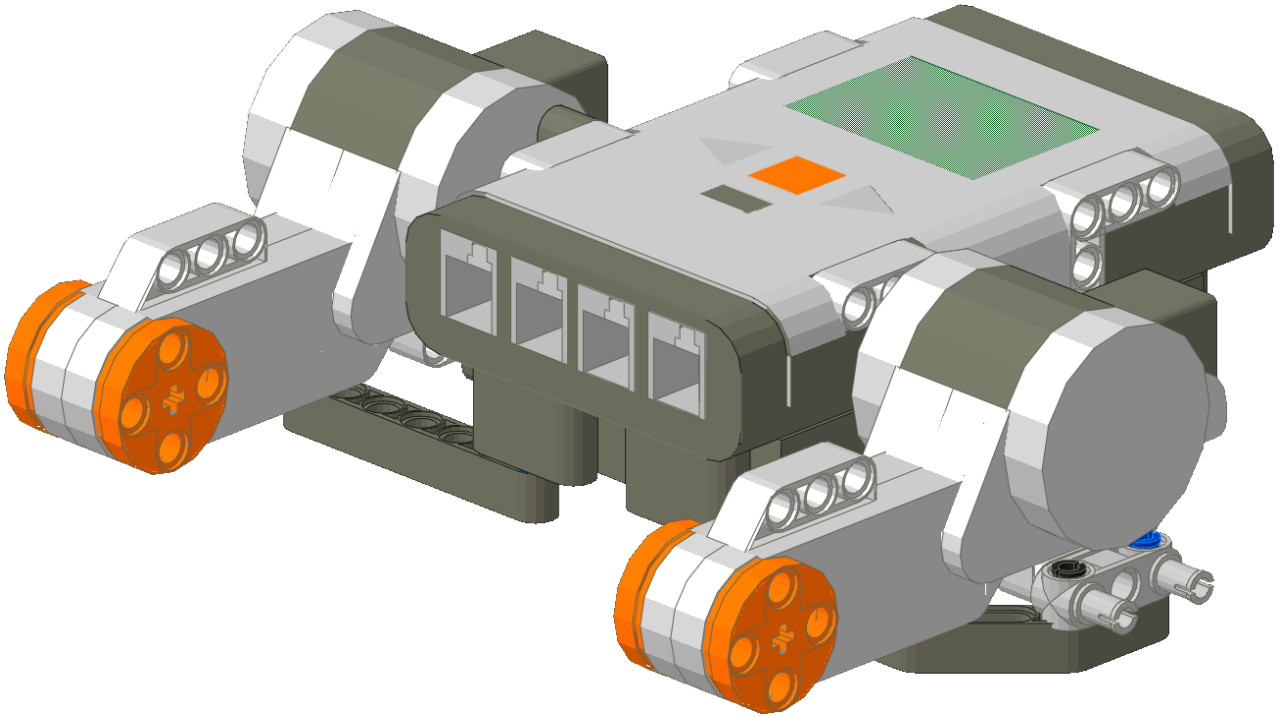


II. Ways to Attach NXT Motors

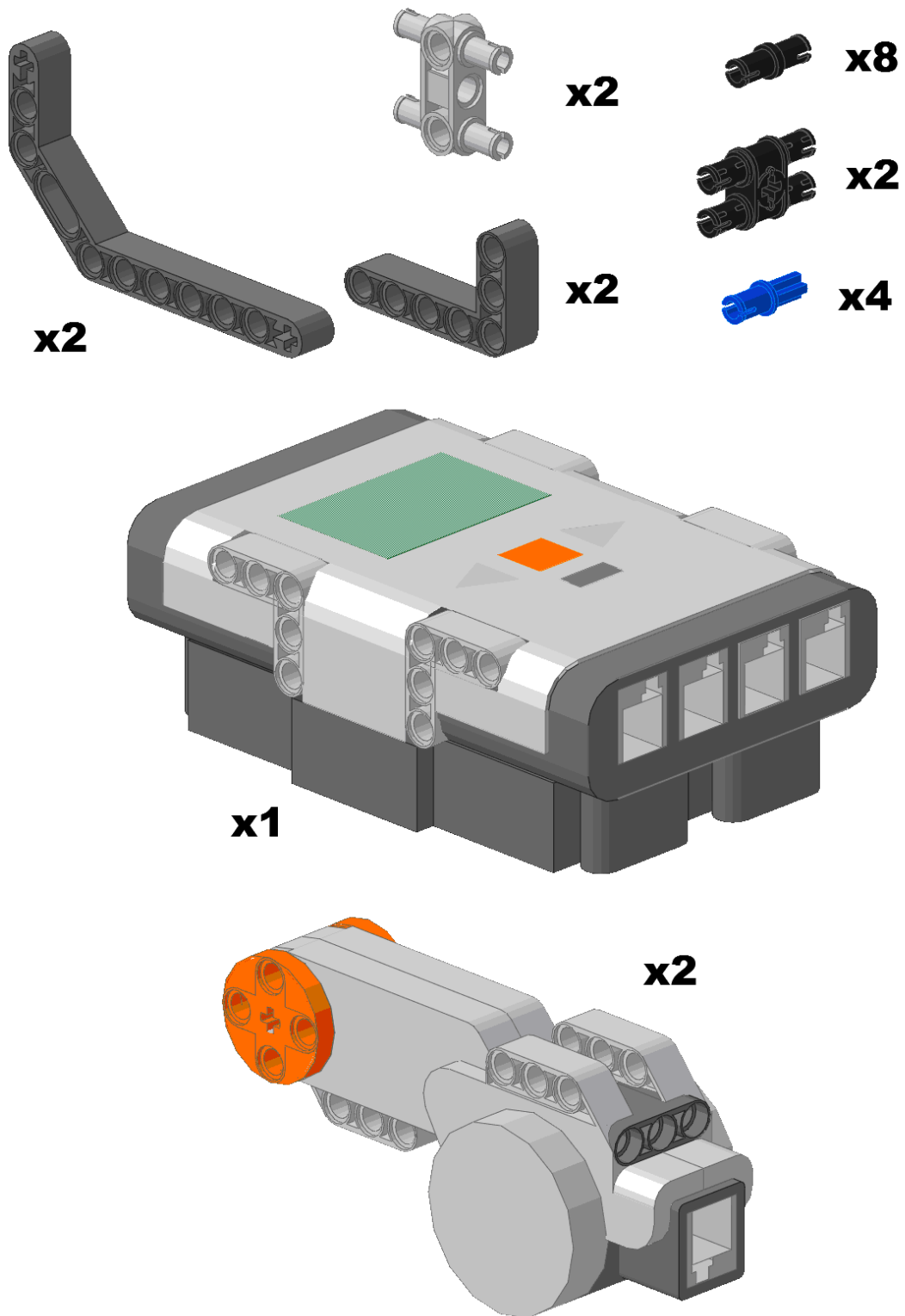
1. Simple Side Attachment



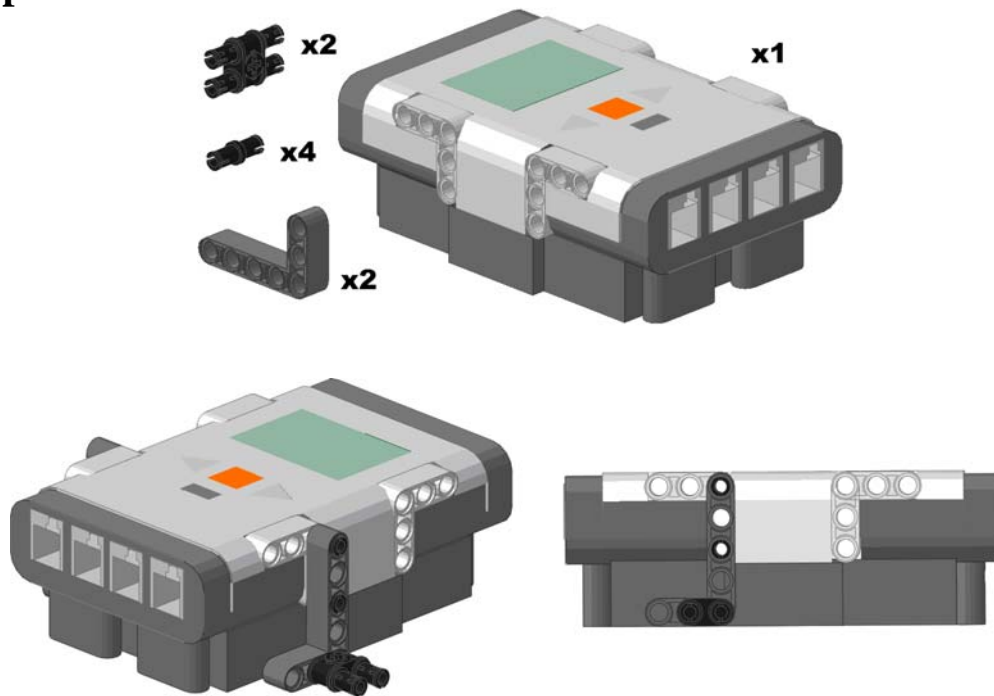
Model Description:

This is a motor attachment option in which the motors attach closely to the sides of the NXT.

These are the parts that you will need:

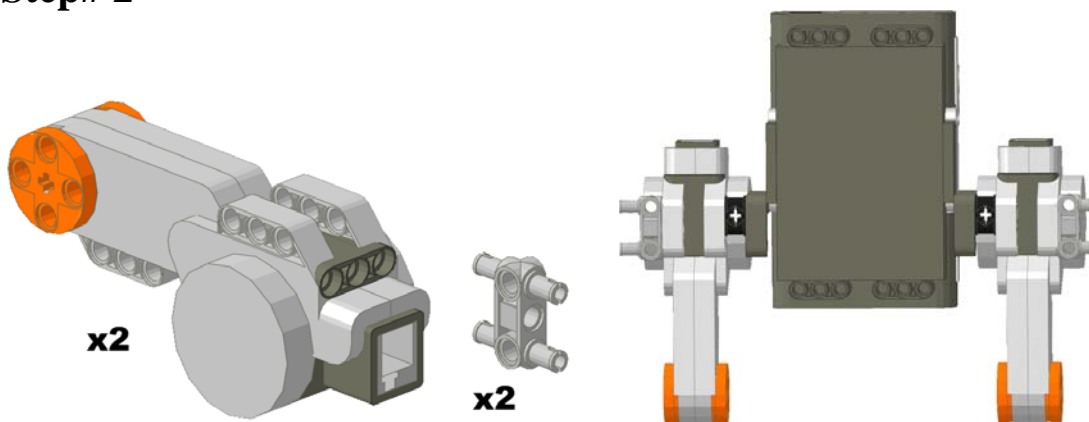


Step# 1

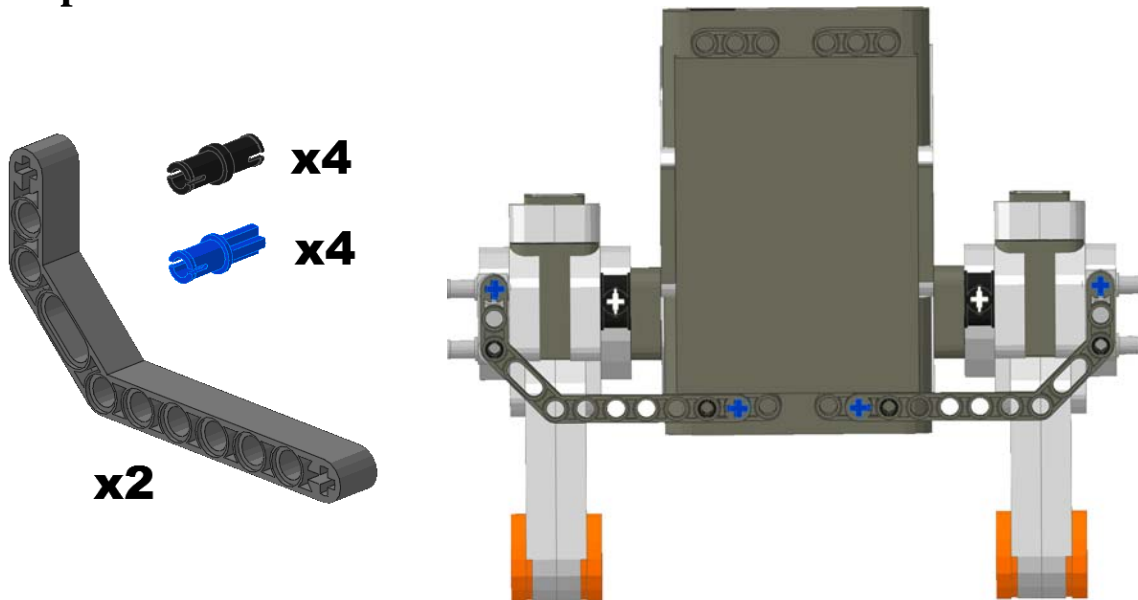


Attach 2 bent beams to the NXT using friction pins. The shorter portion of the beam should be sticking out from the NXT. Insert a double pin connector into this portion.

Step# 2

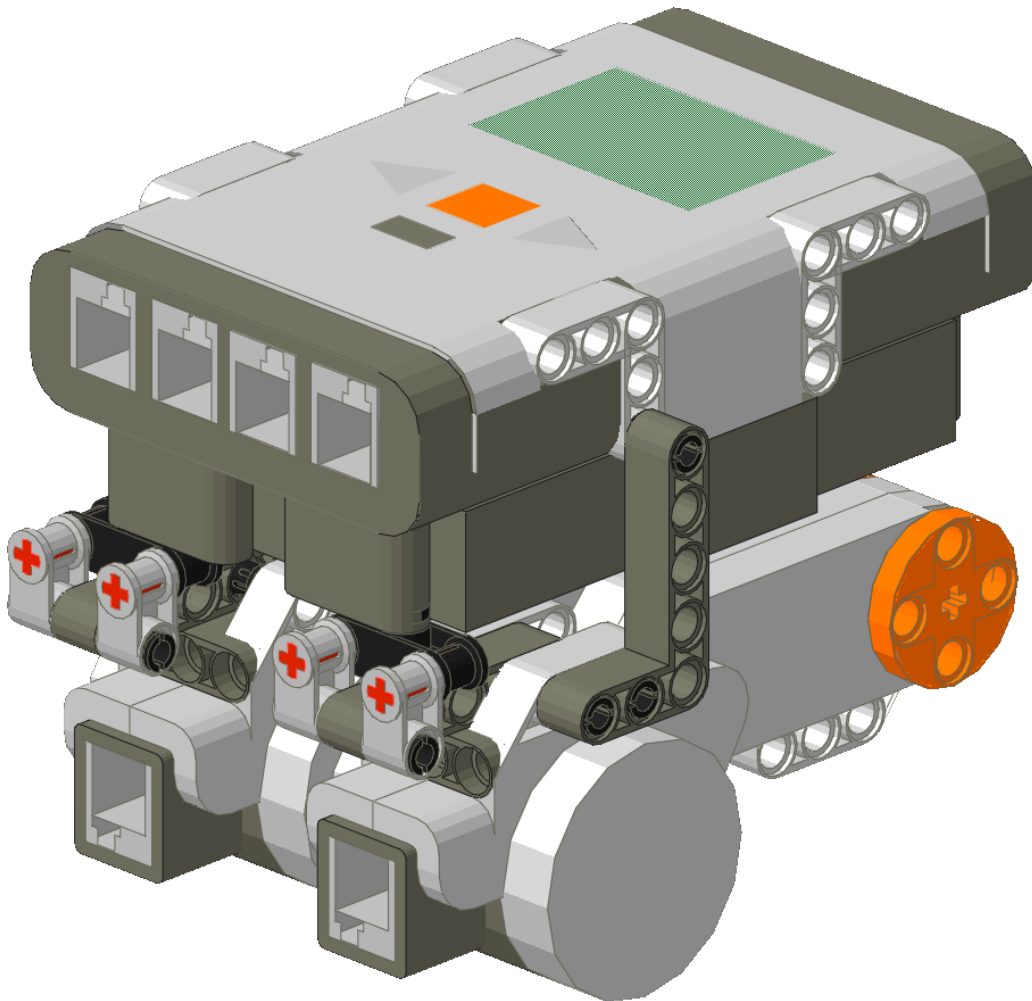


Fasten the motors to the double pin connectors on the bent beams. Then fit a 4 pin connector into the outside mounting beam on the NXT.

Step# 3

Attach the double bent beam to the 4 pin connector and the NXT using the axle pins and friction pins.

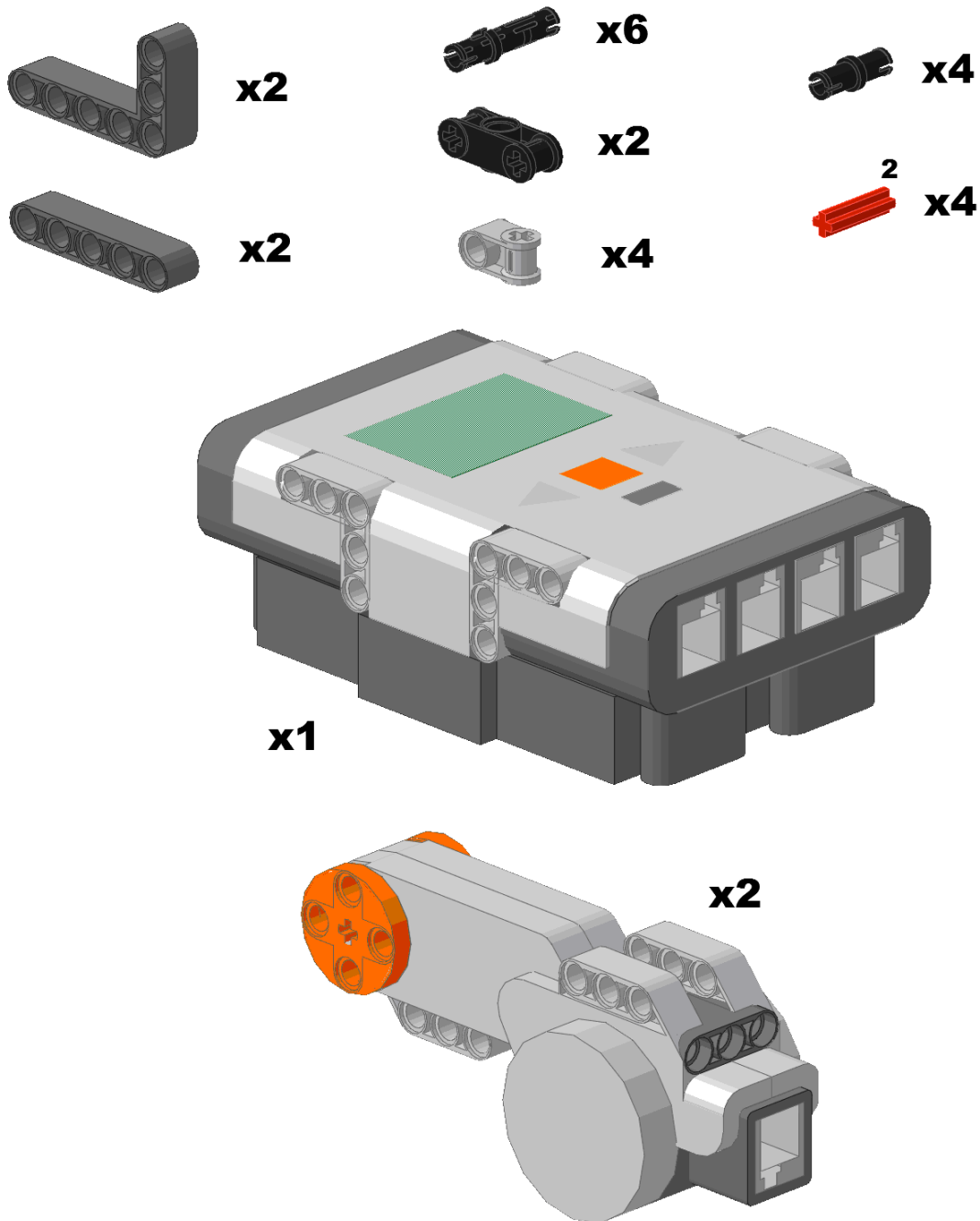
2. Underside Motor Attachment



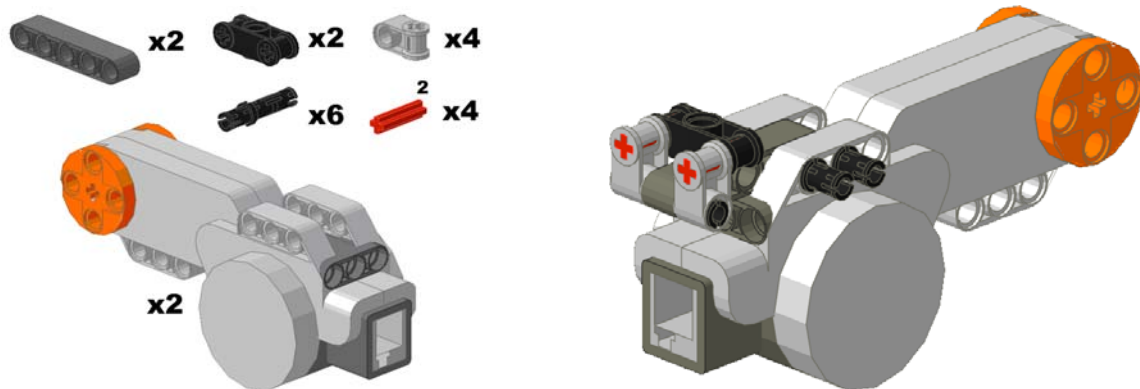
Model Description:

This is a simple, stable way to attach two motors under the NXT.

These are the parts that you will need:

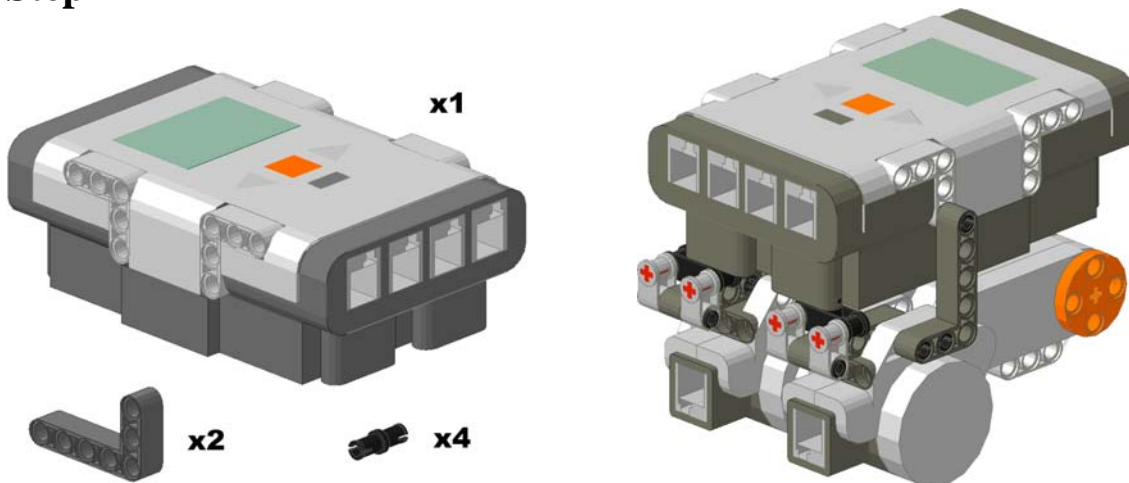


Step# 1



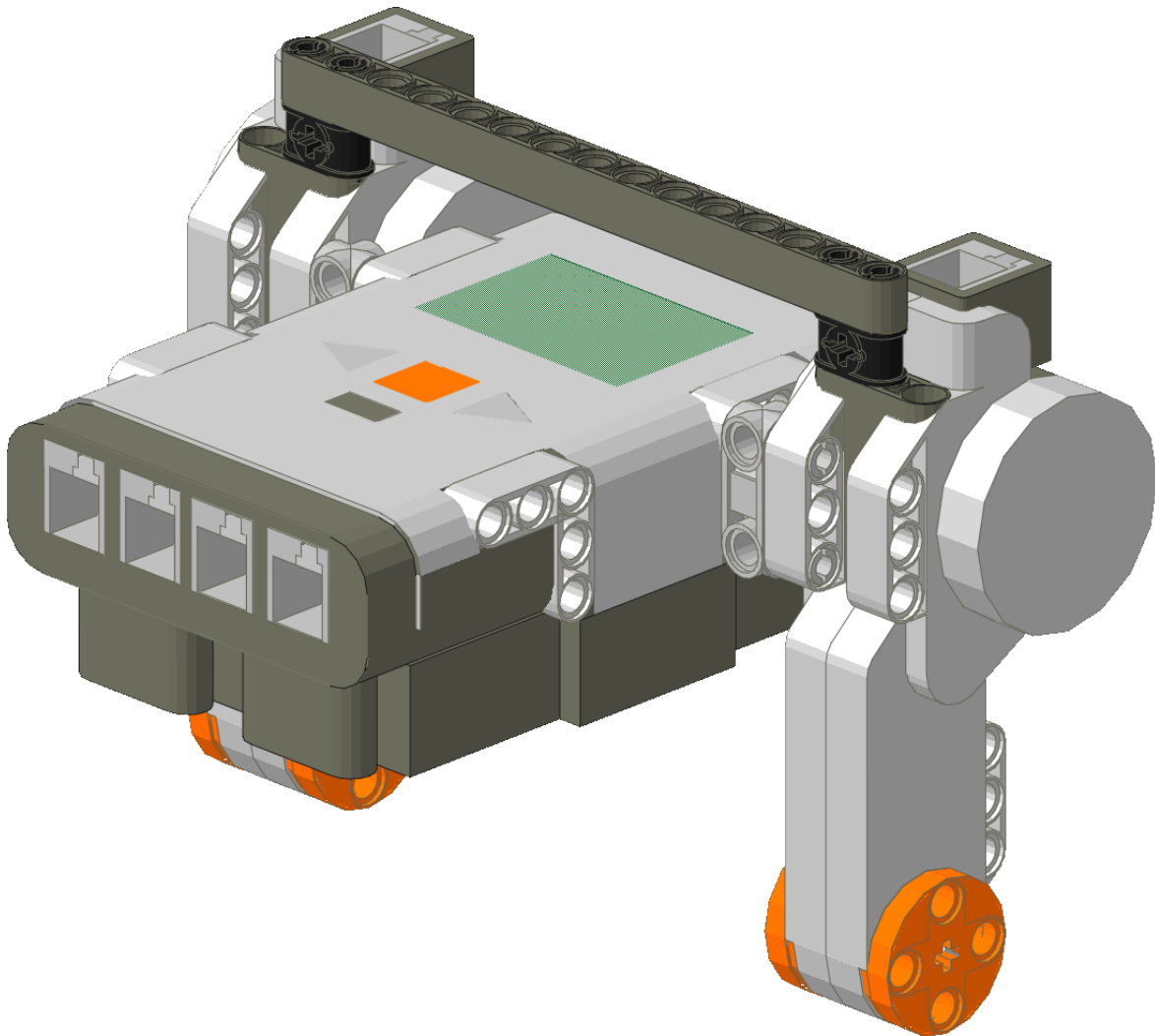
Connect 2 gray axle joiners to the black axle joiner using two 2 stud axles. Connect the 5 hole beam to the gray axle joiners using a long friction pin. Then connect the beam to the motor using 2 more long friction pins. Repeat this process for the 2nd motor.

Step# 2



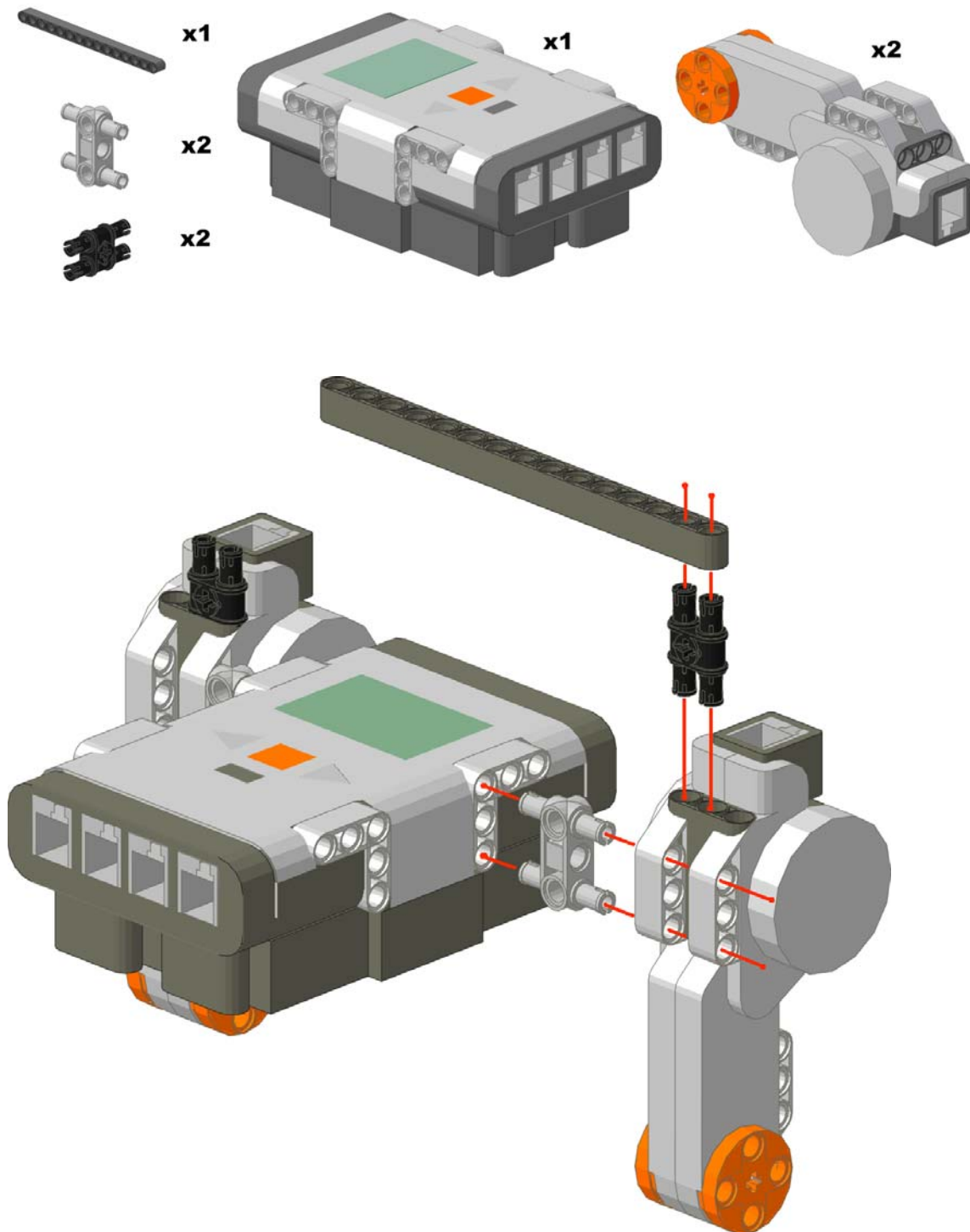
Attach each motor assembly to the bottom of the NXT by the black axle joiner, using a friction pin. Then secure each motor using the bent beam.

3. One Step Motor Attachment



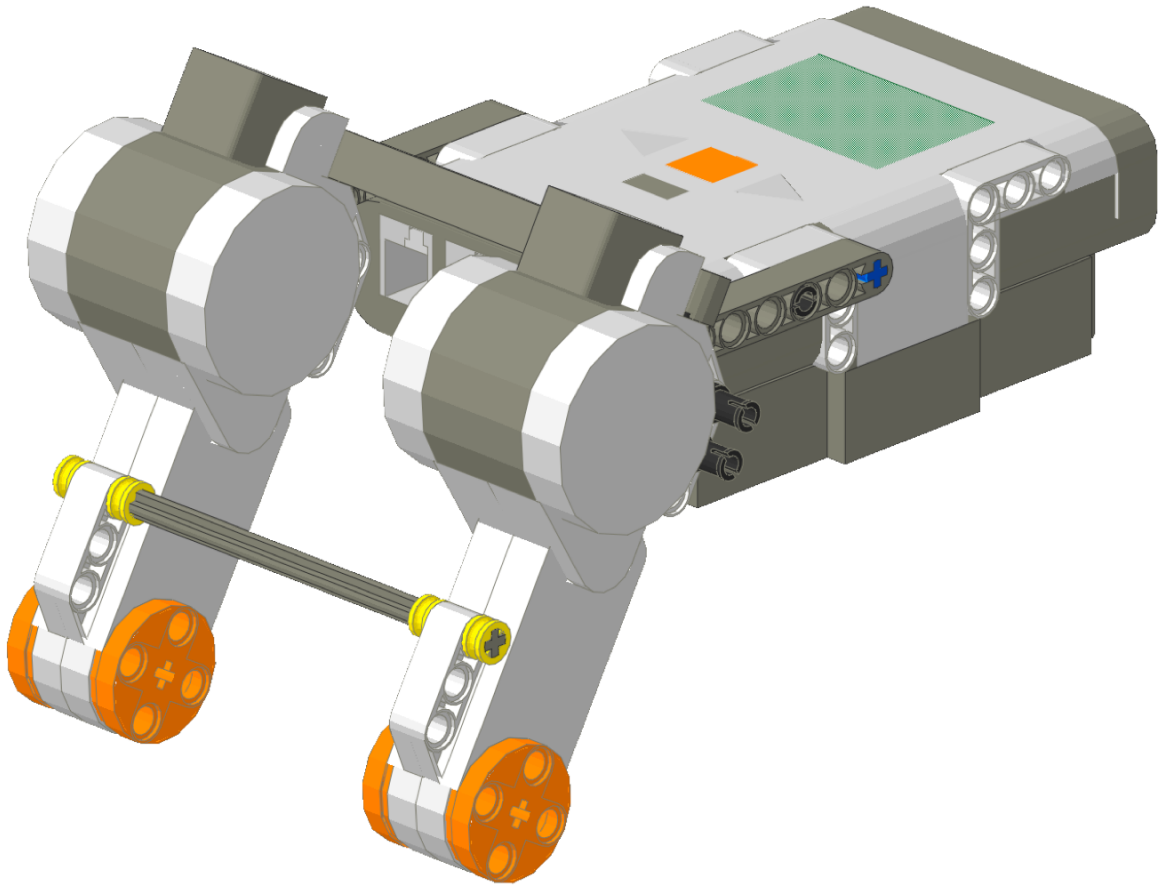
Model Description:

This is a very simple way, using few pieces, to attach motors.

Step# 1 (and only)

Using 1 beam and 4 connector pegs, attach each motor to the NXT. The left and right sides are symmetrical.

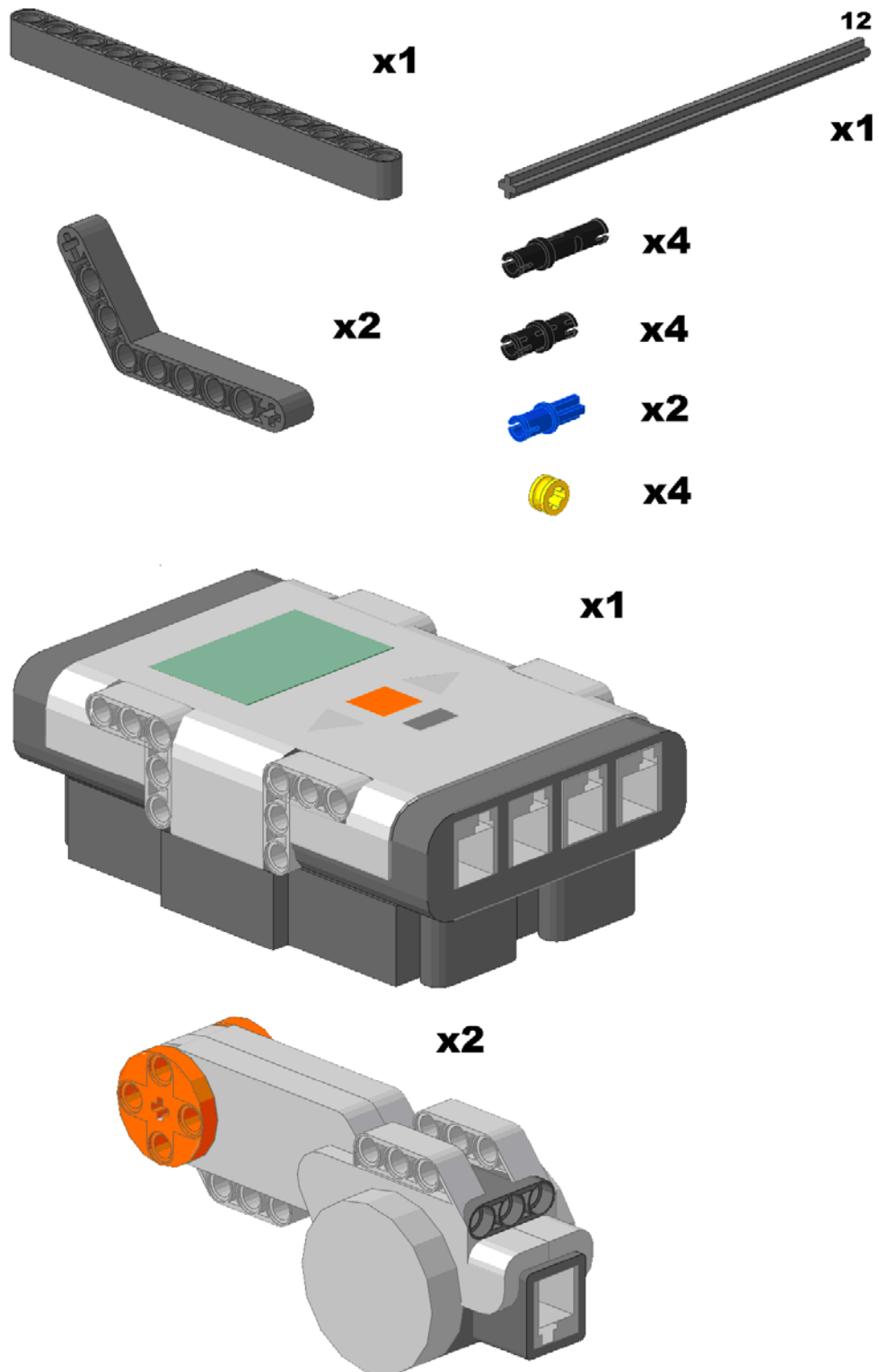
4. Angled Back Attachment



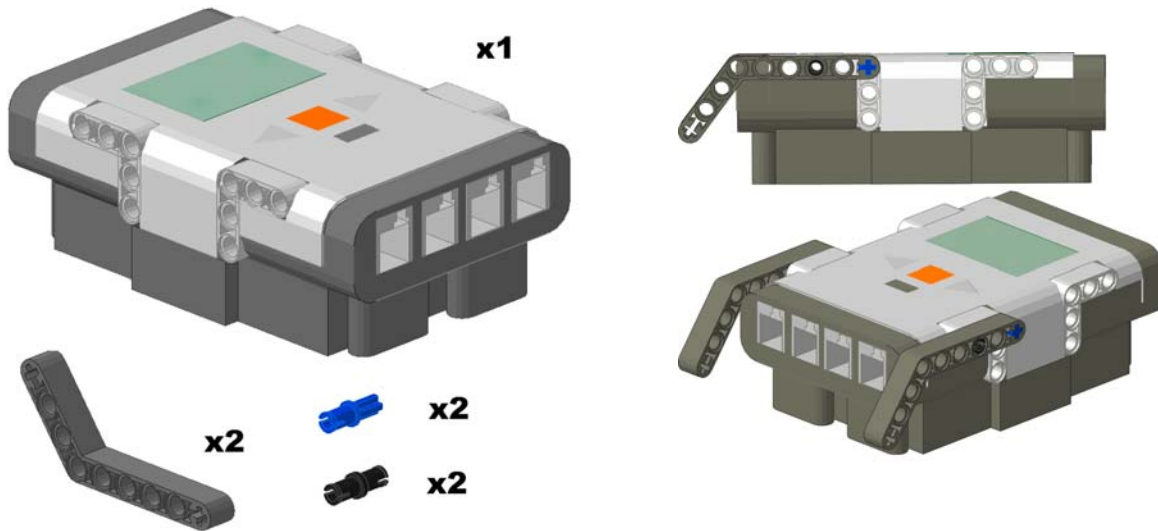
Model Description:

This is a motor attachment option in which the motors angle downward from the NXT.

These are the parts that you will need:

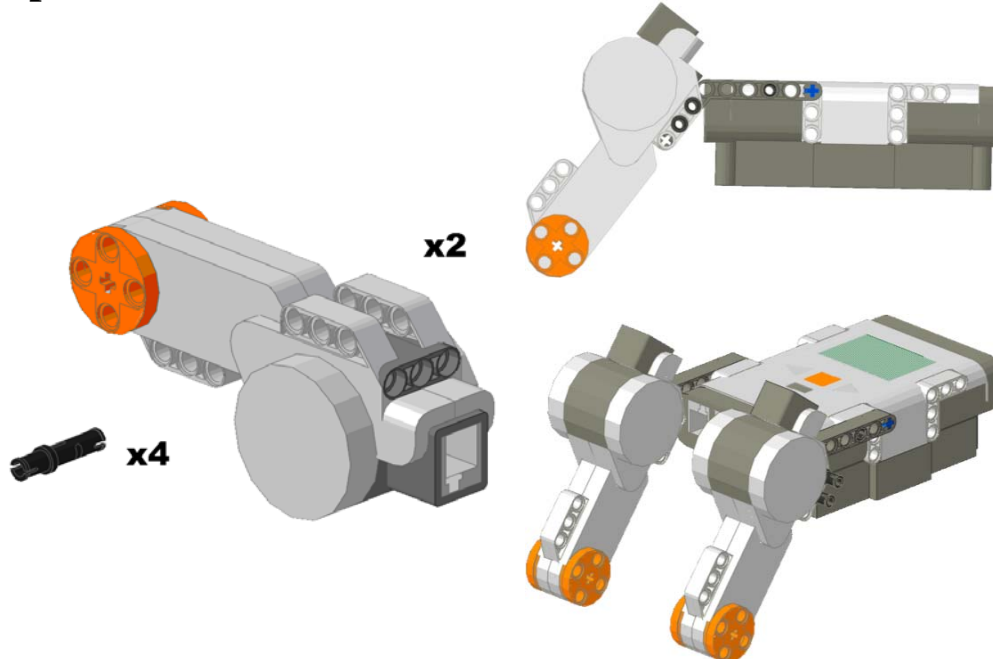


Step# 1



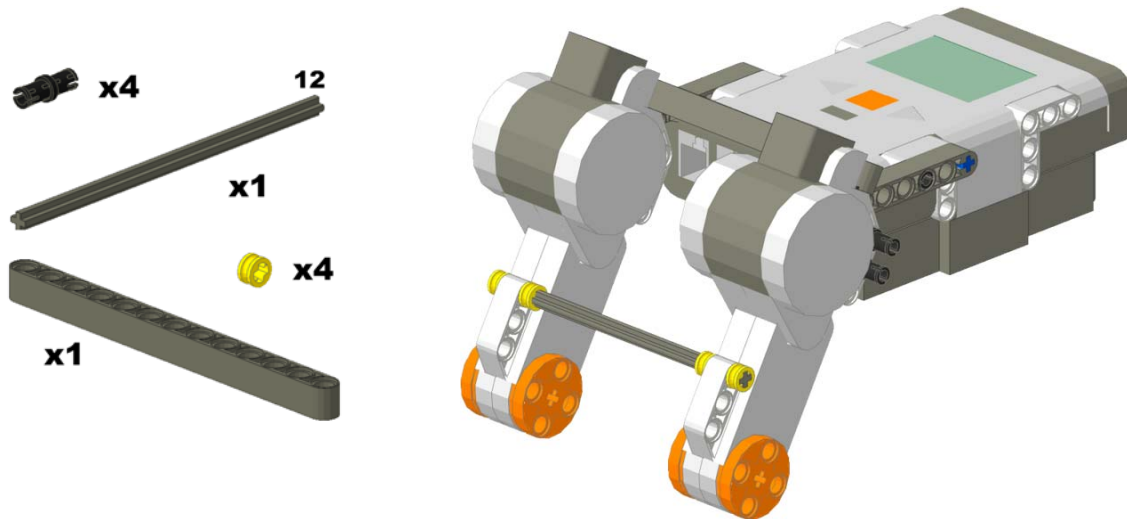
Attach the 2 bent beams to the NXT using a friction pin and an axle pin on each. The shorter portion of the beam should be sticking out from the NXT.

Step# 2



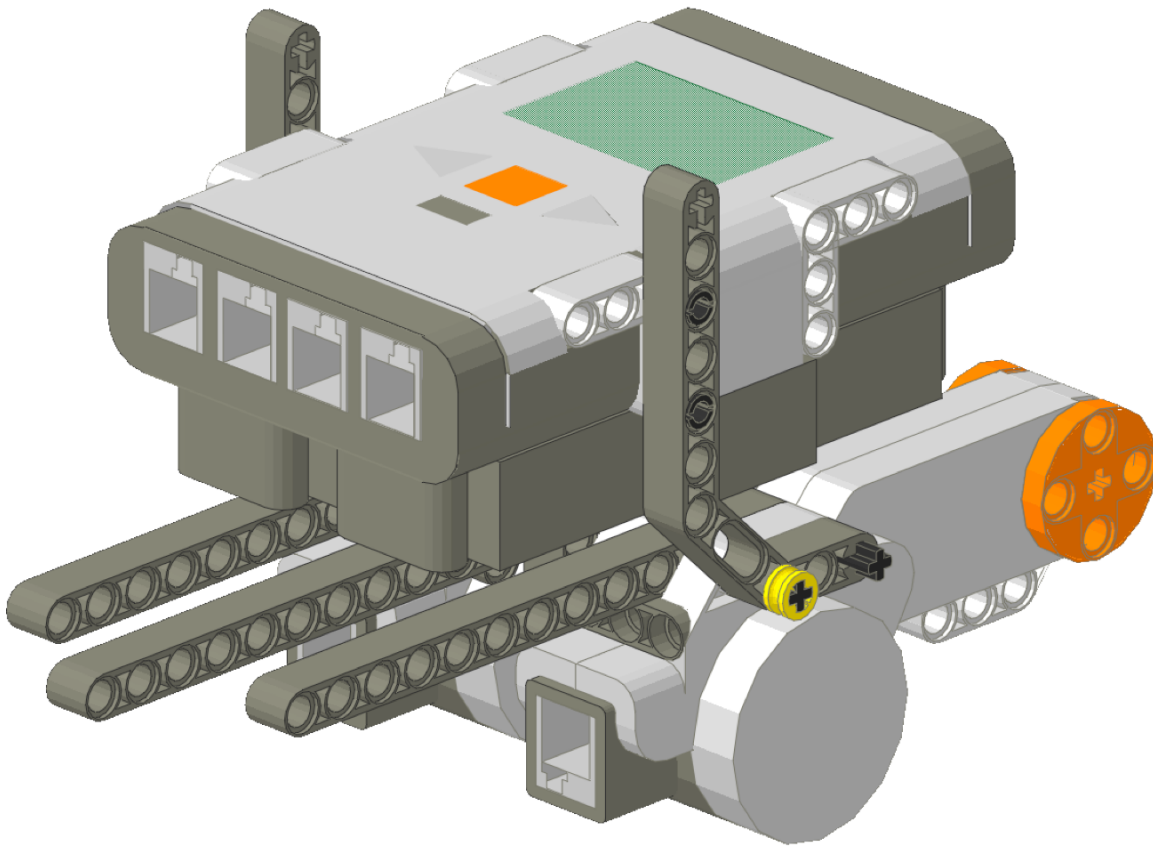
Fasten the motors to the bent beams using the extended pins. Make sure the bent beams are placed in between the 2 mounting beams on the NXT.

Step# 3



Slide the 12 stud axle through the mounting beams of the motor and secure it in place with $\frac{1}{2}$ bushings. Use the friction pins to attach the 13 hole beam across the tops of the motors.

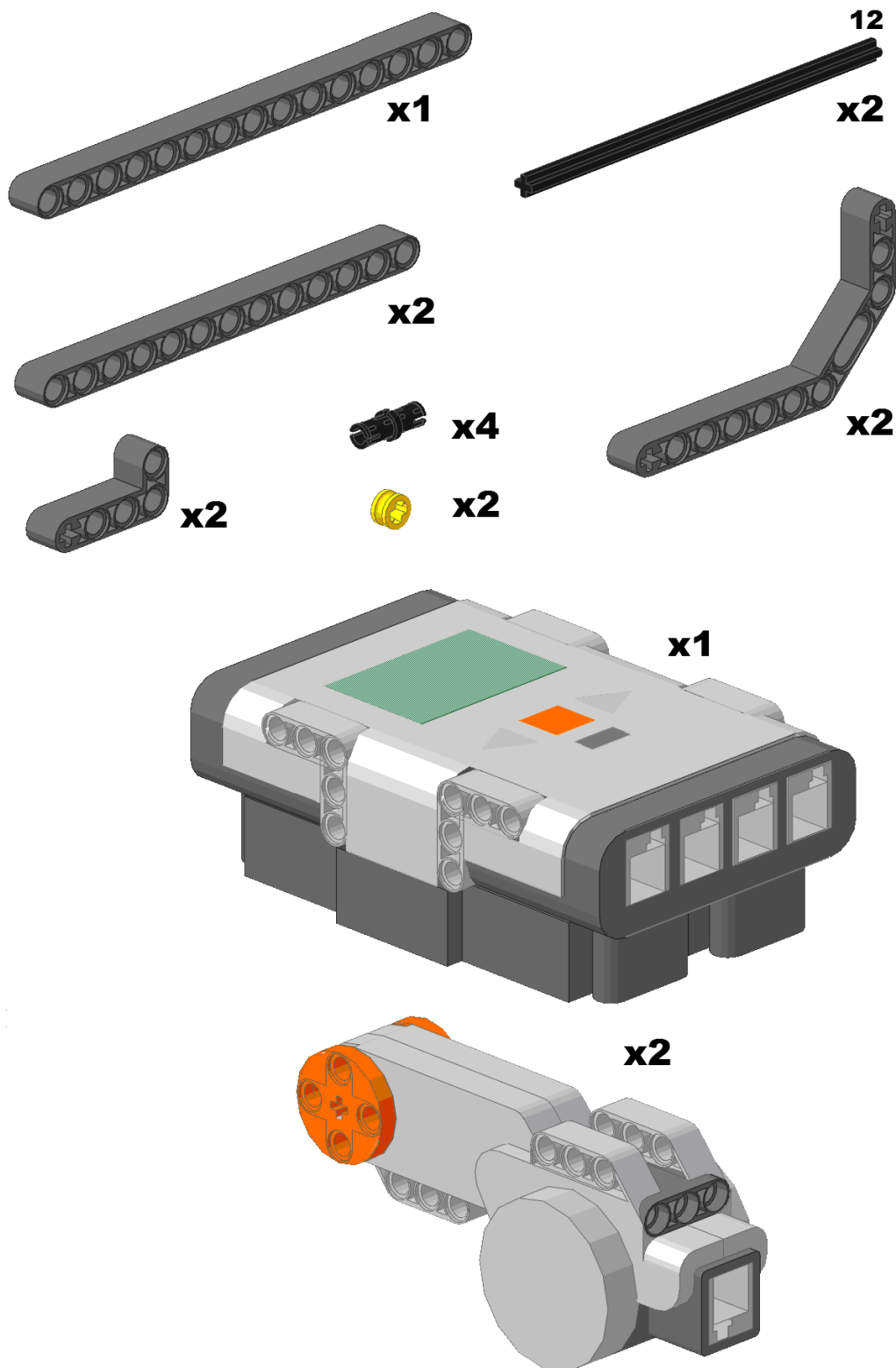
5. Sturdy Motor Attachment



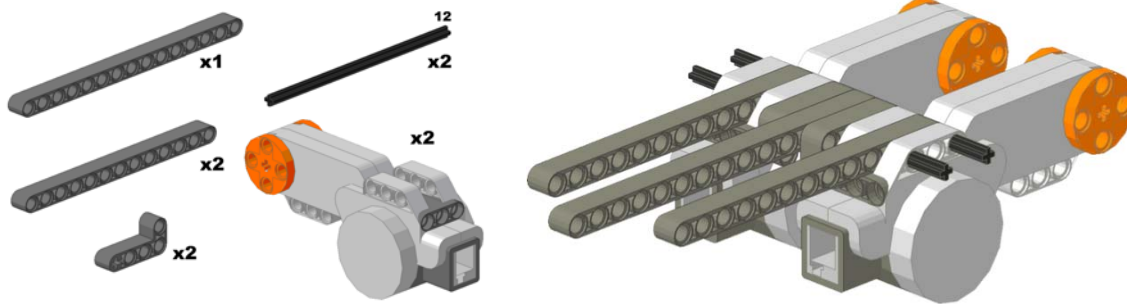
Model Description:

This model is a compact, sturdy, way to attach NXT motors.

These are the parts that you will need:

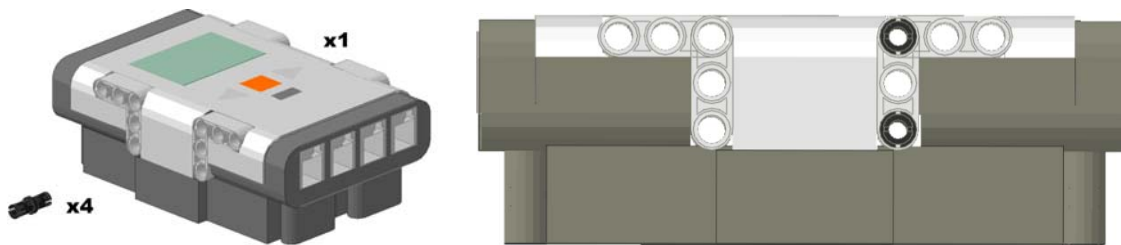


Step# 1



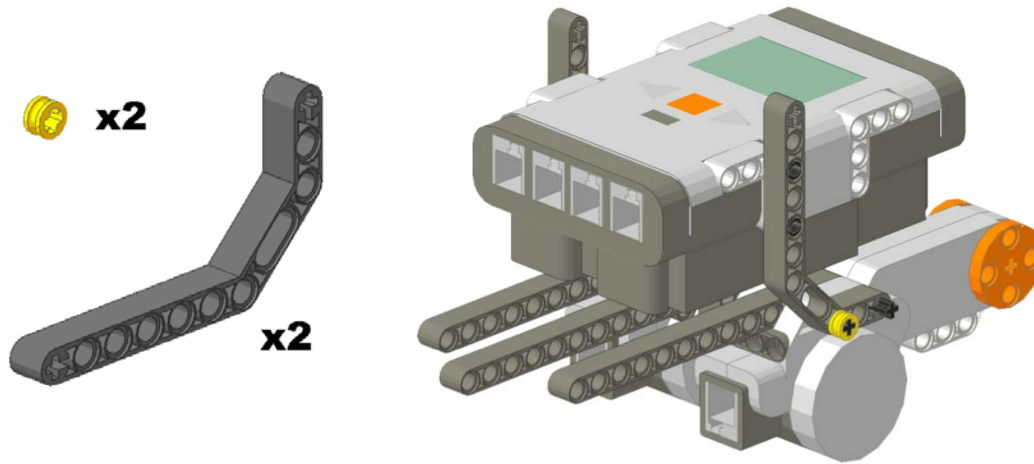
Thread the two 12 stud axles through the NXT motors, beams, and bent beams.

Step# 2



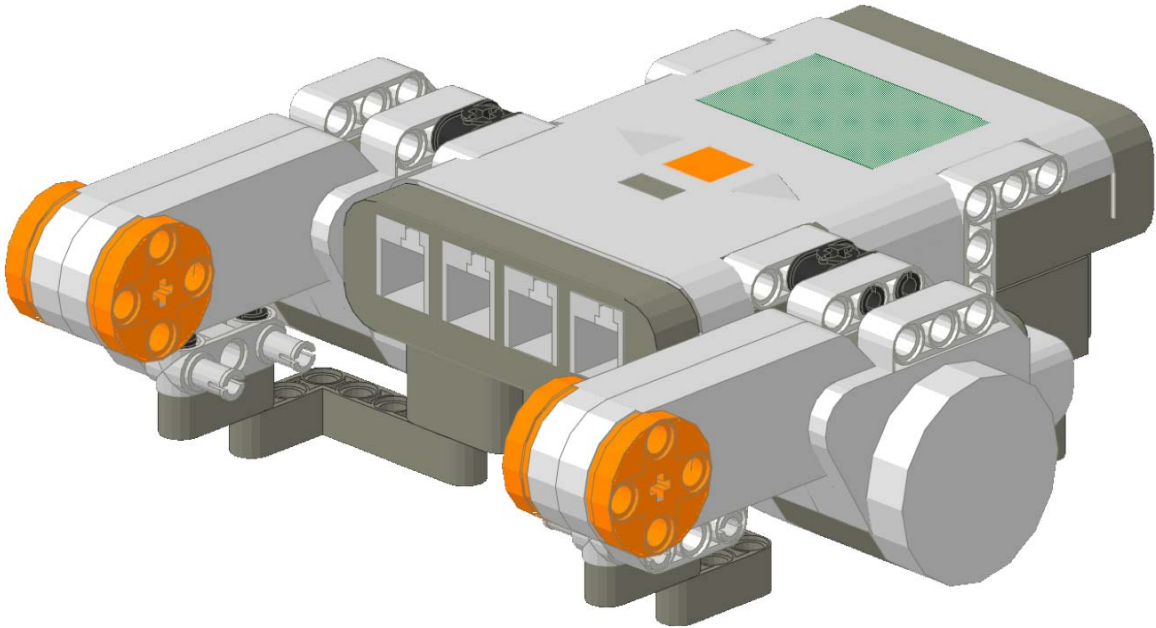
Attach 6 friction pins into the NXT. (3 per side)

Step# 3



Combine the parts from Steps #1 and #2. Attach the bent beams to the friction pins in the NXT and to the axles from step #1. Use a ½ bushings to hold the 3-5 bent beam to the axle. Both sides are symmetrical.

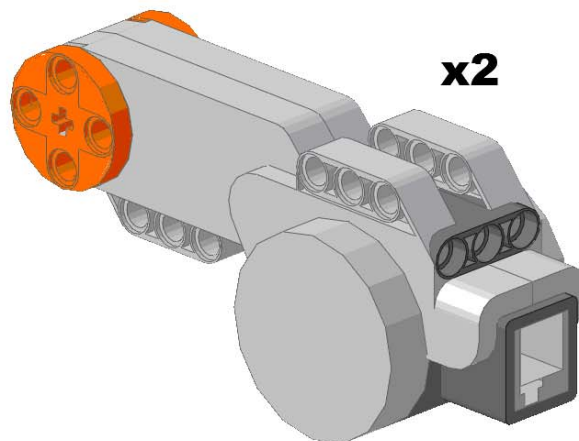
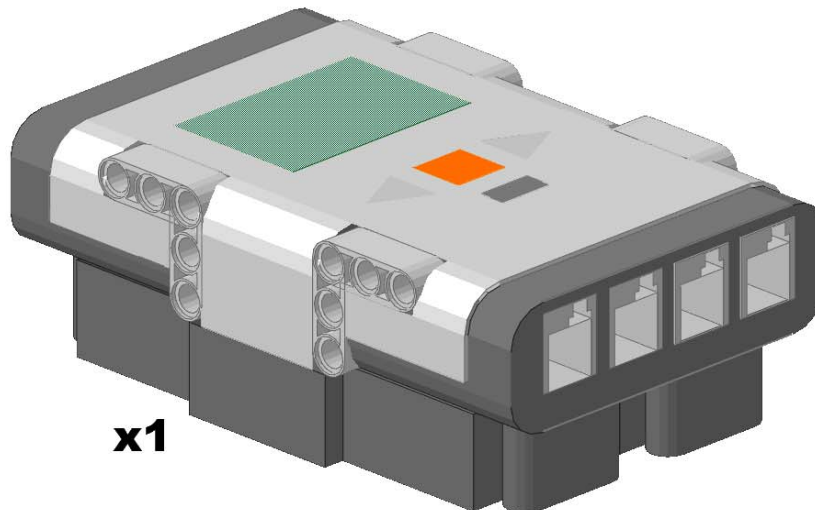
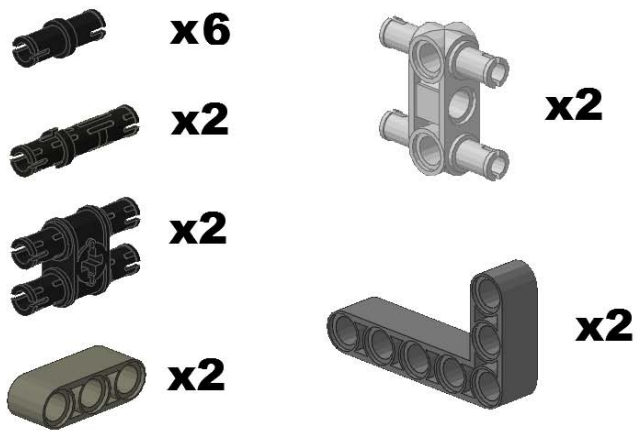
6. Wide Back Attachment



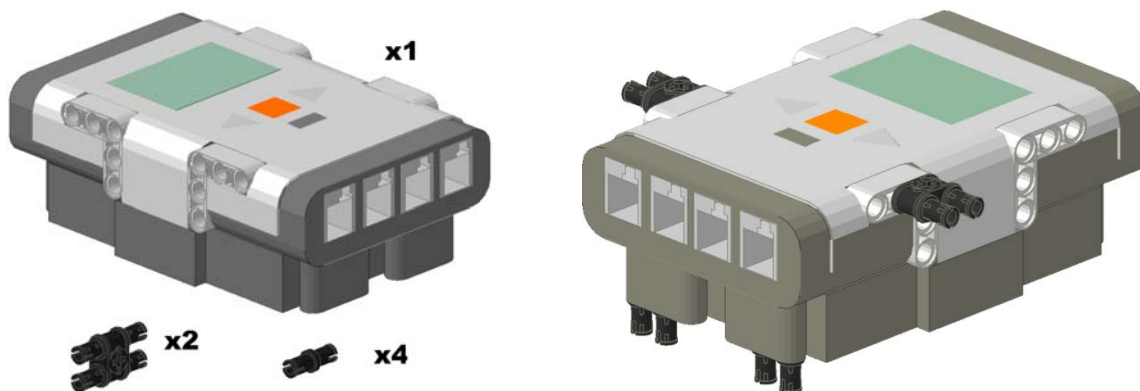
Model Description:

This is a motor attachment option in which the motors are mounted far apart in the back of the NXT.

These are the parts that you will need:

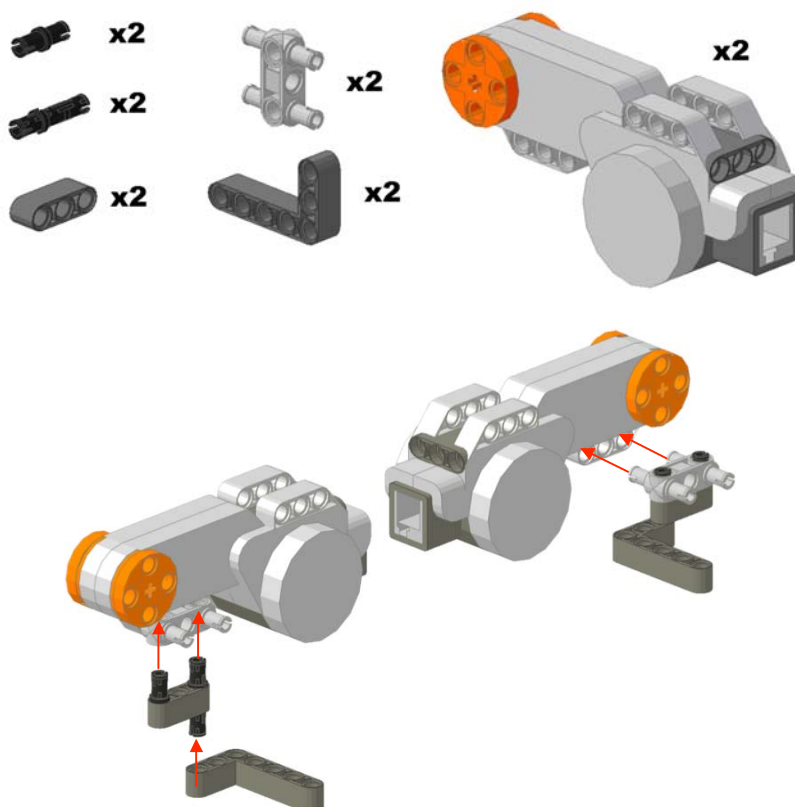


Step# 1



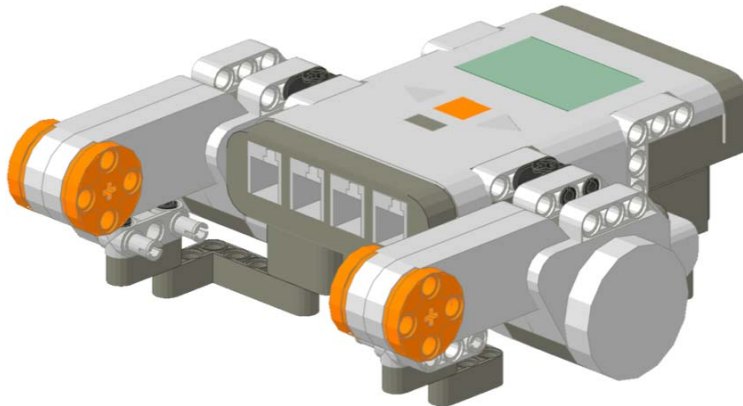
Attach a double pin connector to each side of the NXT. Place 4 pins to the bottom of the NXT in the outside most holes.

Step#2



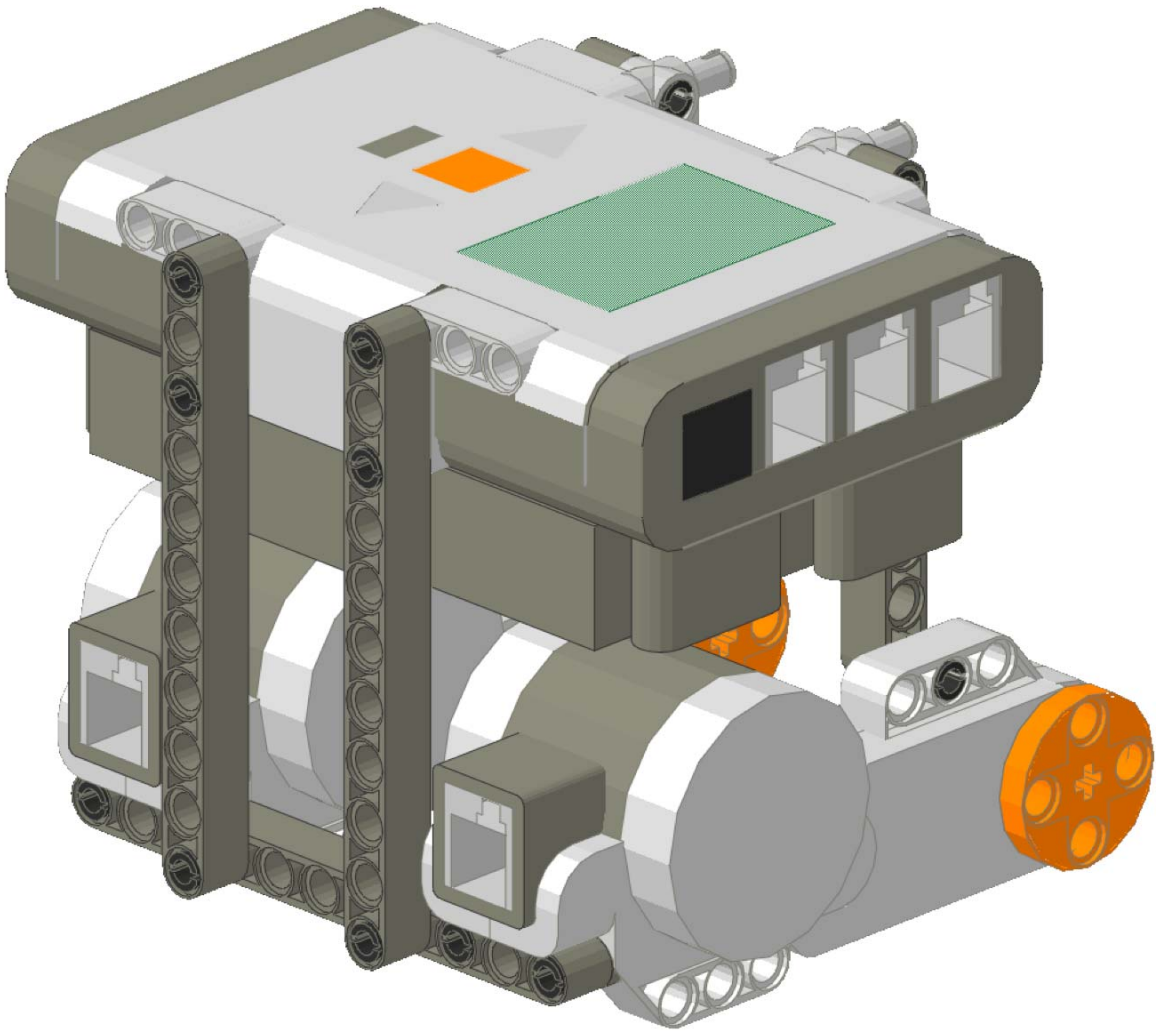
Attach a four pin axle joiner to each of the NXT motors. In 1 hole of the 4 pin connector attach a pin and in the other hole attach an extended pin. Attach the short beam to both pins and the bent beam to the extended pin.
 Note: Each motor assembly should be a mirror image of the other.

Step# 3



Combine the assemblies from Steps #1 and #2. Attach the bent beams to the bottom of the NXT and the motors to the double pin connectors.

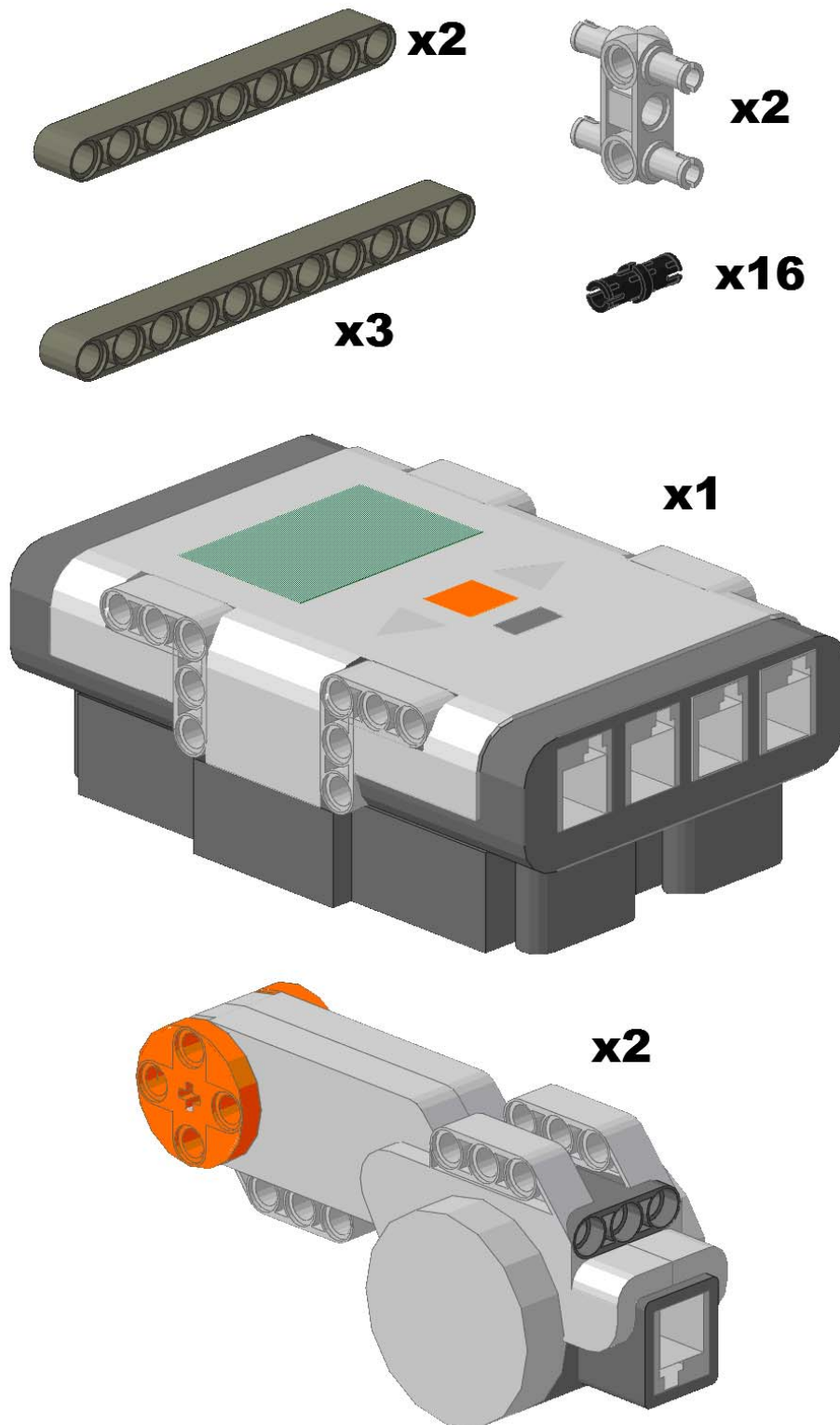
7. Compact Motor Attachment



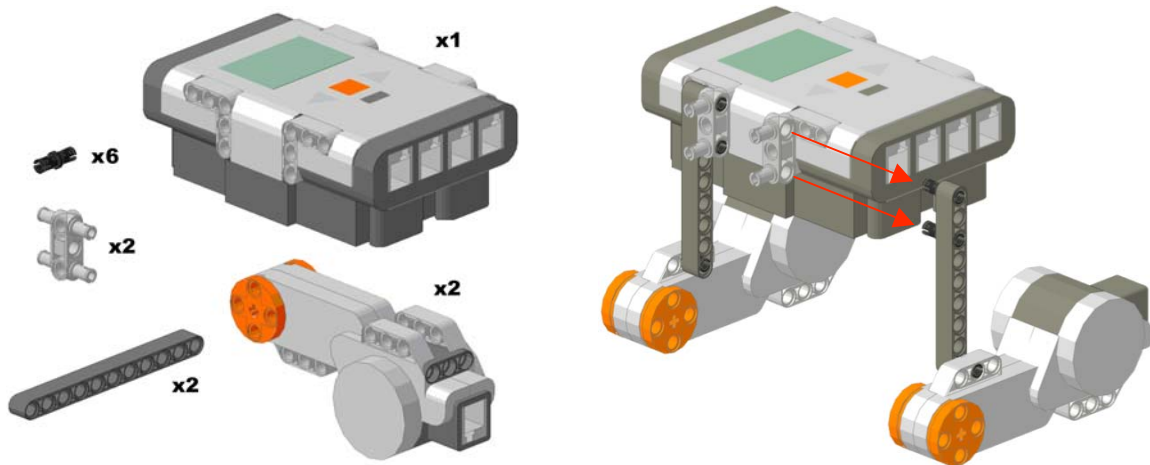
Model Description:

This is a simple, compact way of attaching motors to the NXT.

These are the parts that you will need:

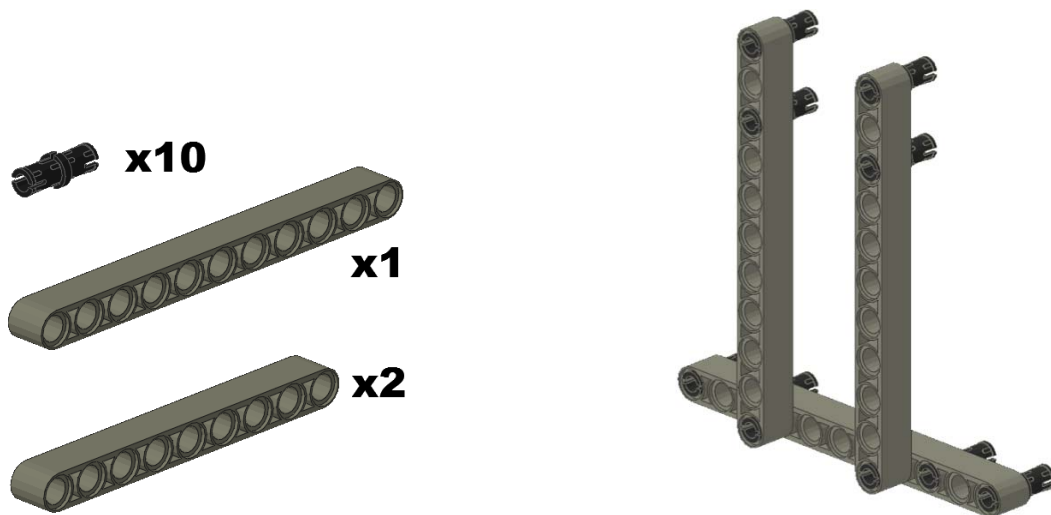


Step# 1



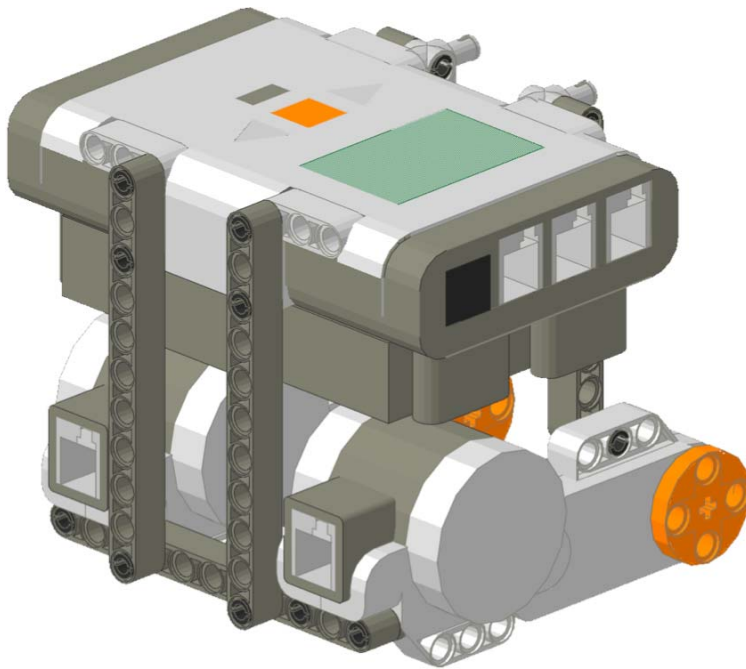
Attach 2 motors to the NXT using beams and various pegs.

Step# 2



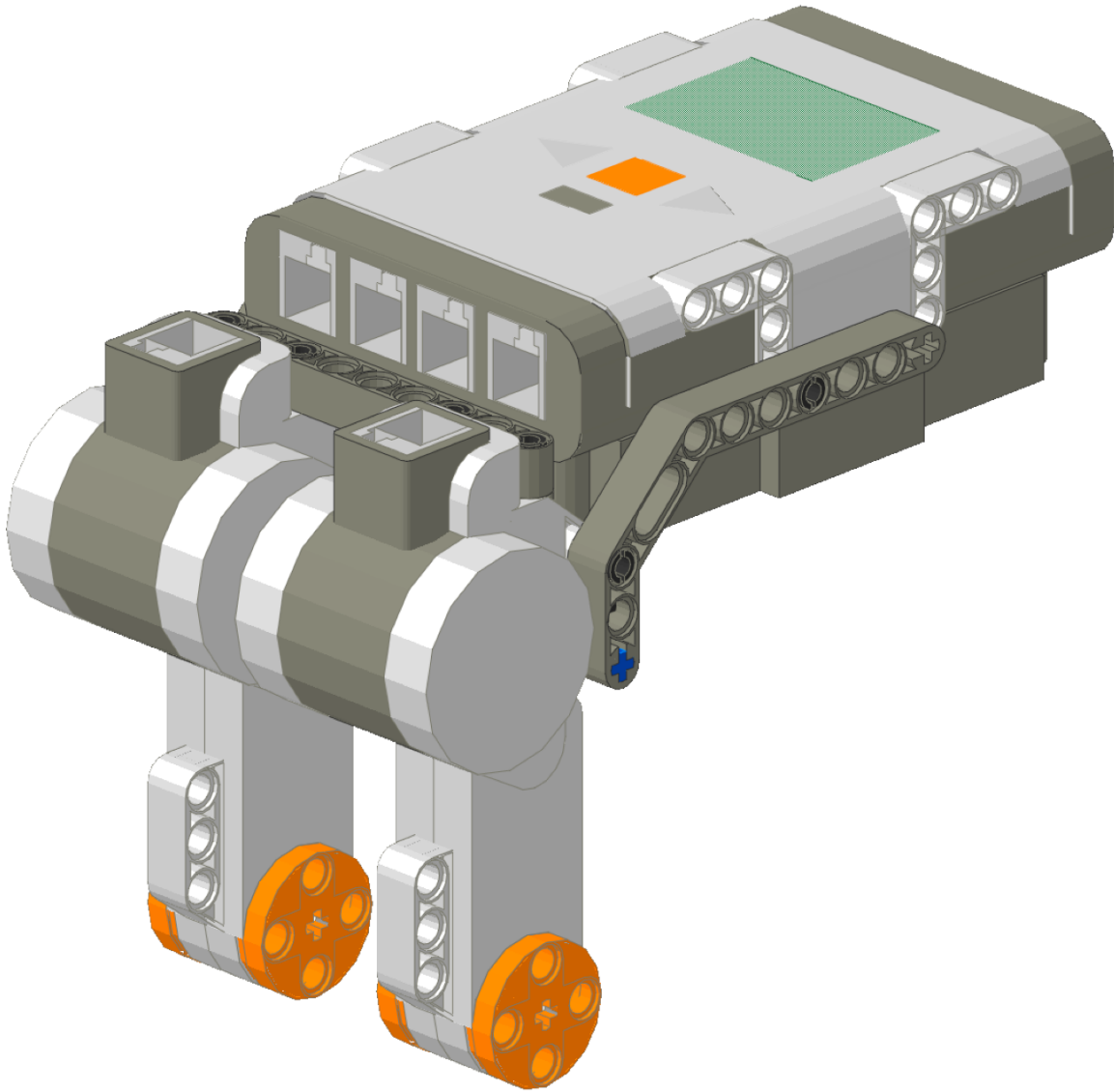
Separately build a motor support using beams and pegs.

Step# 3



Attach the part from Step #1 to the part from Step #2 so that the beams from the first step connect to the back of the motors.

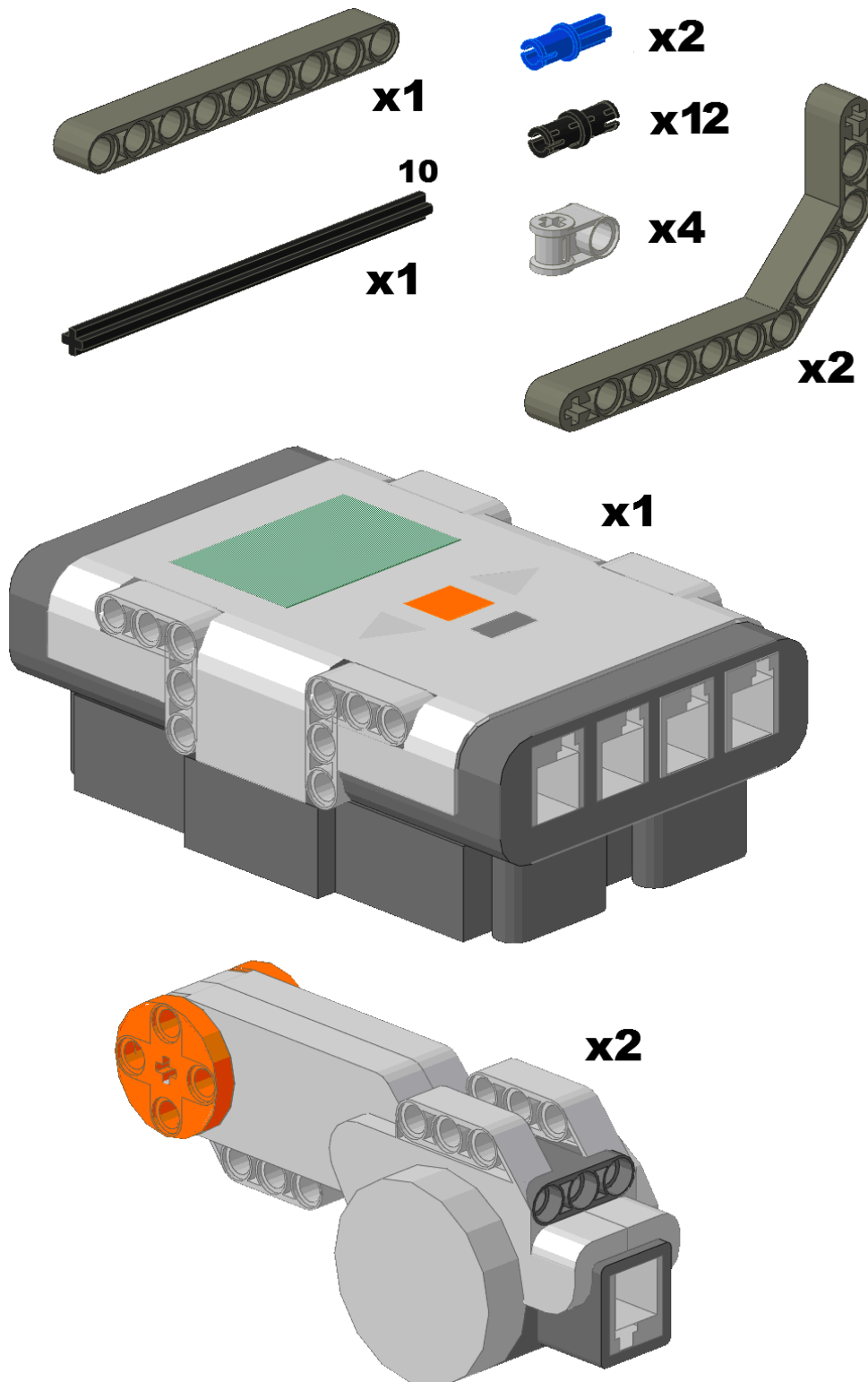
8. Vertical Motor Attachment

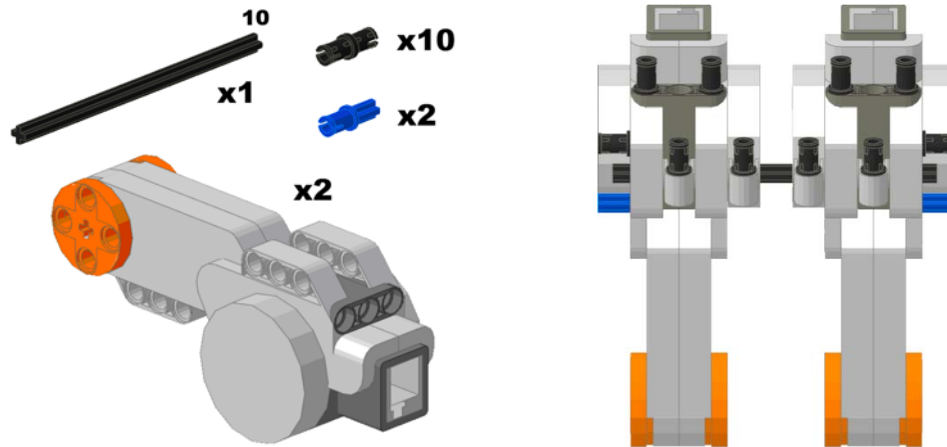


Model Description:

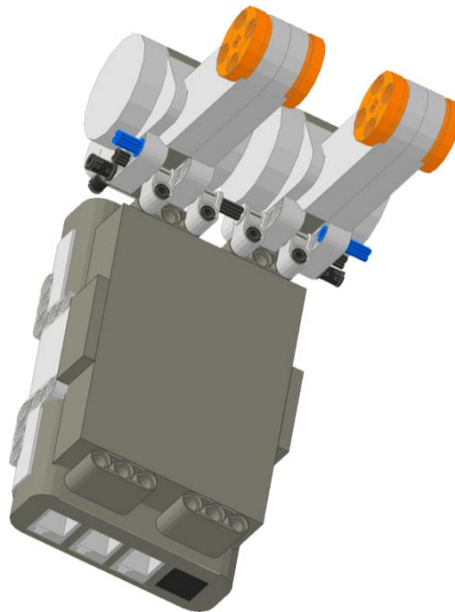
This is a motor attachment option in which two motors are held vertically

These are the parts that you will need:



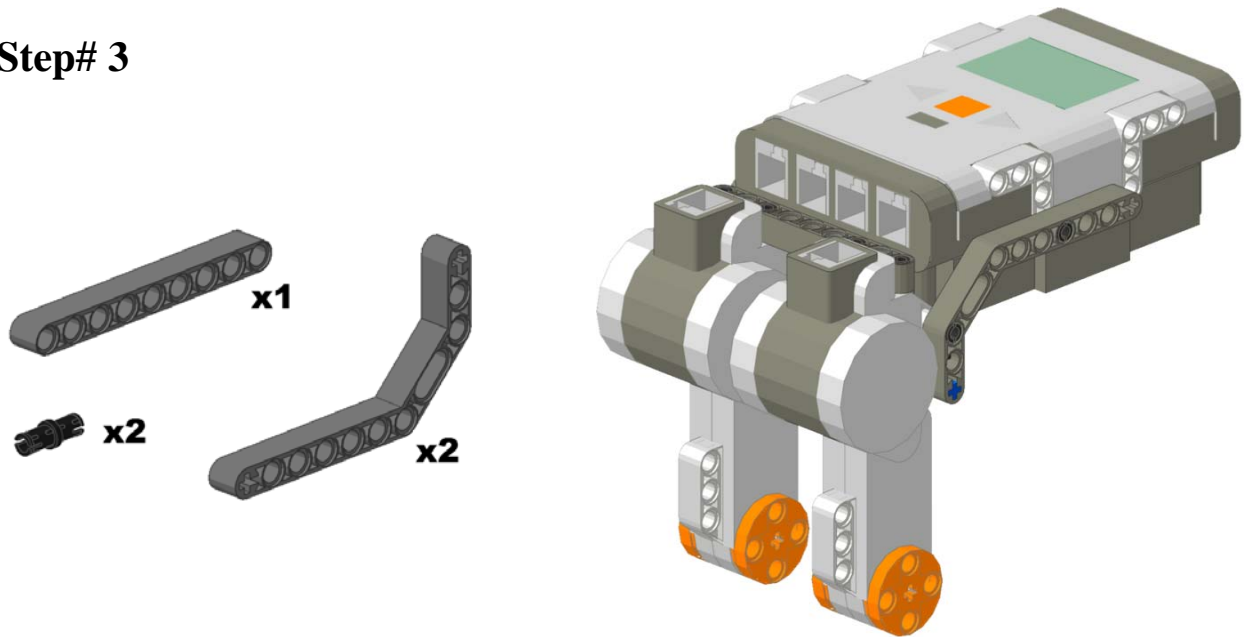
Step# 1

Attach 4 pins to the back of 2 motors. Also attach a pin and an axle pin to the side of each motor. Take 4 pins and attach each to a perpendicular axle joiner. Thread an axle through each motor lining up the 4 perpendicular axle joiners.

Step# 2

Attach the 4 pins from the perpendicular axle joiners to the bottom of an NXT.

Step# 3



Attach 2 pins to the side of the NXT. Secure Step #2 by attaching a bent beam on both sides of the NXT and a straight beam on top of each motor.