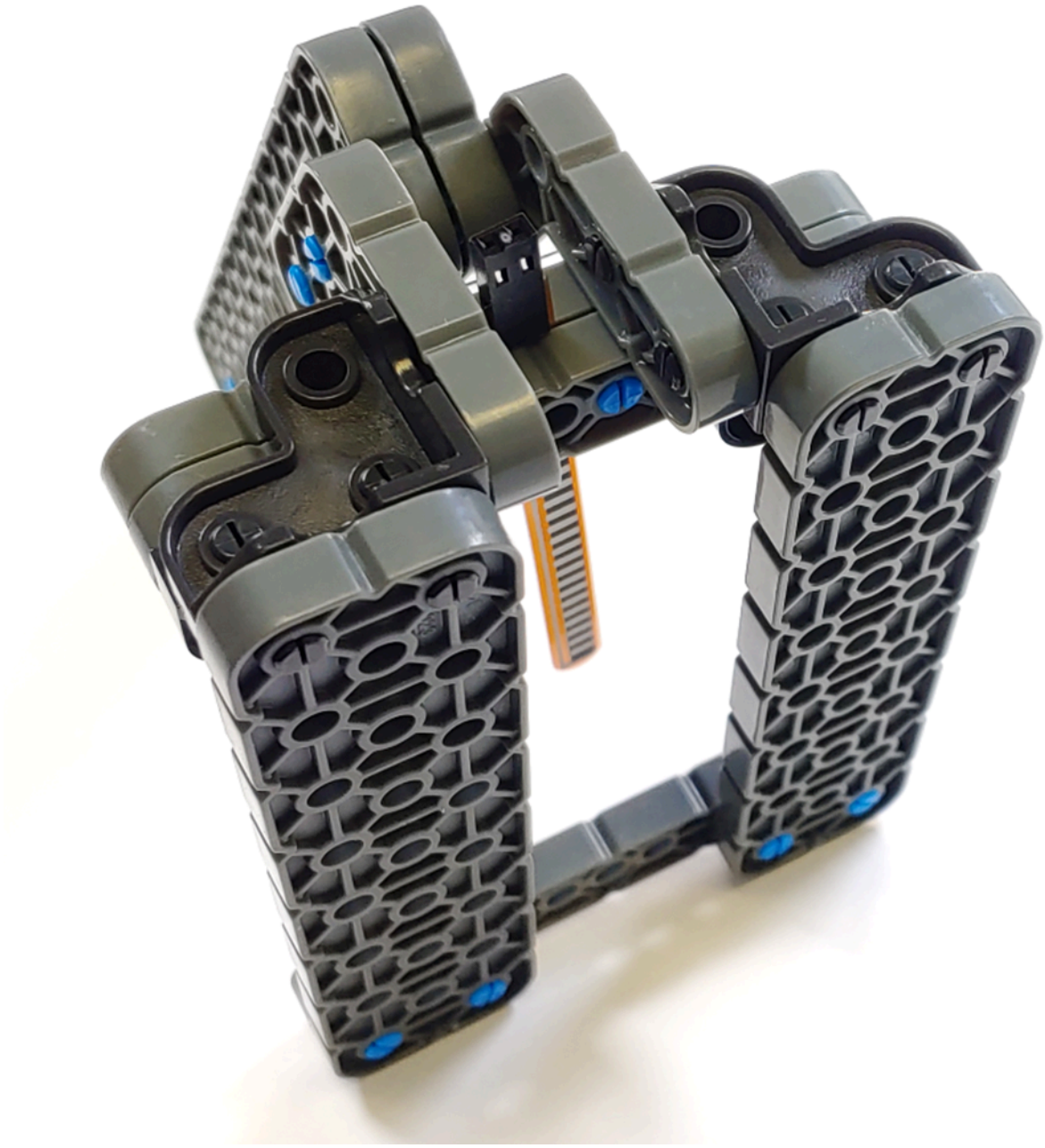
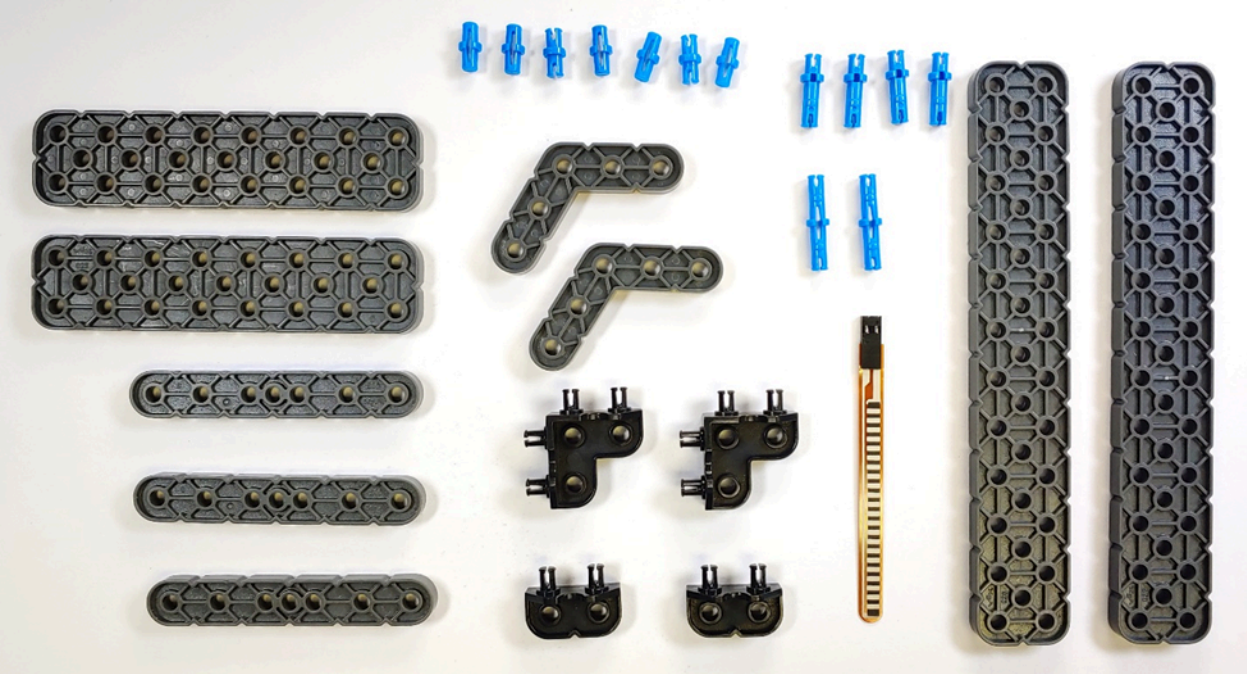
Activity 3.2.5 Flex Sensor Hand Grip Construction Guide



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Materials and Equipment

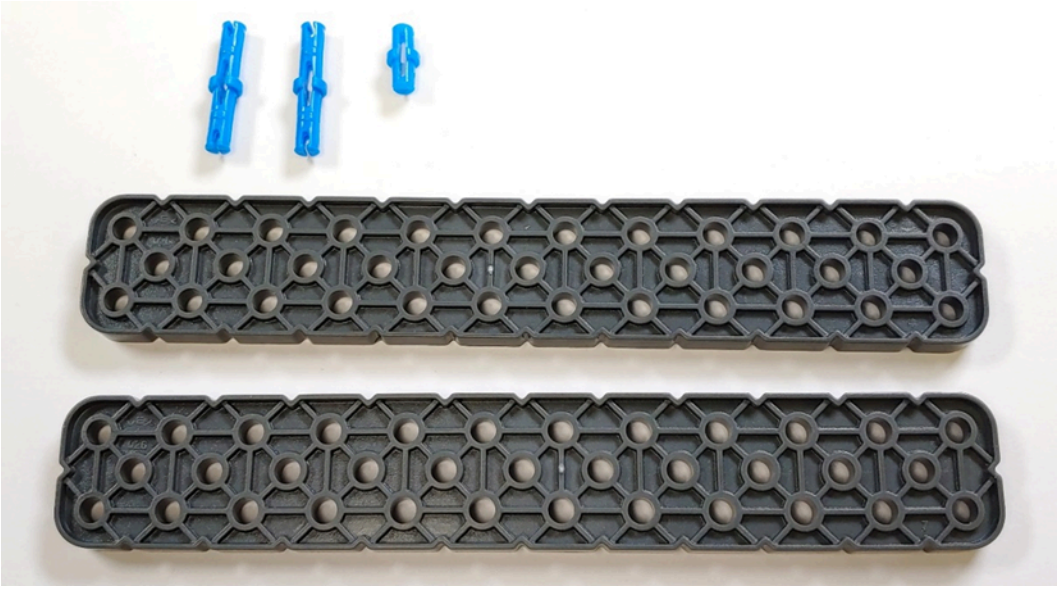
- Flex sensor
- (7) 1x1 Connector Pins
- (4) 1x2 Connector Pins
- (2) 2x2 Connector Pins
- (2) 2x8 Beams
- (2) 2x12 Beams
- (3) 1x6 Beams
- (2) 3x3 60-Degree Angle Beams
- (2) 2x Wide, 1x2 Corner Connectors
- (2) Large Corner Connectors
- (18 inches) Black Hook-Up Wire
- (18 inches) Yellow Hook-Up Wire
- (6 inches) Masking Tape



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Procedure

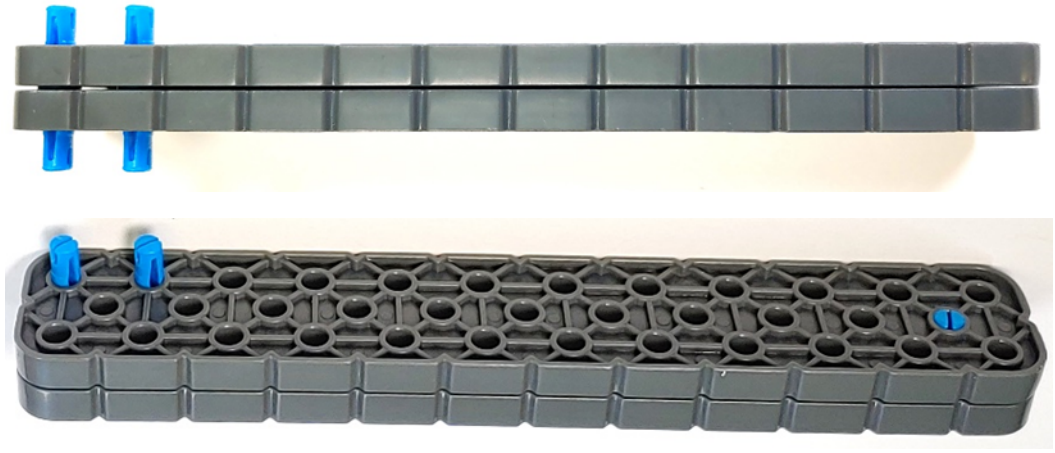
1. Construct the handle using the parts shown.



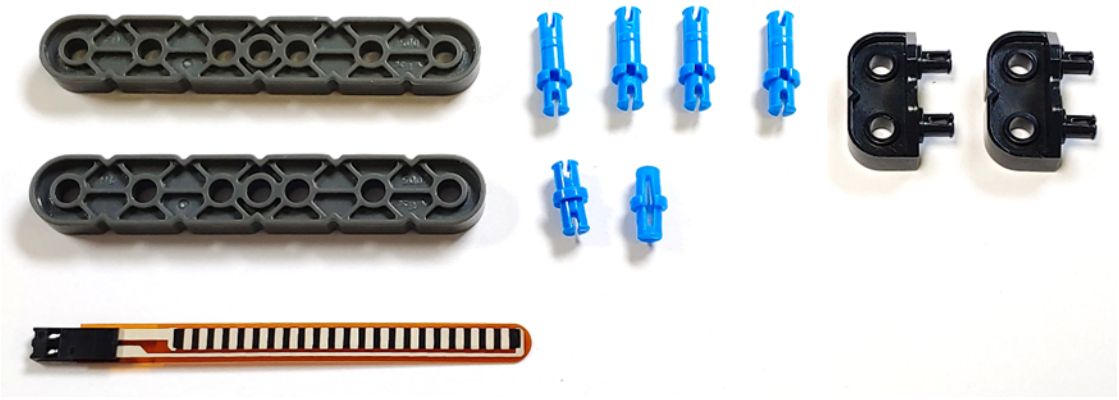
a. Insert the 1x1 connector pin and two 2x2 connector pins to one 2x12 beam.



b. Attach the second 2x12 beam using the pins.

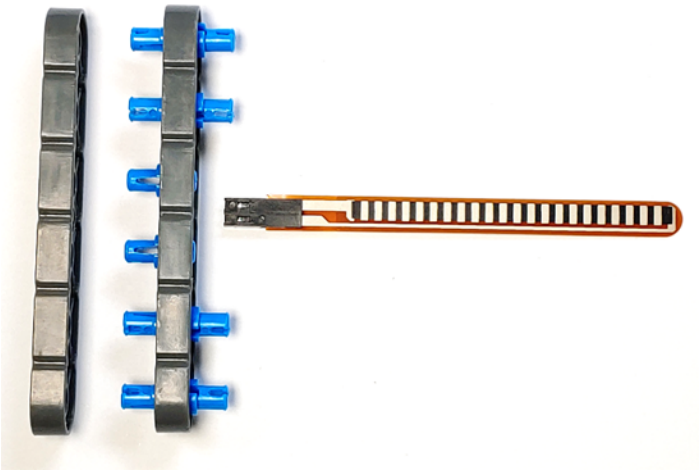


2. Construct the flex sensor holder using the parts shown.

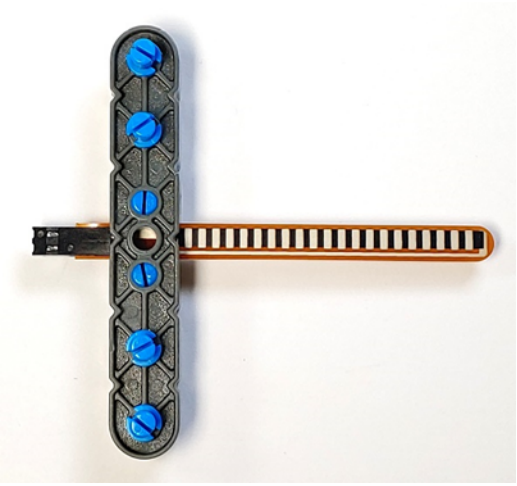


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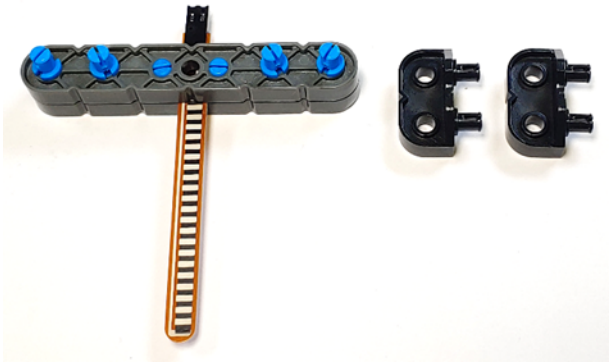
a. Insert the pins into one 1X6 beam.

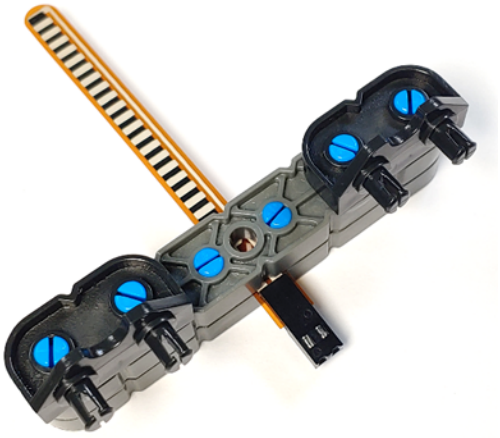


b. Lay the flex sensor on the 1X6 beam with the pins inserted and attach the other 1X6 beam to the pins, ensuring that the flex sensor is oriented perpendicular to the beams.

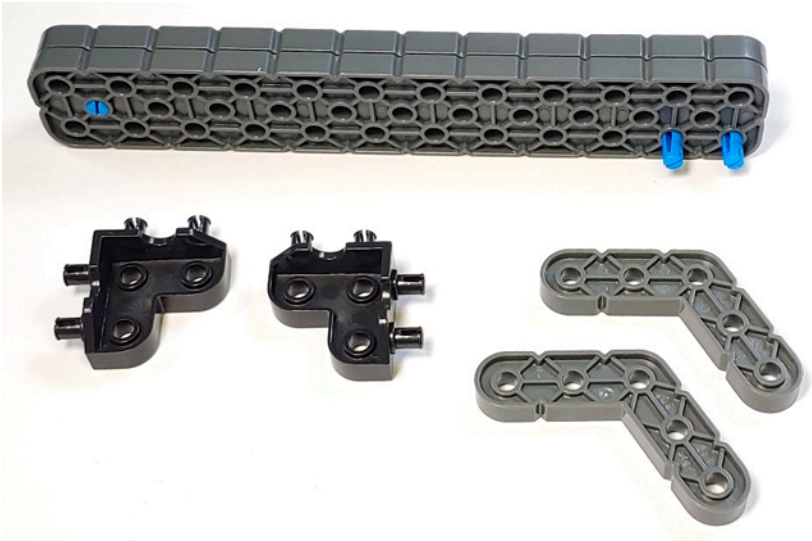


c. Attach the 2x wide, 1x2 corner connectors to the pins.



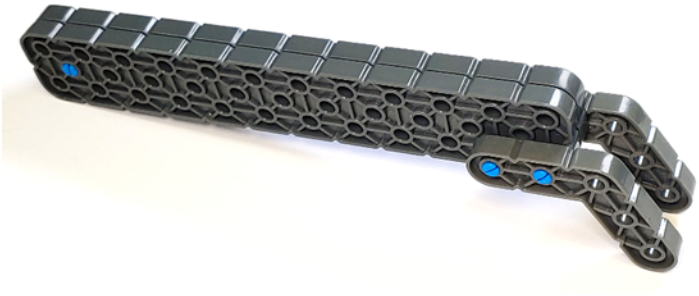


3. Assemble the hand grip using the parts shown.

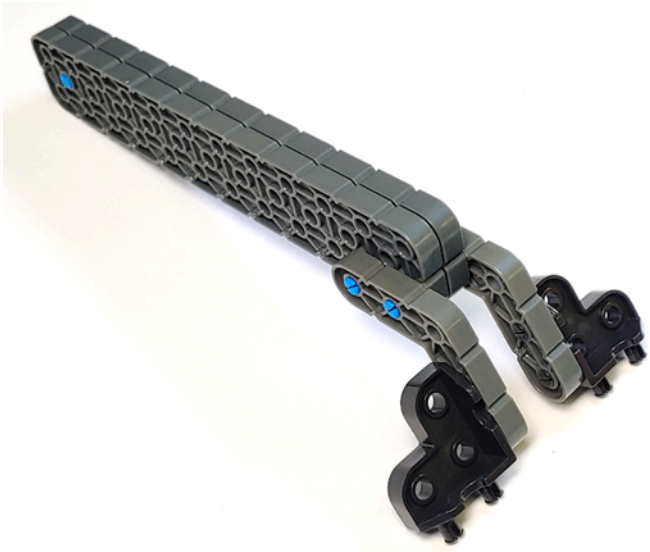


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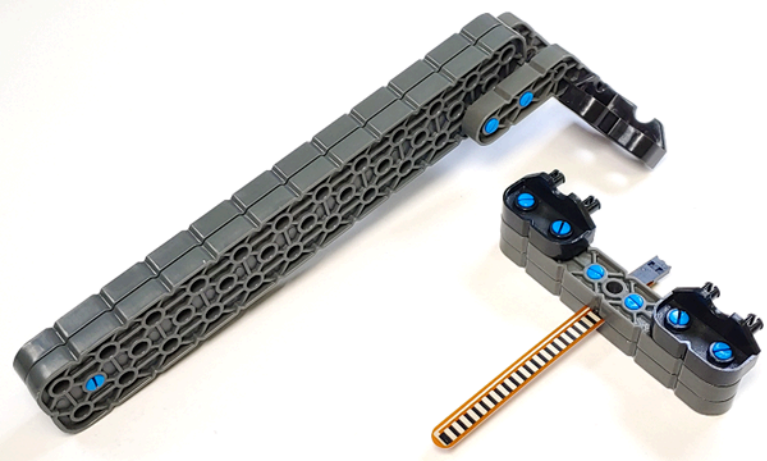
a. Attach the 3x3 60-degree angle beams using the 2X2 connector pins in the handle.



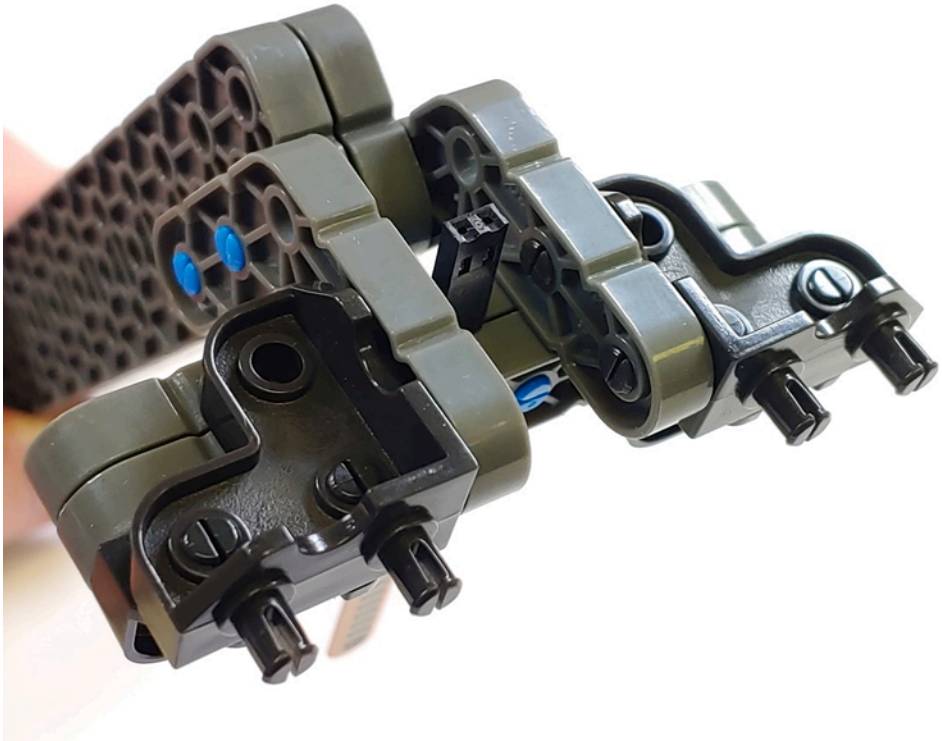
b. Attach the large corner connectors to the 3x3 60-degree angle beams.



4. Construct the flex sensor hand grip using the parts shown.

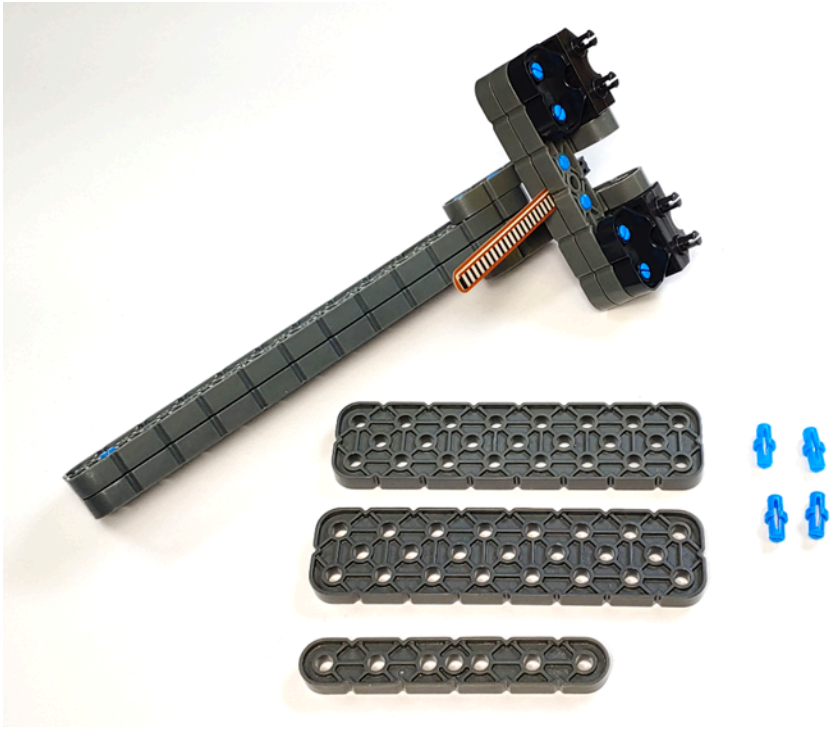


a. Attach the assembled flex sensor holder onto the handle so that the striped ink faces outwards.



5. Construct the flex sensor hand grip guards using the parts shown.

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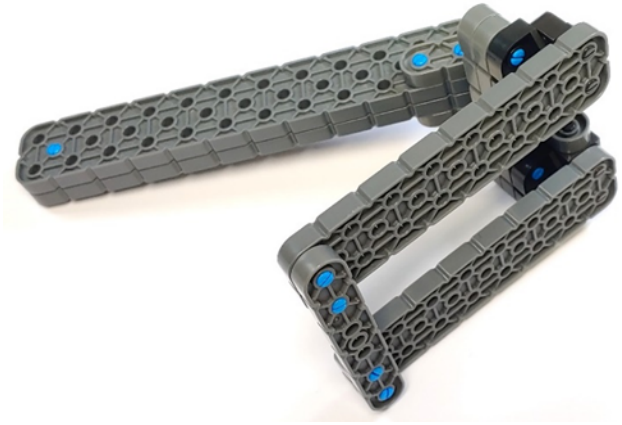
a. Attach the 1X1 connector pins to the 2X8 beams.



b. Attach the 2X8 beams to the flex sensor hand grip.



c. Attach the 1X6 beam to the 2X8 beams.

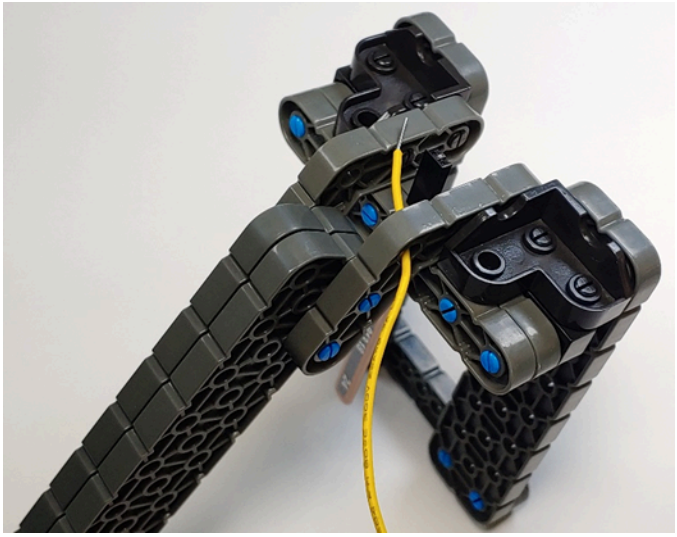


d. Ensure that the flex sensor remains oriented 90 degrees to the 1X6 beams.

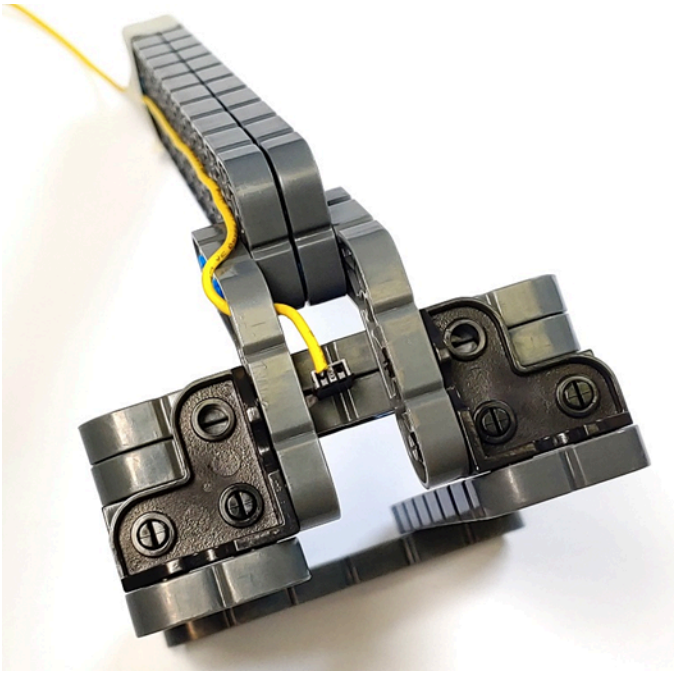


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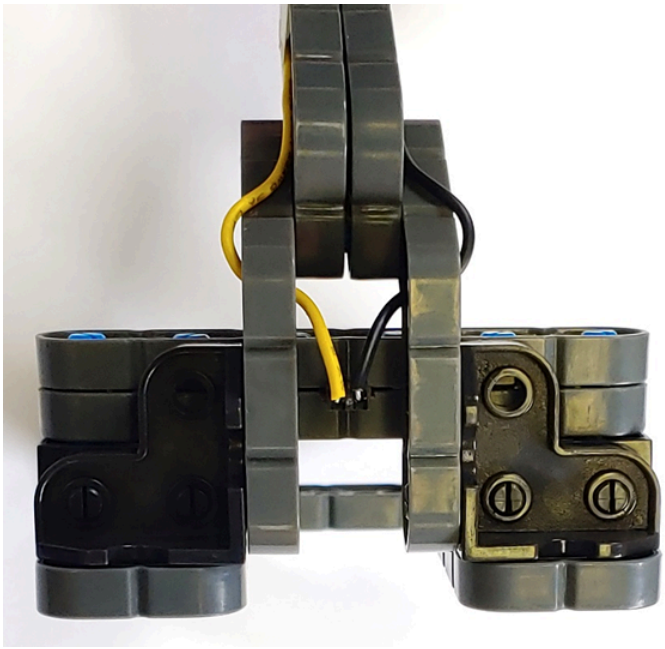
6. Add a yellow and black hook-up wire to the flex sensor.
    a. Confirm that the flex strip is square to the 1X6 beams that it rests between. Make sure the striped ink pattern faces away from the hand grip, and the black connector rests against the VEX IQ component that secures it in position.
    b. Cut a black and yellow wire to a length of 18 inches.
    c. Strip about ¼ inch of insulation from the four ends.
    d. Thread the yellow hook-up wire through the hole at the top of the handle.



    e. Insert the yellow hook-up wire into the flex sensor connector to the nearest side of the flex sensor, leaving enough wire length so that the wire does not pull the flex sensor. This should be the connector aligned with the straight section of the ink pattern.



f. Thread the black hook-up wire through the hole through the opposite side of the handle, then insert it into the closest flex sensor connector. This should be the connector that is aligned with the striped section of the ink pattern.



g. Tape the yellow and black hook-up wires in place using masking tape.

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