

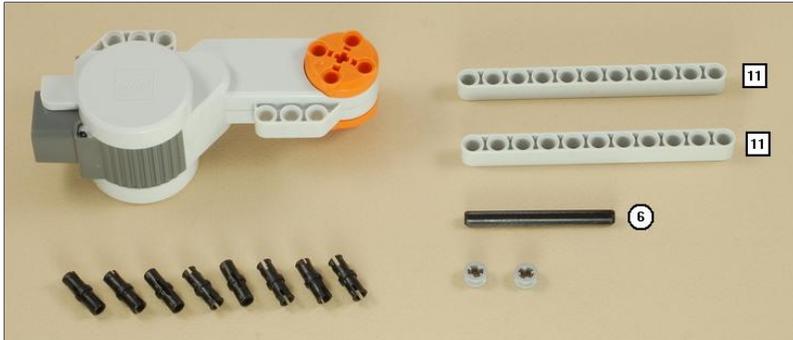
3-Motor Chassis

Building: 
Program: (none)

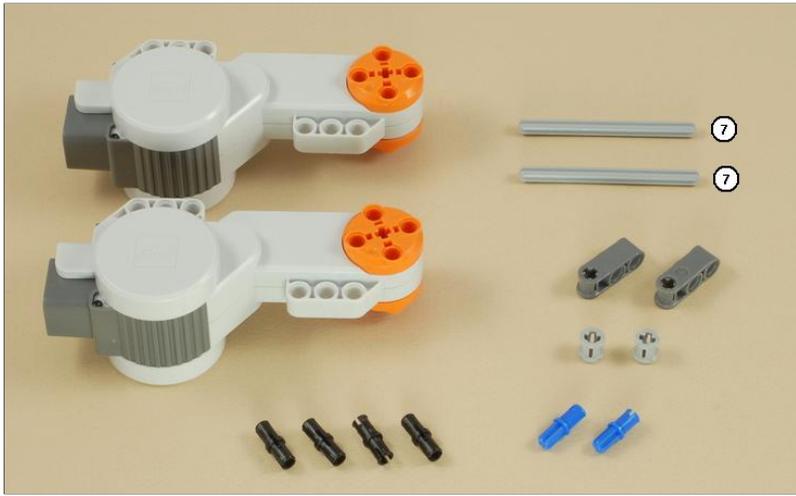
Designed for **NXT 1.0** (8527, or 9797 + 9695/9648)

Building Instructions

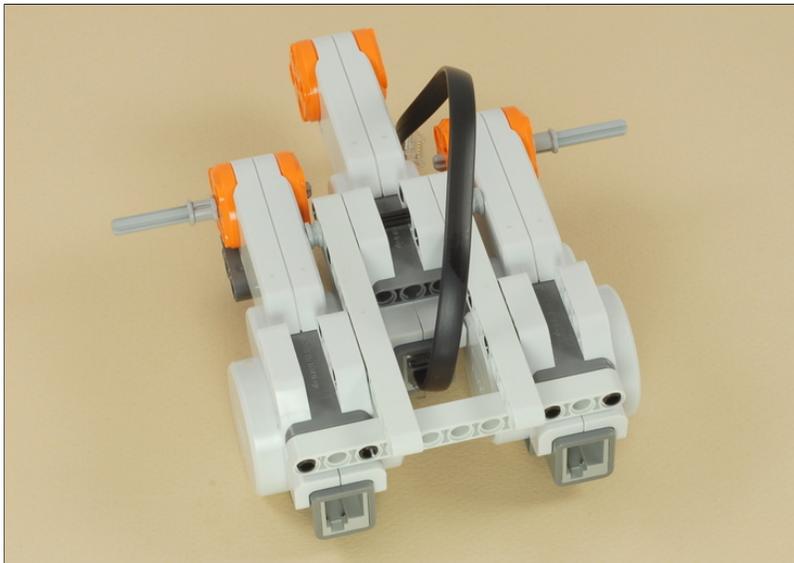
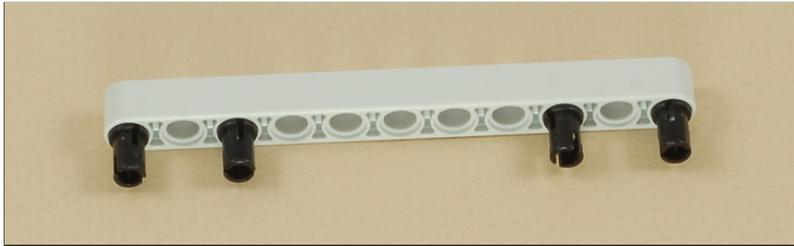
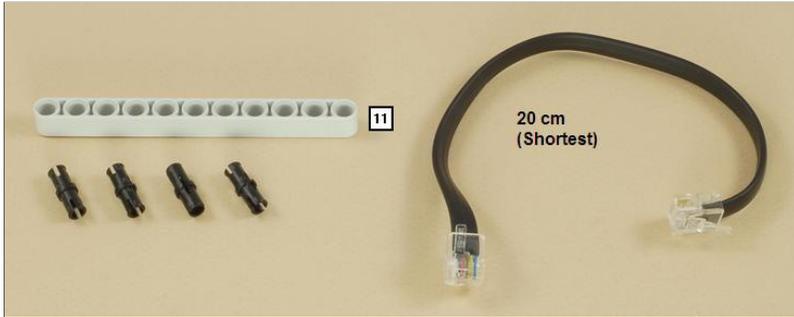
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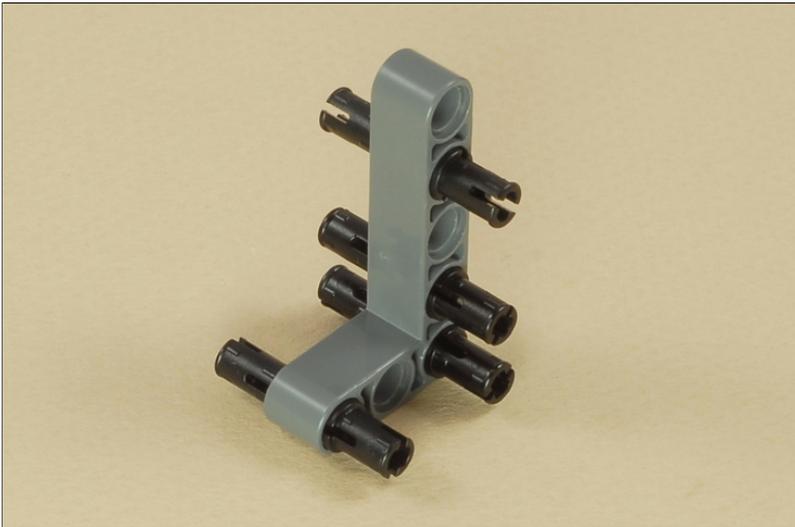
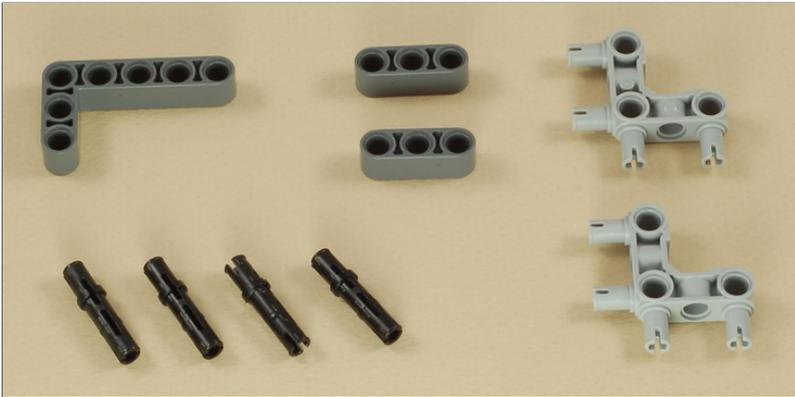


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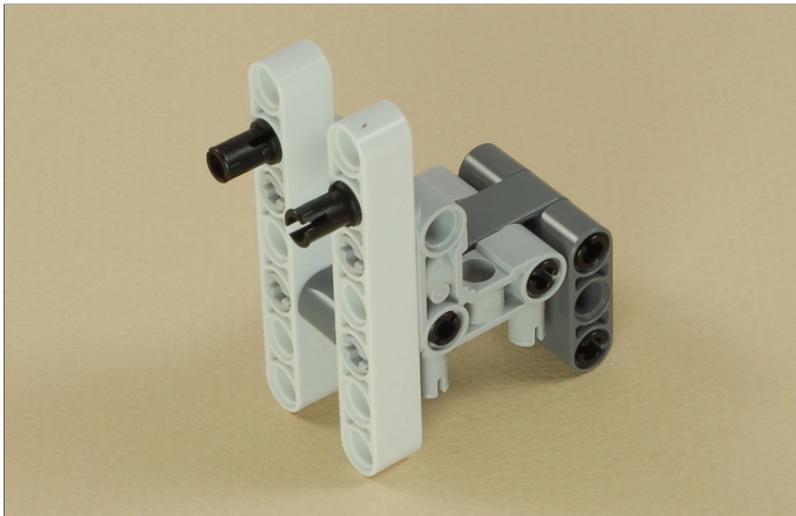
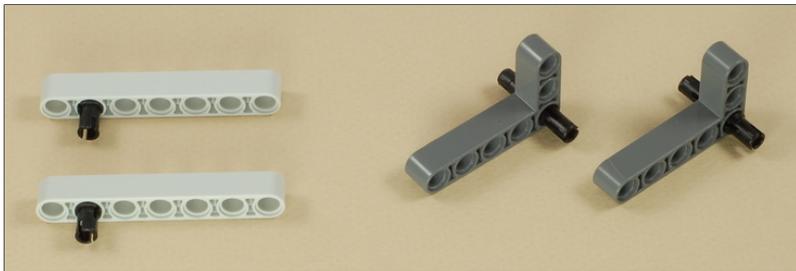
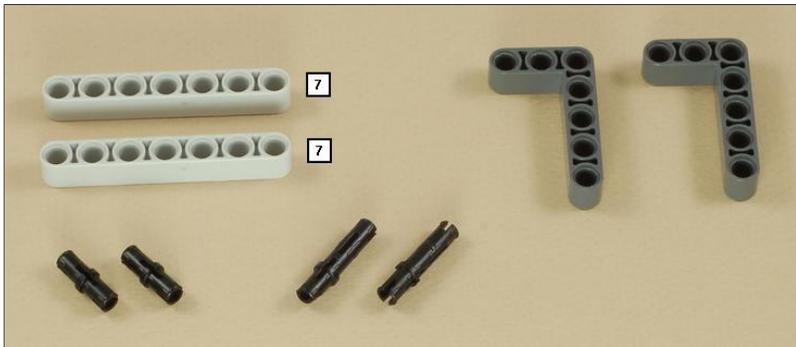


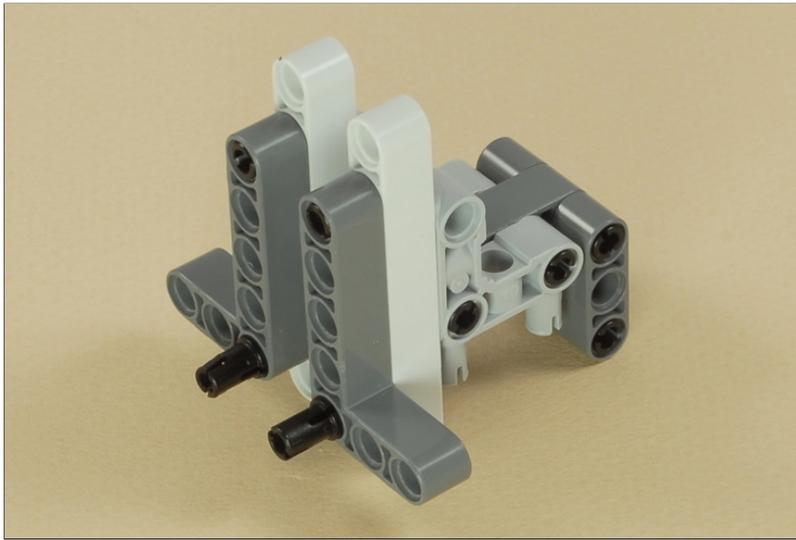
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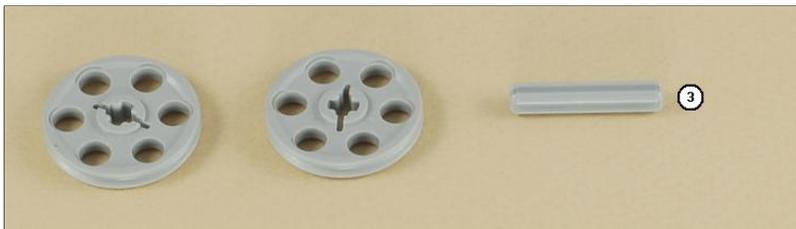


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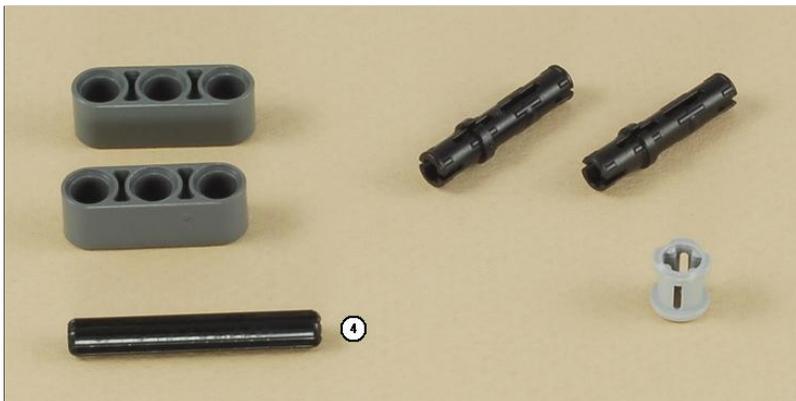


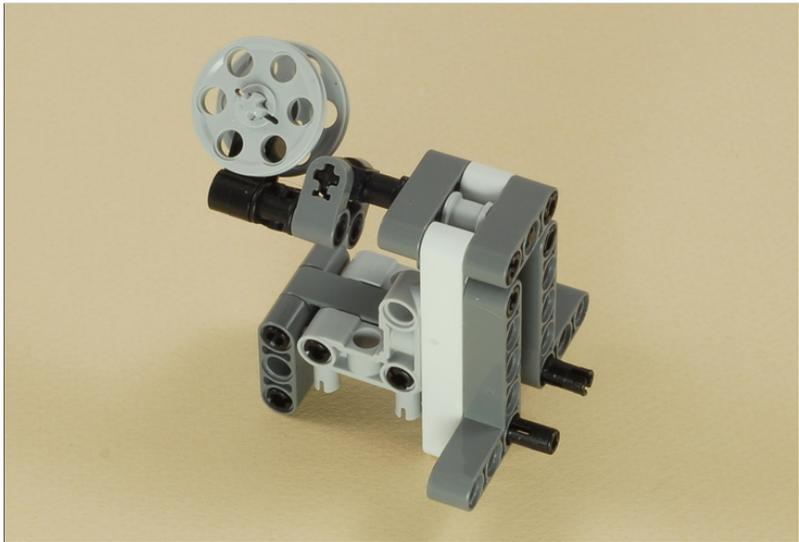
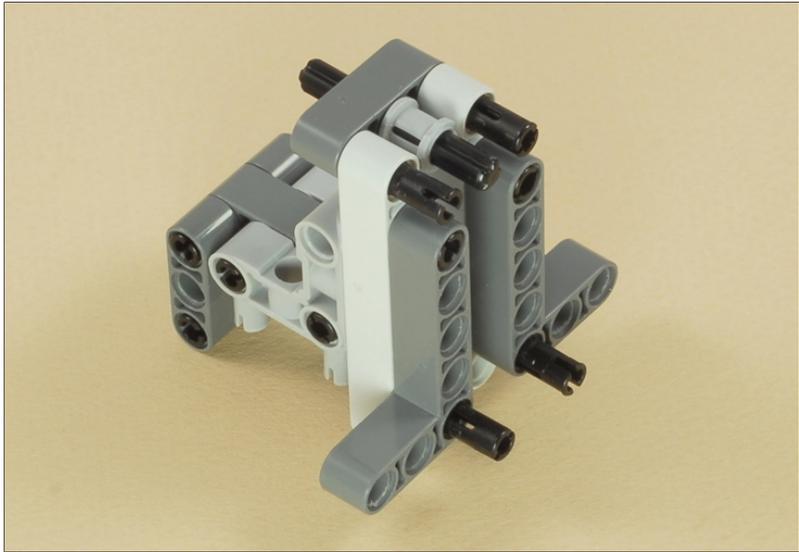


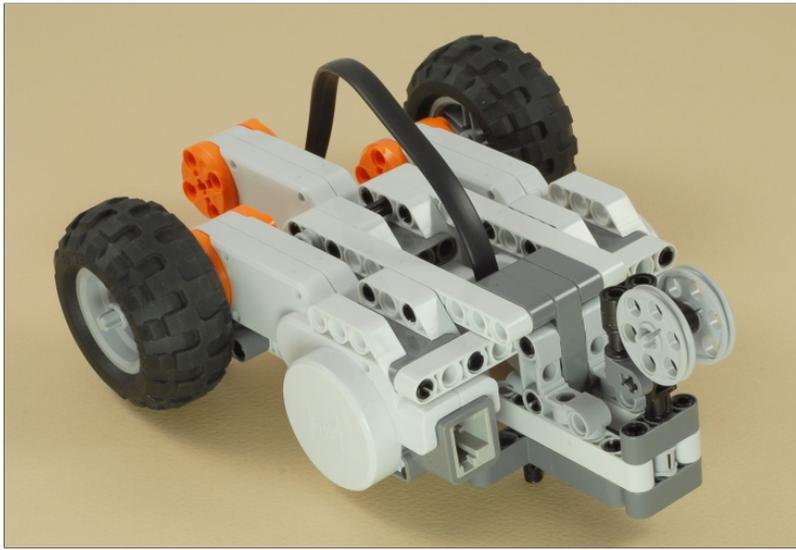
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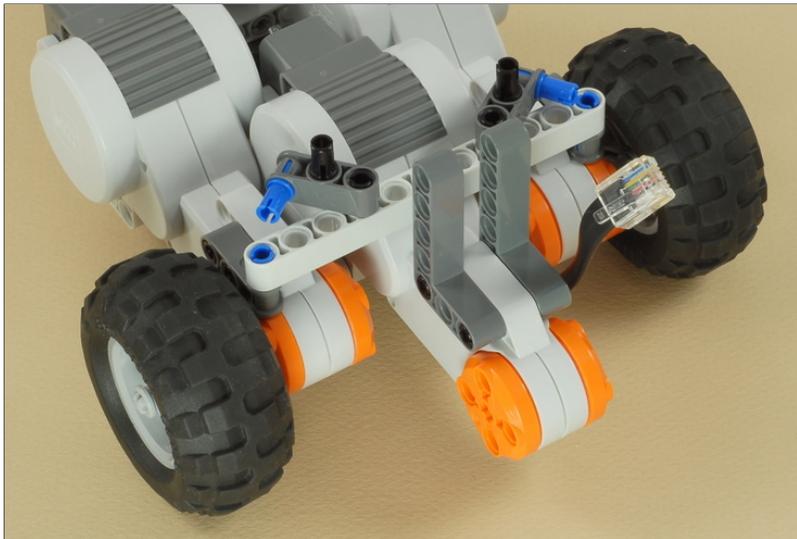
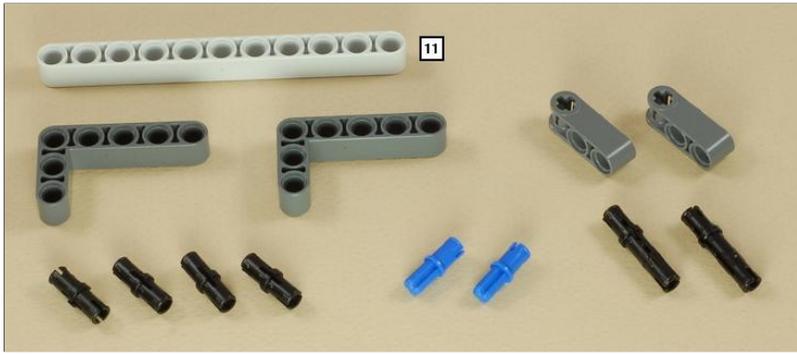


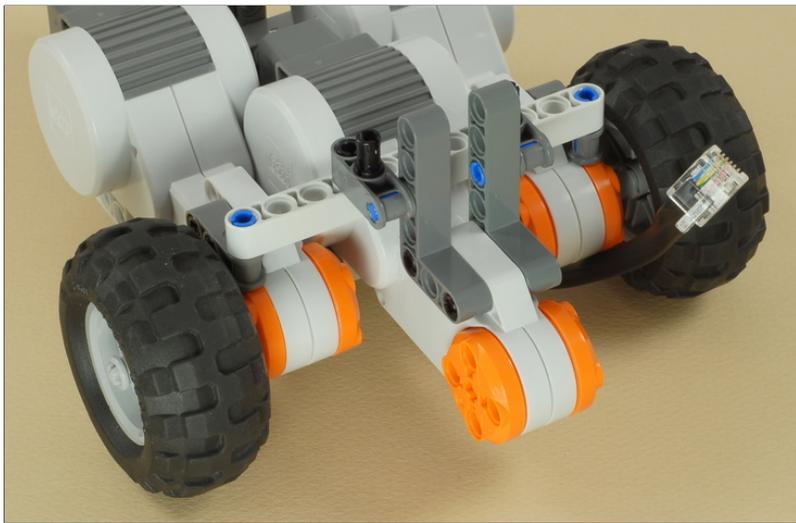


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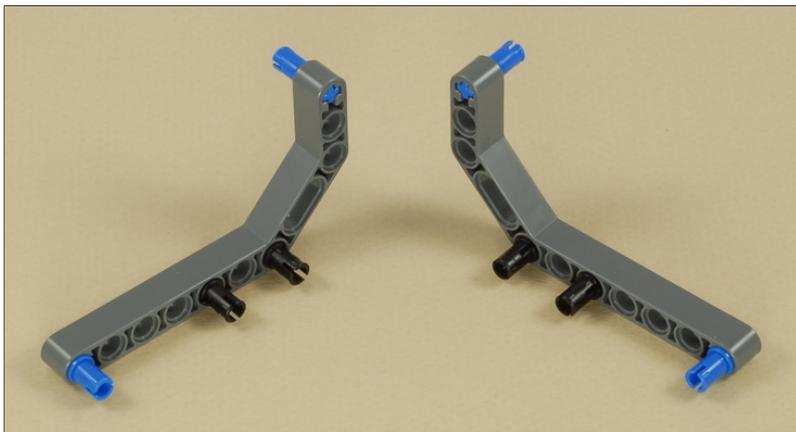


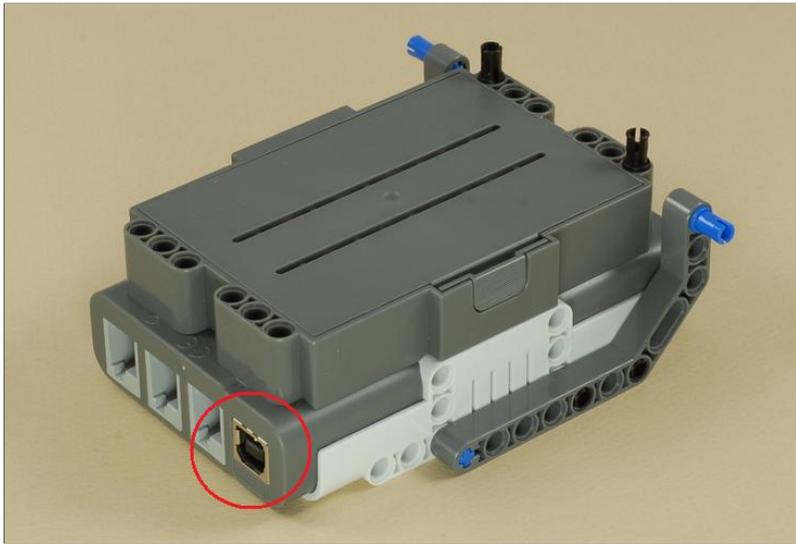
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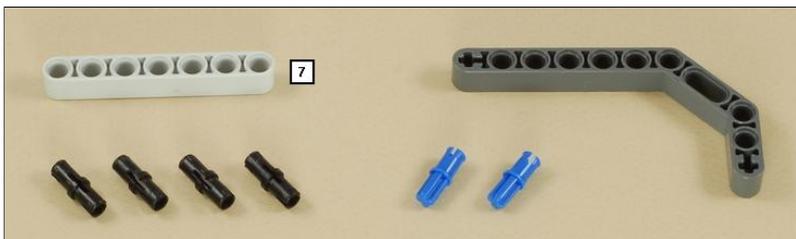


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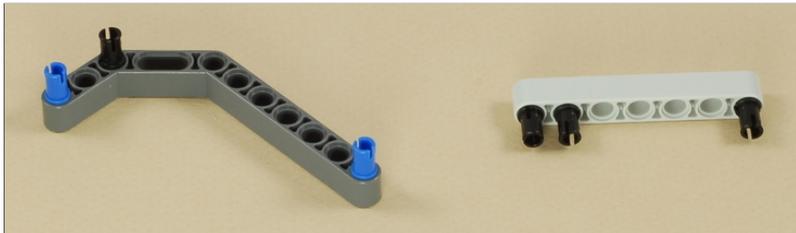
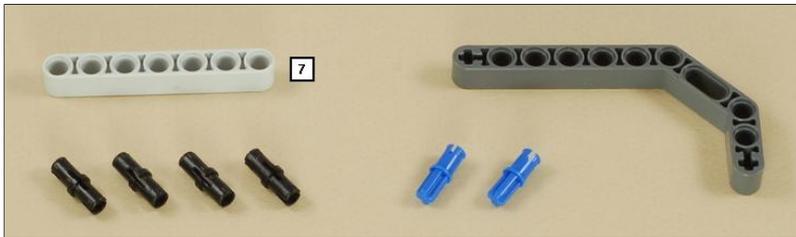


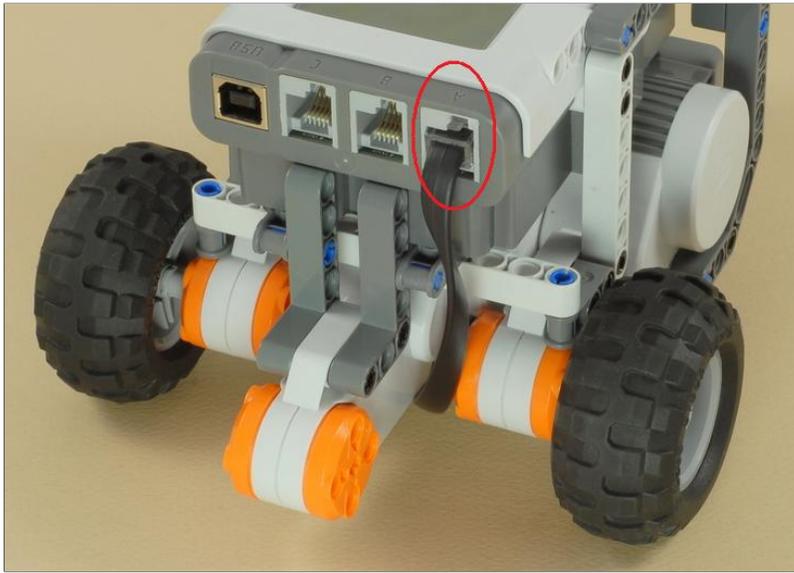
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16

Use two medium (35 cm) wires to connect the two drive motors to ports **B** and **C** on the NXT. Connect the B motor on the B side and the C motor on the C side. This can be done by either not crossing the wires, as shown on the left below, or crossing them twice, as shown on the right. In either case, route the wires under the frame braces as shown, and pull the wire slack out away from the hub of the center motor.



Wires not crossed

(or)



Wires crossed twice

The 3-Motor Chassis is a base that can be used for other projects. To continue building one of the projects that uses this chassis, click the link below.

[Hammer Car](#)
[Claw Striker](#)
[Forklift](#)



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Hammer Car

Building: 
Program: 

Designed for **NXT 1.0** (8527, or 9797 + 9695/9648)

Building Instructions

1-16

Start by building the [3-Motor Chassis](#). Click the picture for building instructions.

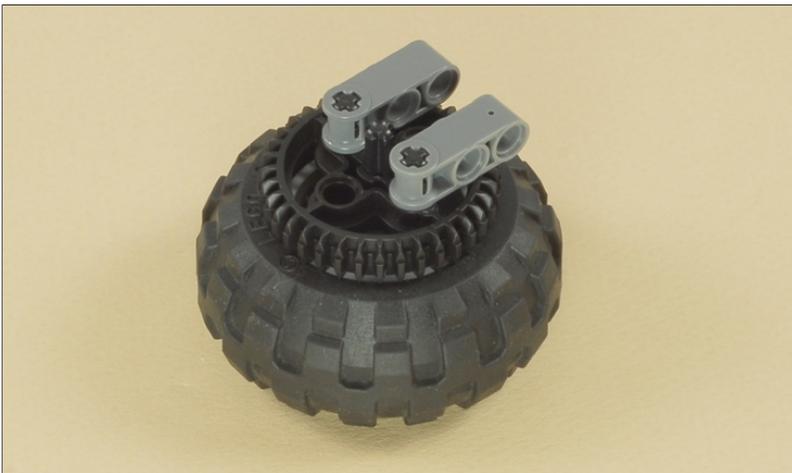
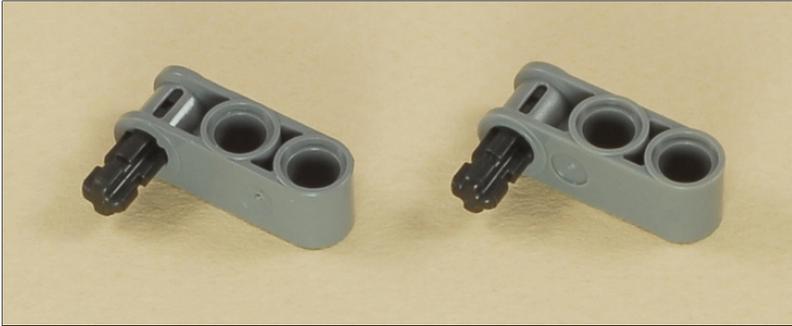


[Building Instructions](#)

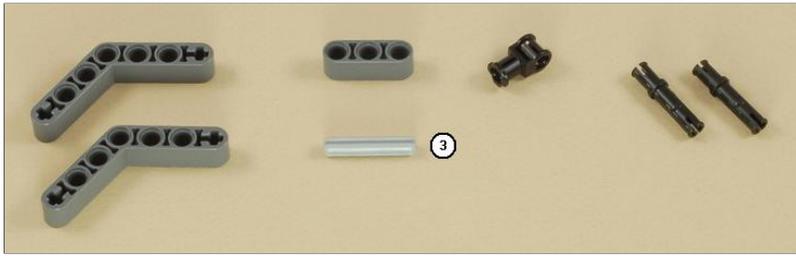
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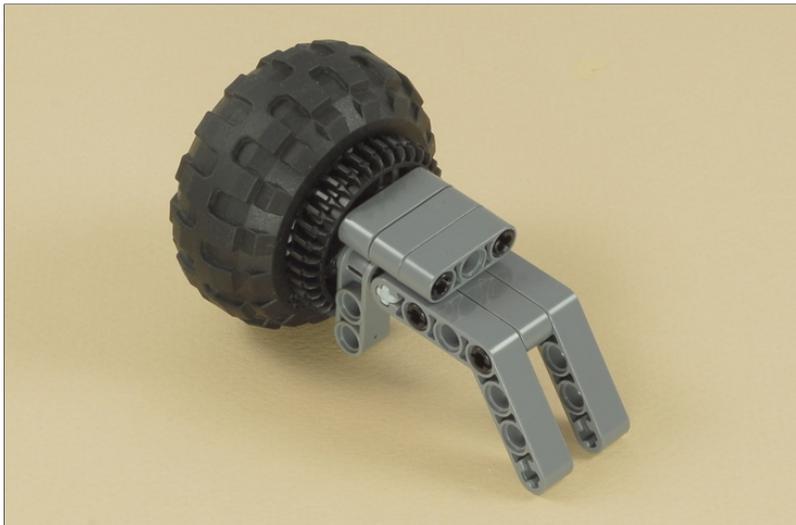
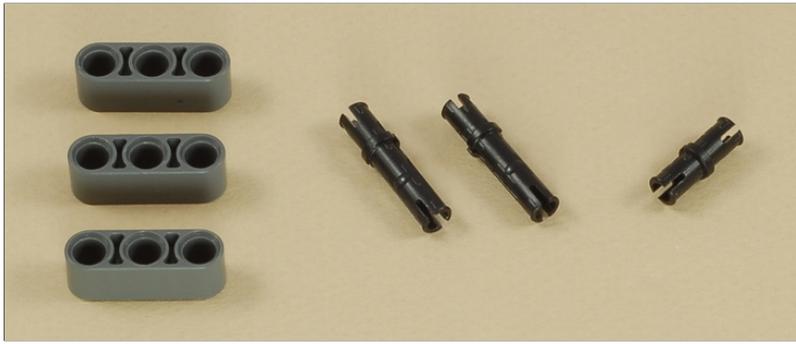


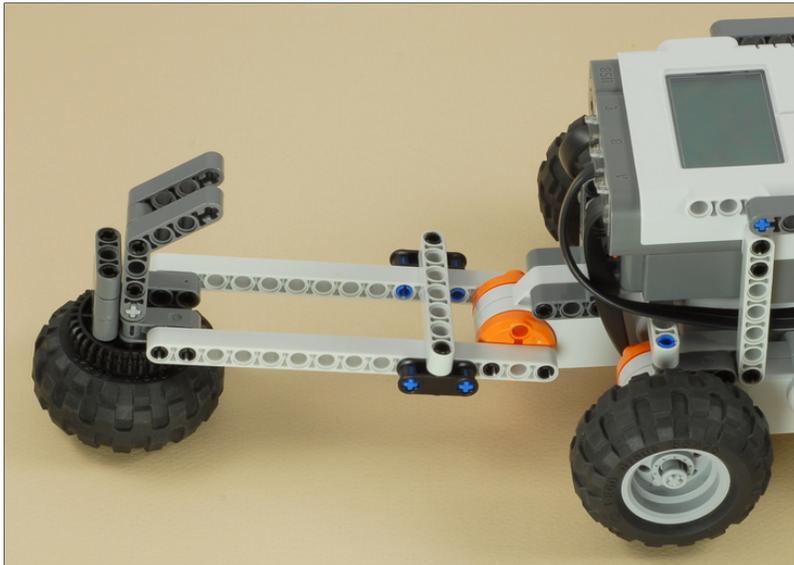
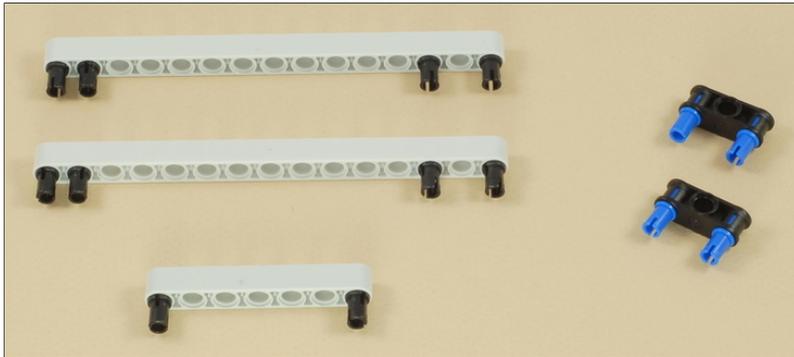
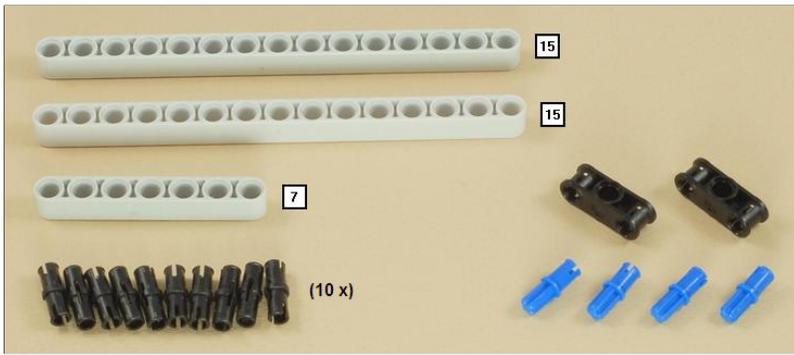
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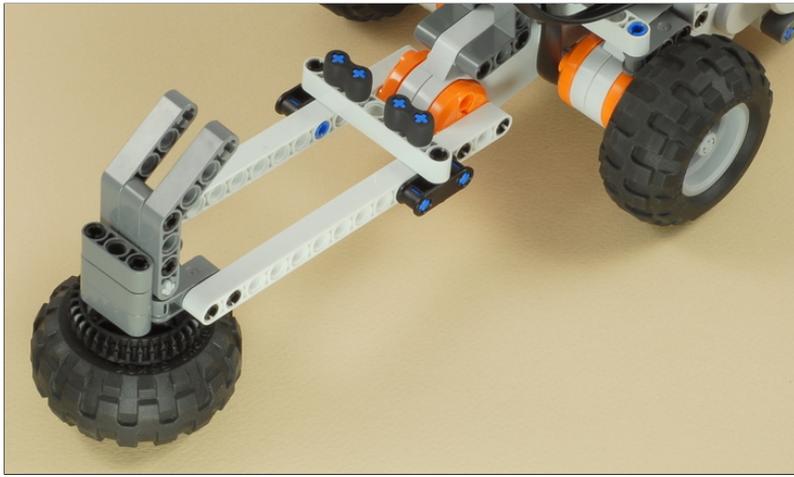




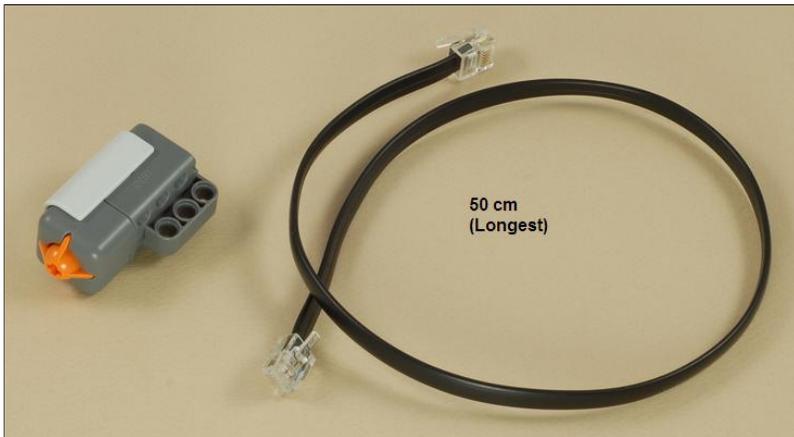


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Use one of the longest wires to connect the touch sensor to port **1** on the NXT.



Hammer Car Programming

The [Hammer Car](#) program will allow you to operate the Hammer Car with the single button remote control. See the instructions below.

How to Control the Hammer Car

The [Hammer Car](#) program uses a simple timing technique in order to tell the difference between the touch sensor being quickly pressed and then released, and the touch sensor being held down. Whenever it sees a quick press and release, the robot will swing the hammer down and then back up. Whenever it sees the button being held down, it will cycle between the following four driving actions:

1. Go straight until the button is released.

2. Pivot turn to the left until the button is released.
3. Go straight again until the button is released.
4. Pivot turn to the right until the button is released.

Before each driving action, a pointing hand graphic will be displayed on the NXT screen to show which way the Hammer Car will go next. With a little practice, you will be able to drive and turn to get where you want, then swing the hammer when you want.

Challenges

- Practice driving the Hammer Car, then set up some small targets and see if you can drive your Hammer Car to the targets and hit them with the hammer.
- Try programming the Hammer Car to drive to a target and hit it by itself without the remote control.
- Try building and programming another kind of remote control for the Hammer Car. For example, if you have enough parts to build the game controller from the [Car with Game Controller](#) project (or something similar), try using that remote control and then modifying the claw part of the [Claw Control](#) program from the [Claw Car with Game Controller](#) project to control the Hammer Car.
- The Hammer Car has a sturdy 3-motor chassis that you could use to make other robots. Can you think of something else to use the third motor for instead of the hammer?



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