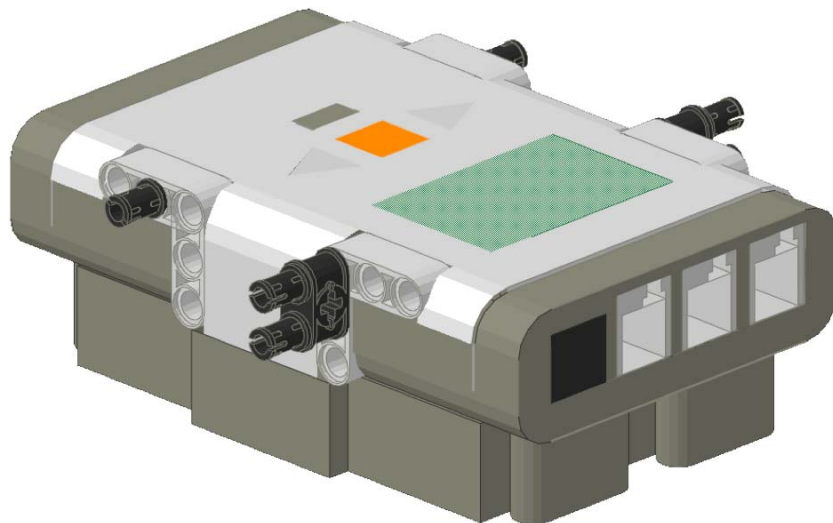
Step A.1: NXT Preparation



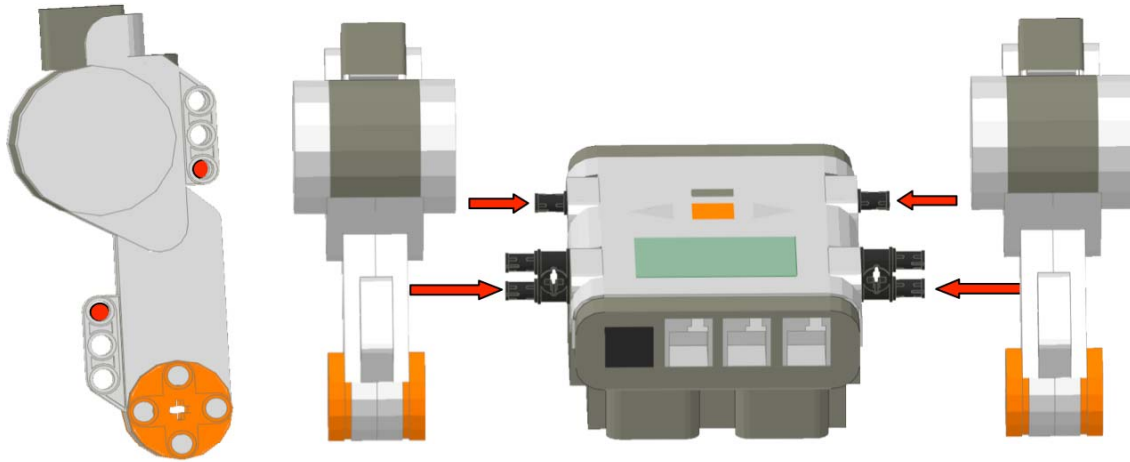
Side Views



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 A.2: Attach Motors to the NXT

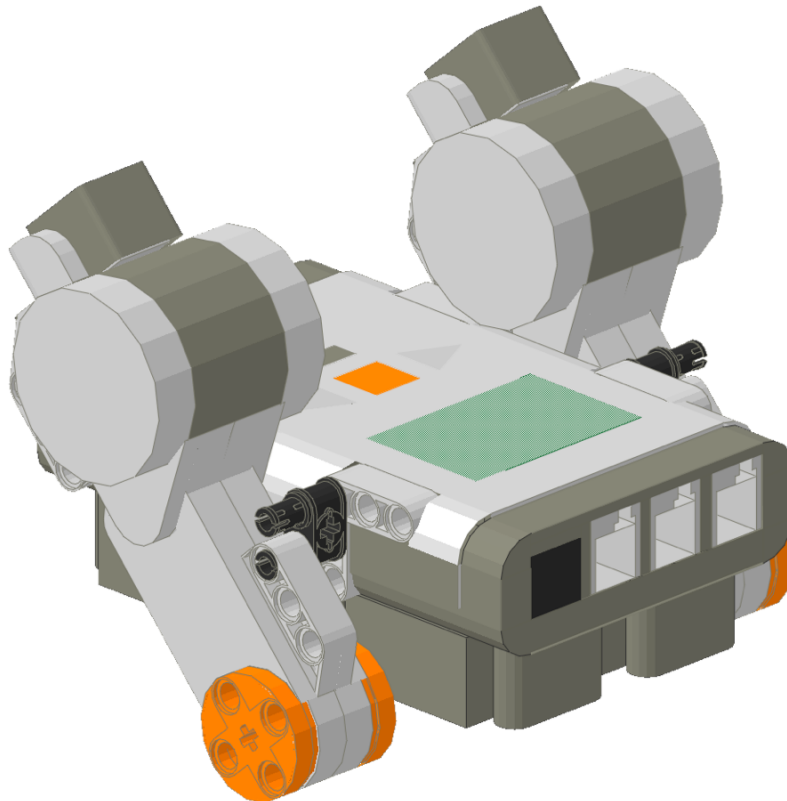


Side View

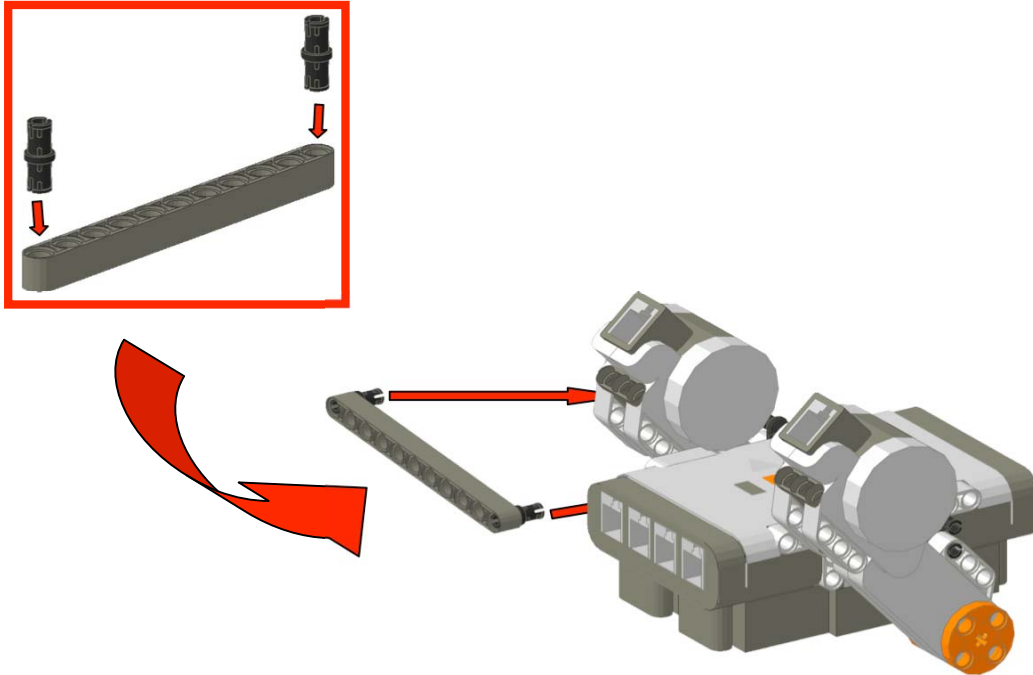
Top View

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.

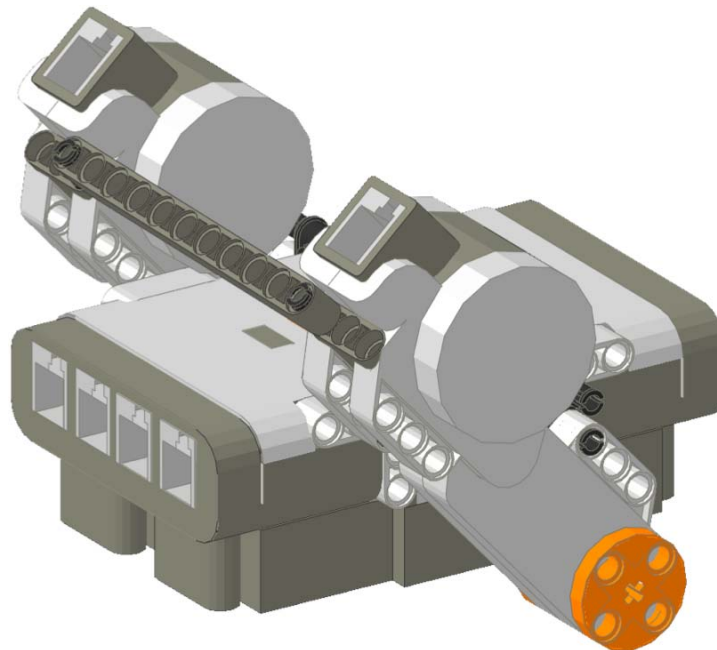
Note: The top connection of the double black connector peg is not connected to anything.



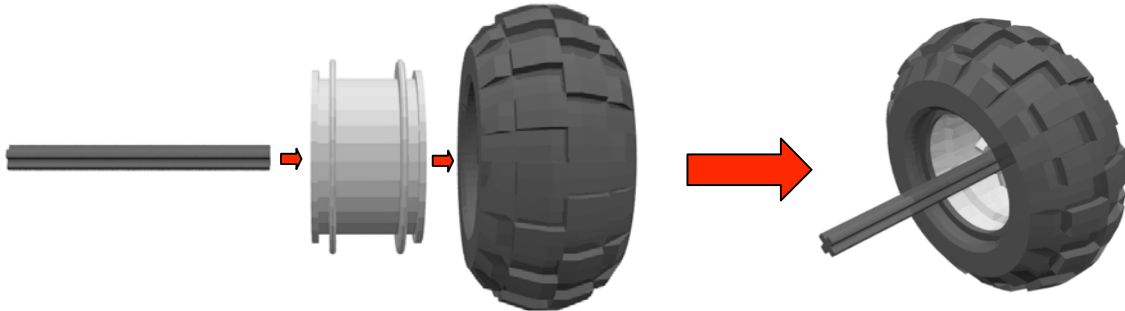
Step A.3: Support Motors



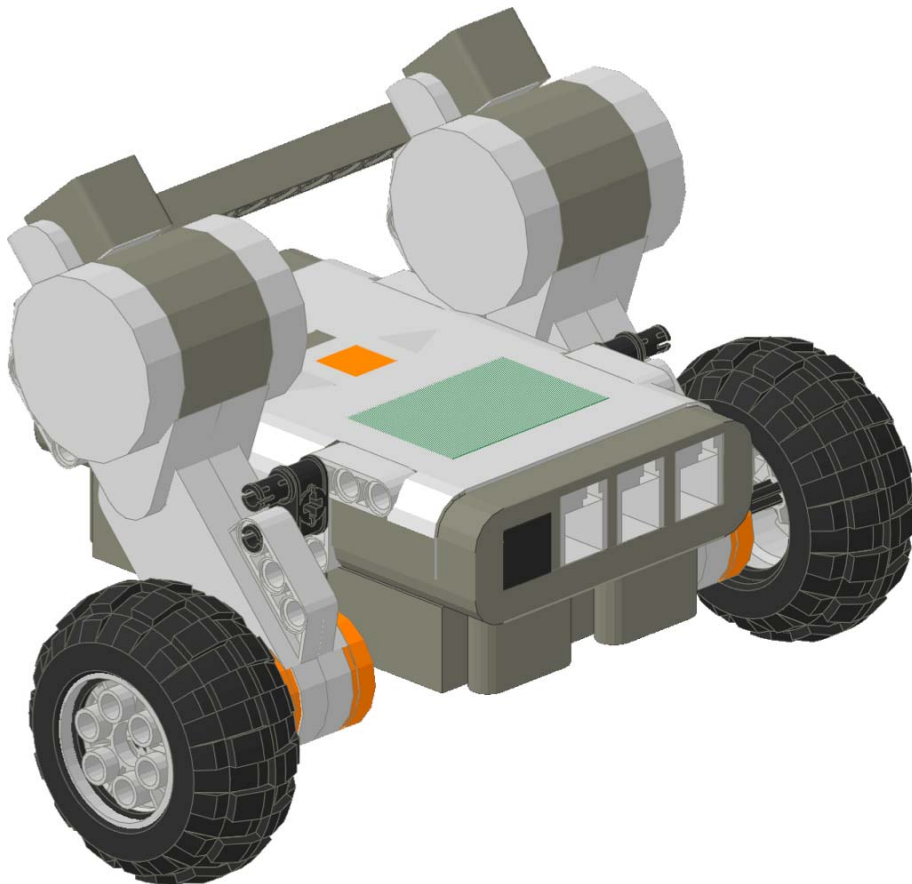
Take an 11-holed rounded beam and attach two short black connector pegs to the outside holes as seen in the red square. Connect the pegs to the back of each motor (as identified by the red dots) to further support the motors to the NXT. Your NXT should look like the below picture before moving on to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



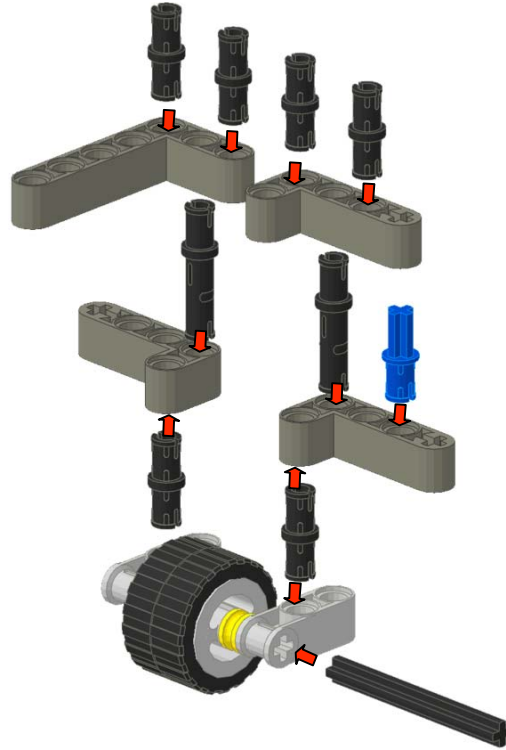
Step A.4: Attach Wheels



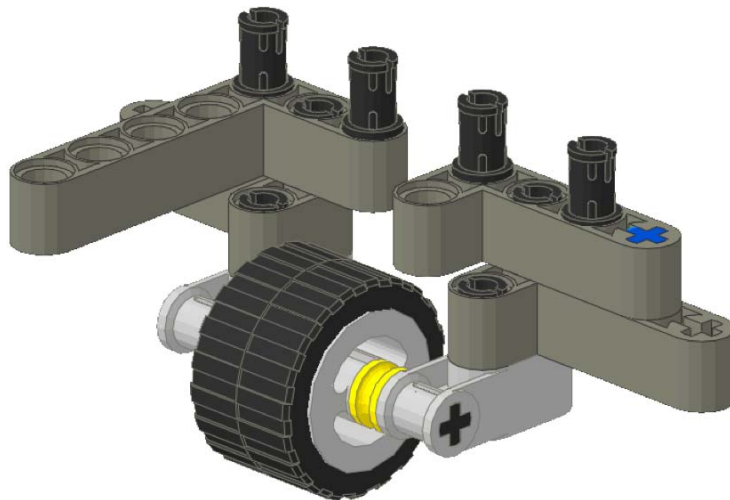
Assemble 2 rear wheel assemblies using a 6-length axle, a wheel, and a hub. Attach one to each motor as seen below.



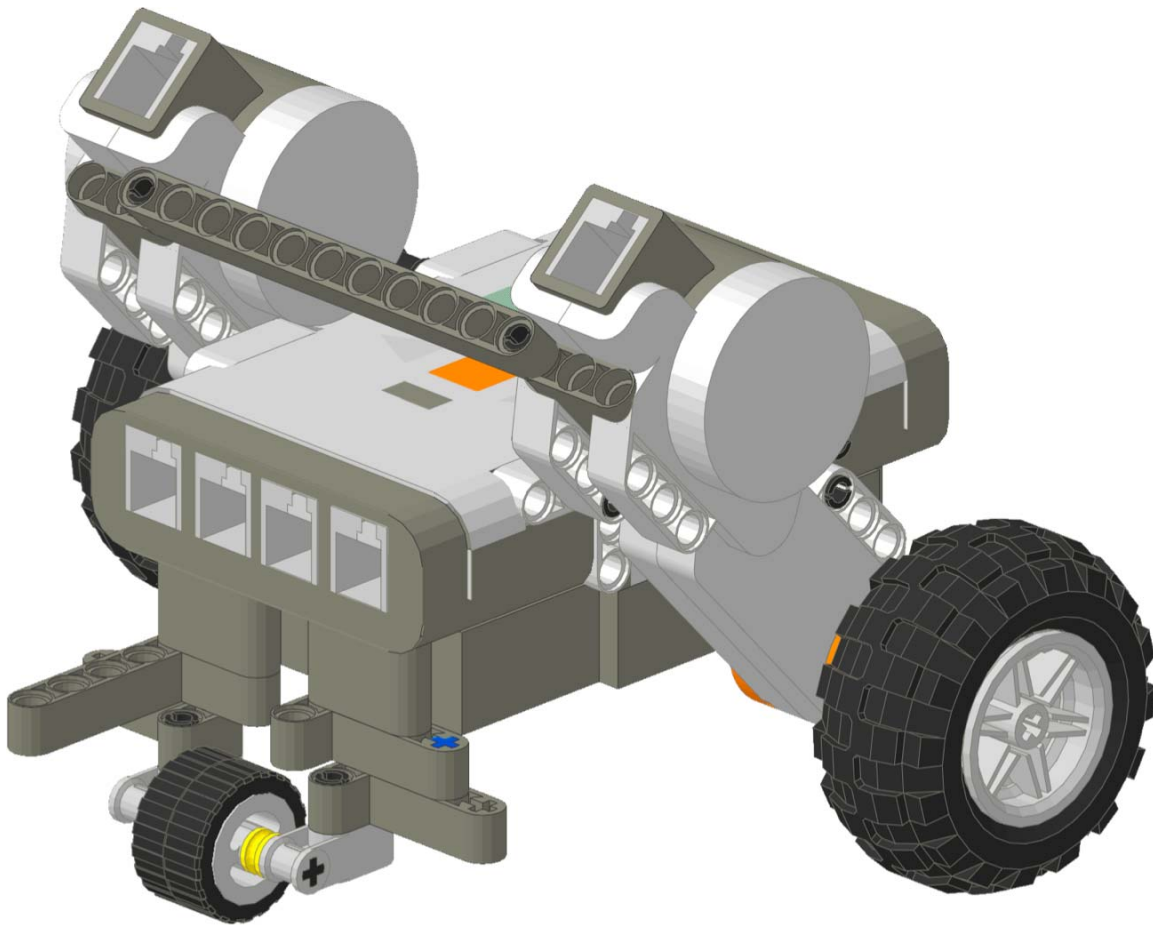
Step A.5: Front Wheel Assembly Base



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 first and third hole on the larger part of the L. In the second hole between the two connector pegs on each L-beam, attach an extended black connector peg. Also attach a friction axel to the fourth hole on the small L-beam. Now attach two 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 axel joiner on each of the protruding connector pegs below the small L-beams. Then, align the wheel between two half bushings and slide the 5-axel through the axel joiners.



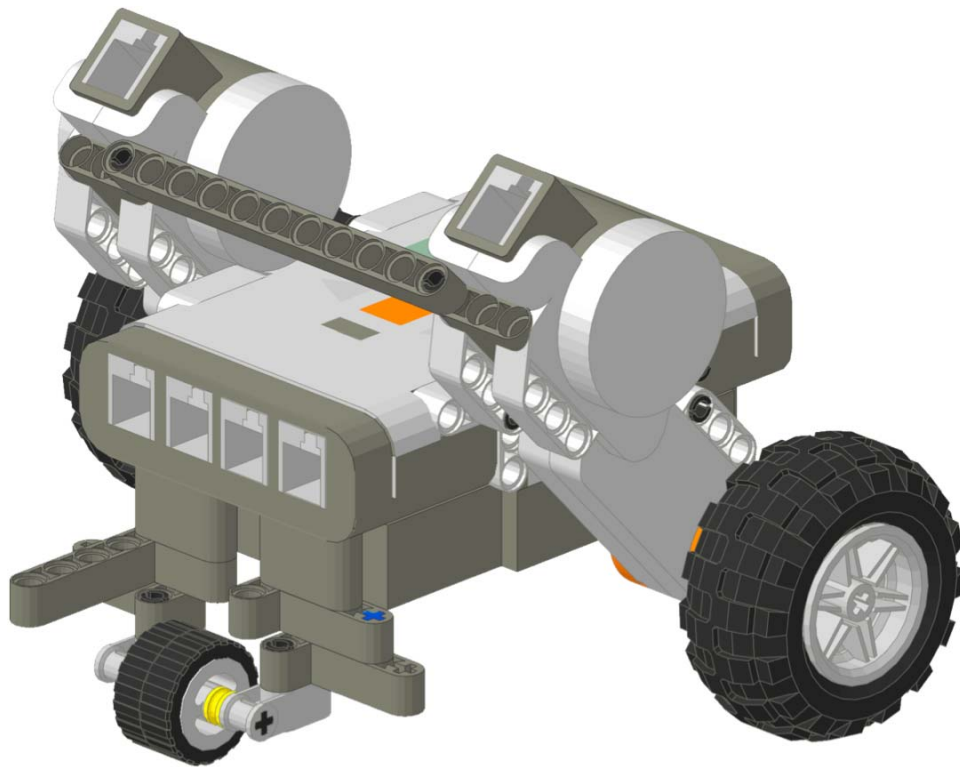
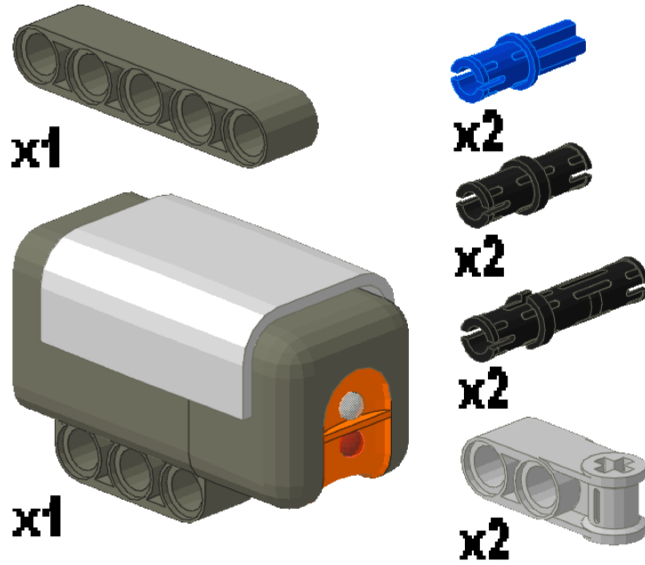
Step A.6: Front Wheel Assembly Attachment



Connect the front wheel assembly to the bottom of the NXT at the protruding connector pegs.

B. Equipped With a Light Sensor

Required Pieces:



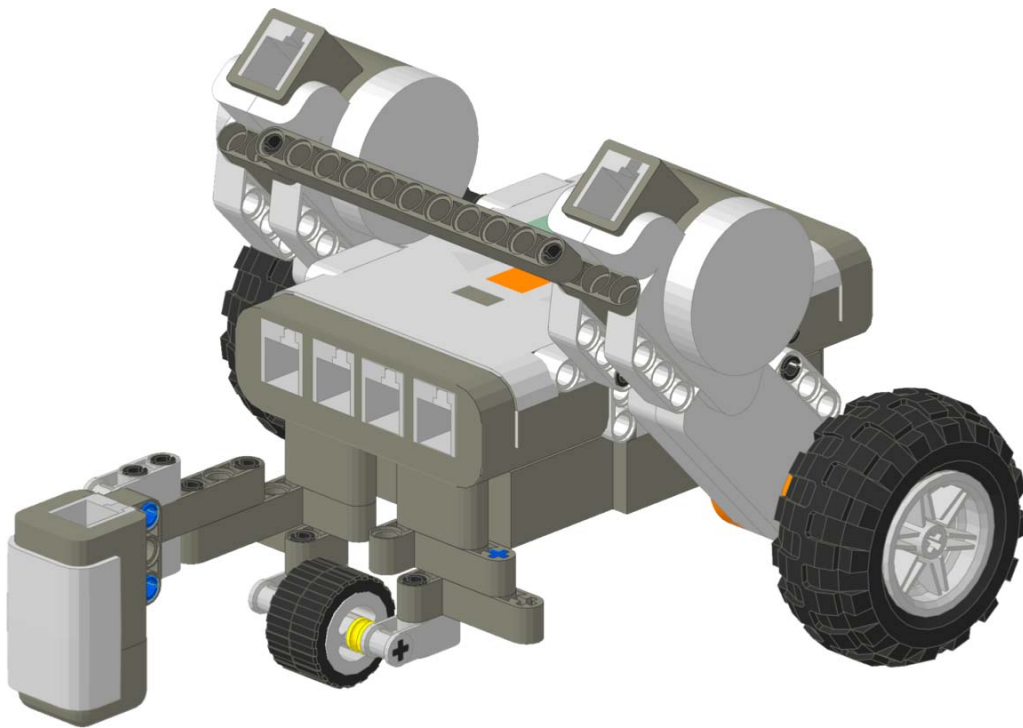
Car from Step A.6

Step B.1: Light Sensor Assembly



Insert a black connector peg into the first and third holes of the 5-hole beam and an extended black connector peg into the fourth and fifth holes. Attach an axle joiner to the extended black connector pegs. Insert a friction axel into each hole of the axle joiners and attach the light sensor to the friction axels.

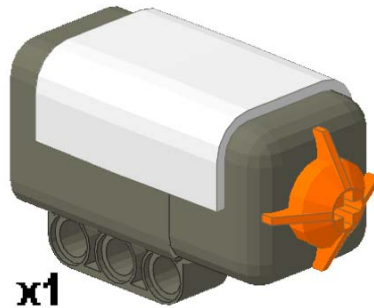
Step B.2: Attach Sensor to the Car



Attach the light sensor to the car from Step A.6. The 5-hole beam should connect to the top of the L-beam on the front wheel assembly.

C. Equipped with a Touch Sensor

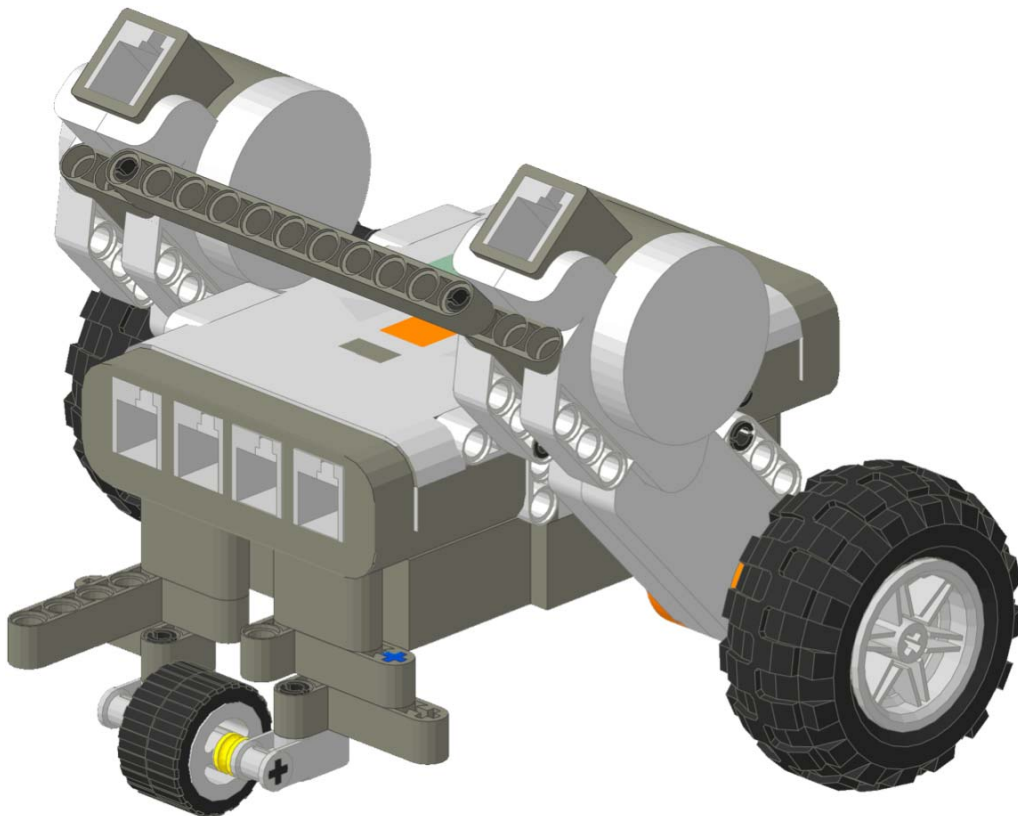
Required Pieces:



x1

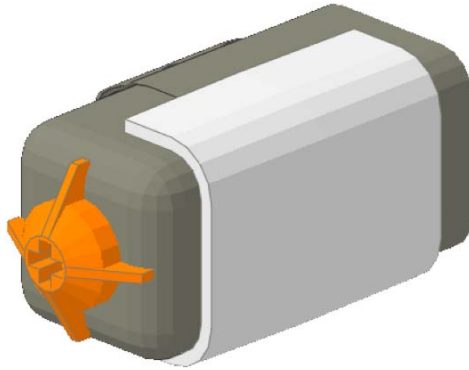


x2



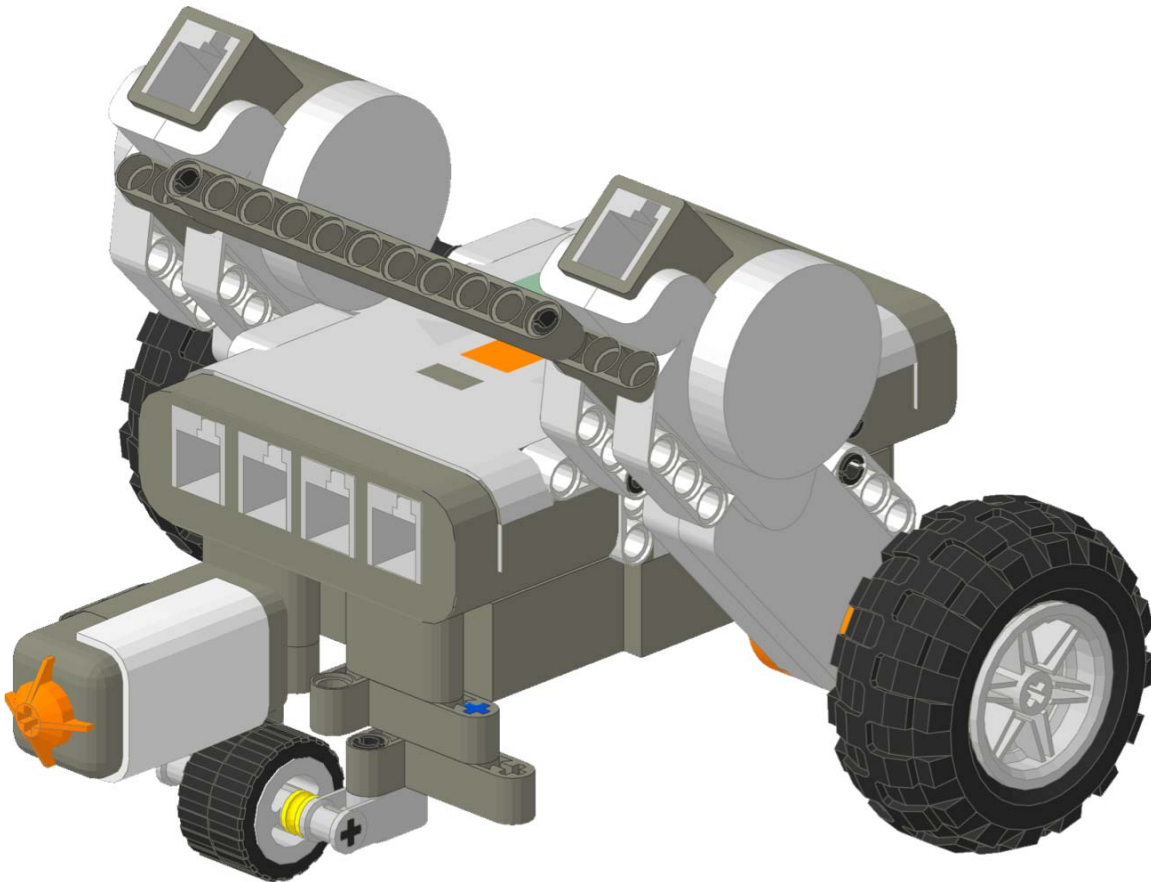
Car from Step A.6

Step C.1: Touch Sensor Assembly



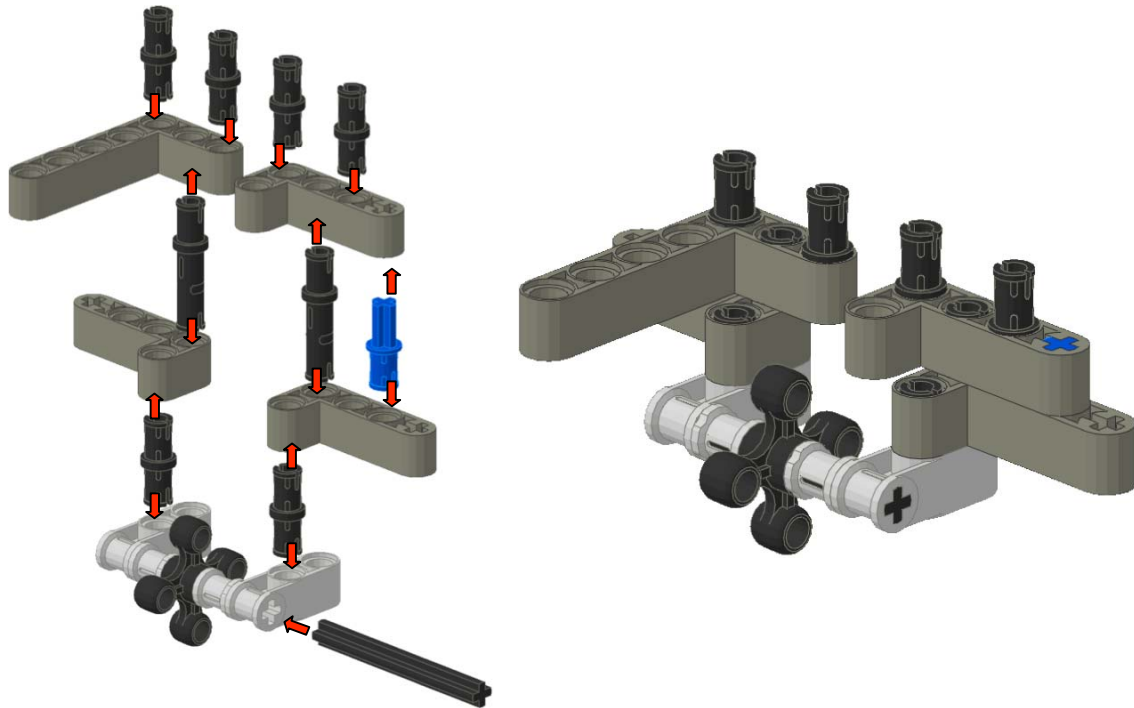
Attach the two black connector pegs to the first and third holes of the touch sensor.

Step C.2: Attach Sensor to the Car



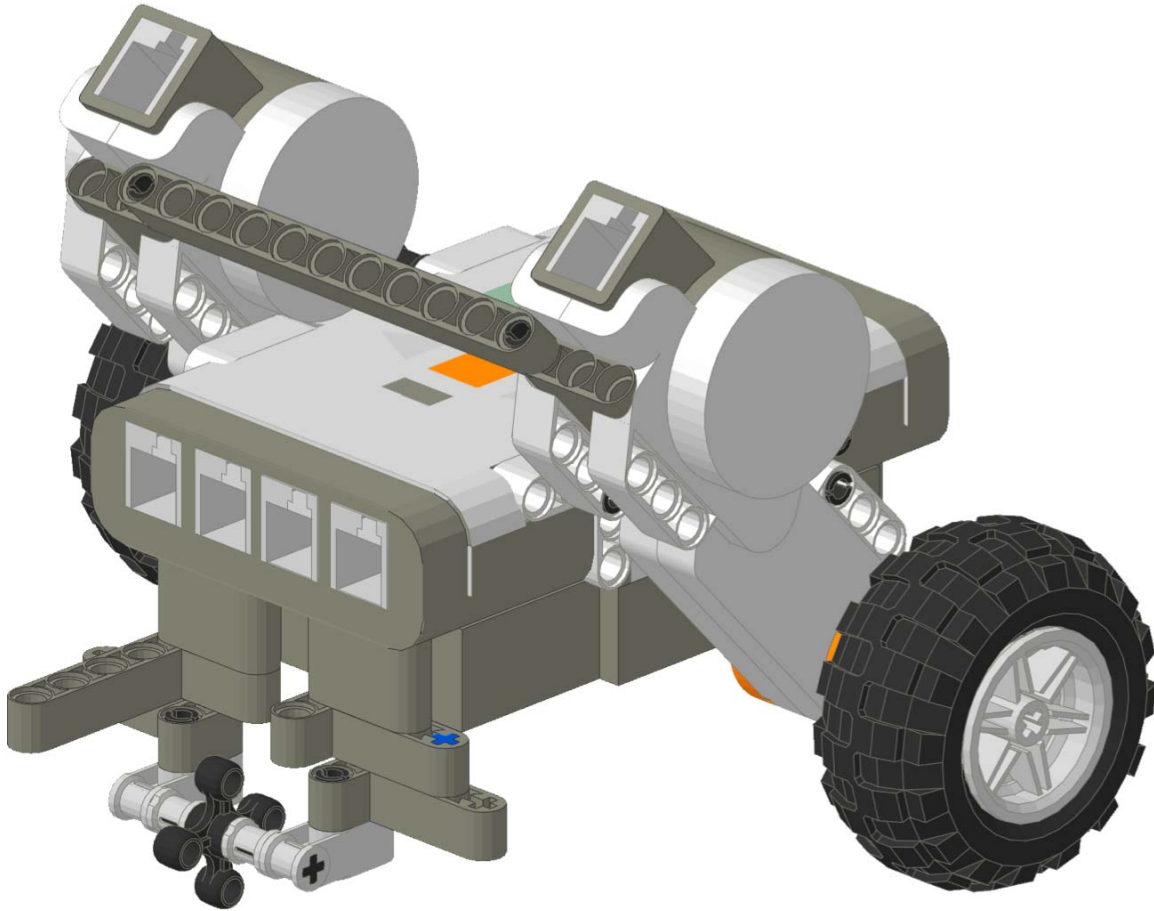
Attach the touch sensor assembly to the car from Step A.6. The sensor should attach to the top of the L-beam on the front wheel assembly.

Step D.1: Skid 'Wheel' Assembly

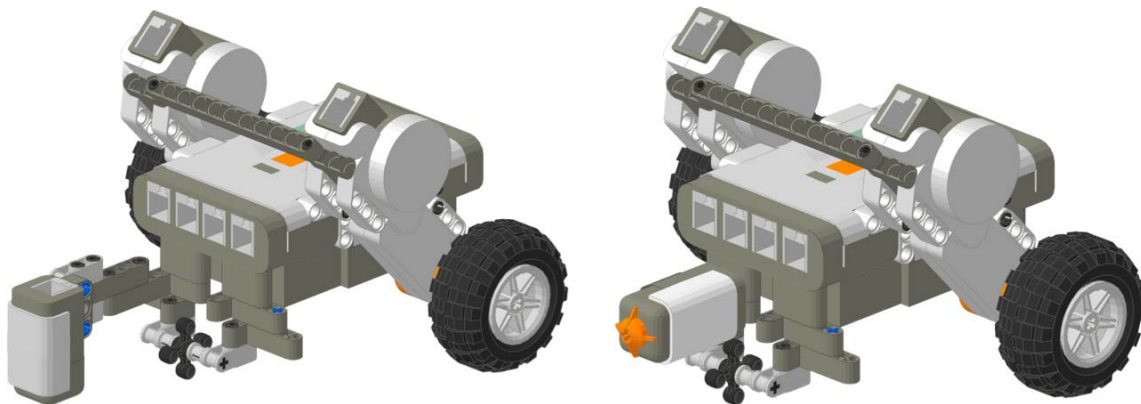


Take an L-beam and attach a black connector peg to the first and third hole on the smaller part of the L. Take a small L-beam and attach a black connector peg to the first and third hole on the larger part of the L. In the second hole between the two connector pegs on each L-beam, attach an extended black connector peg. Also attach a friction axel to the fourth hole on the small L-beam. Now attach two 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 axel joiner on each of the protruding connector pegs below the small L-beams. Then, align the skid 'wheel' between two half bushings and slide the 5-axel through the axel joiners.

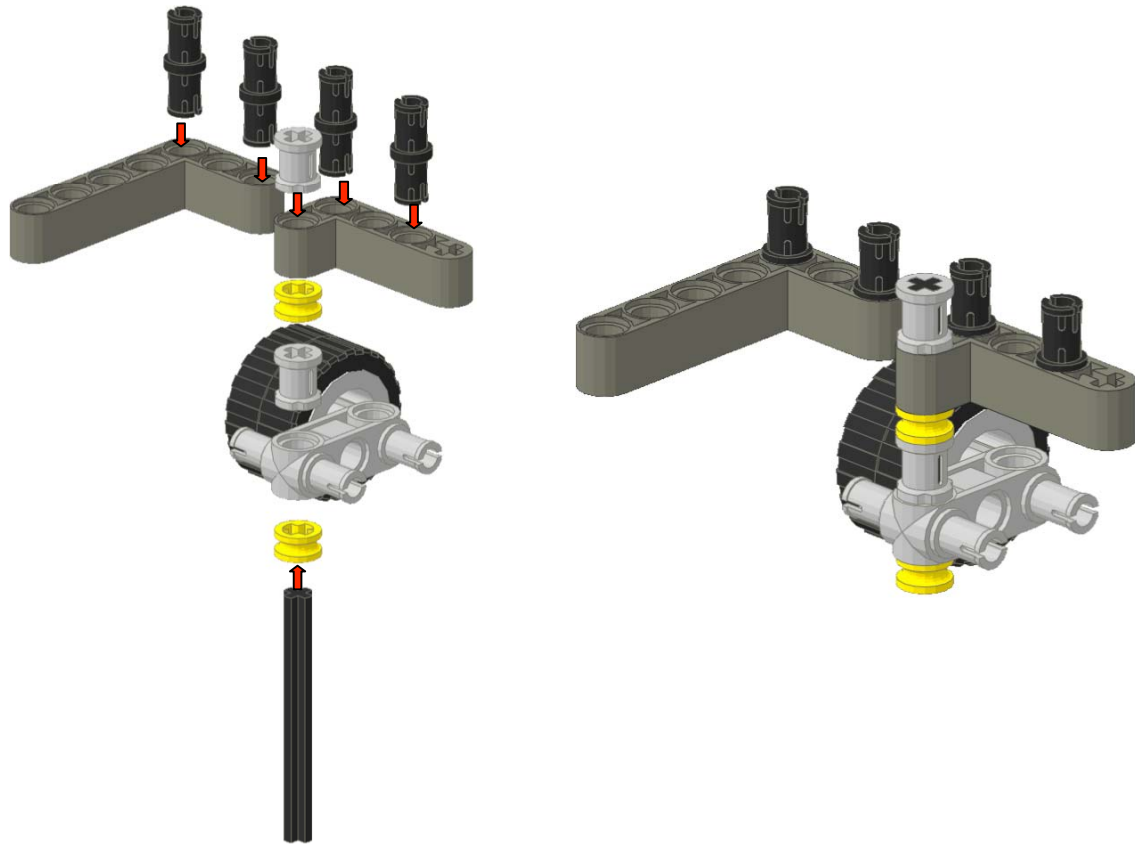
Step D.2: Attach Skid 'Wheel' to the Car



Connect the front skid 'wheel' assembly to the bottom of the NXT at the protruding connector pegs. Follow the steps in Part B and Part C to attach sensors.

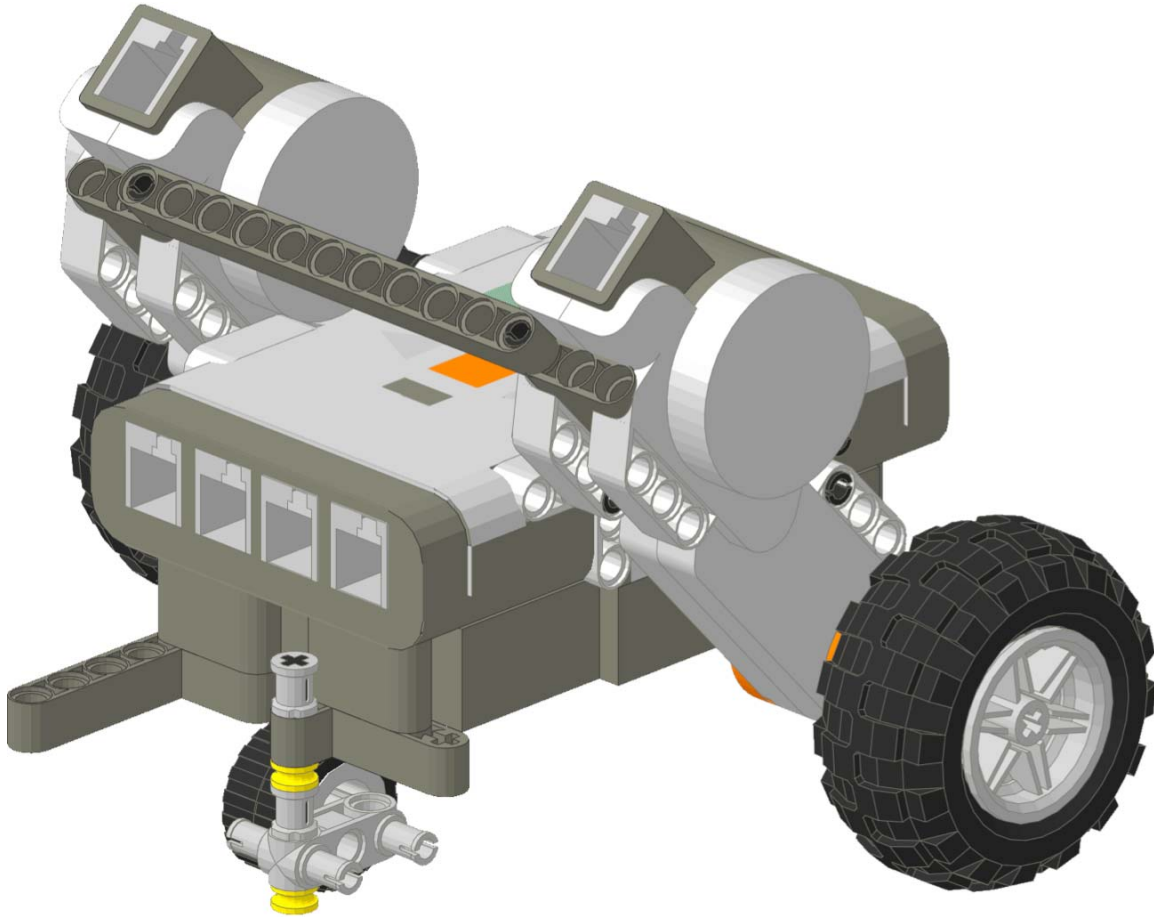


Step E.1: Swivel Wheel Assembly



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 first and third hole on the larger part of the L. Align a bushing over the second hole on the small L-beam. Align a half bushing followed by a bushing, 4-connector peg, and another half bushing below the second hole on the small L-beam. Slide a 5-beam through the bushings and connector peg. Attach a wheel to the 4-connector peg.

Step E.2: Attach Swivel Wheel to the Car



Connect the front swivel wheel assembly to the bottom of the NXT at the protruding connector pegs. Follow the steps in Part B and Part C to attach sensors.

