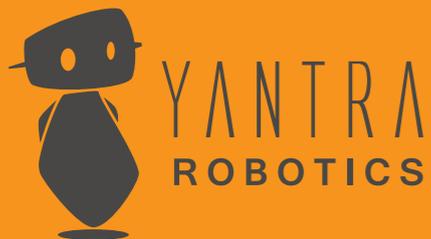
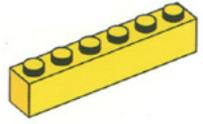


Start Building!

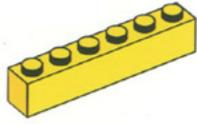


Step 1

You will Need:



Yellow 1x6
Brick



Yellow 1x6
Brick



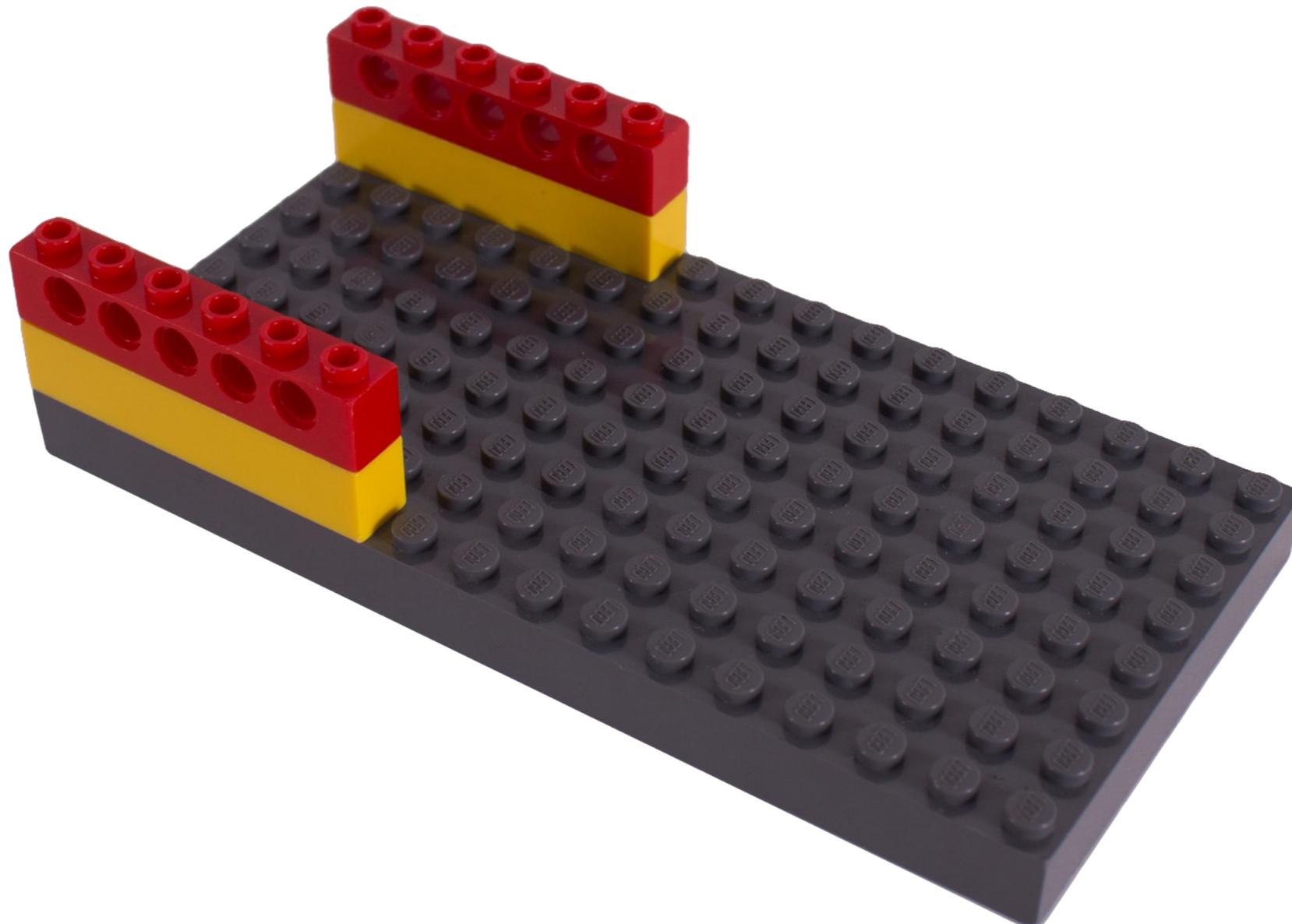
Red 1x6
Brick
W/ Holes



Red 1x6
Brick
W/ Holes



Grey 8x16 Brick



Step 2

You will Need:



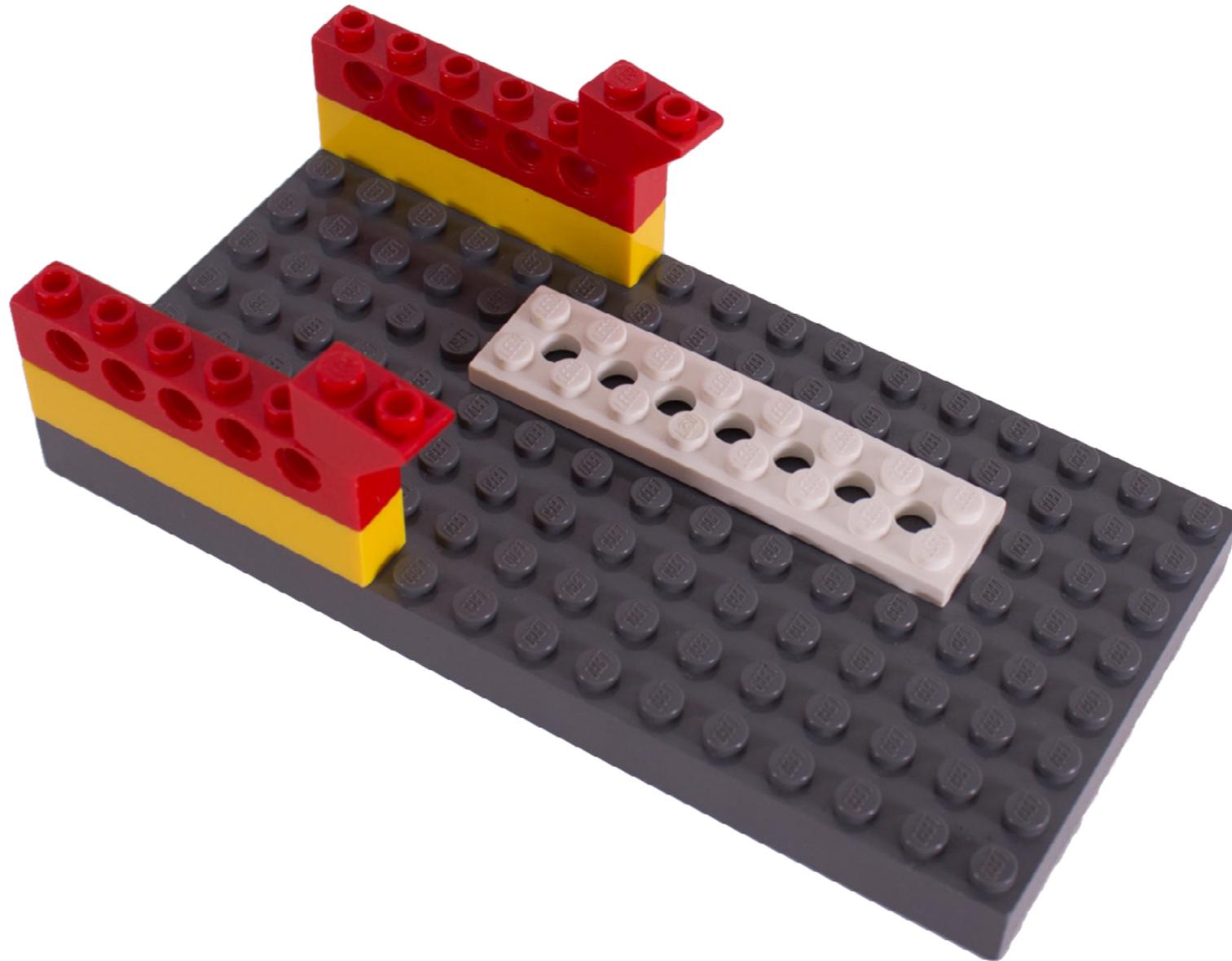
Red 1x2
Inverted
Wedge



Red 1x2
Inverted
Wedge



White 2x8
Plate



Step 3

You will Need:



#3 Axle



Black Pin



Black Pin



Motor



Step 4

You will Need:



Red 1x8
Brick
W/ Holes



Step 5

You will Need:

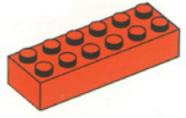


Crown Gear

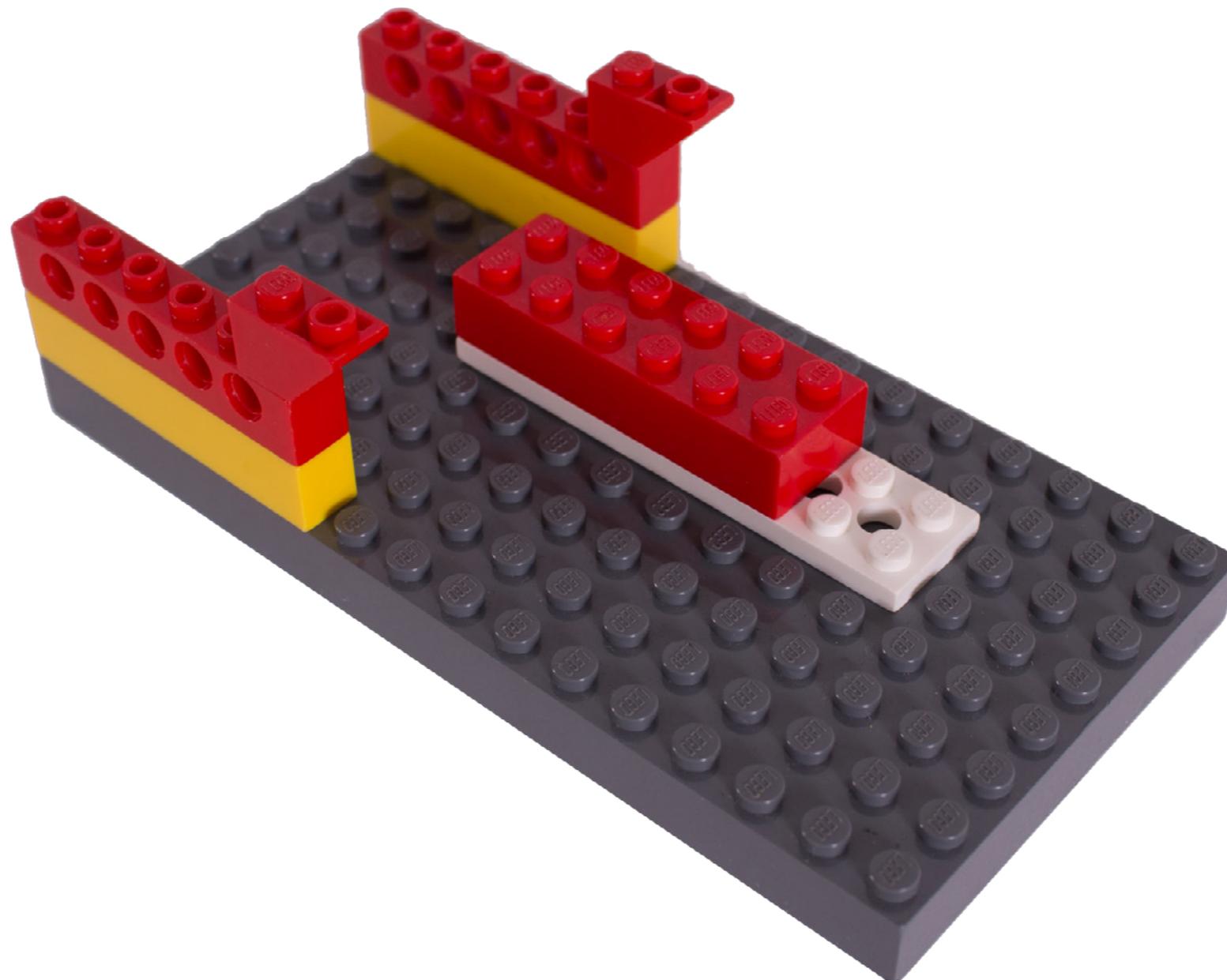


Step 6

You will Need:



Red 2x6
Brick



Step 7

 Attach!!



Step 8

You will Need:



Pinion Gear



Red 1x2
Brick
W/ Holes

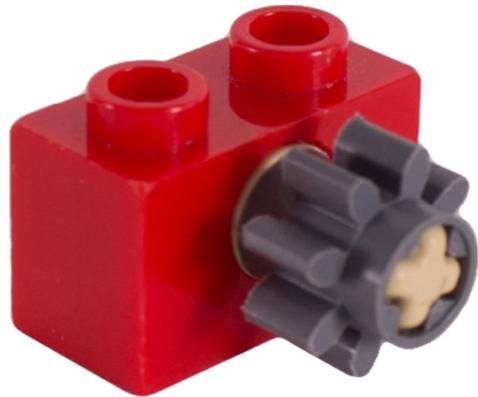


Red 1x2
Brick
W/ Holes



Beige Pin

a.



b.



Step 9

You will Need:



Black Pin



Black Pin



Basic Gear



Basic Gear



Step 10

You will Need:



#6 Axle



#8 Axle



Step 11

You will Need:



Worm Gear



Cam



Cam



Red 1x2
Brick
W/ Holes



Step 12

You will Need:



Bushing



Bushing



Bushing



Bushing



Step 13

You will Need:



Bushing



Cam



Cam

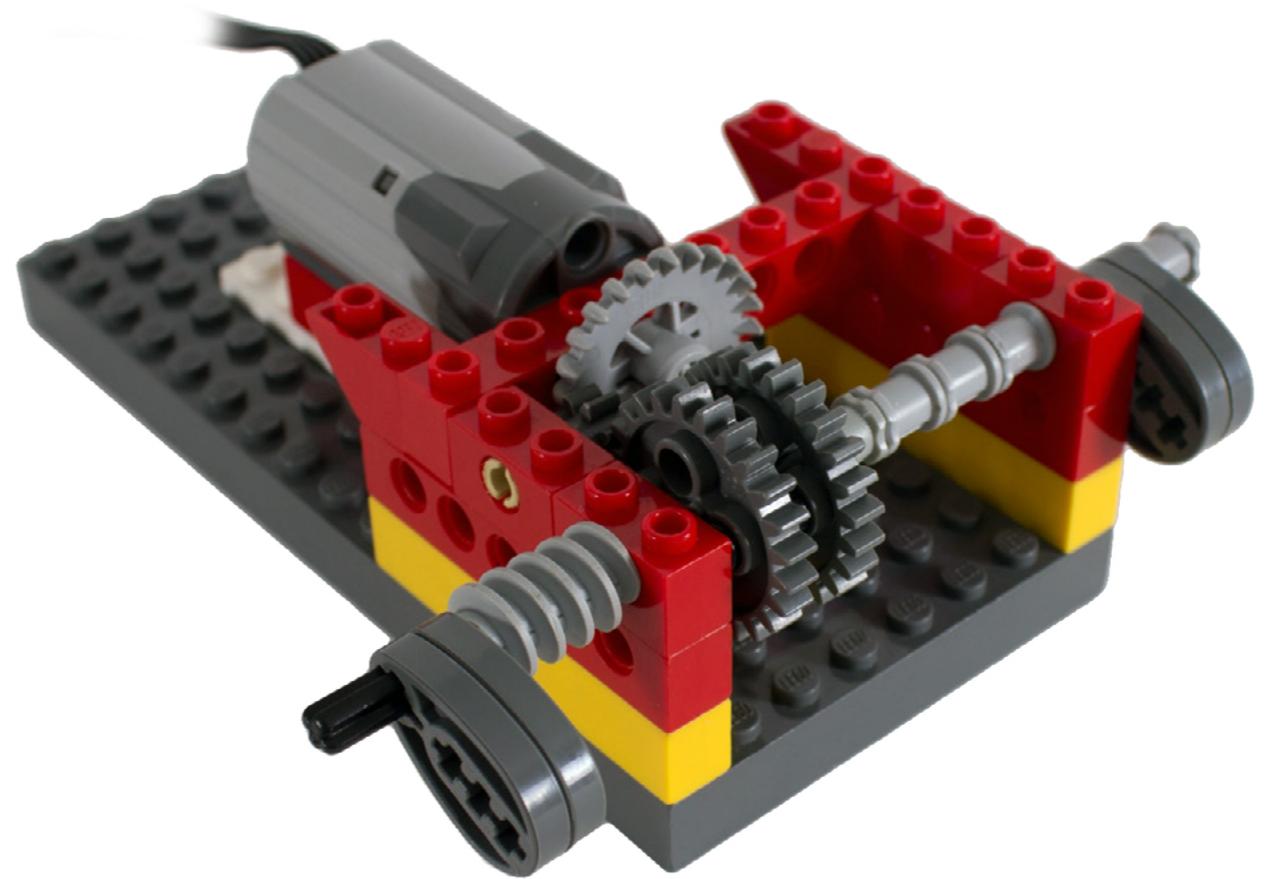


Red 1x2
Brick
W/ Hole

a.



b.



Step 14

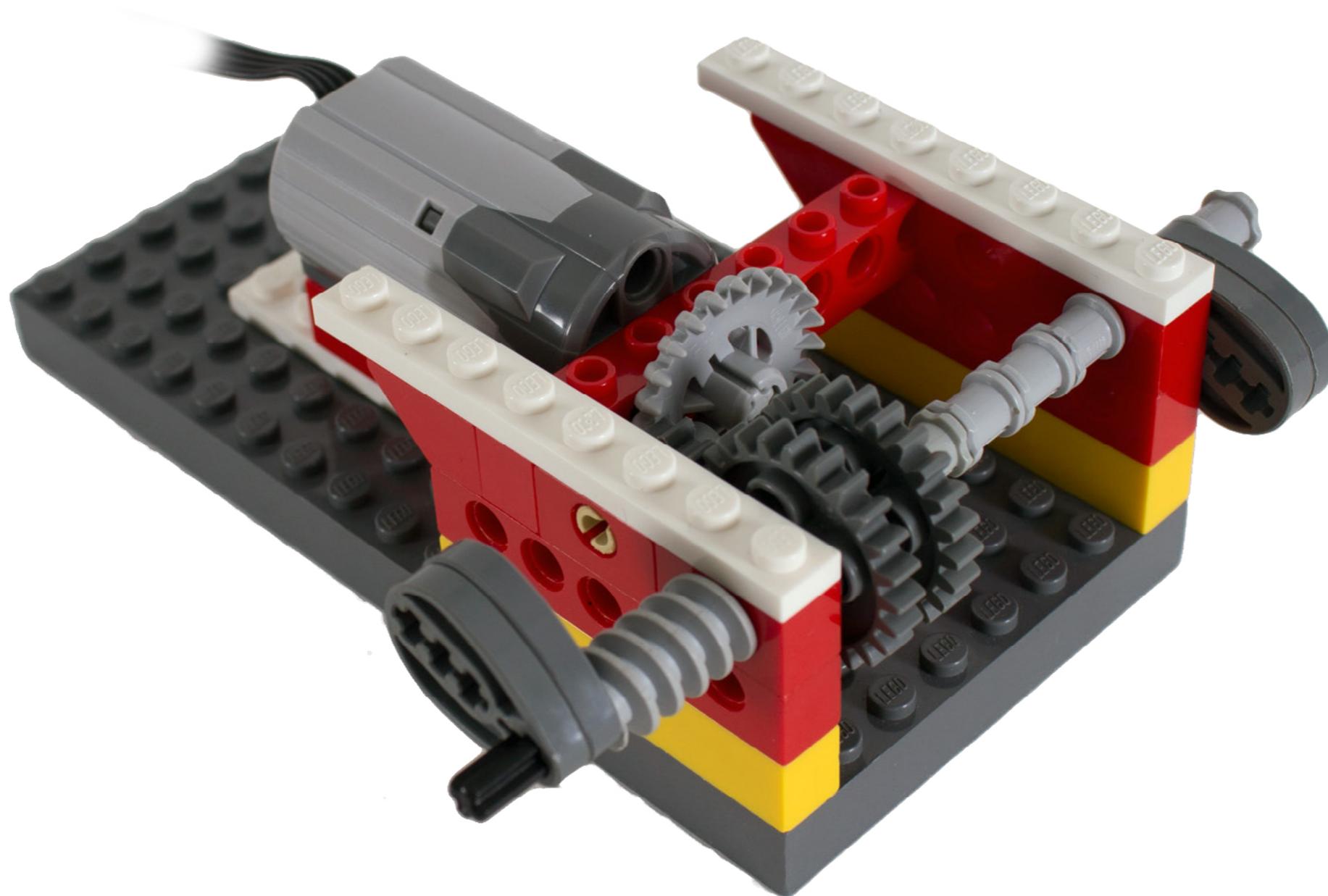
You will Need:



White 1x8
Plate



White 1x8
Plate



Step 15

You will Need:



Grey 1x2
Brick W/
Cross Hole



Grey 1x2
Brick W/
Cross Hole



Red 1x2
Brick
W/ Holes



Red 1x2
Brick
w/ Stub



White 1x4
Plate



Step 16

You will Need:



Grey 1x2
Brick W/
Cross Hole



Grey 1x2
Brick W/
Cross Hole



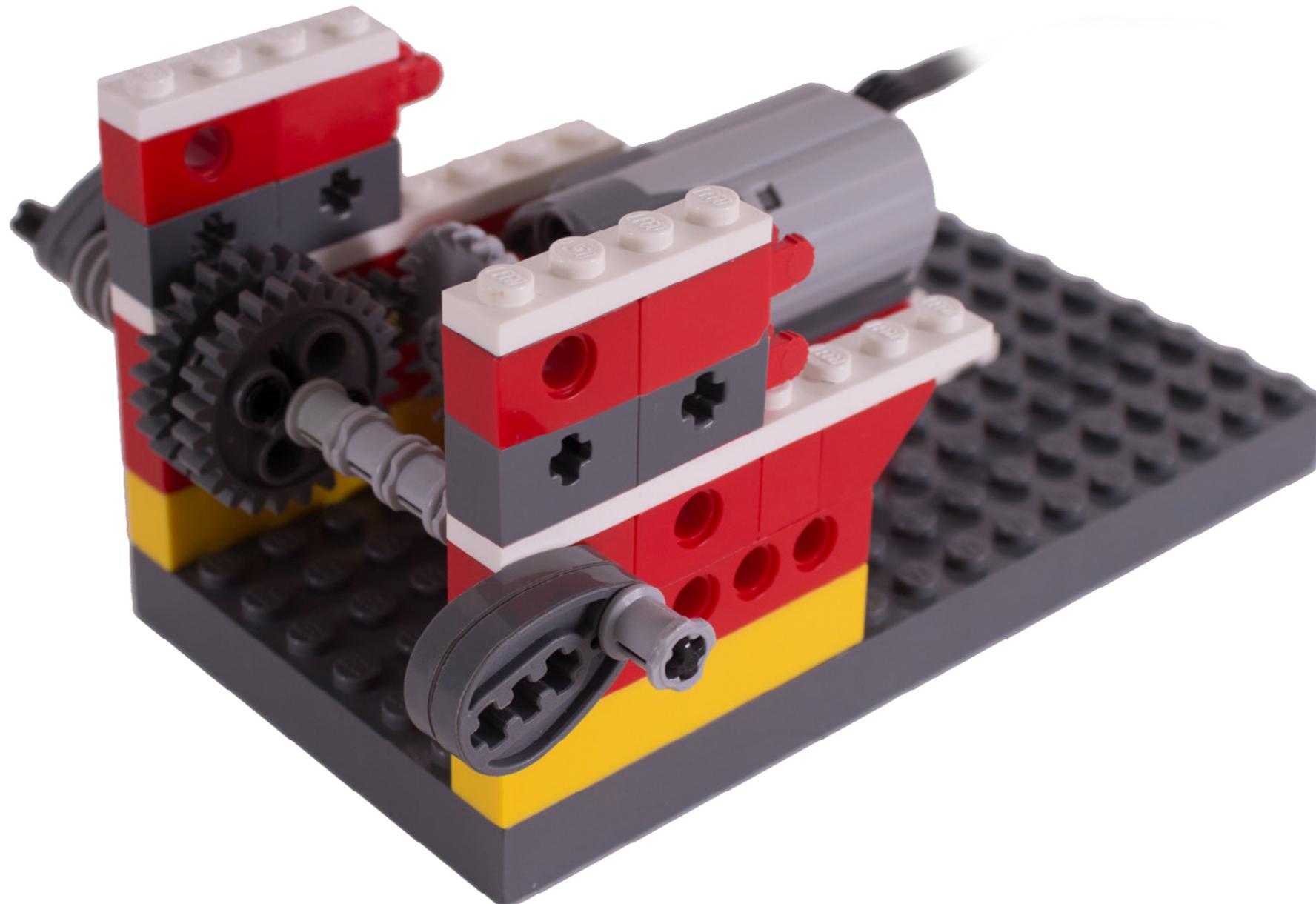
Red 1x2
Brick
W/ Holes



Red 1x2
Brick
w/ Stub

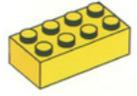


White 1x4
Plate



Step 17

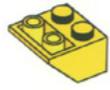
You will Need:



Yellow 2x4
Brick



Yellow 2x2
Inverted
Wedge



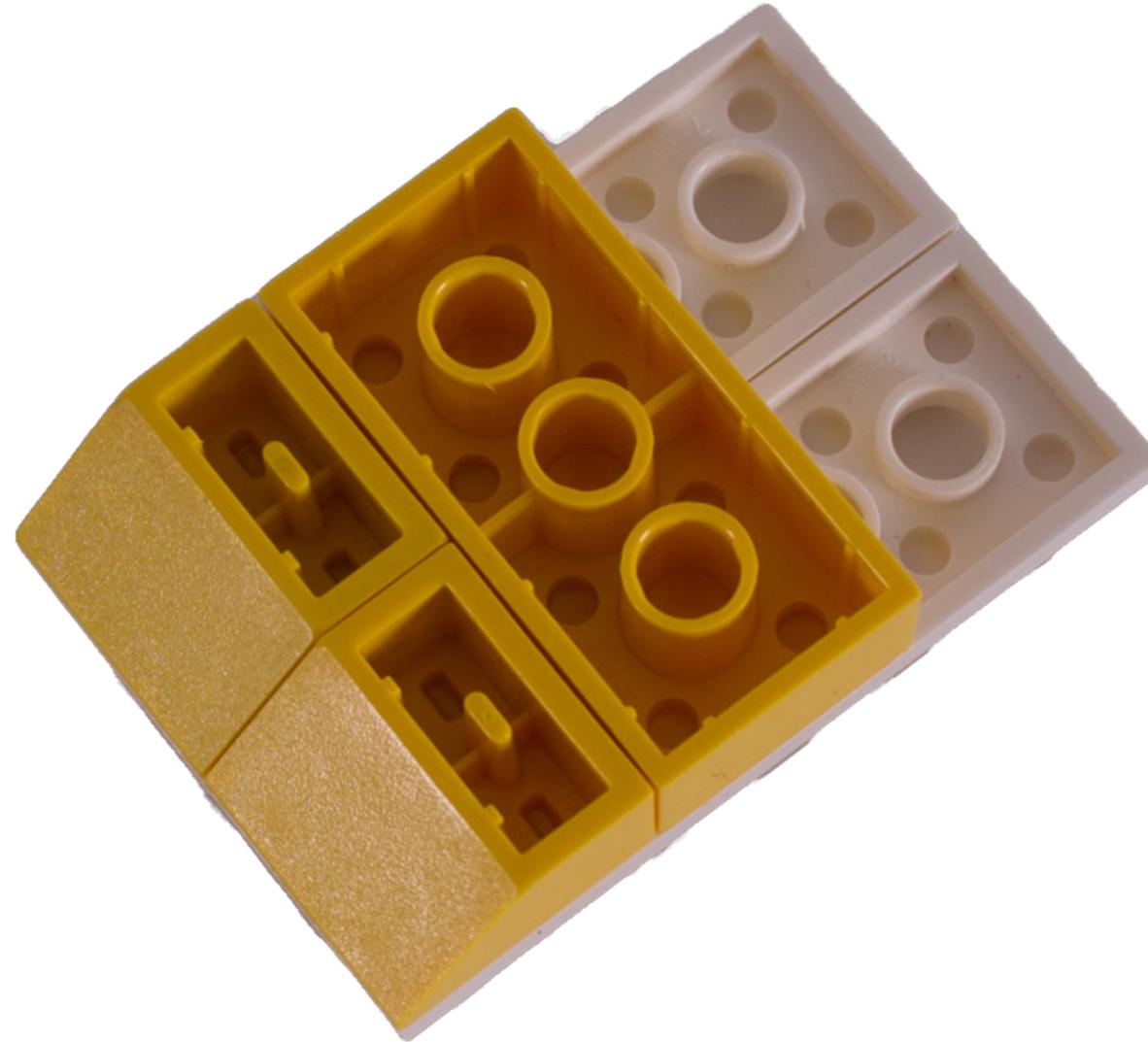
Yellow 2x2
Inverted
Wedge



White 2x6
Plate

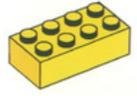


White 2x6
Plate



Step 18

You will Need:



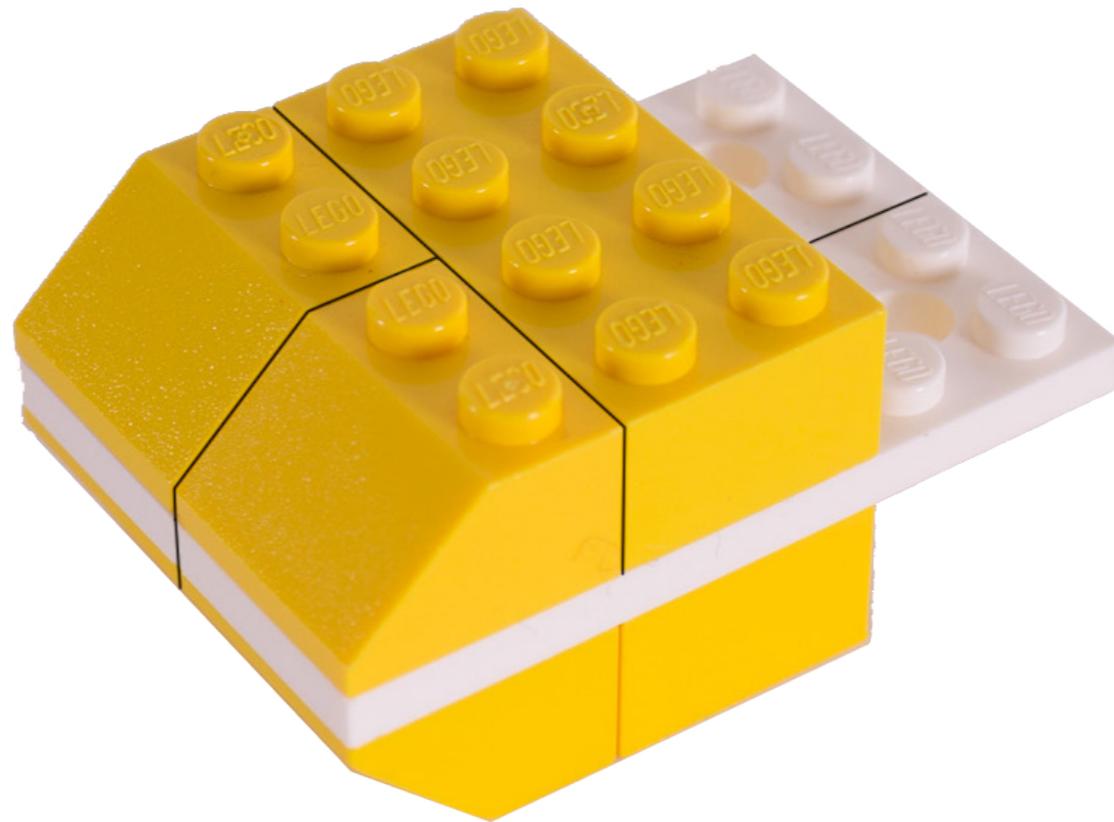
Yellow 2x4
Brick



Yellow 2x2
Wedge

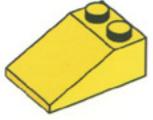


Yellow 2x2
Wedge

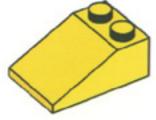


Step 19

You will Need:



Yellow 2x3
Wedge

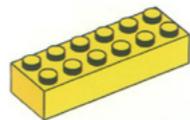
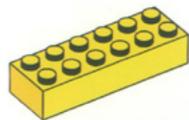


Yellow 2x3
Wedge



Step 20

You will Need:

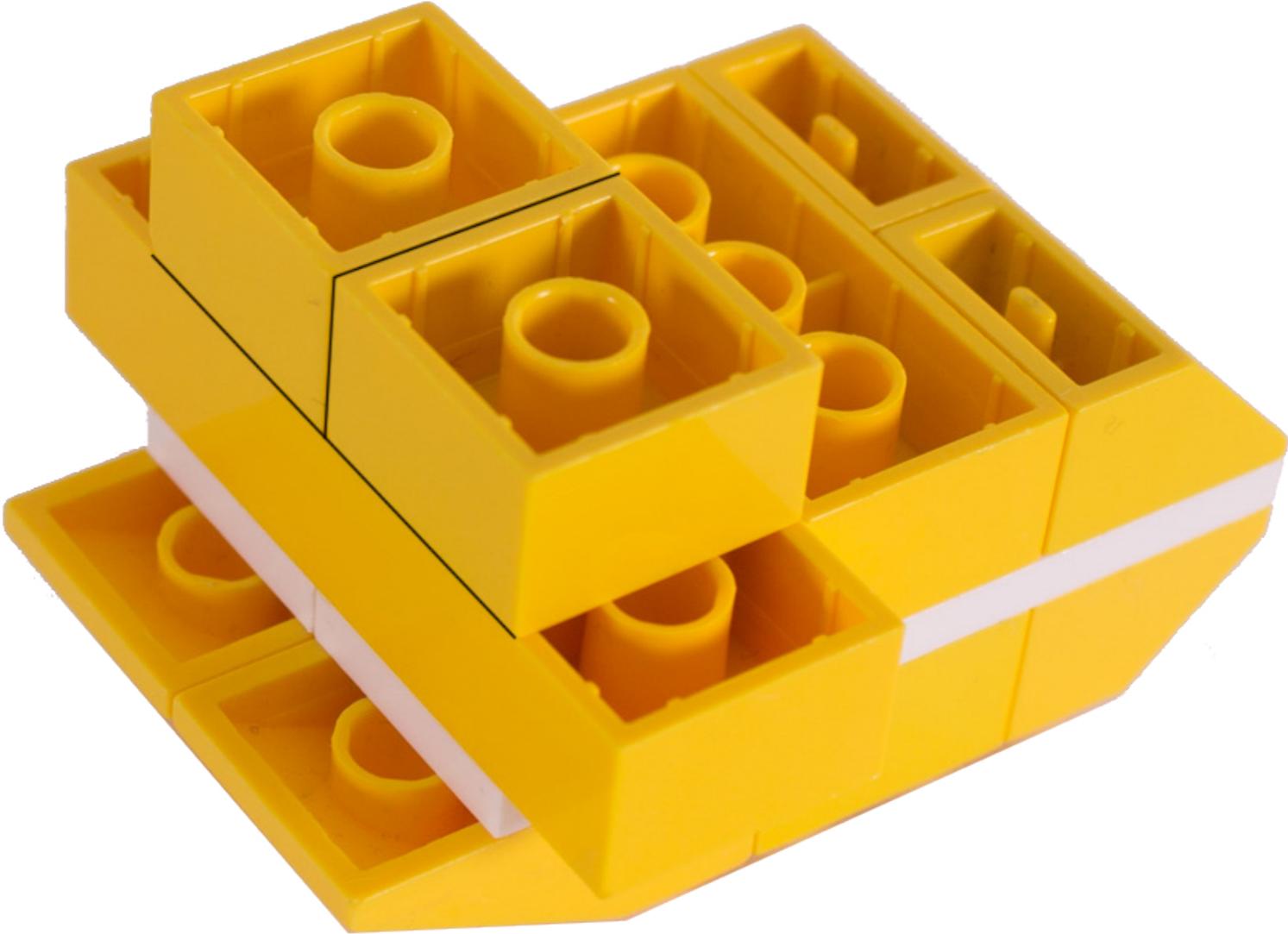


Yellow 2x2
Brick

Yellow 2x2
Brick

Yellow 2x6
Brick

Yellow 2x6
Brick

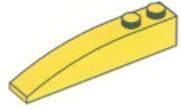


Step 21

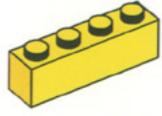
You will Need:



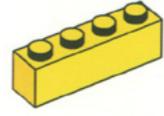
Yellow Bow



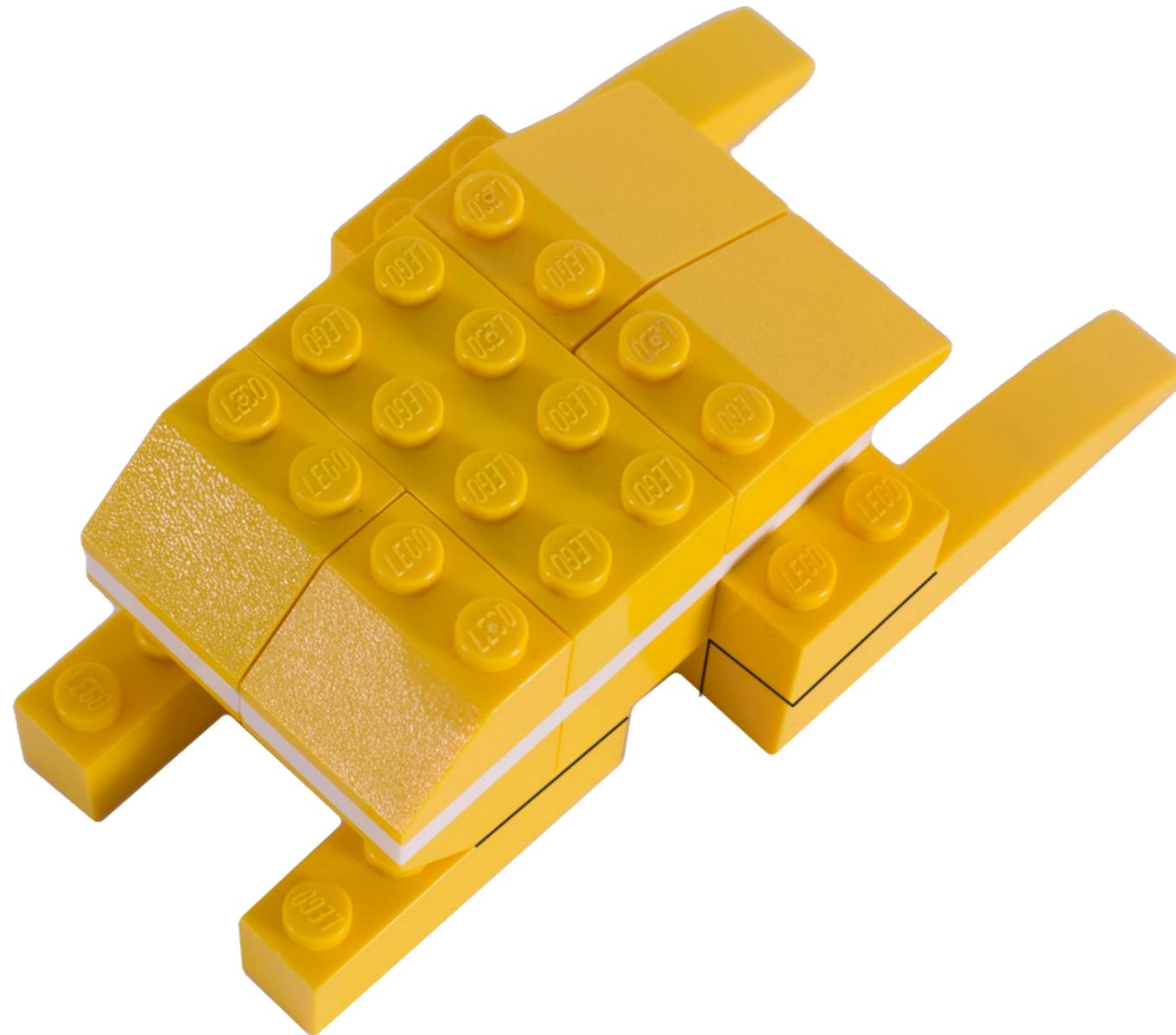
Yellow Bow



Yellow 1x4
Brick



Yellow 1x4
Brick



Step 22

You will Need:



Eye



Eye



Step 23

You will Need:



Green 2x2
Circle Brick



Green 2x2
Circle Brick



Turntable

a.



b.



Step 24

You will Need:



Green 2x4
Plate



Green 2x4
Plate



Green 2x4
Plate



Green 2x4
Plate



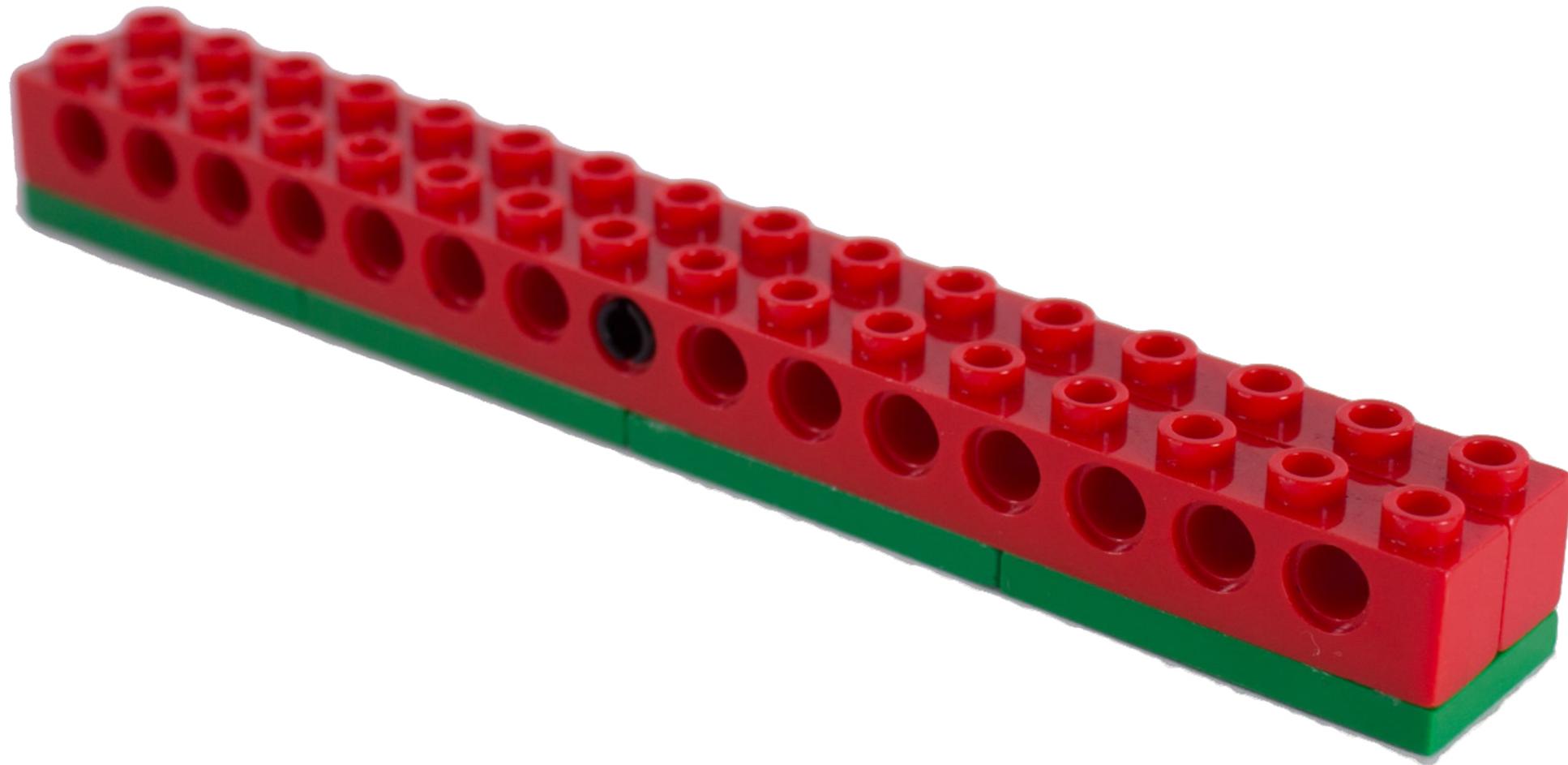
Black Pin



Red 1x16
Brick
W/ Holes



Red 1x16
Brick
W/ Holes



Step 25

You will Need:

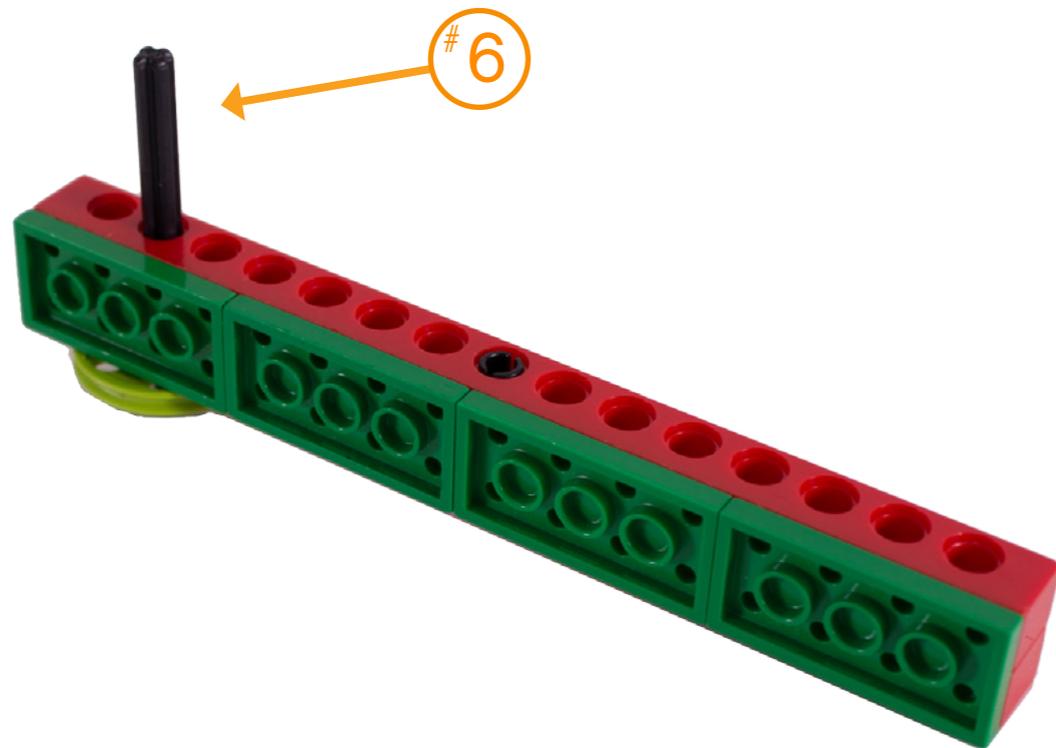


Belt Wheel

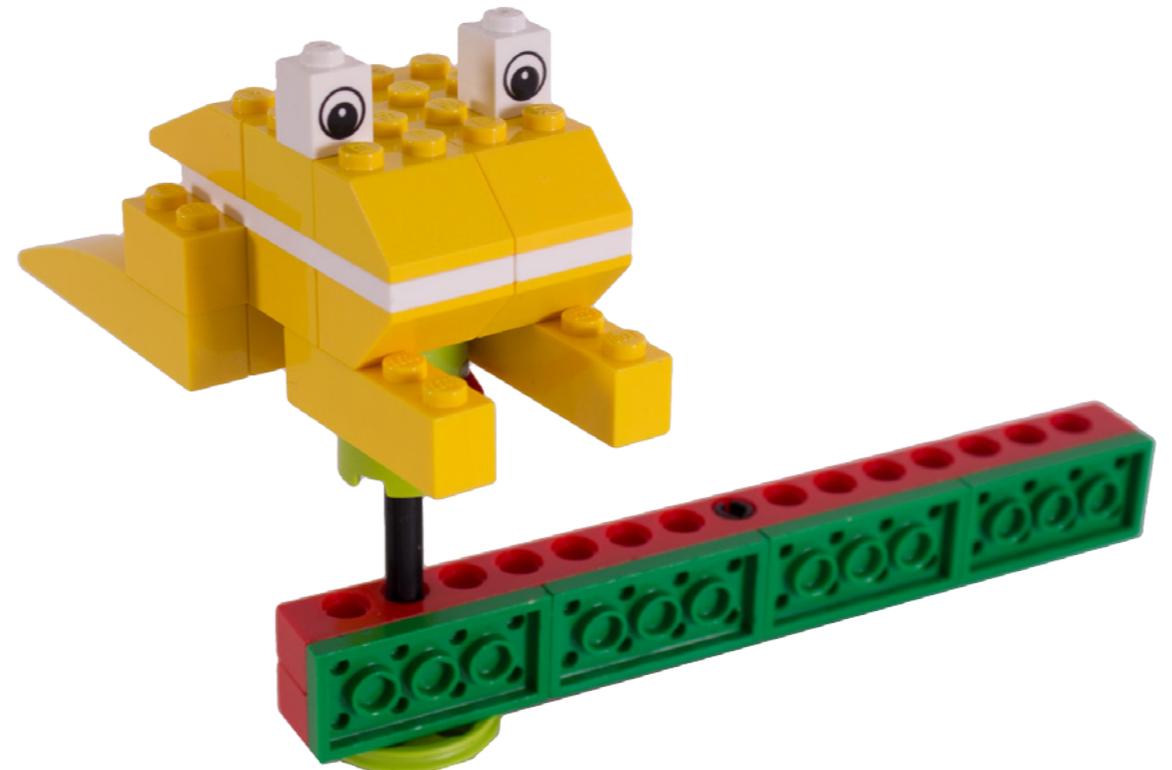


#6 Axle

a.

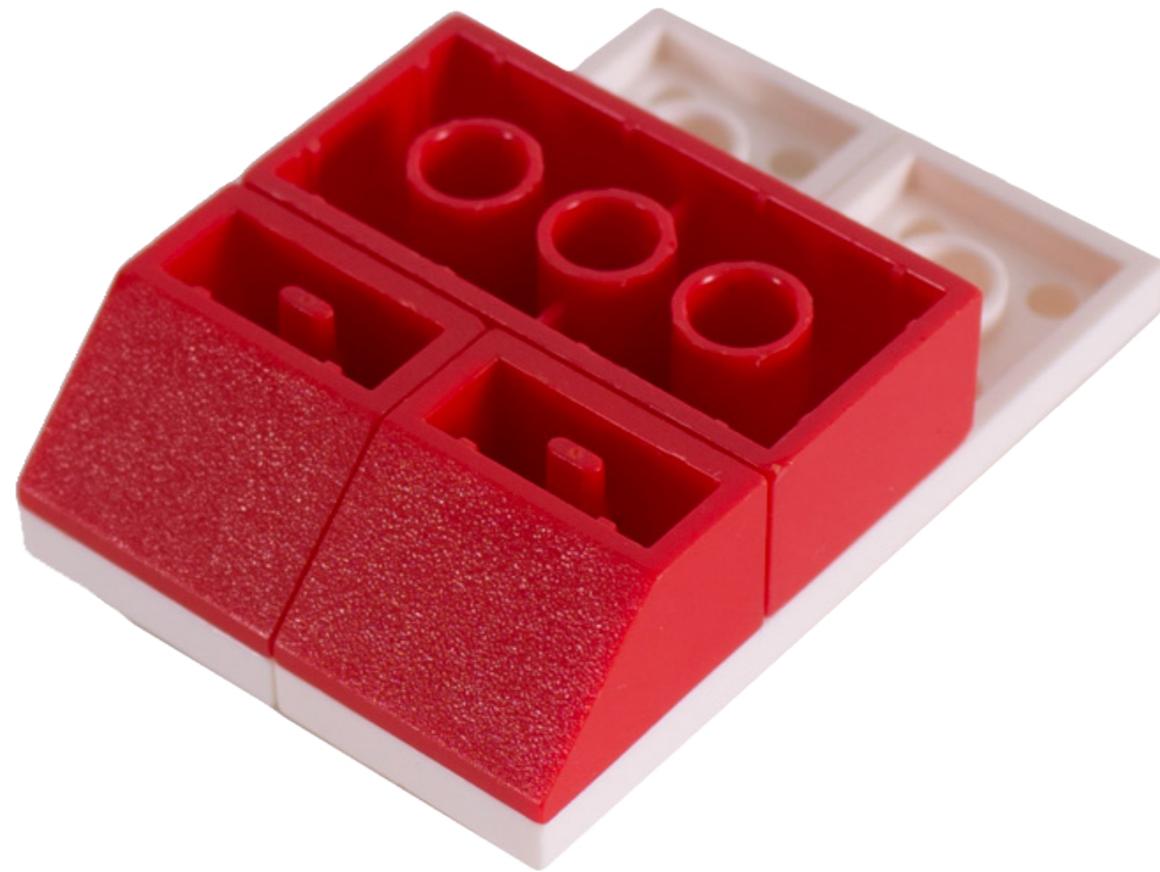


b.



Step 26

You will Need:



Step 27

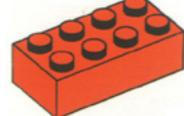
You will Need:



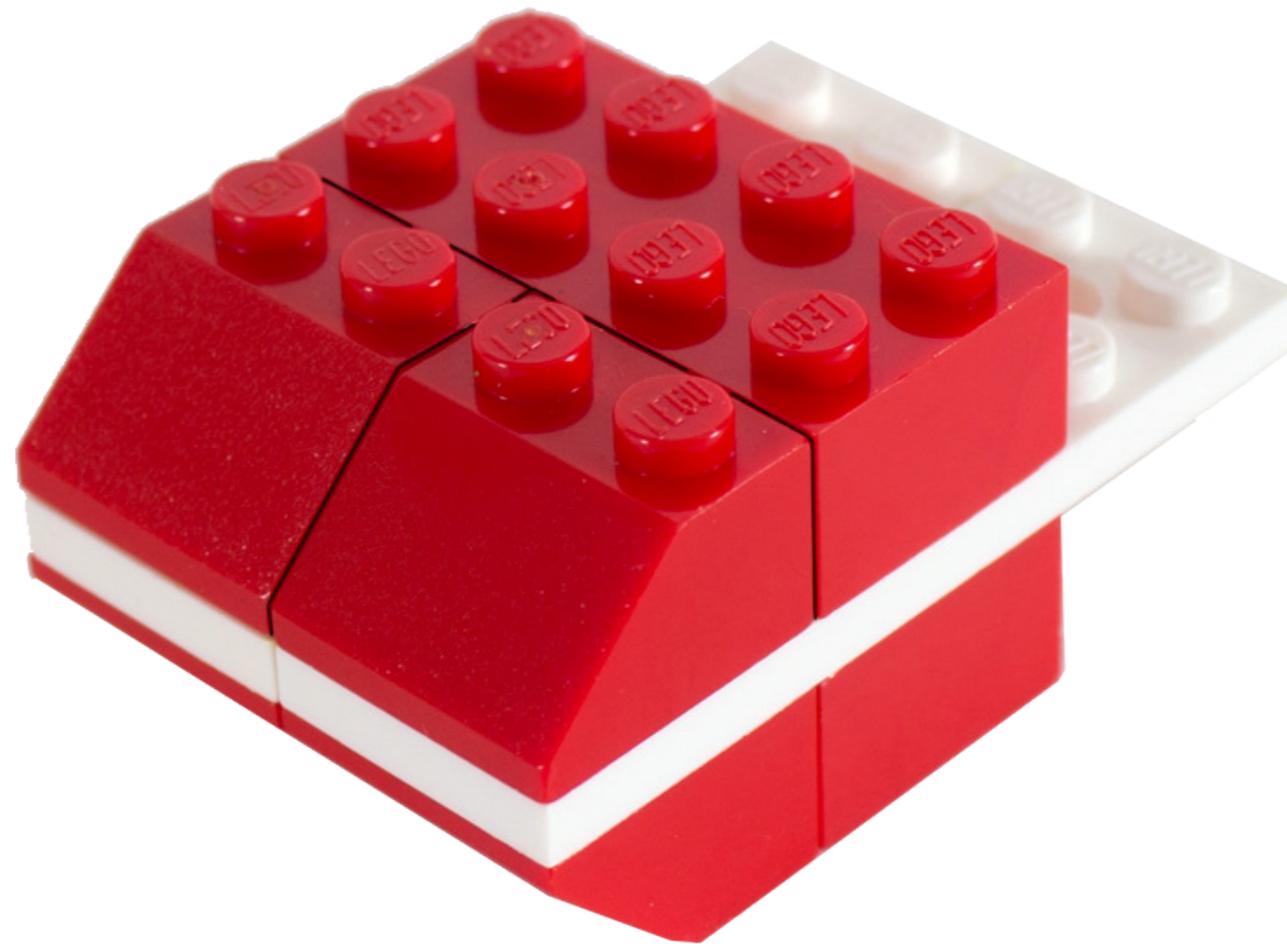
Red 2x2
Brick



Red 2x2
Brick



Red 2x4
Brick



Step 28

You will Need:



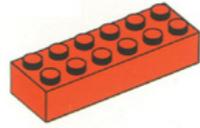
Red 1x2
Wedge



Red 1x2
Wedge



Red 2x2
Brick

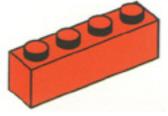


Red 2x6
Brick

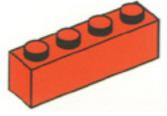


Step 29

You will Need:



Red 1x4
Brick



Red 1x4
Brick



Red Bow



Red Bow



Step 30

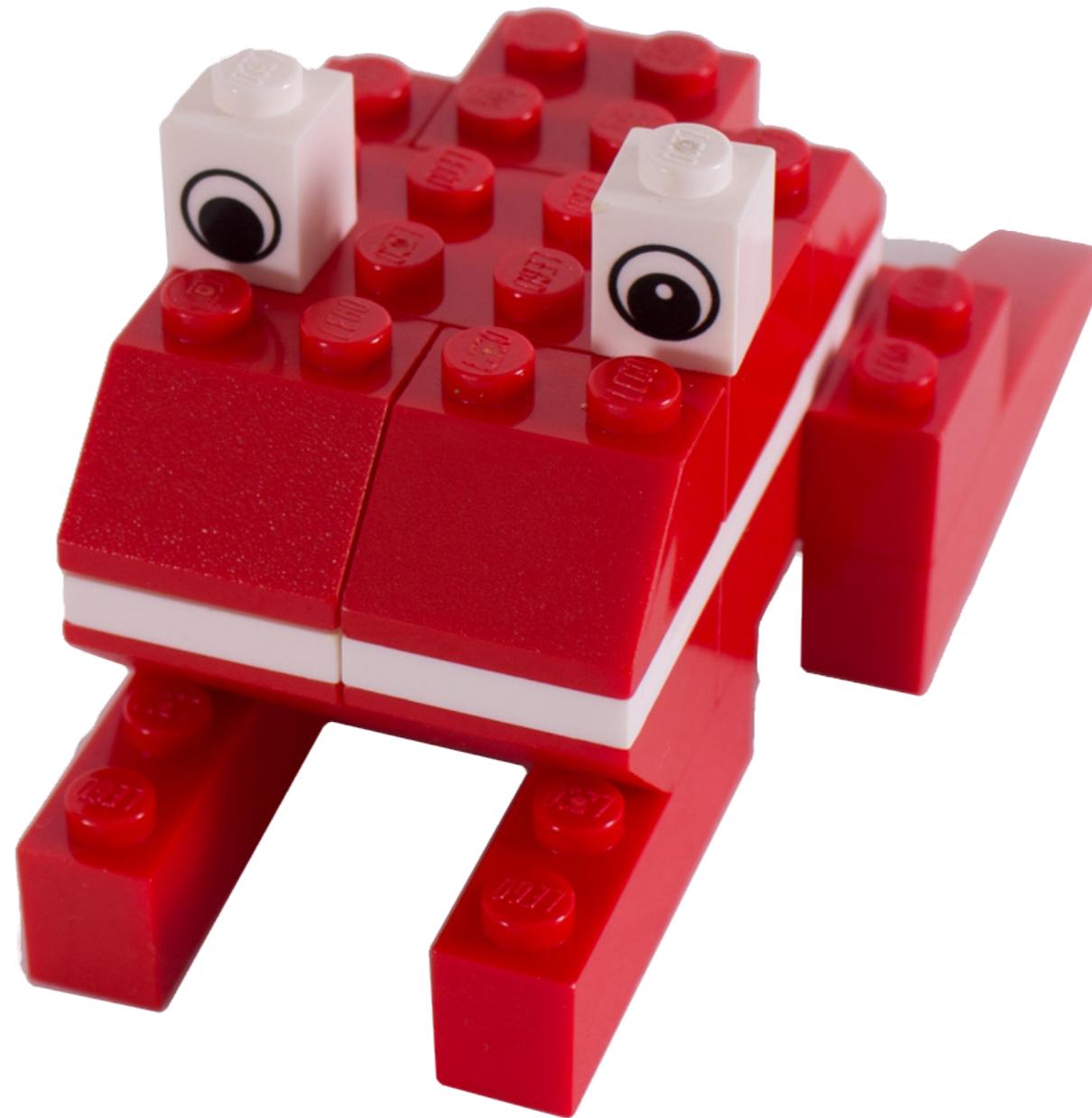
You will Need:



Eye



Eye



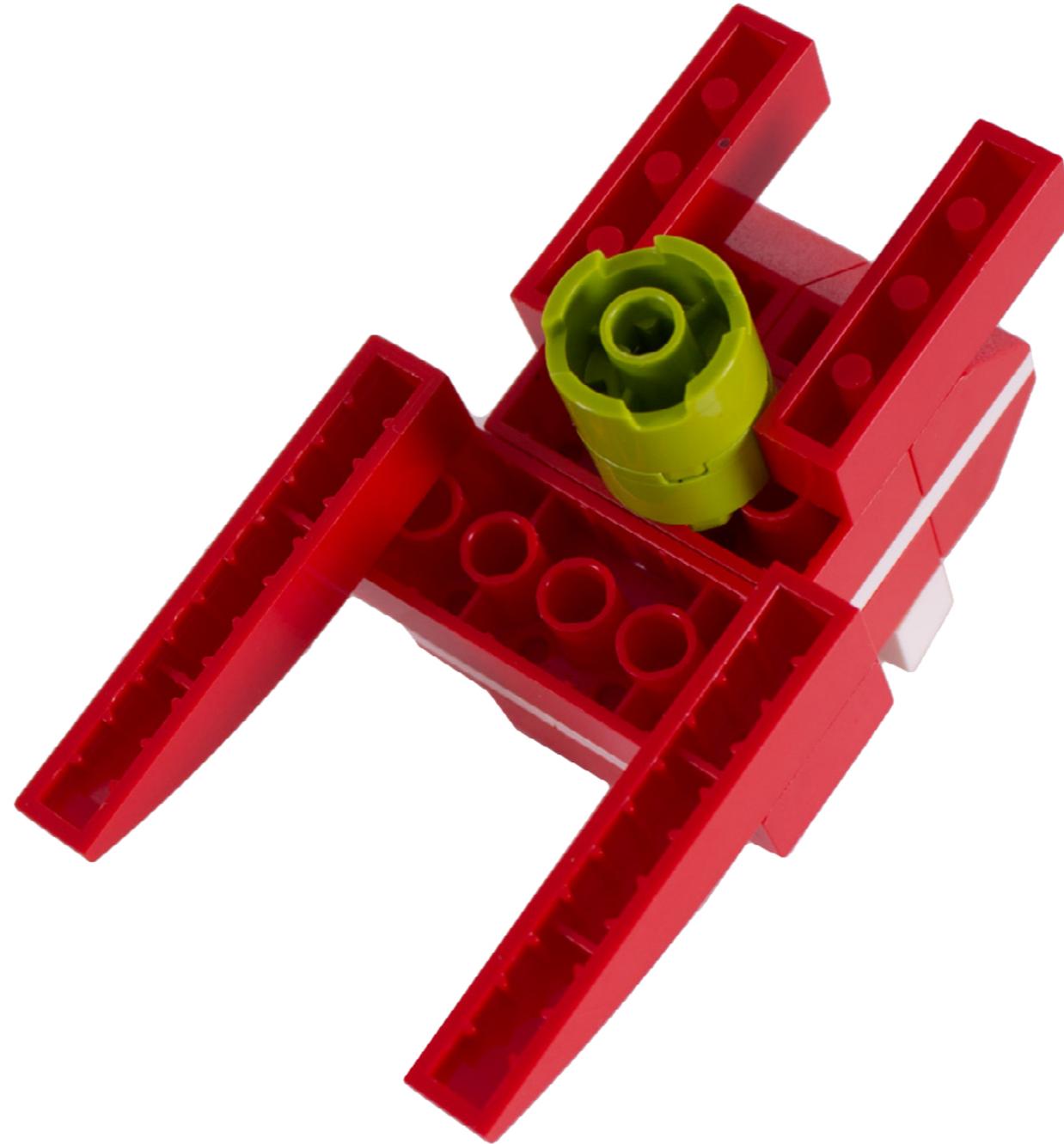
Step 31

You will Need:



Green 2x2
Round Brick

Green 2x2
Round Brick



Step 32

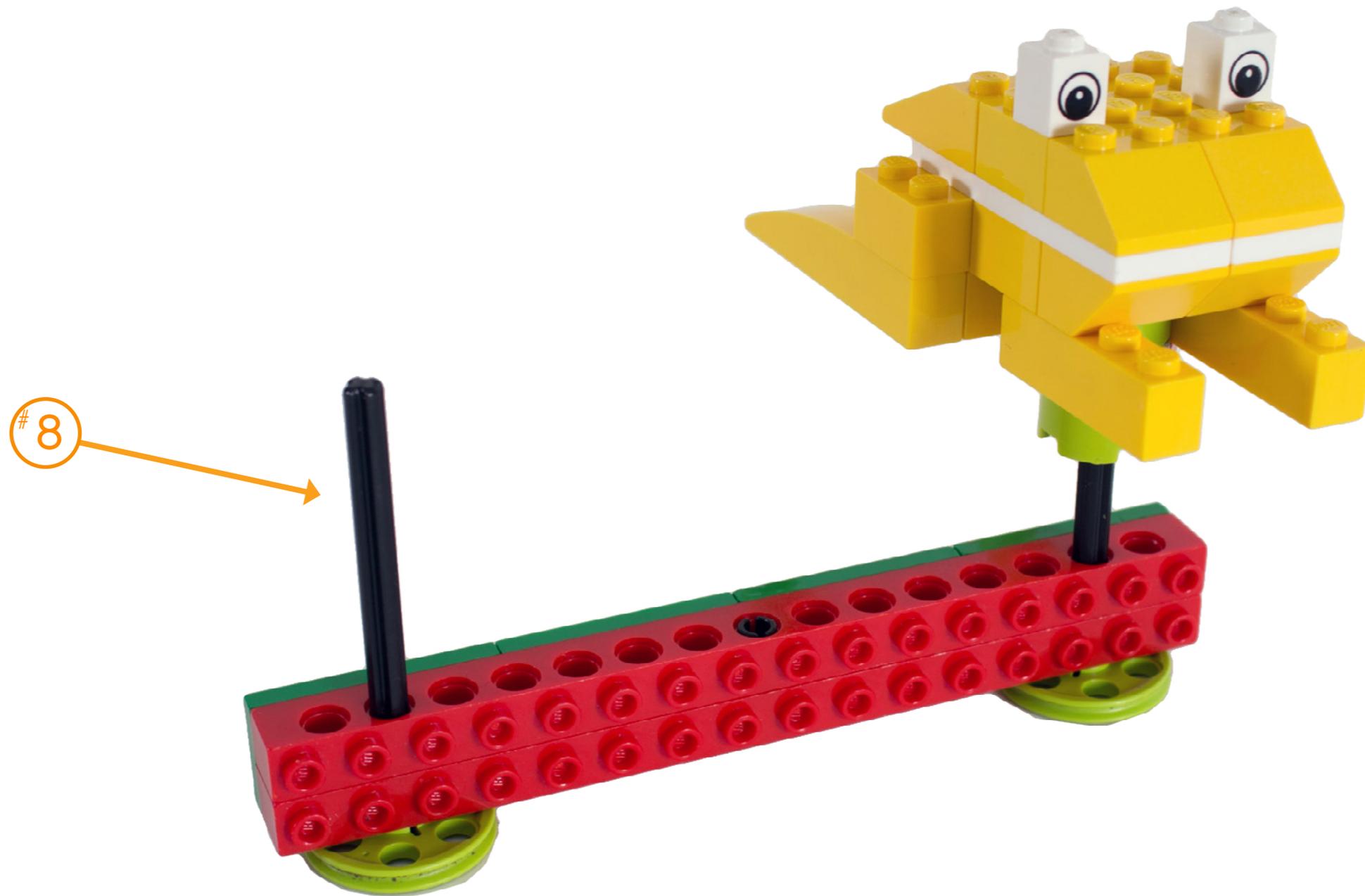
You will Need:



Belt Wheel

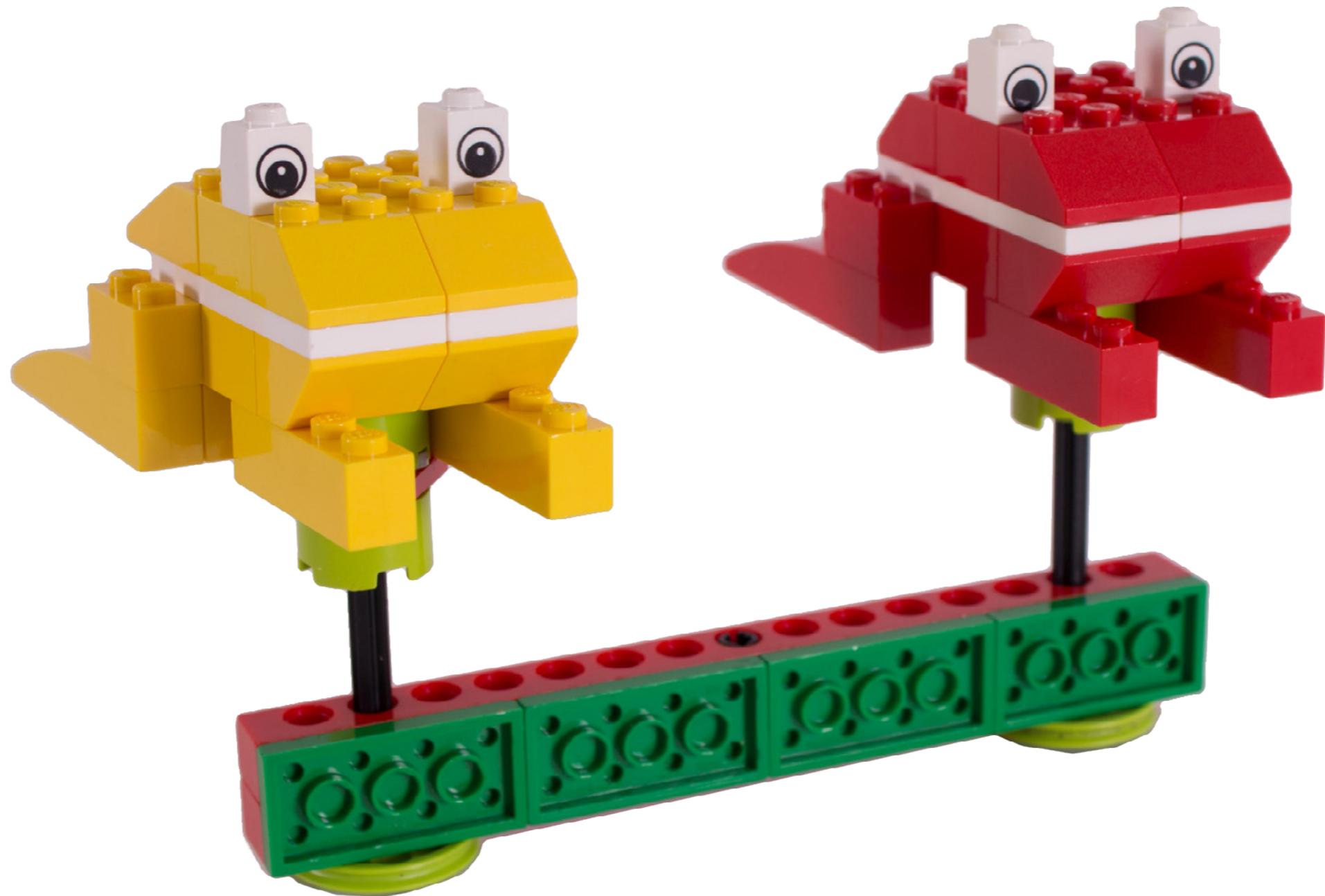


#8 Axle



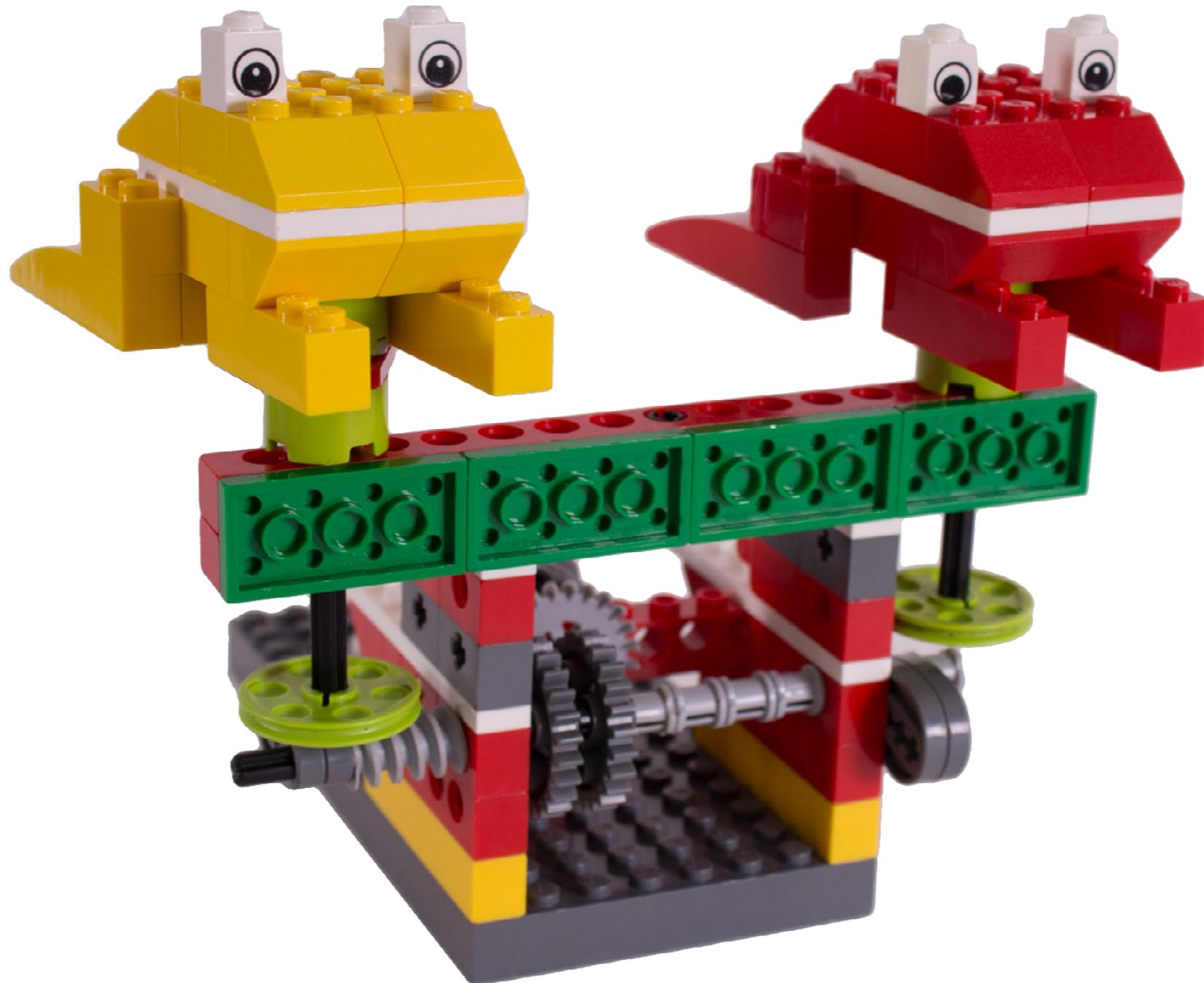
Step 33

 Attach



Step 34

👉 Attach!!



Step 35

You will Need:

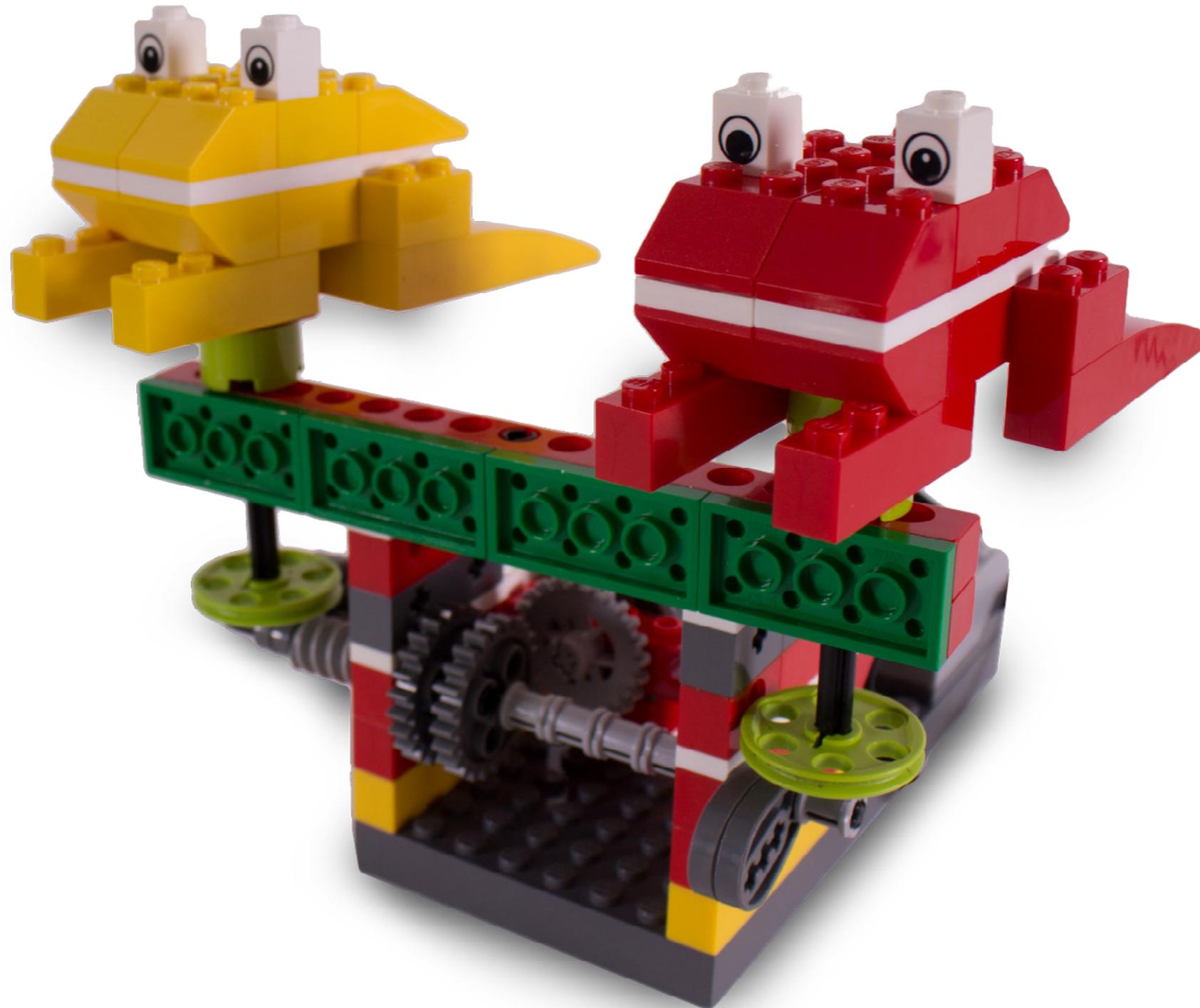


Hub

 Plug in Motor



Hopping Frogs are built!...
Time to program it!



Programming

Make your Frogs hop up and down!



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

Task



Run this program!

What happens when the cams face the same way?
Different ways?
Doubled?

Extension 1

Add sound to your hopping Frogs!



Extension 2

Add the motion or tilt sensor to your robot and program your robot to turn on using the motion or tilt sensor!

