

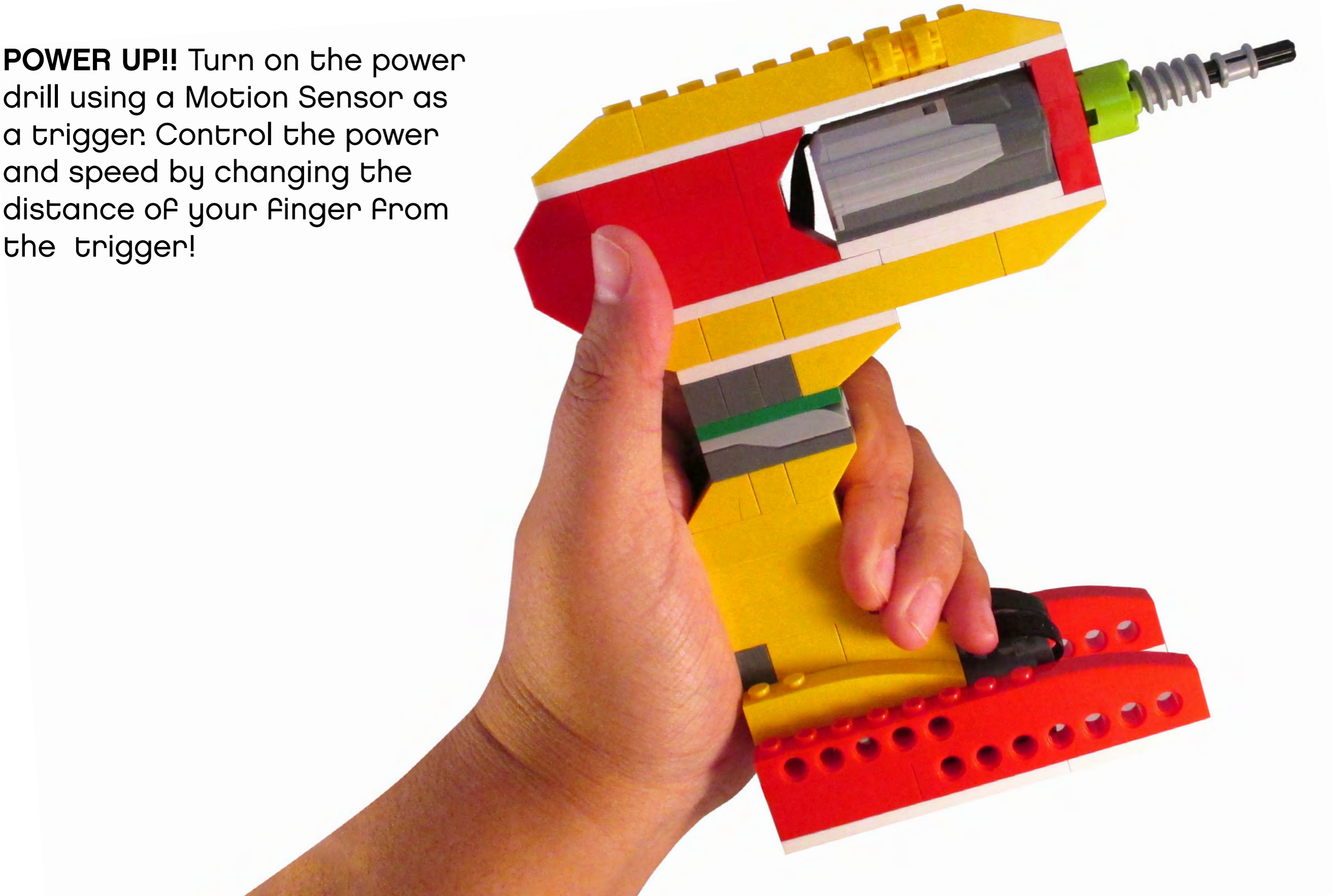
TINY TECHS CLUB

Creativity | Science | Technology



Power Drill

POWER UP!! Turn on the power drill using a Motion Sensor as a trigger. Control the power and speed by changing the distance of your finger from the trigger!



Step 1

You will Need:



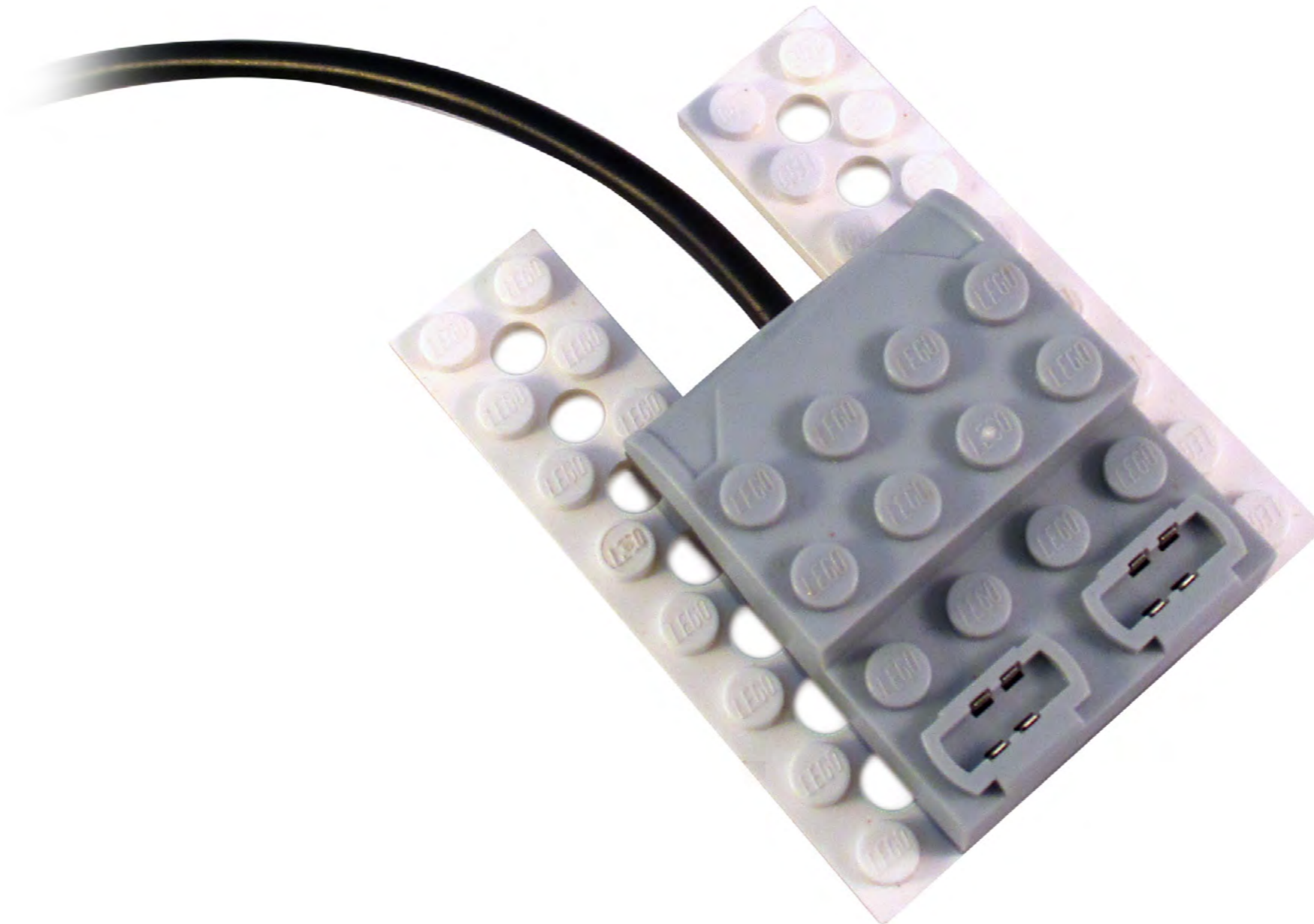
White 2x8
Plate



White 2x8
Plate



Hub



Step 2

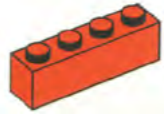
You will Need:



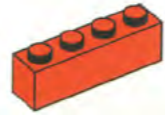
Red 1x2
with Hole



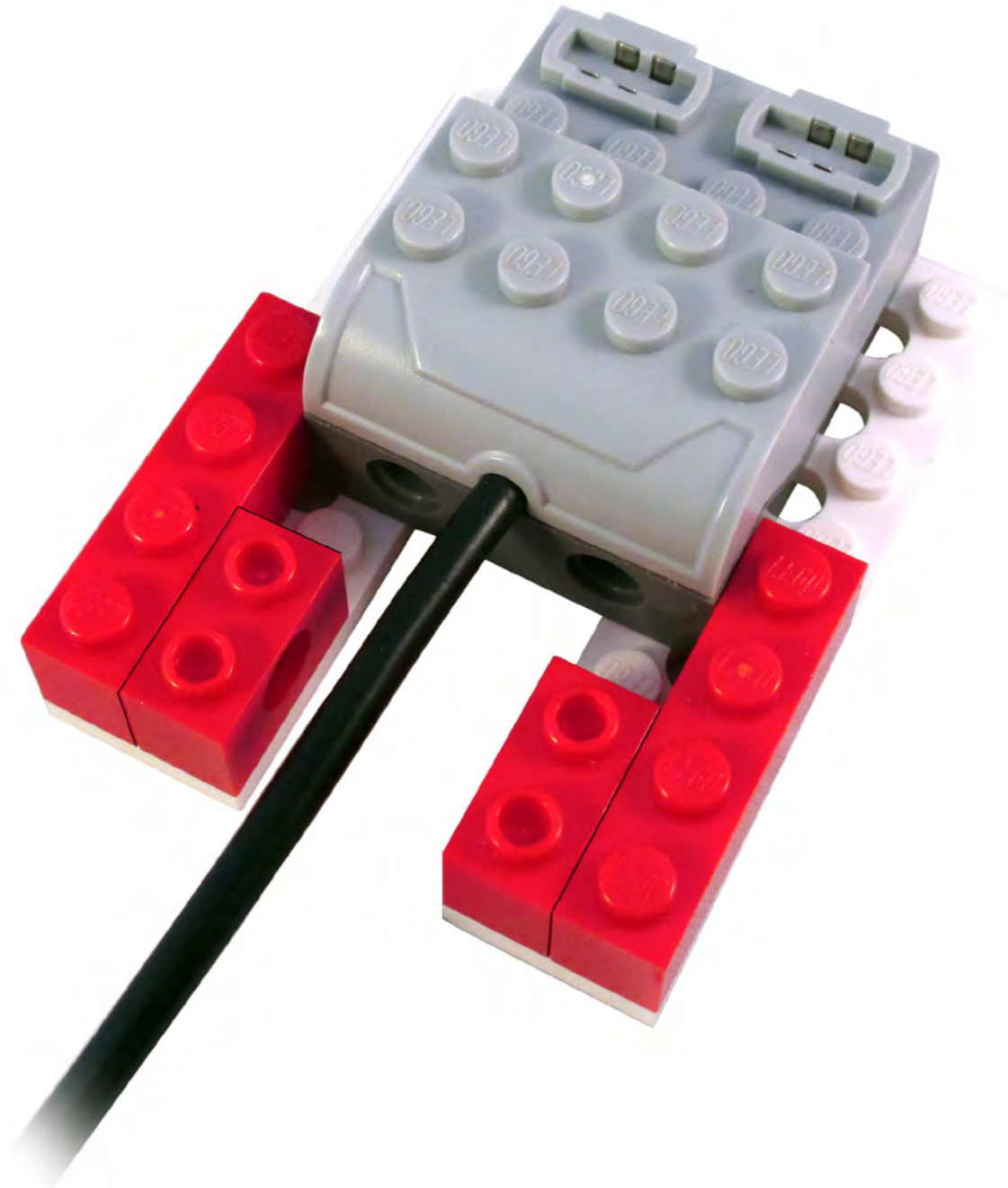
Red 1x2
with Hole



Red 1x4
Brick



Red 1x4
Brick



Step 3

You will Need:



Red 1x8
with Hole



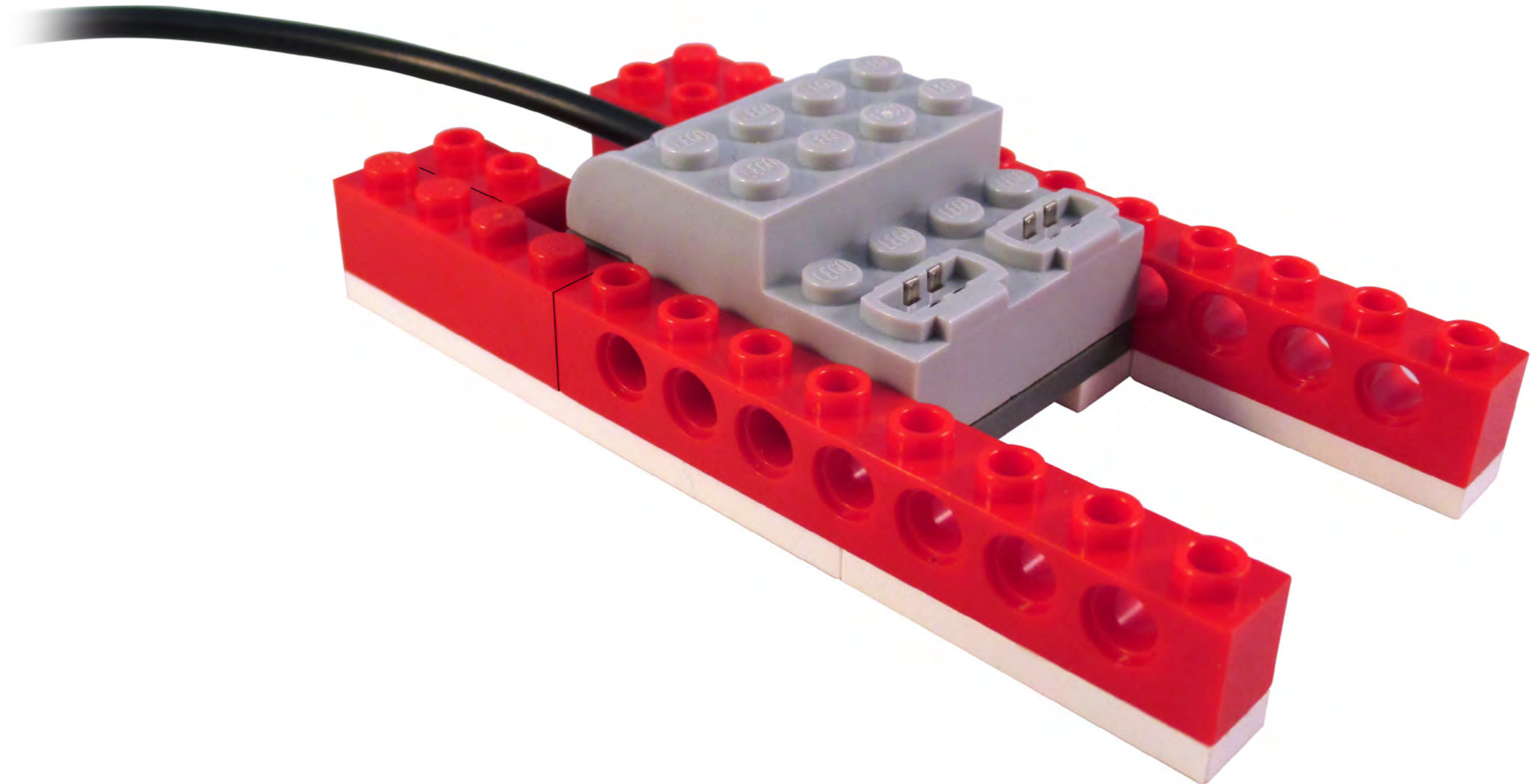
Red 1x8
with Hole



White 1x4
Plate



White 1x4
Plate



Step 4

You will Need:



Red 1x6
with Holes



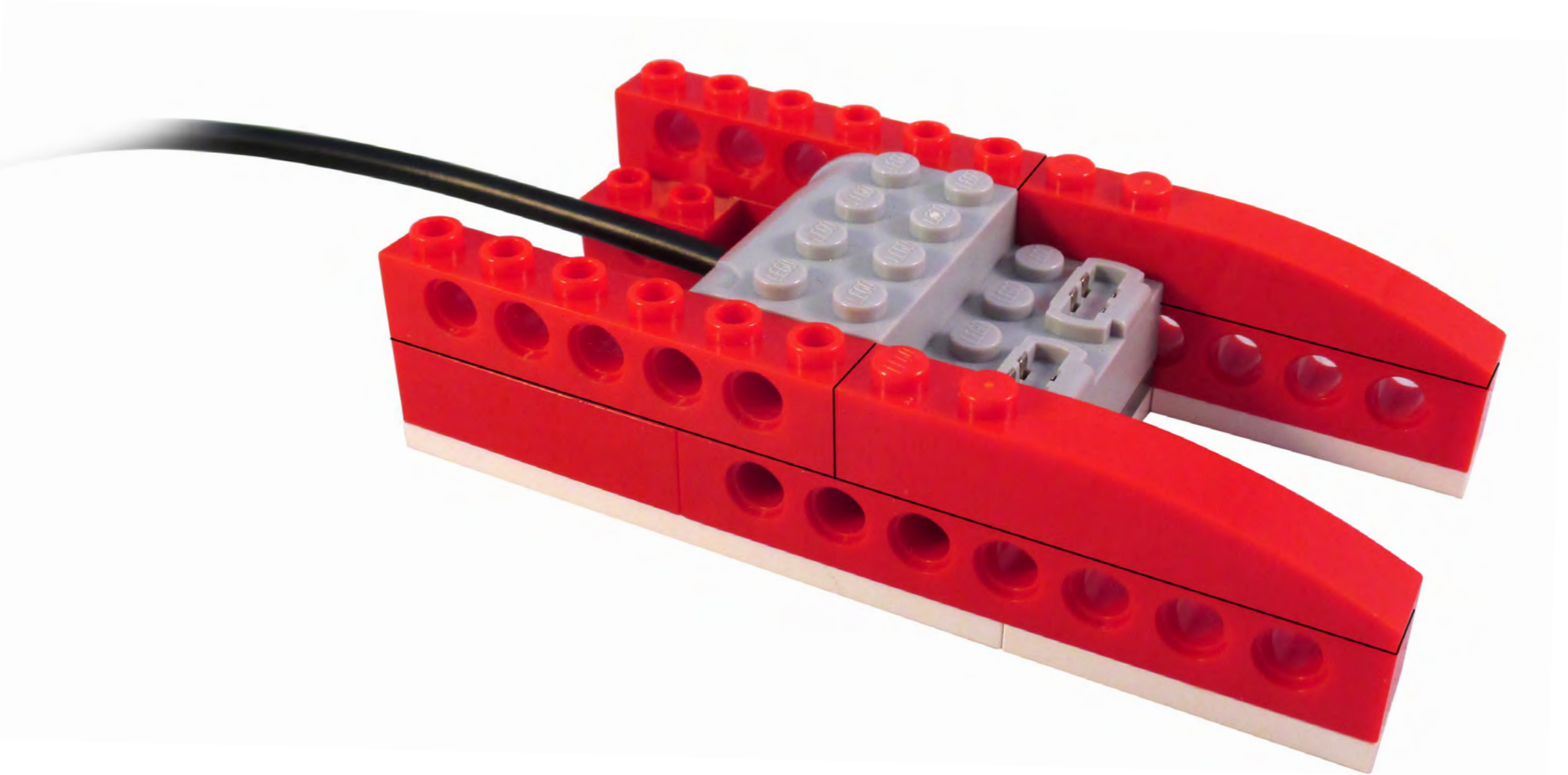
Red 1x6
with Holes



Red Bow

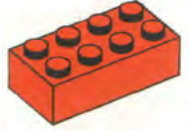


Red Bow

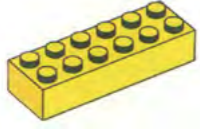


Step 5

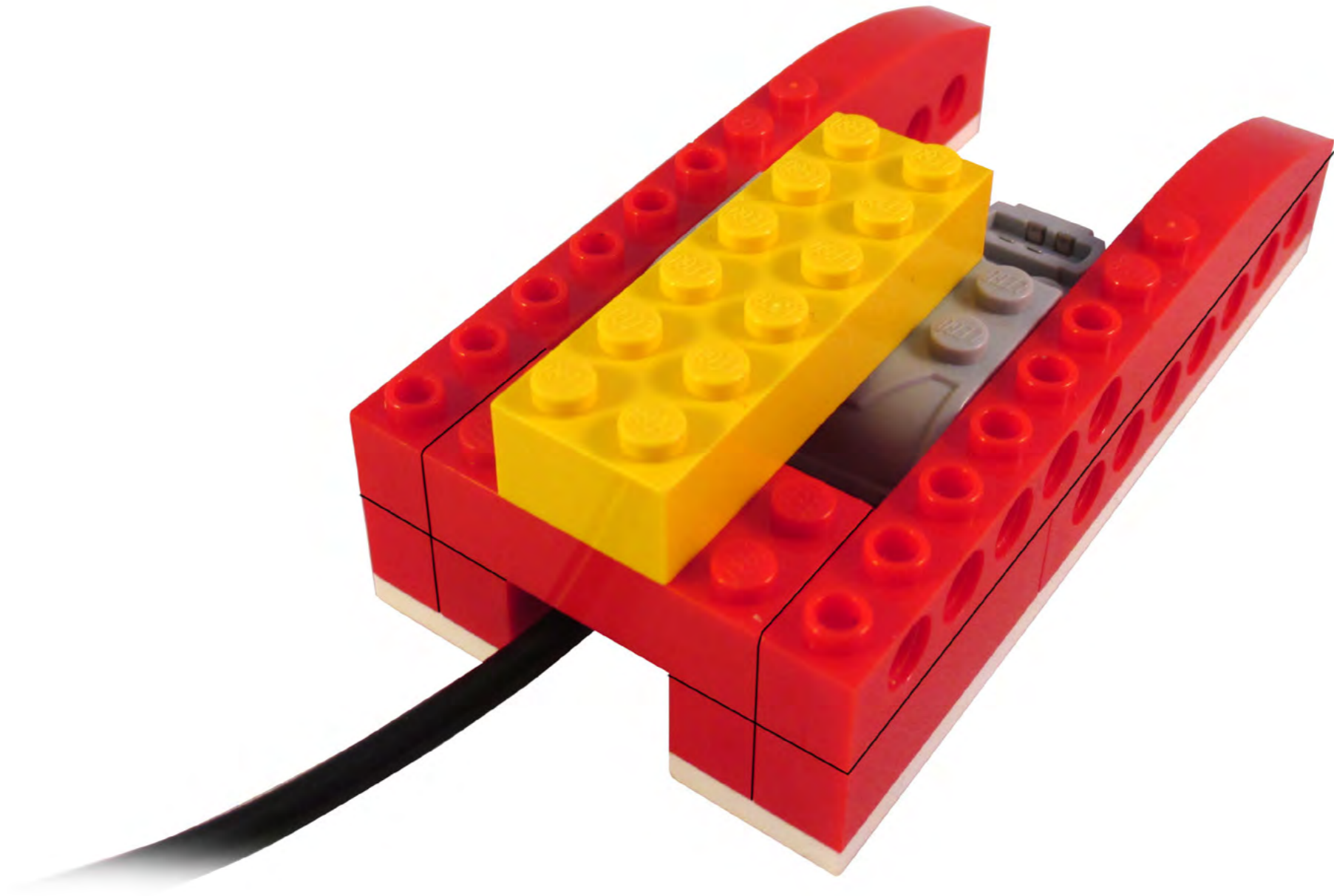
You will Need:



Red 2x4
Brick



Yellow 2x6
Brick

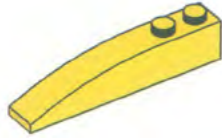


Step 6

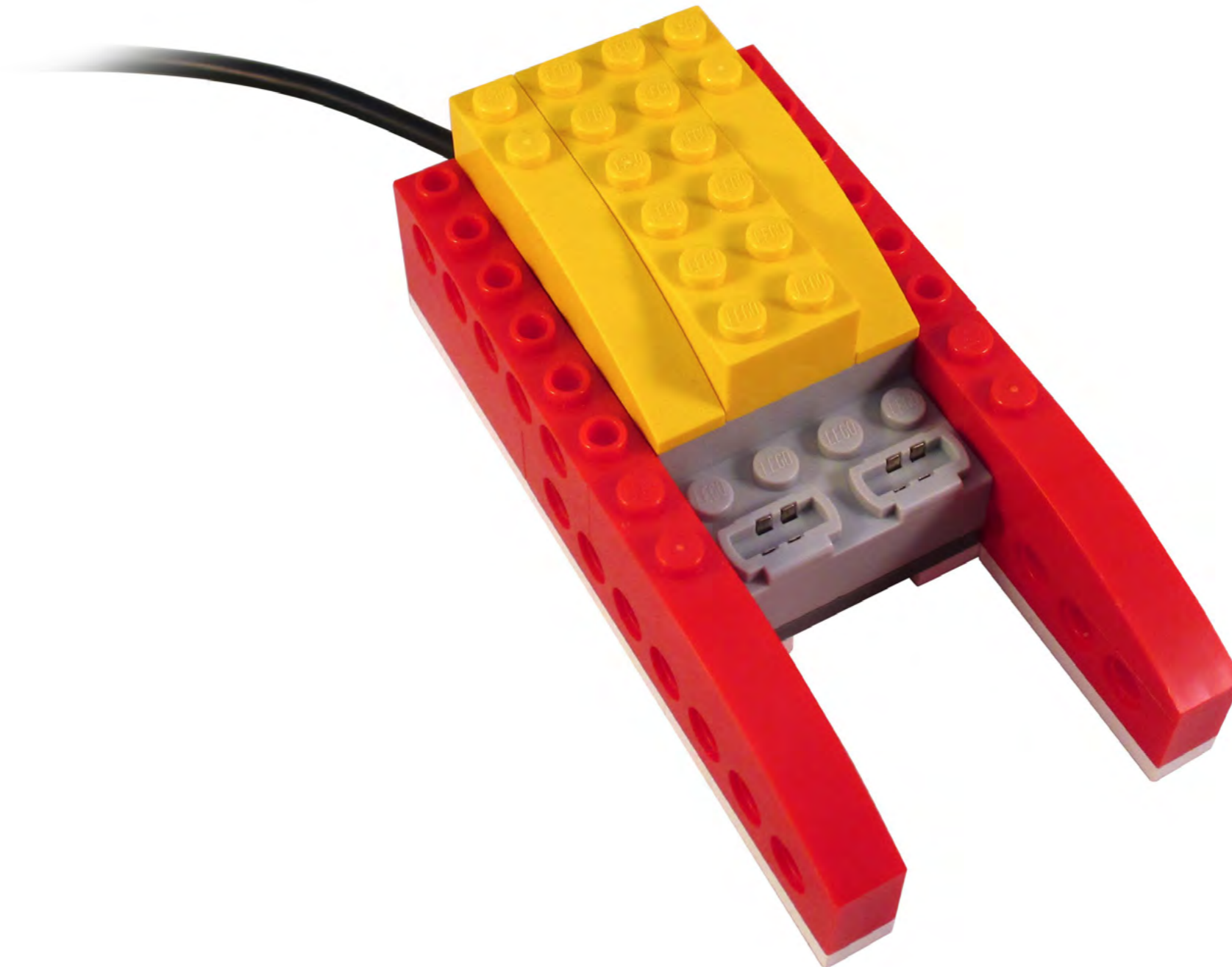
You will Need:



Yellow Bow



Yellow Bow



Step 7

You will Need:



Grey 1x2
with
Cross Hole



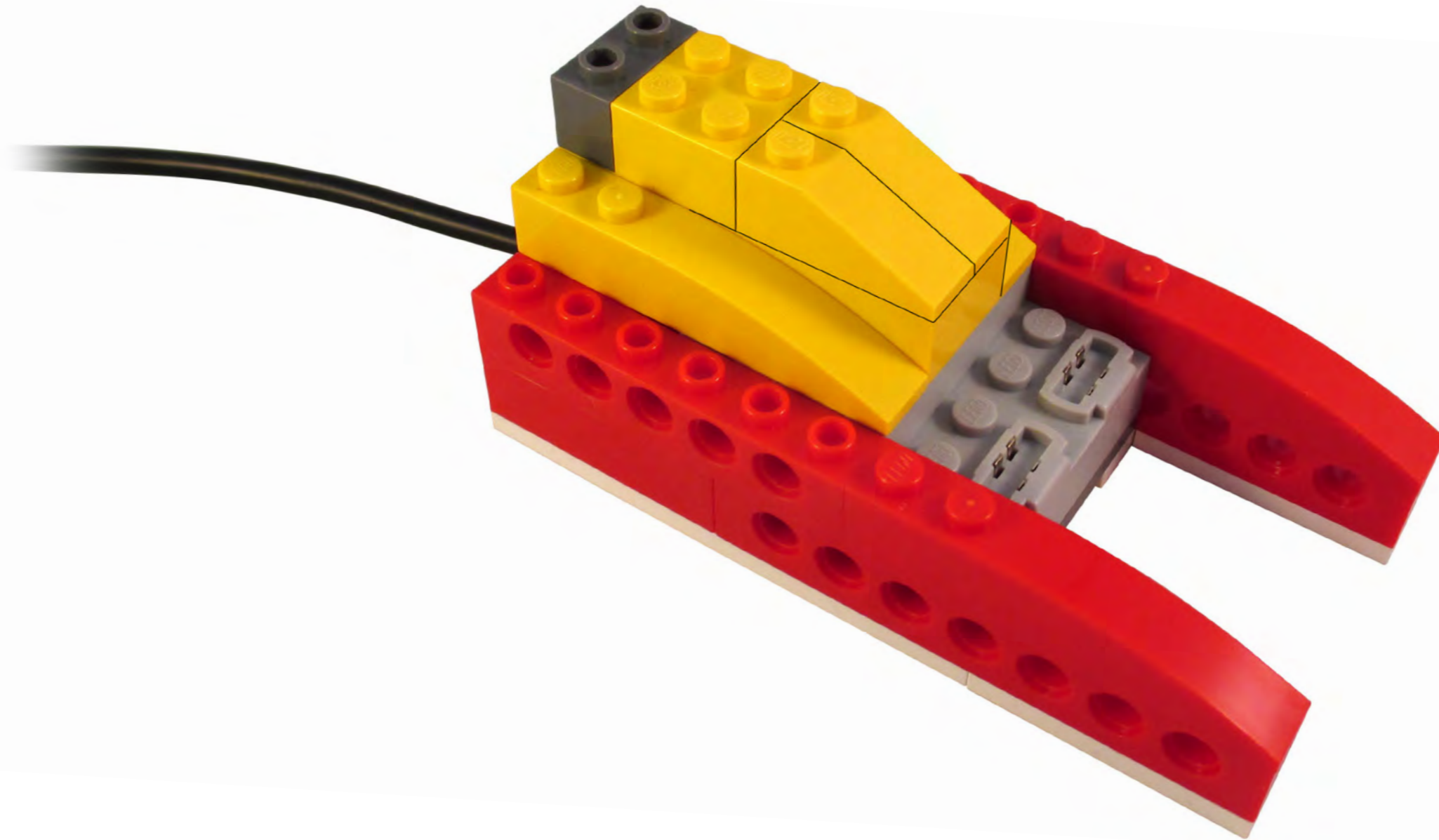
Yellow 2x2
Brick



Yellow 1x3
Wedge

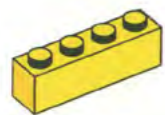


Yellow 1x3
Wedge

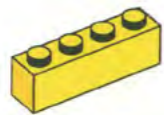


Step 8

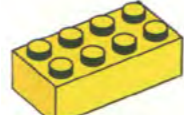
You will Need:



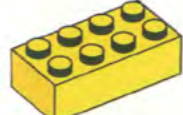
Yellow 1x4
Brick



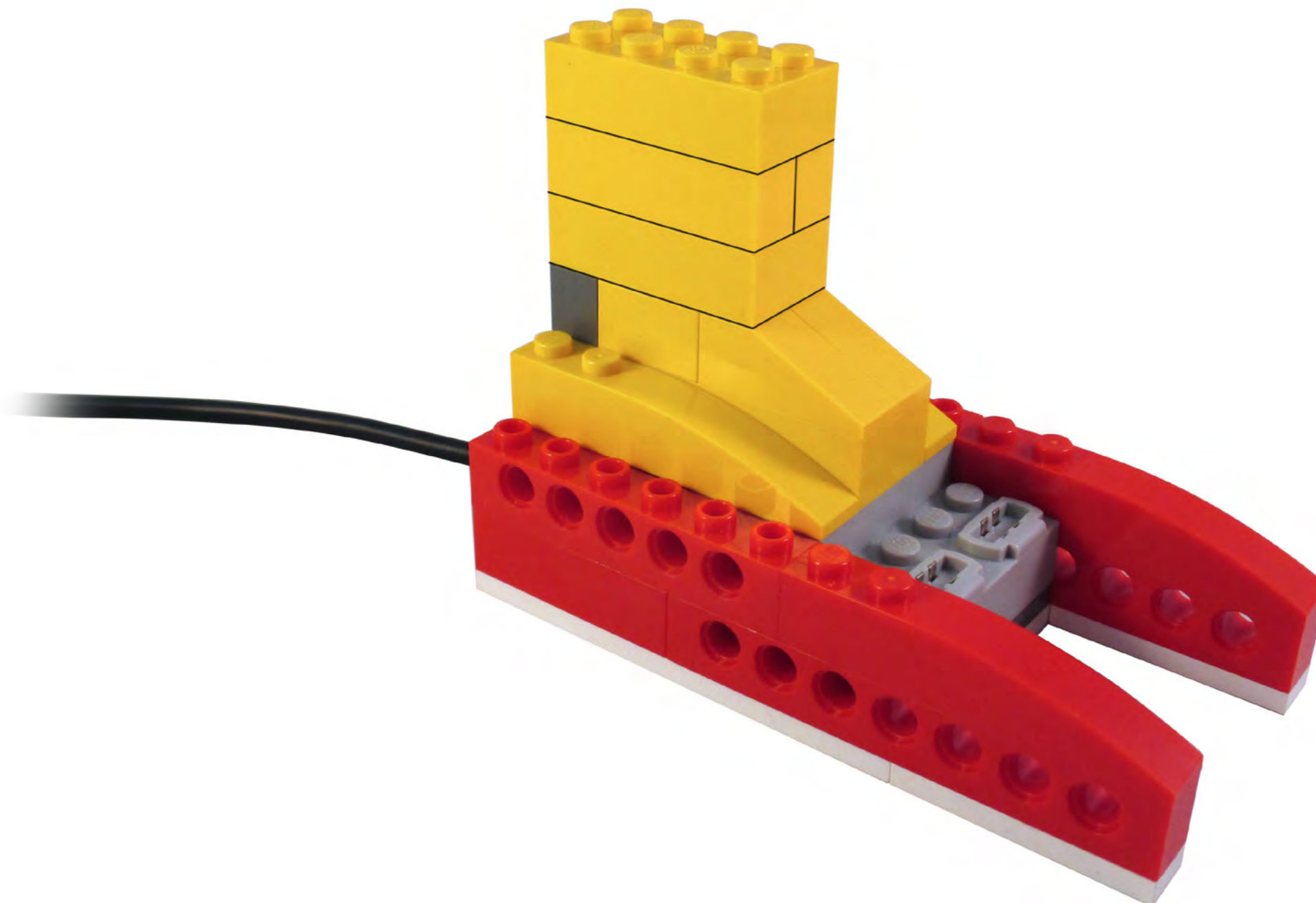
Yellow 1x4
Brick



Yellow 2x4
Brick



Yellow 2x4
Brick



Step 9

You will Need:



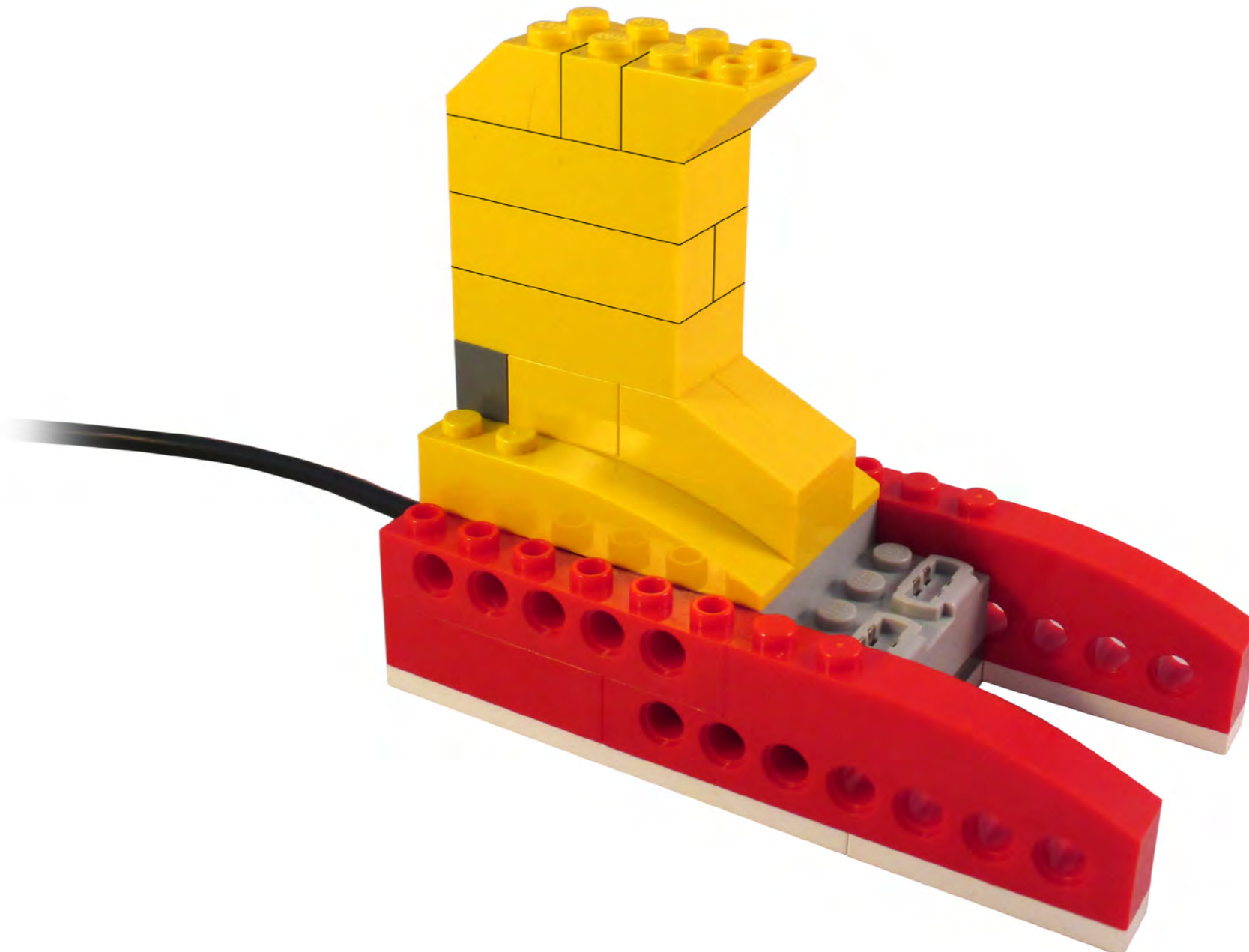
Yellow 1x2
Brick



Yellow 2x2
Wedge



Yellow 2x2
Inverted
Wedge



Step 10

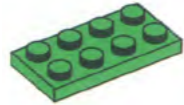
You will Need:



Yellow 1x3
Inverted
Wedge



Yellow 1x3
Inverted
Wedge



Green 2x4
Plate



Grey 1x2
with Cross
Hole



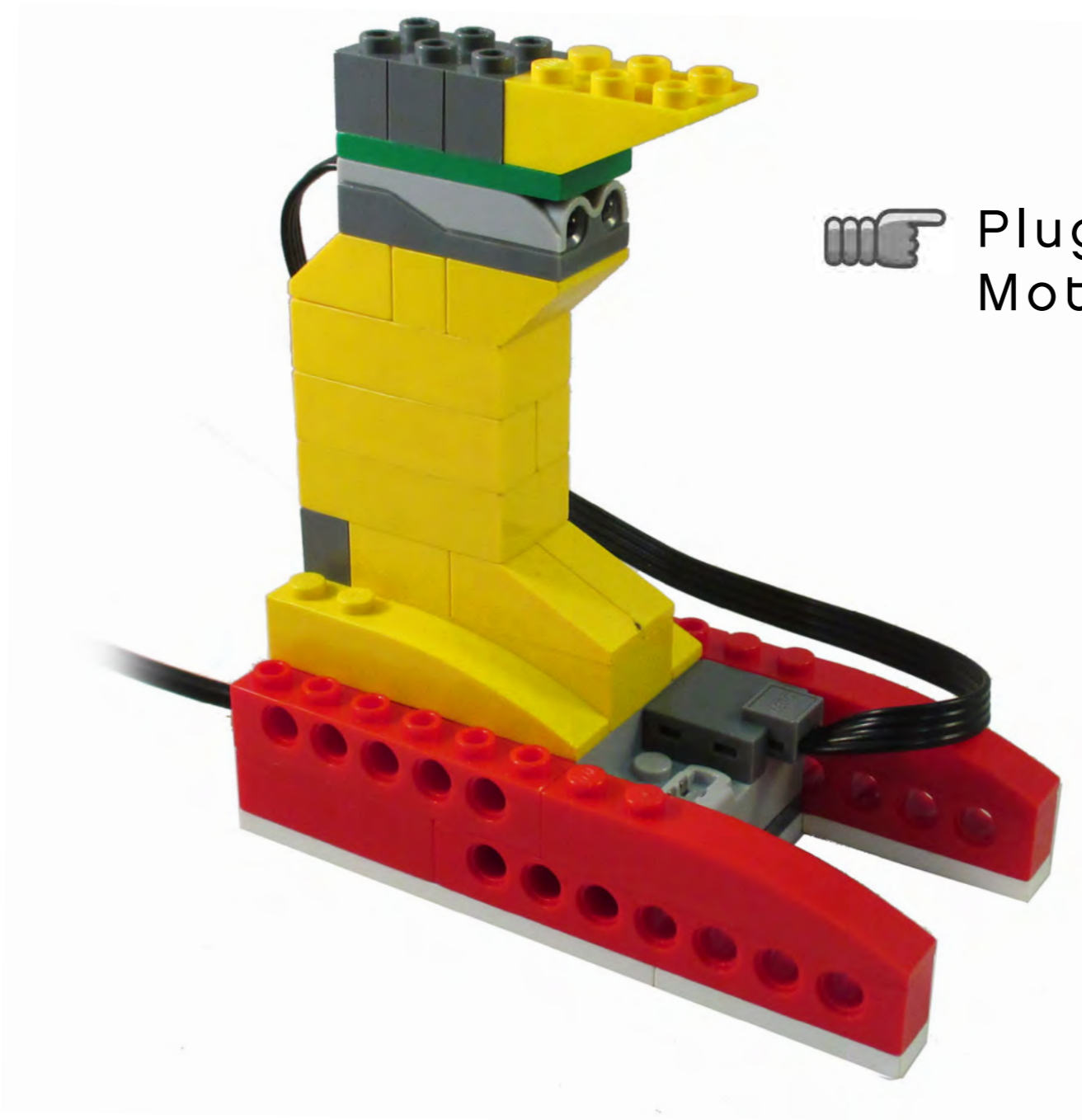
Grey 1x2
with Cross
Hole



Grey 1x2
with Cross
Hole



Motion Sensor



Plug in the
Motion Sensor!

Step 11

You will Need:



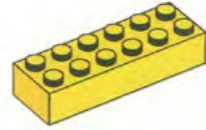
White 2x6
Plate



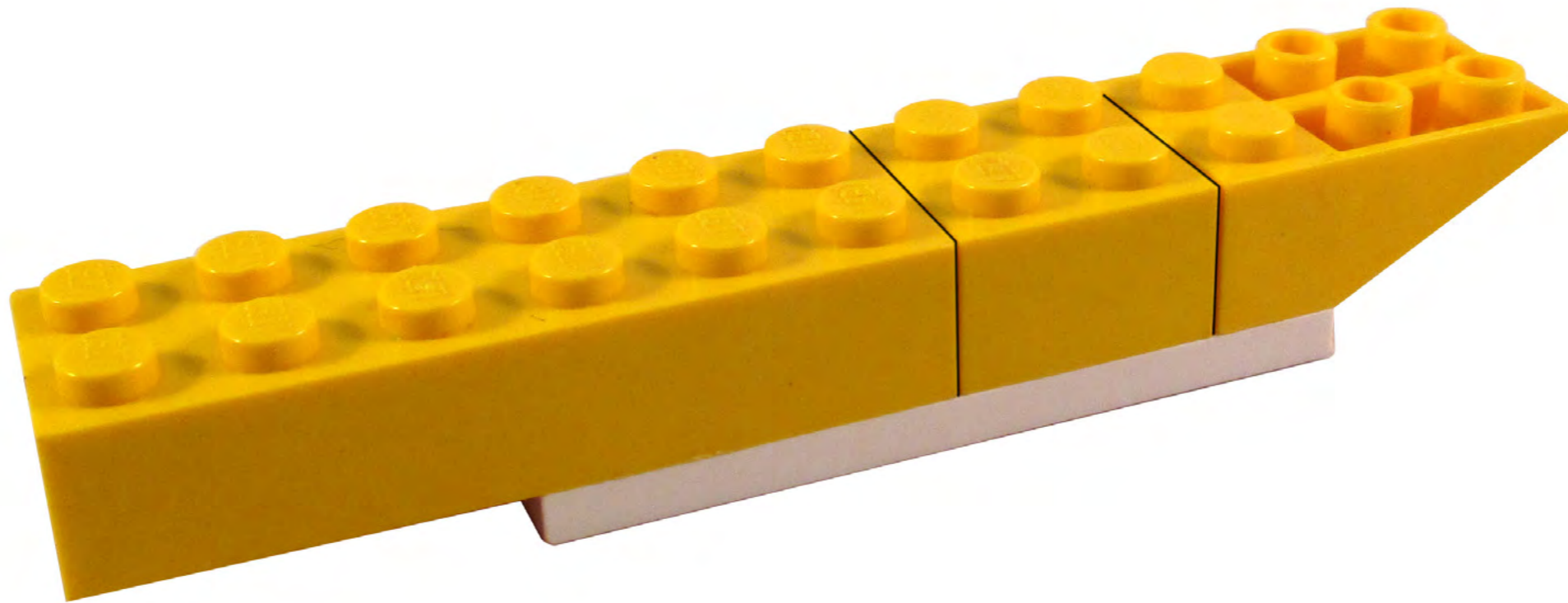
Yellow 2x2
Brick



Yellow 2x3
Inverted
Wedge



Yellow 2x6
Brick

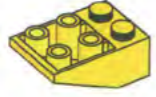


Step 12

You will Need:



White 2x6
Plate



Yellow 2x3
Inverted
Wedge



White 2x8
Plate



Step 13

You will Need:



White 2x6
Plate



Red 1x2
with Hole



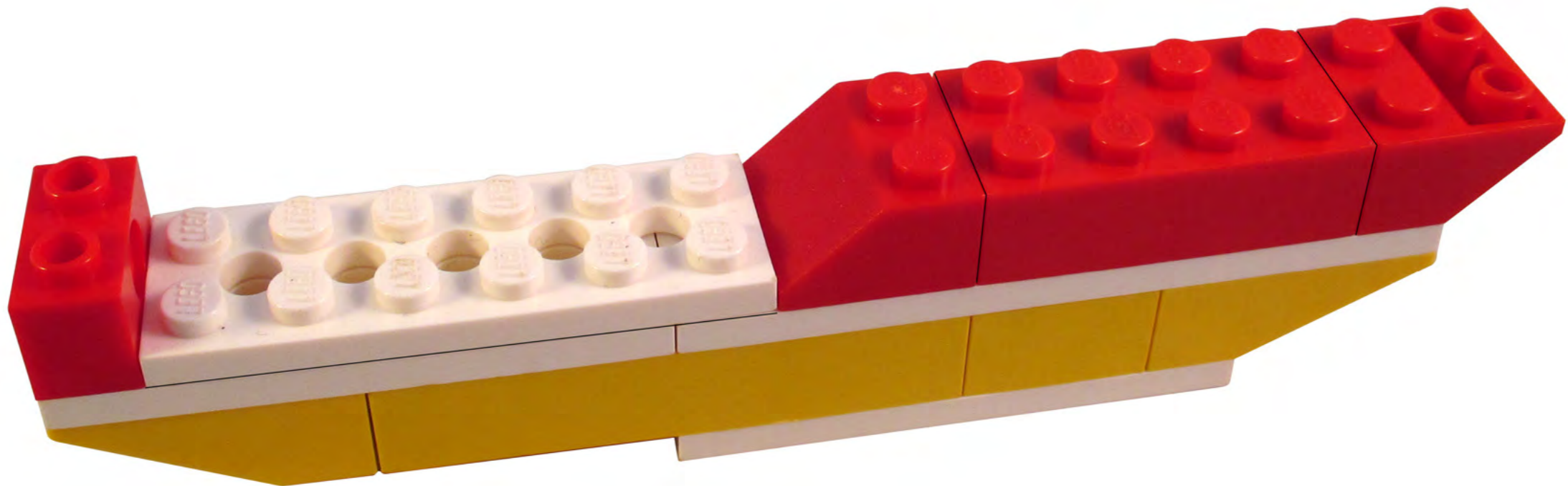
Red 2x2
Wedge



Red 2x4
Brick

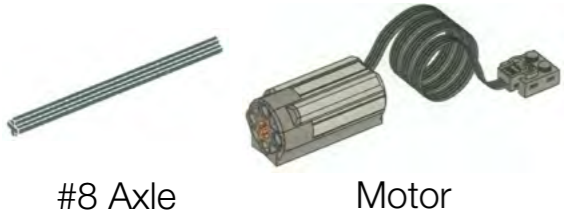


Red 2x2
Inverted
Wedge



Step 14

You will Need:



Step 15

You will Need:



Red 1x2
Brick



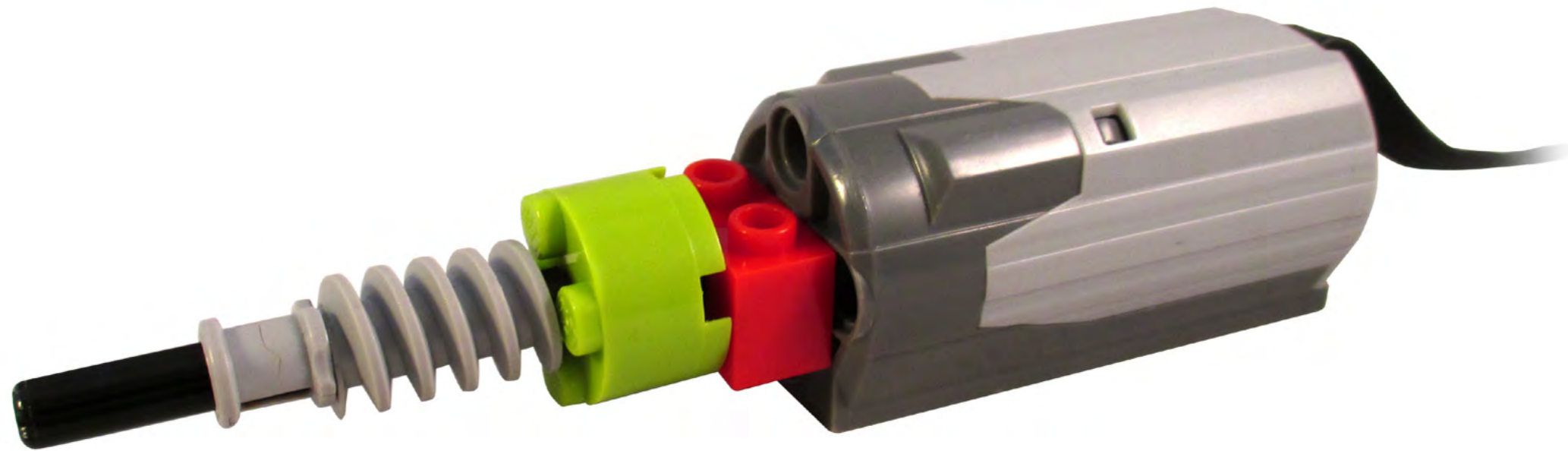
Green round
Brick



Worm Gear



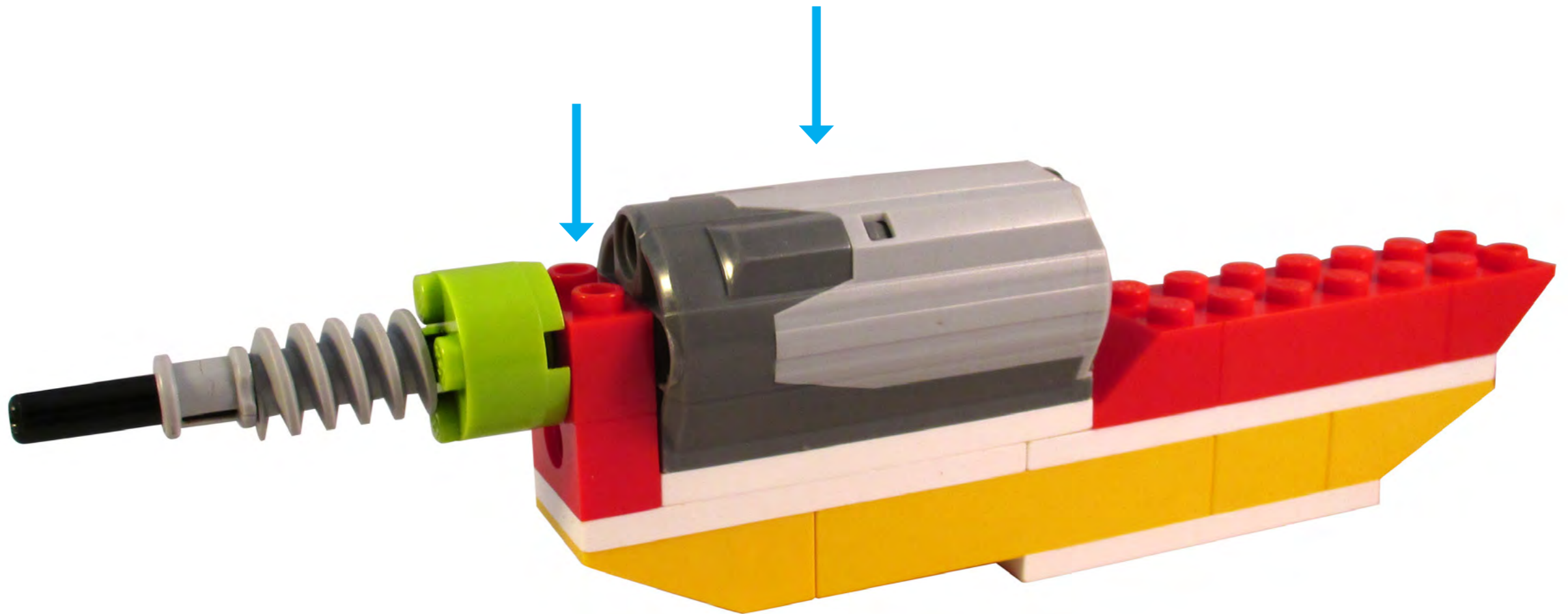
Bushing



Step 16



Attach the Assembly!



Step 17

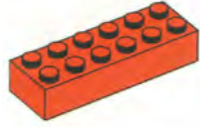
You will Need:



Red 1x2
with Hole



Red 2x2
Inverted
Wedge



Red 2x6
Brick



Step 18

You will Need:



Red 1x2
with Hole



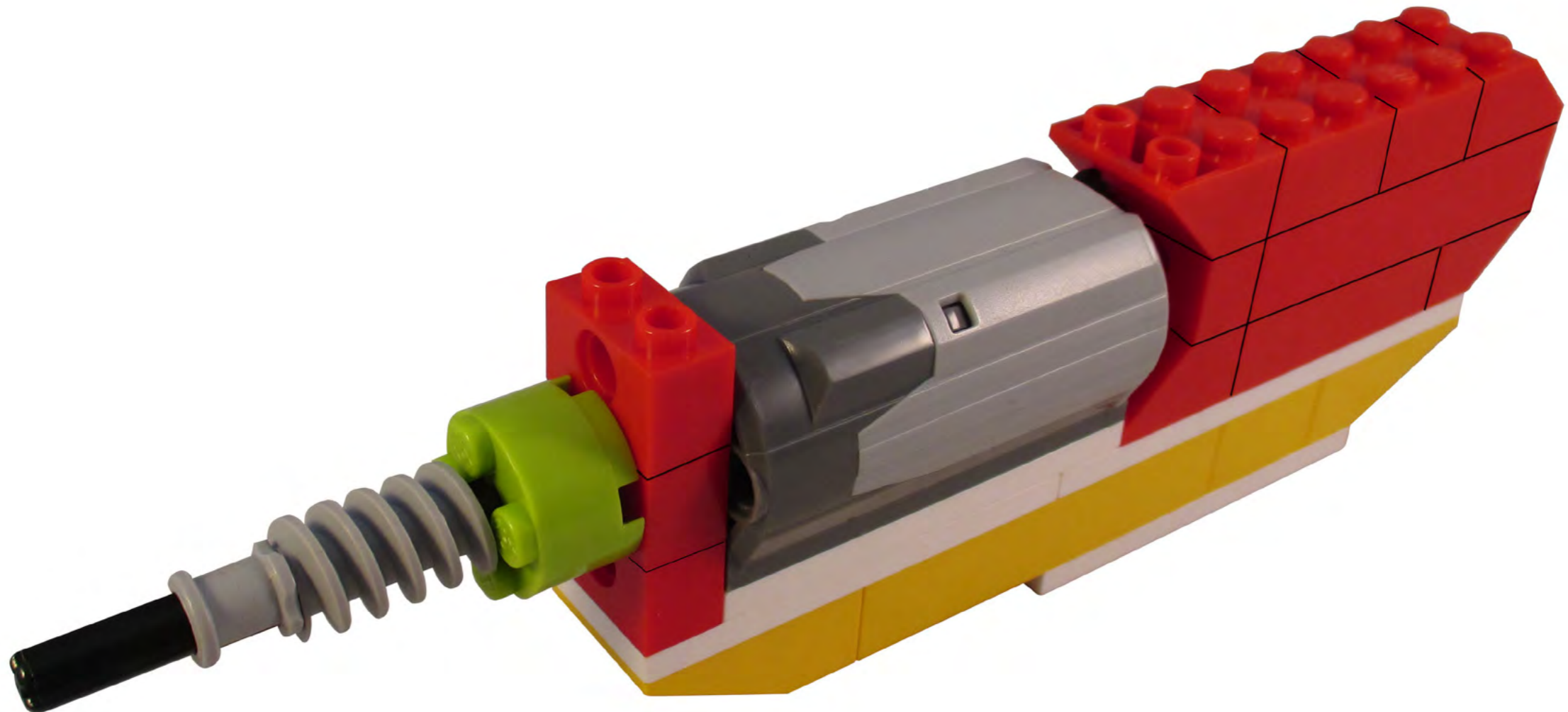
Red 2x2
Wedge



Red 2x2
Brick



Red 2x2
Brick

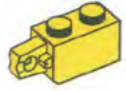


Step 19

You will Need:



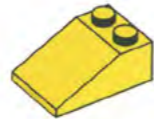
White 2x8
Plate



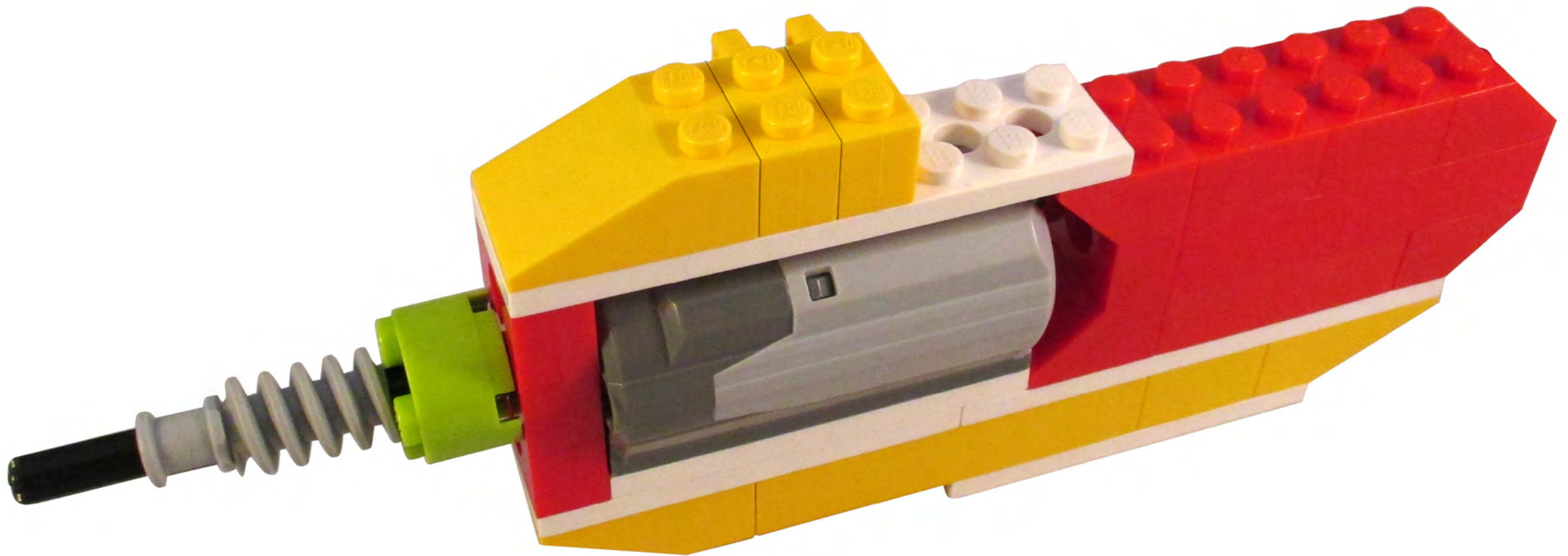
Yellow 1x2
with Stub



Yellow 1x2
with Stub



Yellow 2x3
edge

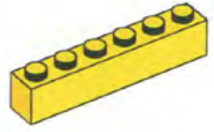


Step 20

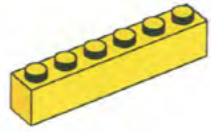
You will Need:



White 2x6
Plate



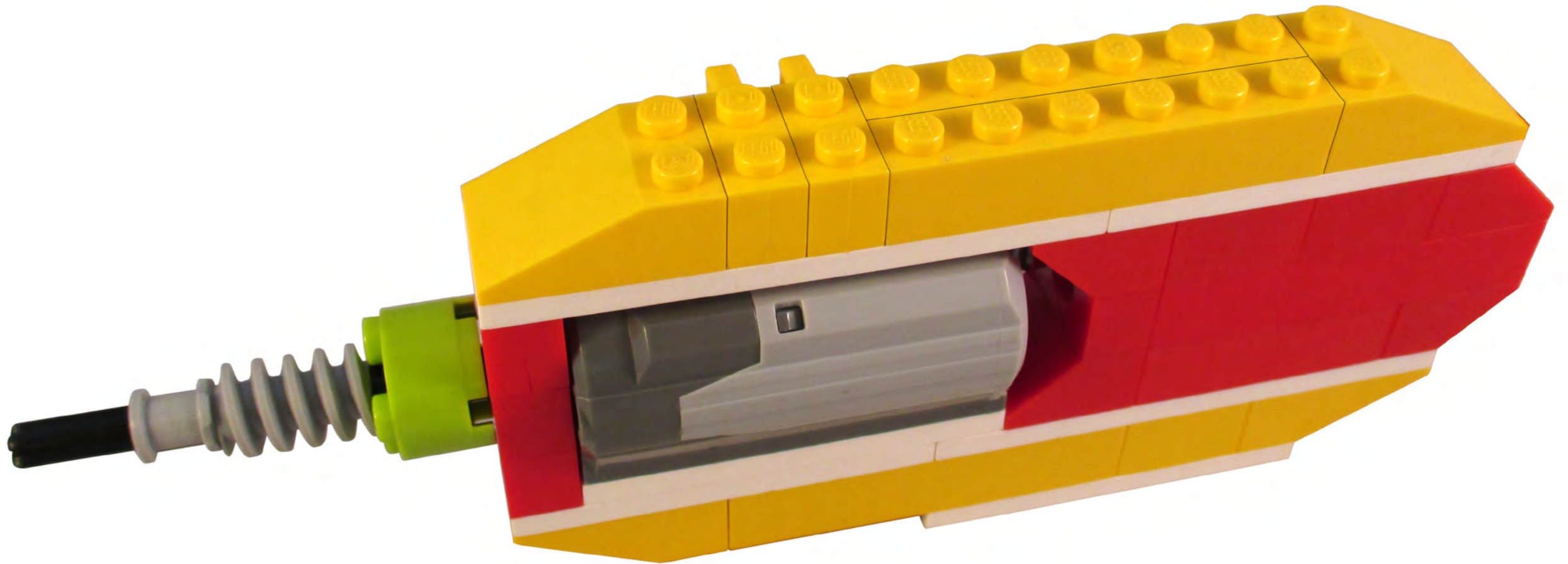
Yellow 1x6
Brick



Yellow 1x6
Brick



Yellow 2x3
Wedge



Step 21



Attach the Assembly!



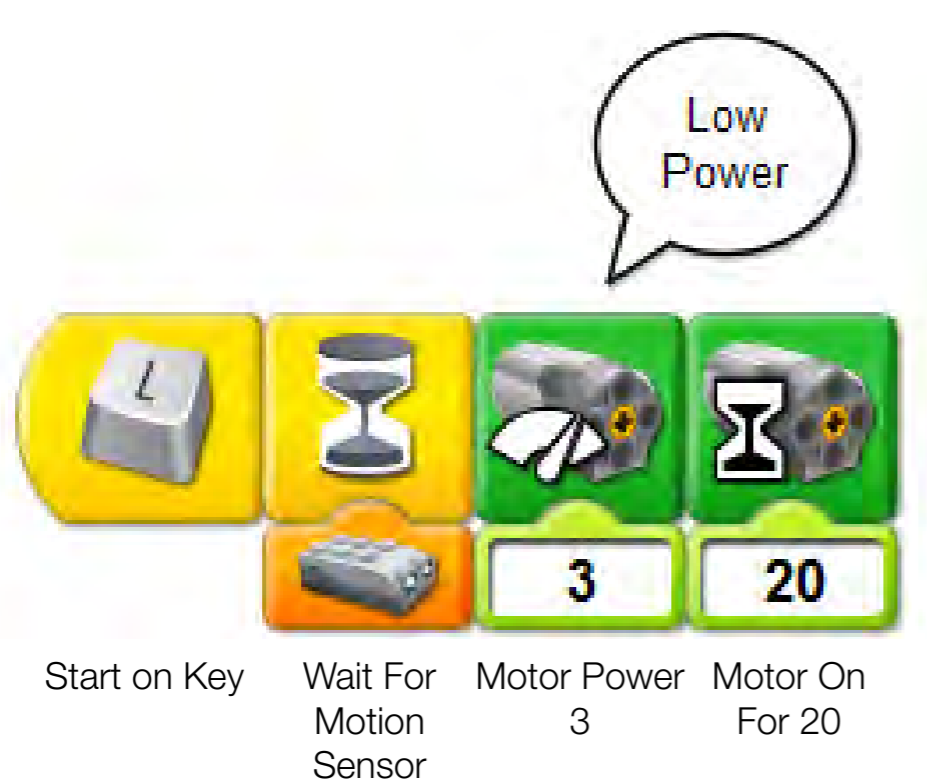
Your Power Drill is Built!...

Time to Program it!



Programming

These programs use the Motion Sensor to turn on your motor at different Motor Powers.



1. Minimize these instructions and open the LEGO® WeDe® software.
2. Program your robot with the program above.
3. IF you finish, open the instructions and continue to the extension activities!

Extension 1

This program teaches you how the Motion Sensor detects distance. The display will change value as you move your finger closer and further from the Motion Sensor.



Extension 2

This program uses the value of the Display to control the Motor Power.



Start

Display
Motion
Sensor

Motor
Power-
Display

Repeat