

# MRS. GAINES' COMPUTER LAB

- 🏠 Wiki Home
- 🕒 Recent Changes
- 📄 Pages and Files
- 👤 Members

🔍 Search

\*\*Return to Sacred  
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## 5 Minute Bot for EV3

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This is the modified version of the 5-Minute Bot found at [www.nxtprograms.com](http://www.nxtprograms.com) 🌱. The original robot was built for the LEGO Mindstorms NXT 2.0 kits, but the newer EV3 kits that we have have some different parts and the design had to be modified. This modification was developed by a team of our 6th graders and, out of all of the teams, they had the most successful design and the robot performed flawlessly!

Here are the modified steps:

K3

K4

Kindergarten

1st Grade

2nd Grade

3rd Grade

4th Grade

5th Grade

6th Grade

7th Grade

8th Grade

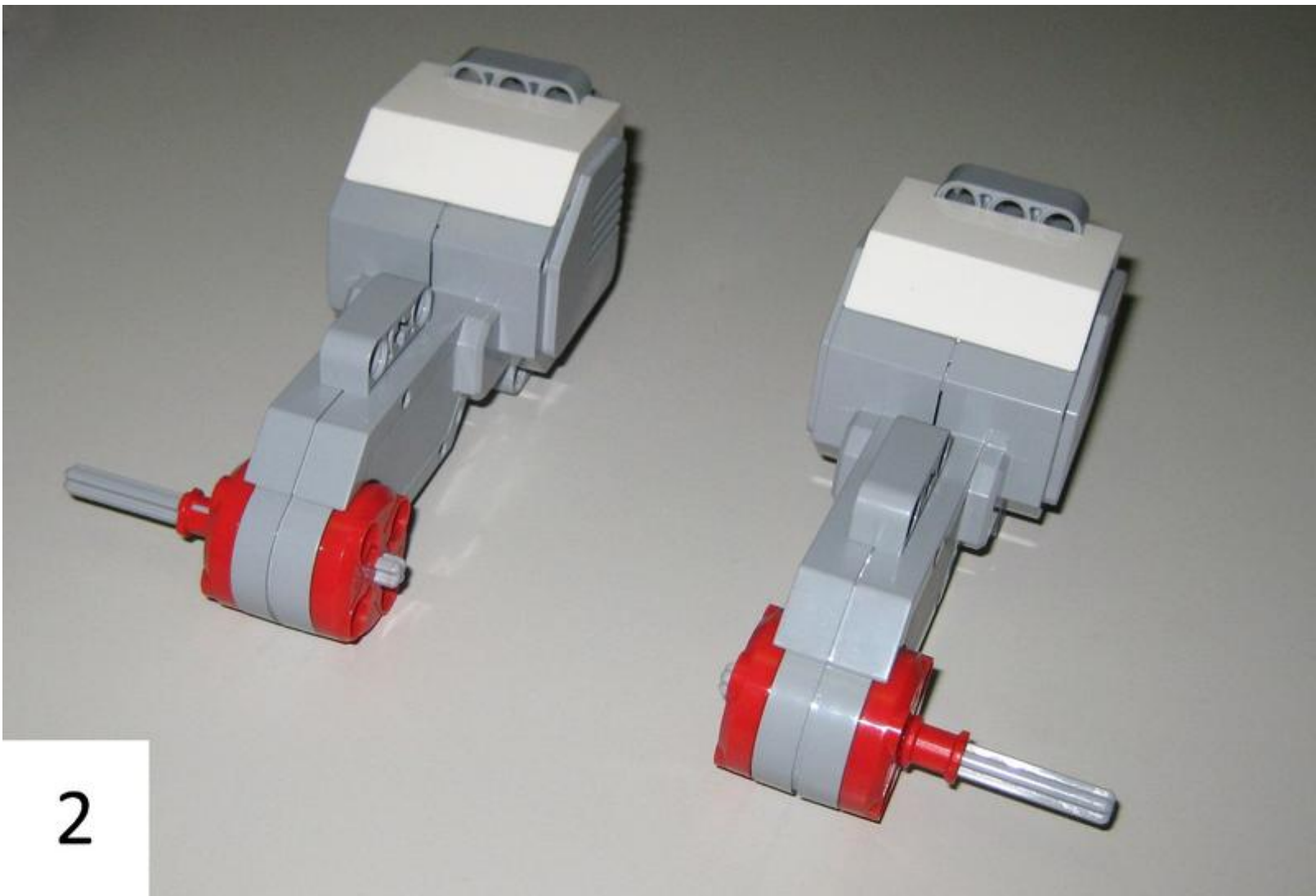
9th Grade

Yearbook Resources

Teacher Training



1

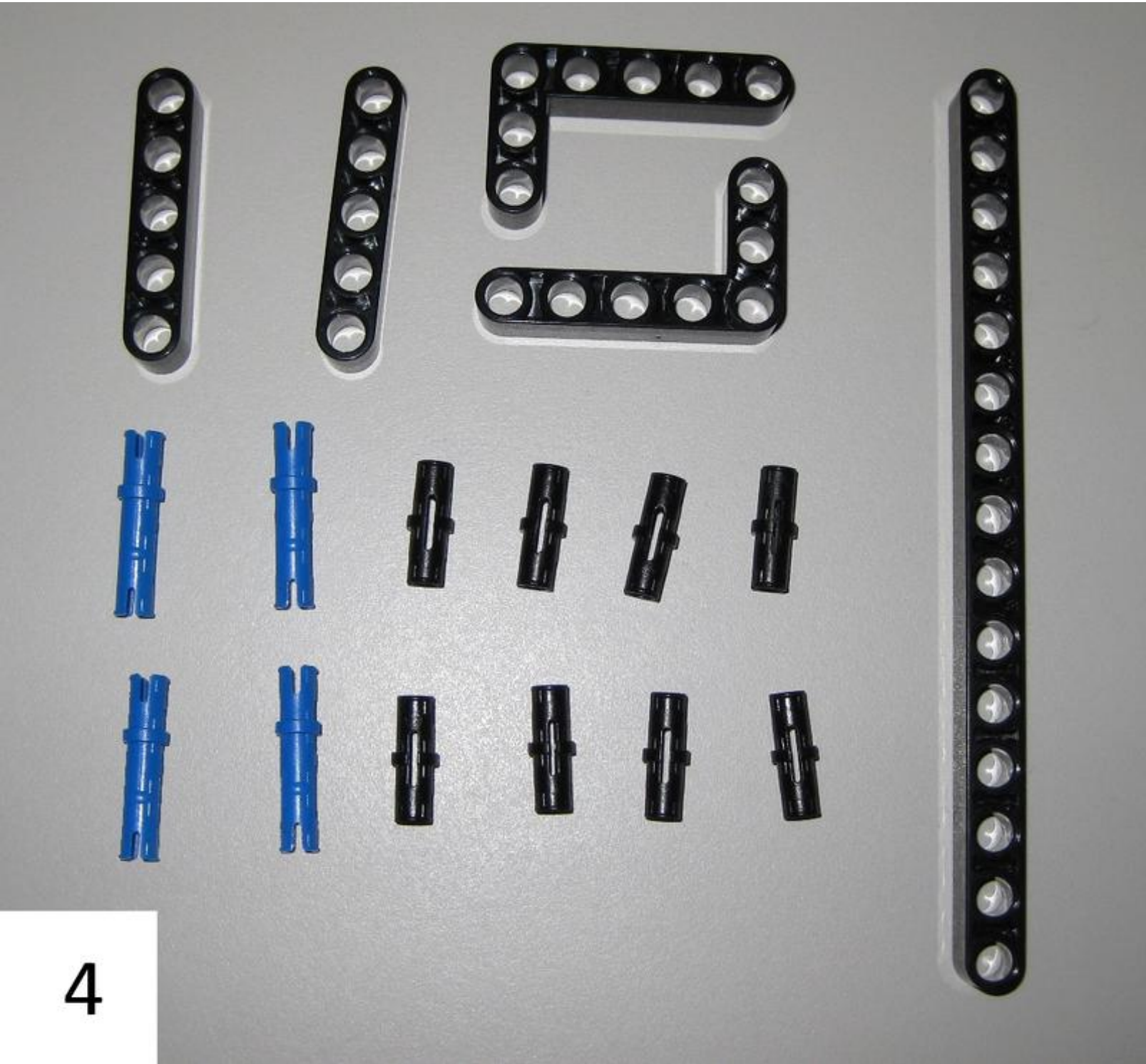


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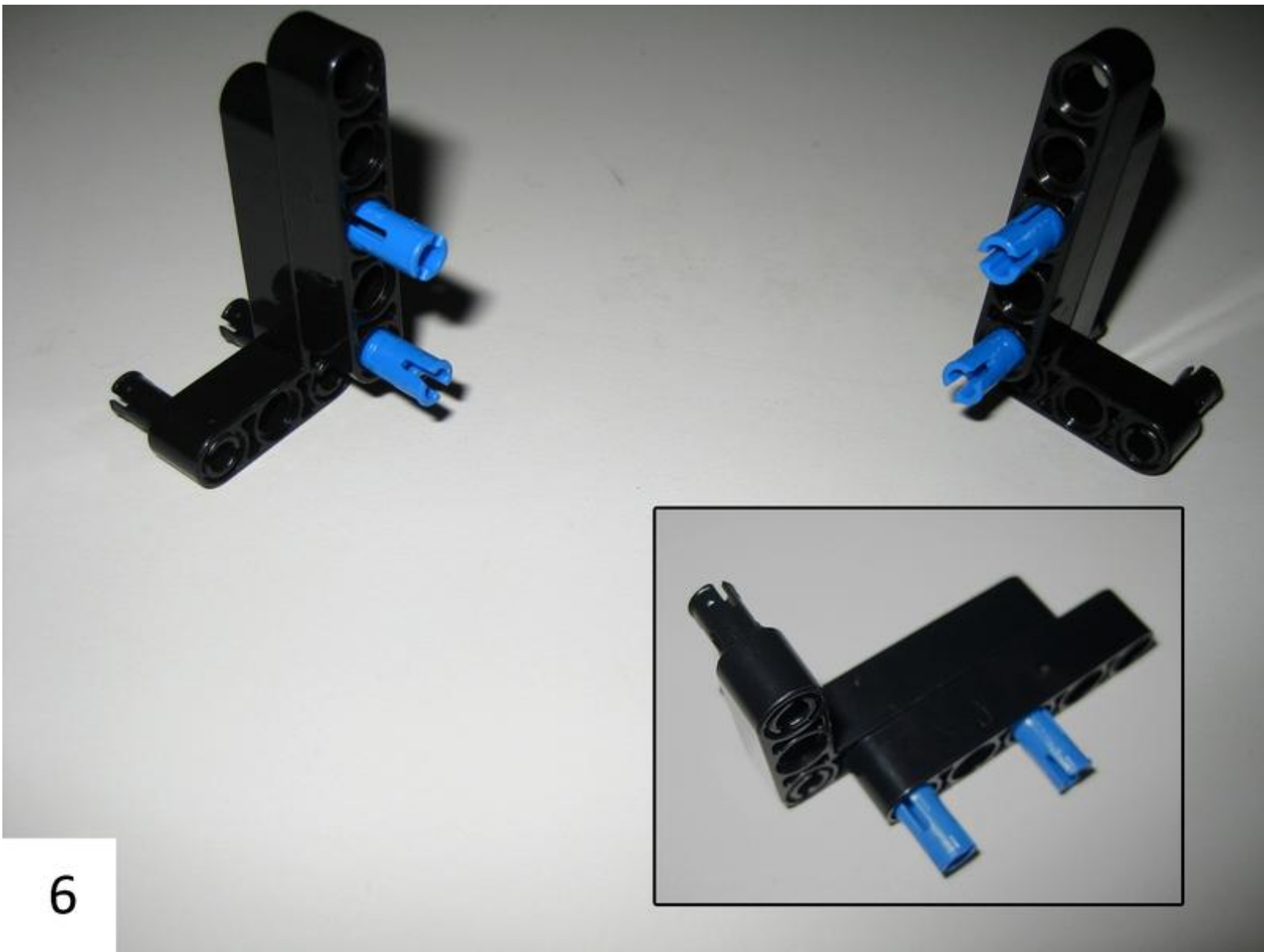
Once you have these parts assembled, set them aside and move to the next part. (NOTE: These should be OPPOSITES so be careful when you're building them!))



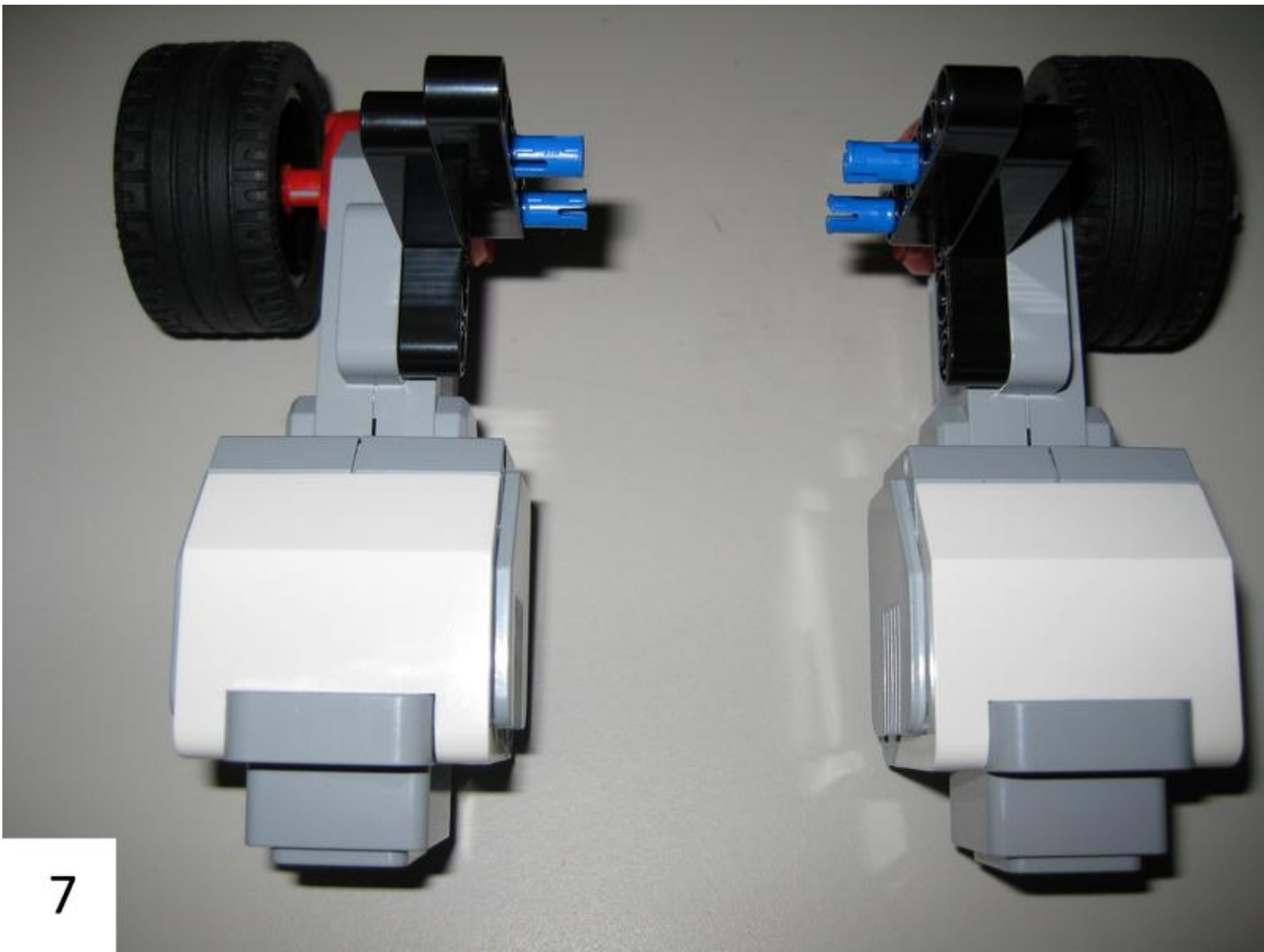
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5



6



7

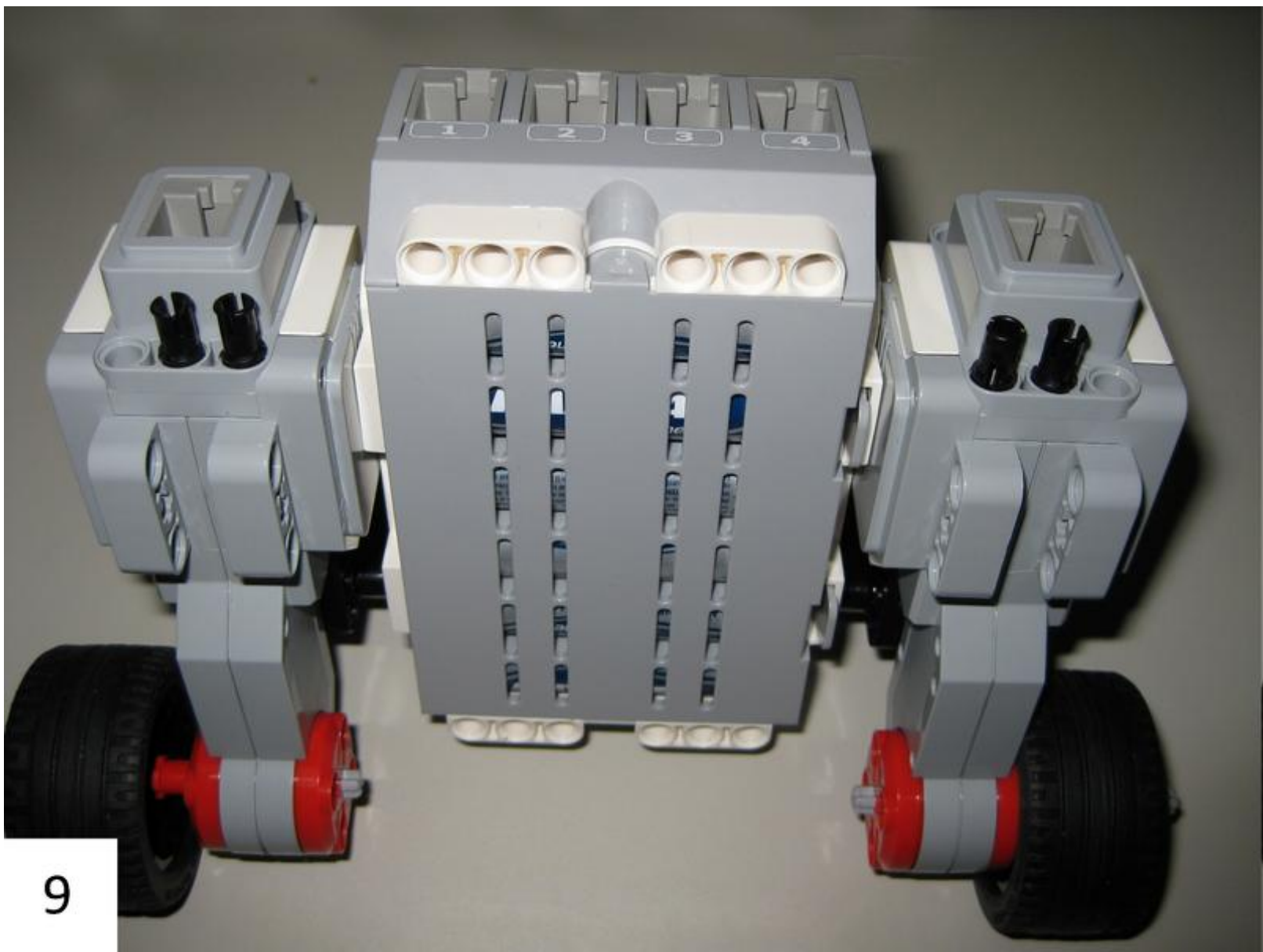




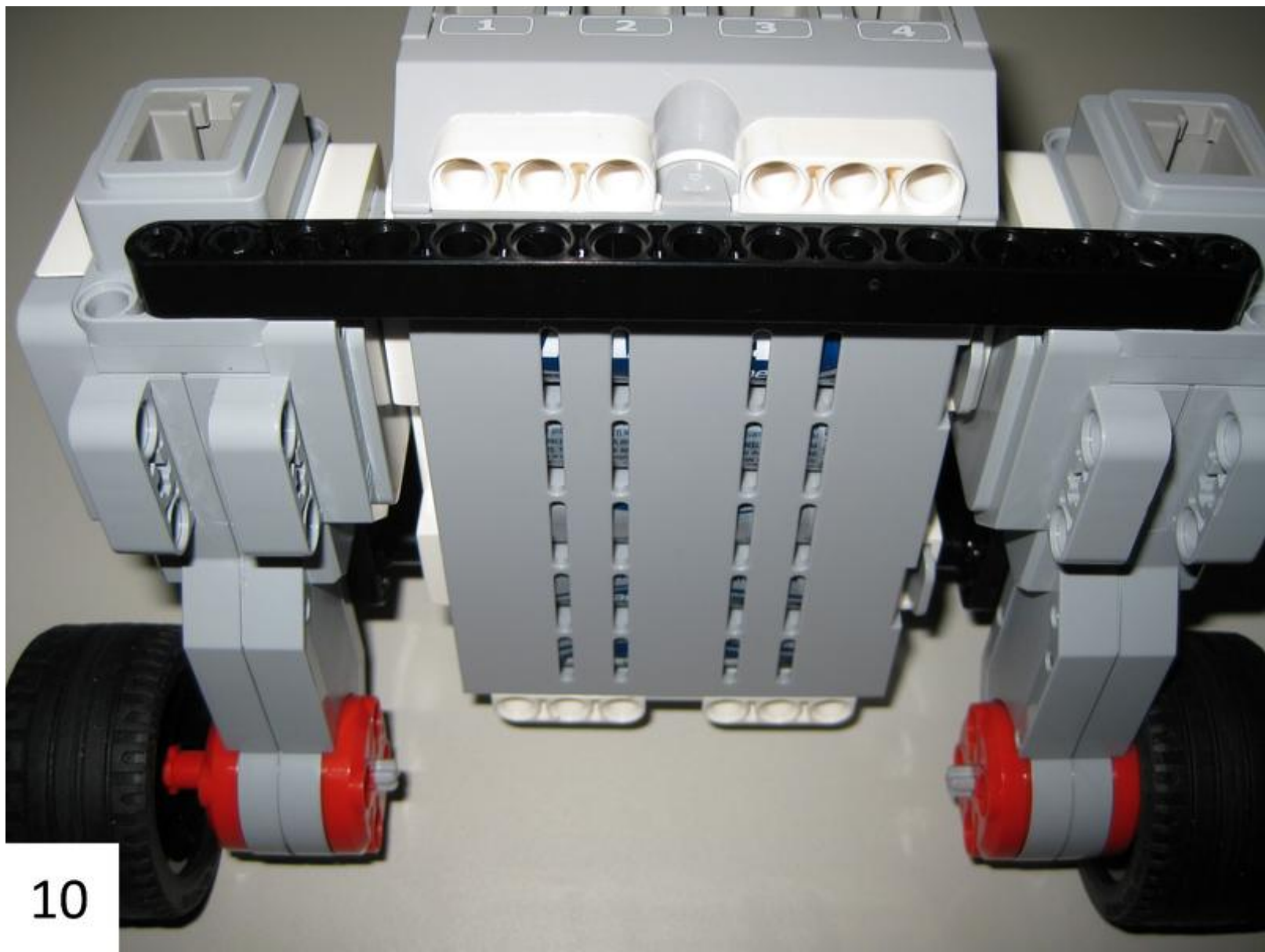
8

Here's a better look at how they connect:



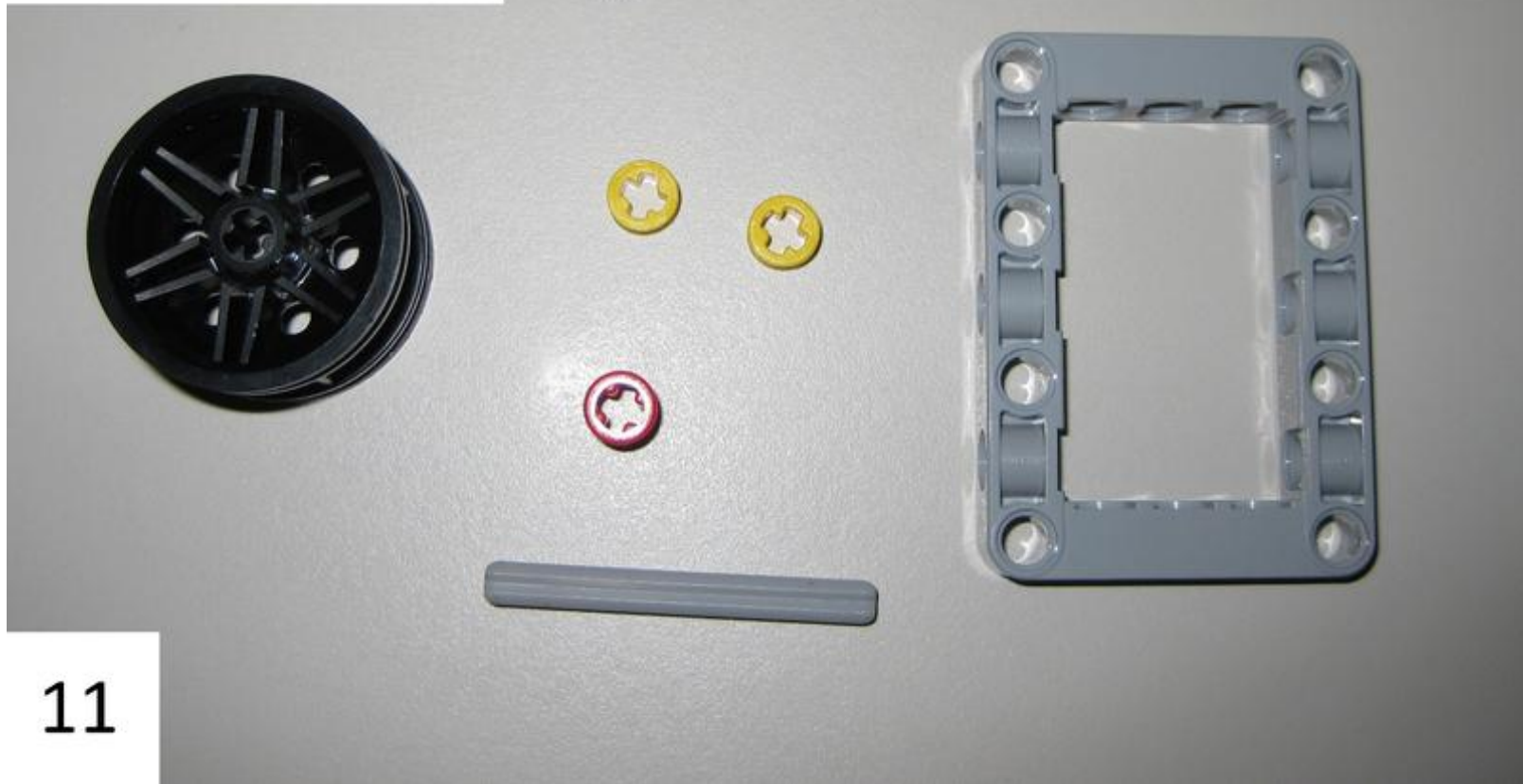


9



10

NOTE: If you cannot get the spacers to work in this step, you can probably eliminate them. The outcome will be a little less stable on the wheel, but it should work fine.



11

You will have to balance these parts inside the wheel to make the next step work. If you can't do it, eliminate the yellow spacers.



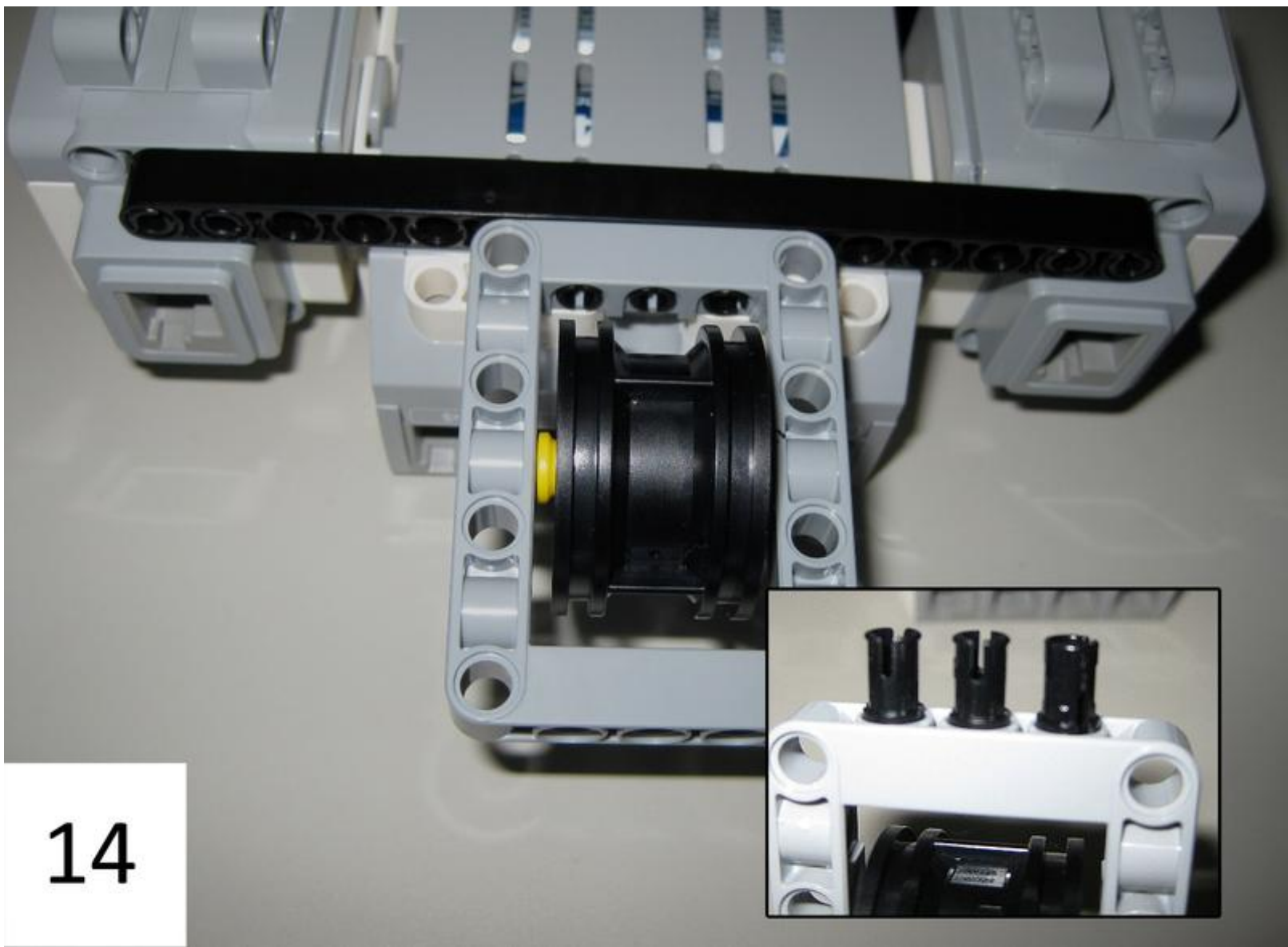
12

Slide the axle through the wheel and the spacers, if you can. You will probably need at least the red spacer to help control the stability of the wheel.



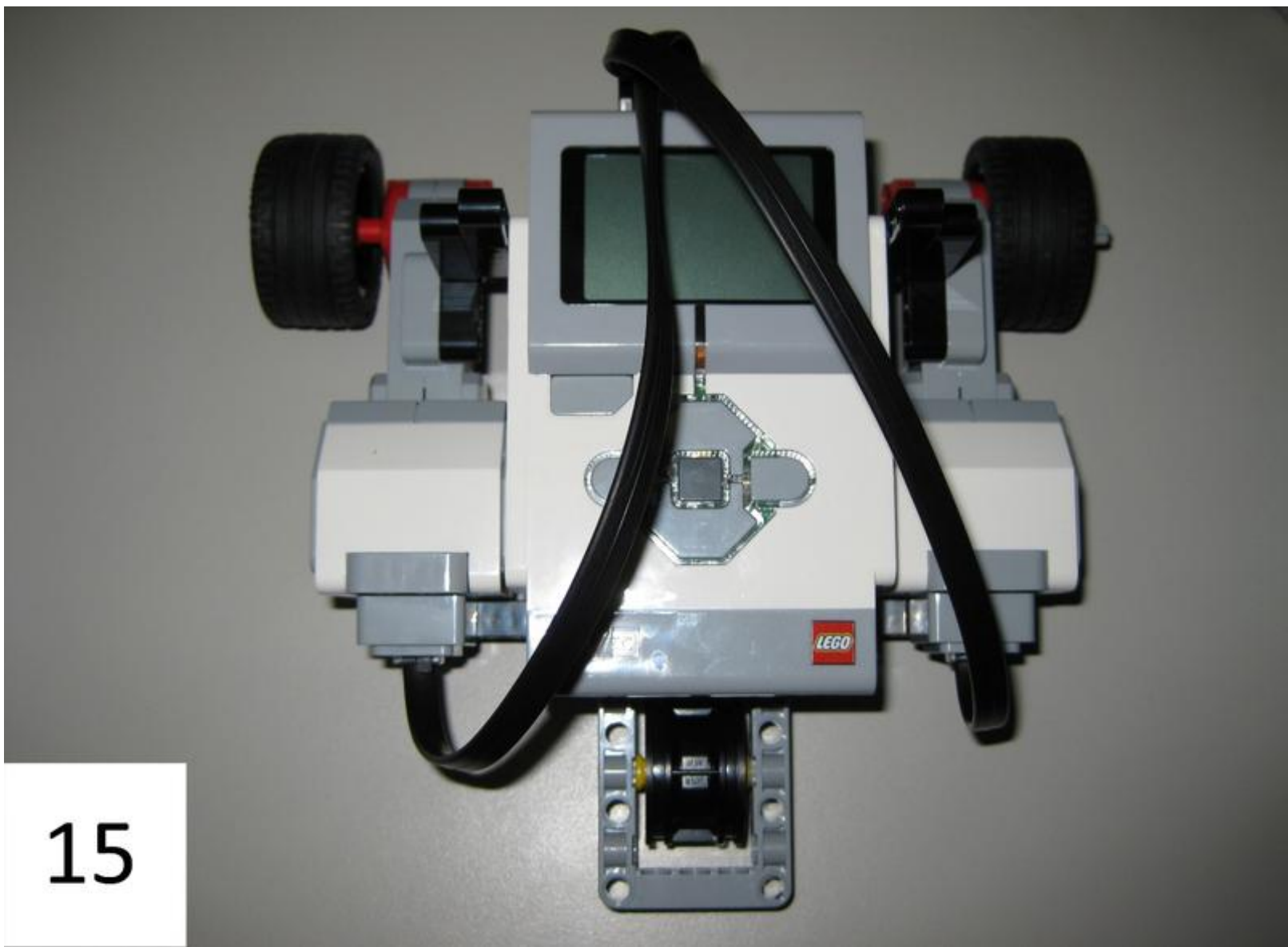
13

14



For step 15, try to use the two shortest cables if you can. It keeps the robot more compact. If you can't, use the two medium cables. You will criss-cross them across the top of the robot and connect the motors to ports B and C on the brick. When you look at the brick "right-side" up with the word "EV3" upright at the bottom, the left motor will connect to port C and the right motor to port B.

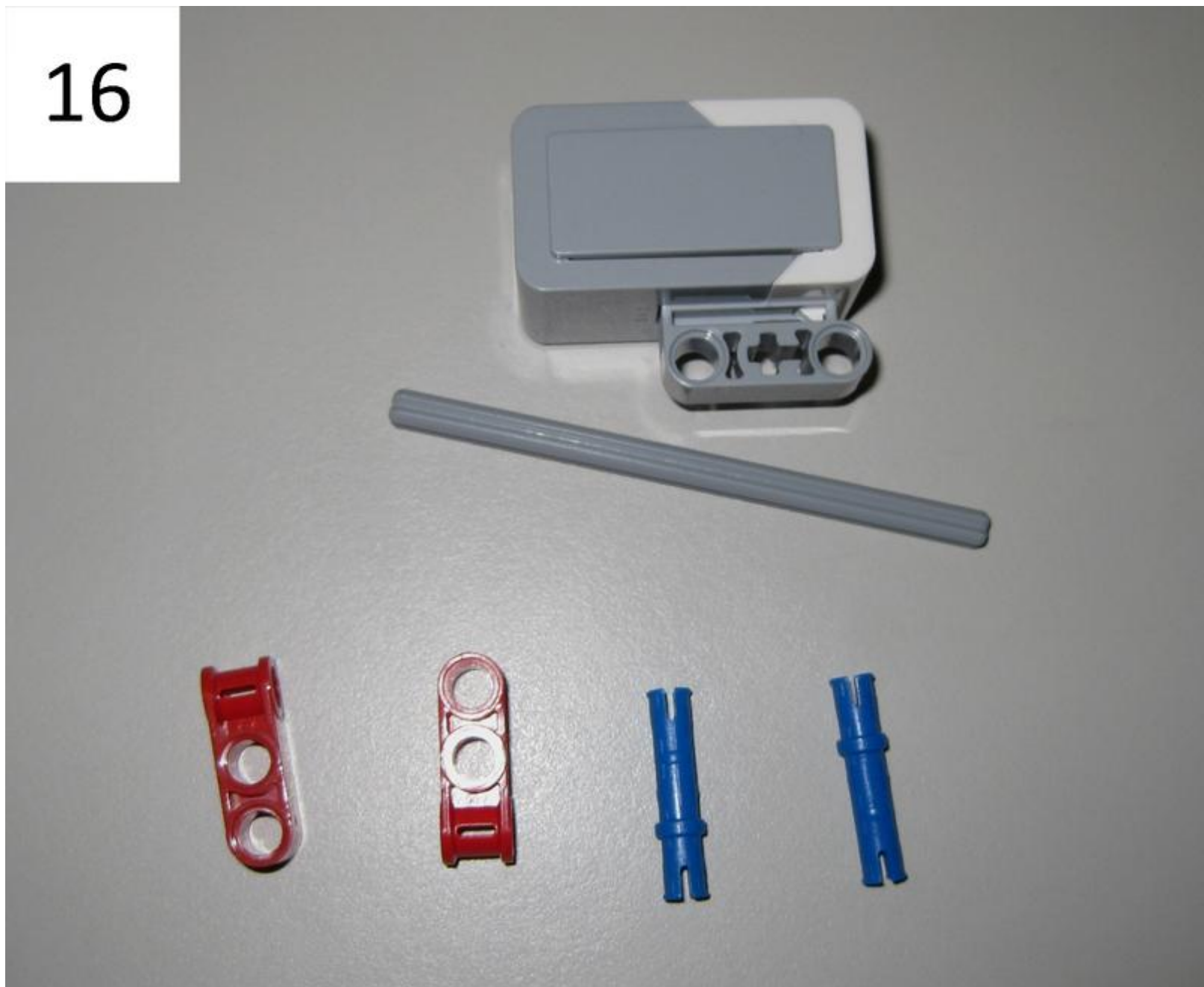




15

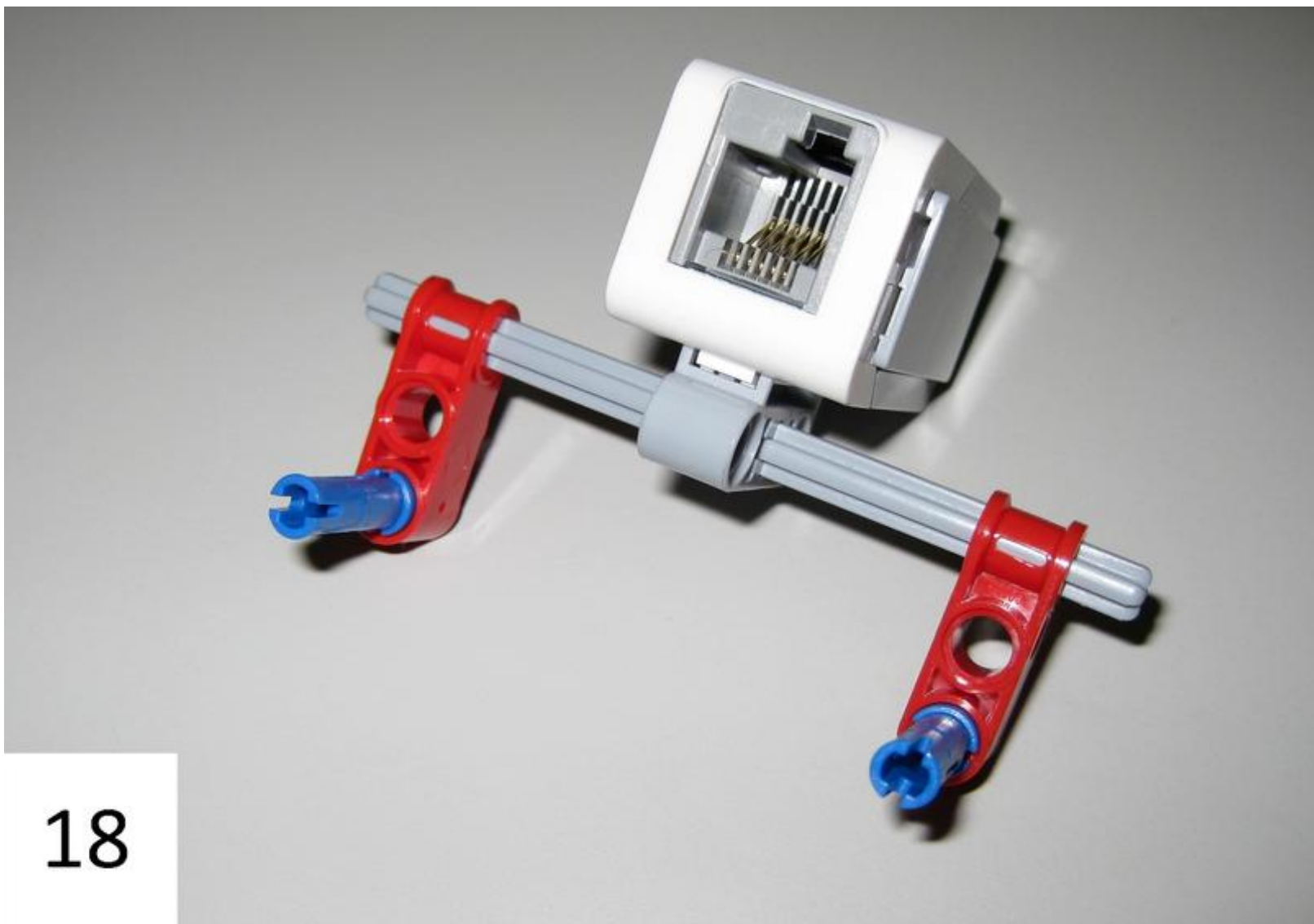
This is the end of the Basic 5-Minute Bot modified for EV3. Our class will be adding a sensor to make our robot follow a line. The following steps are for the light sensor attachment.

16



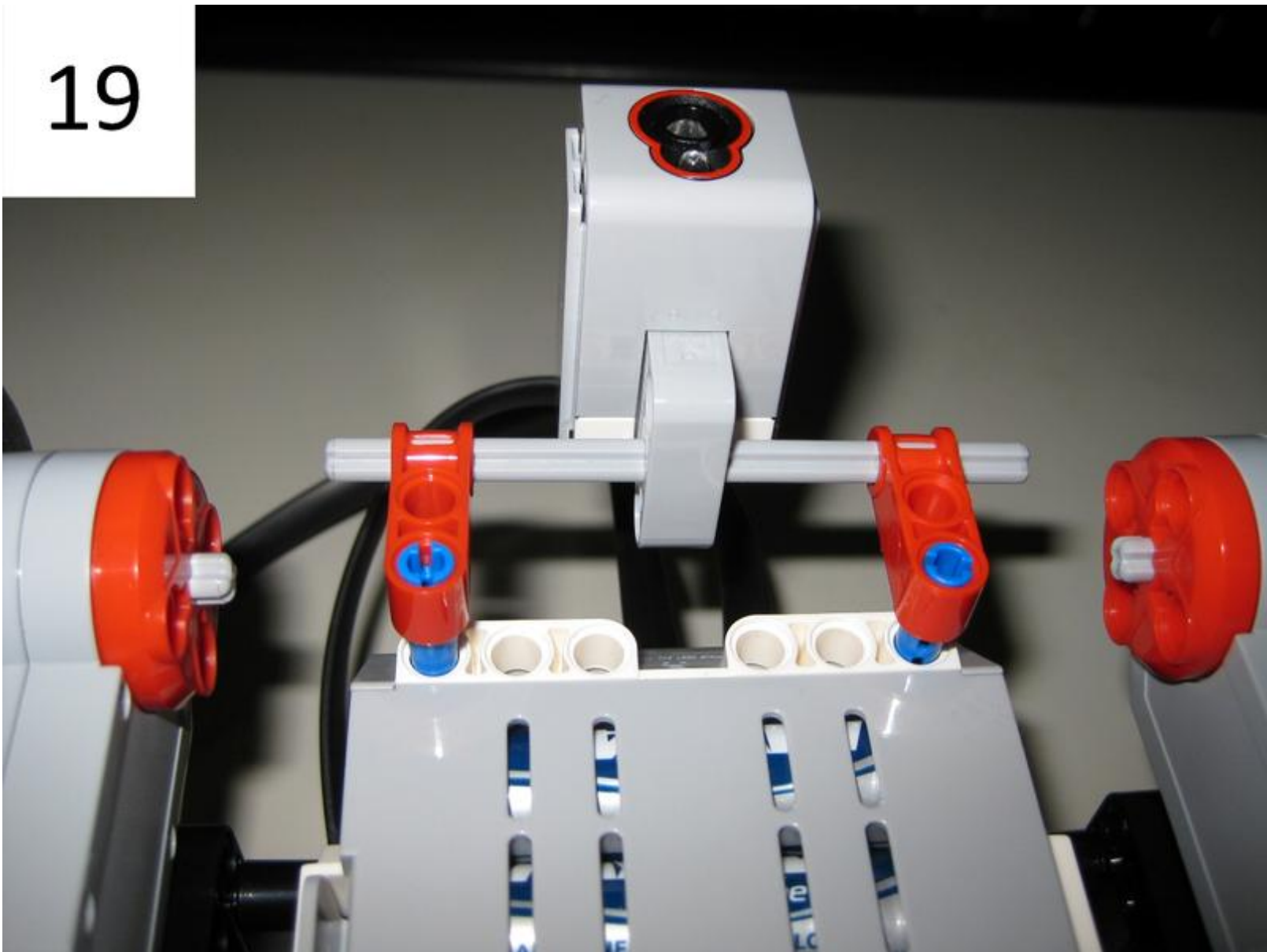


17

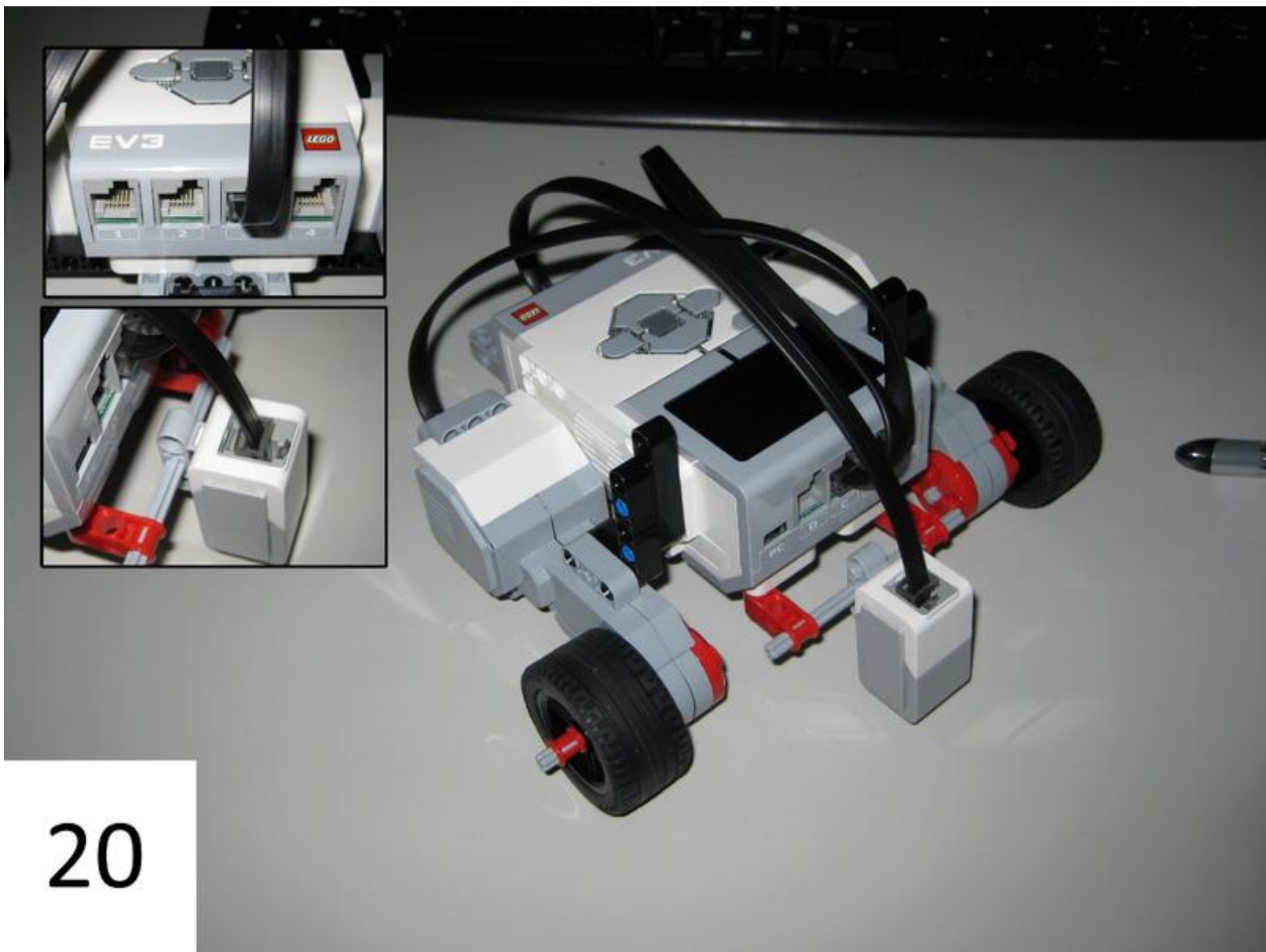


18

19



Use the shortest cable possible to connect the light sensor to Port 3 on the brick.



20

Make sure that all cables are secure and aren't rubbing the wheels, table, etc. The robot should be stable and compact. Check for any loose parts before beginning to program!

