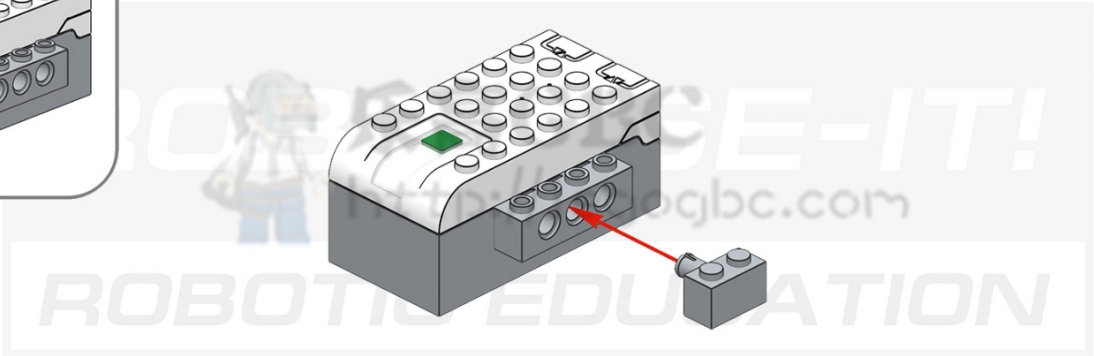
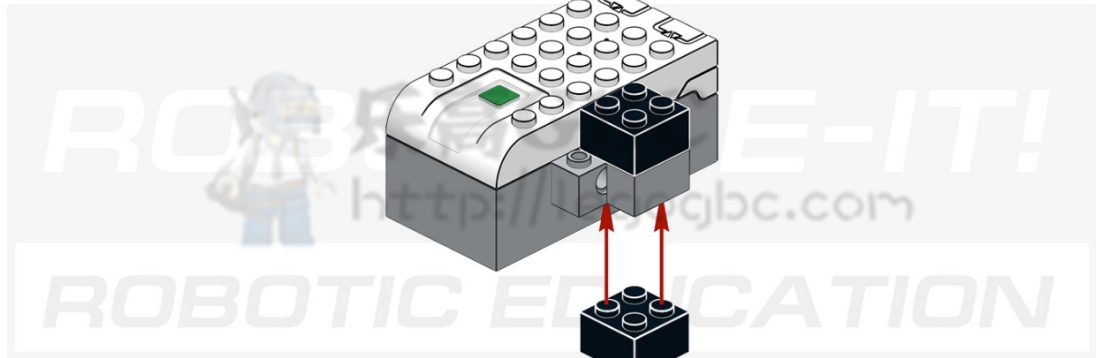


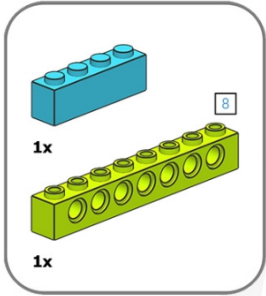
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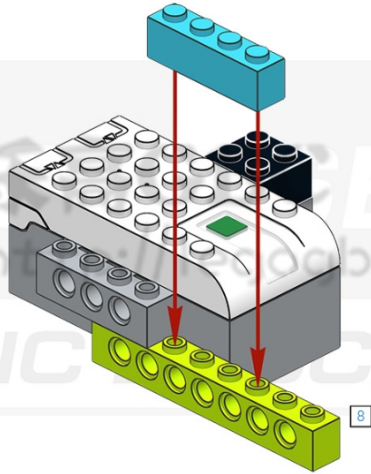


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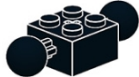
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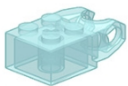
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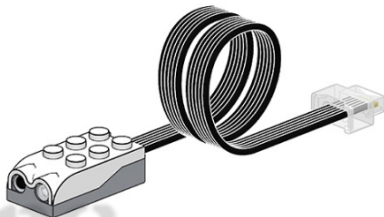
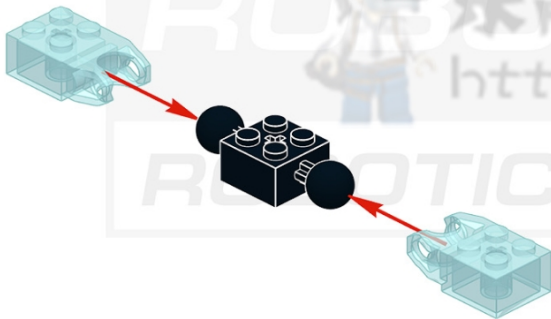


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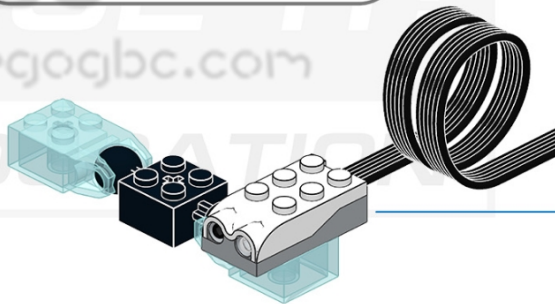
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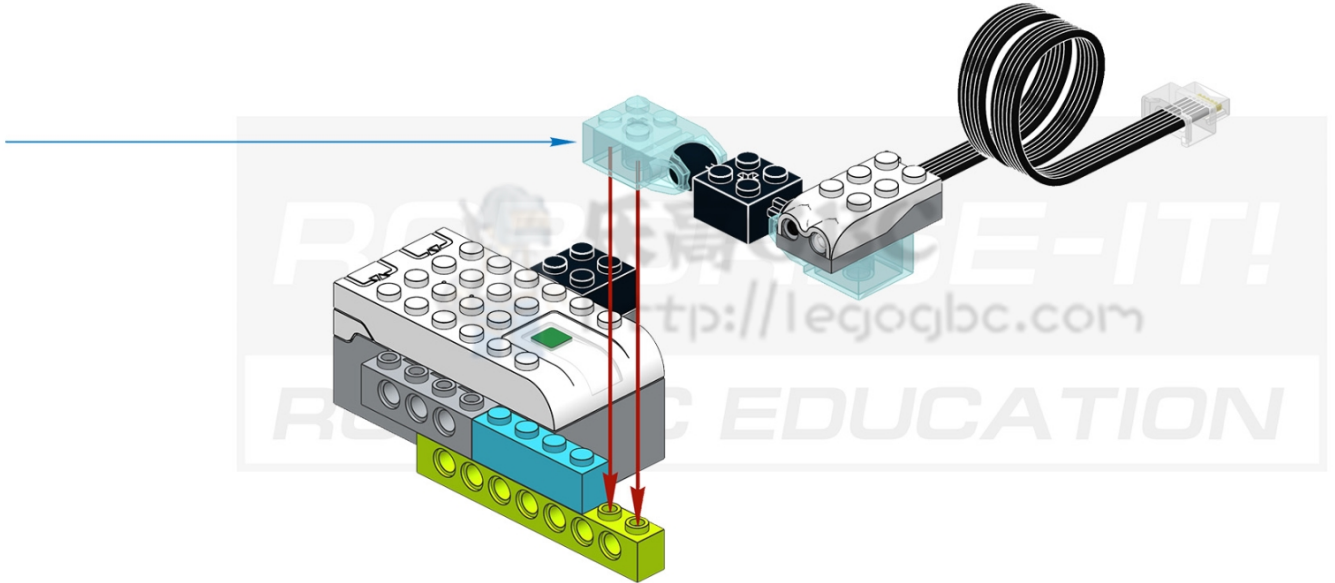


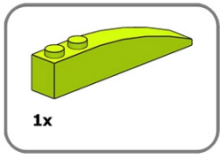
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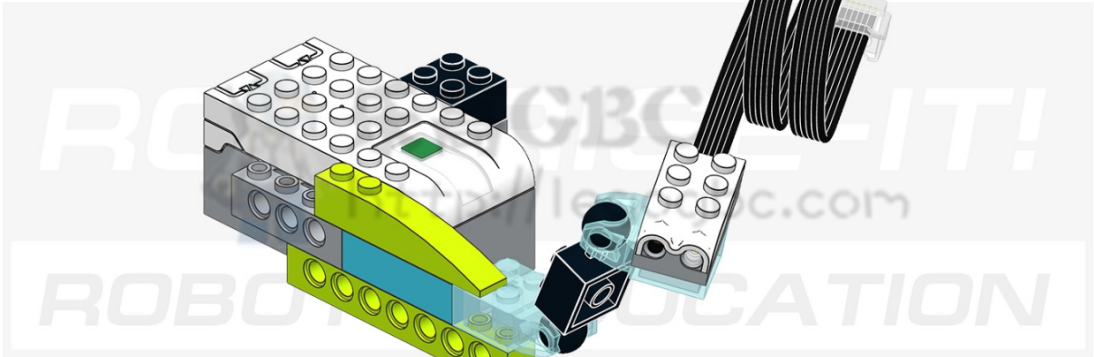


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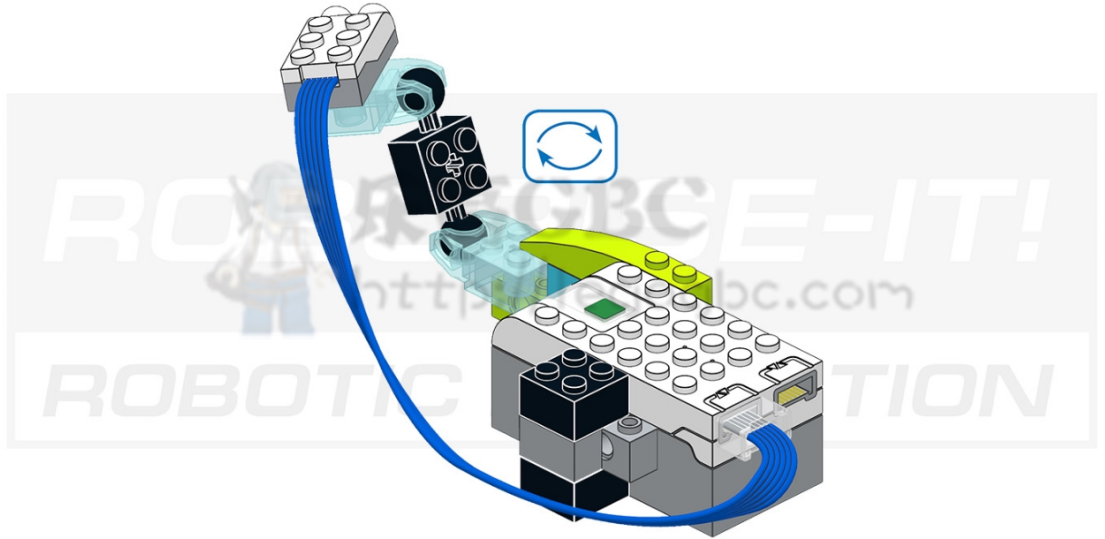


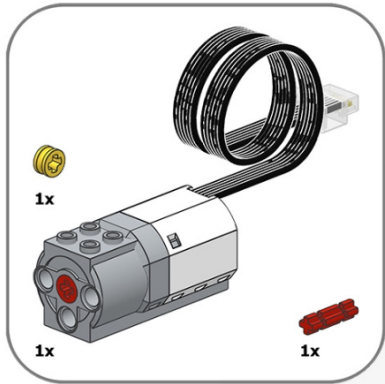


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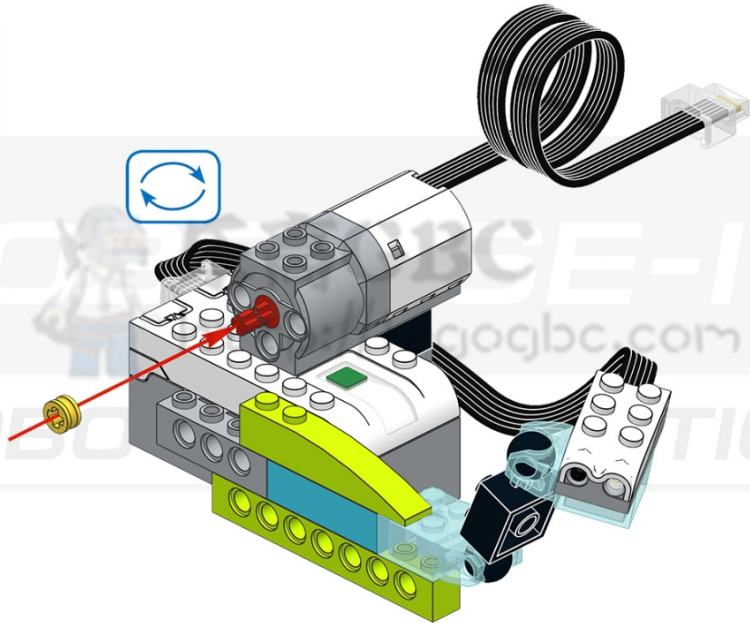


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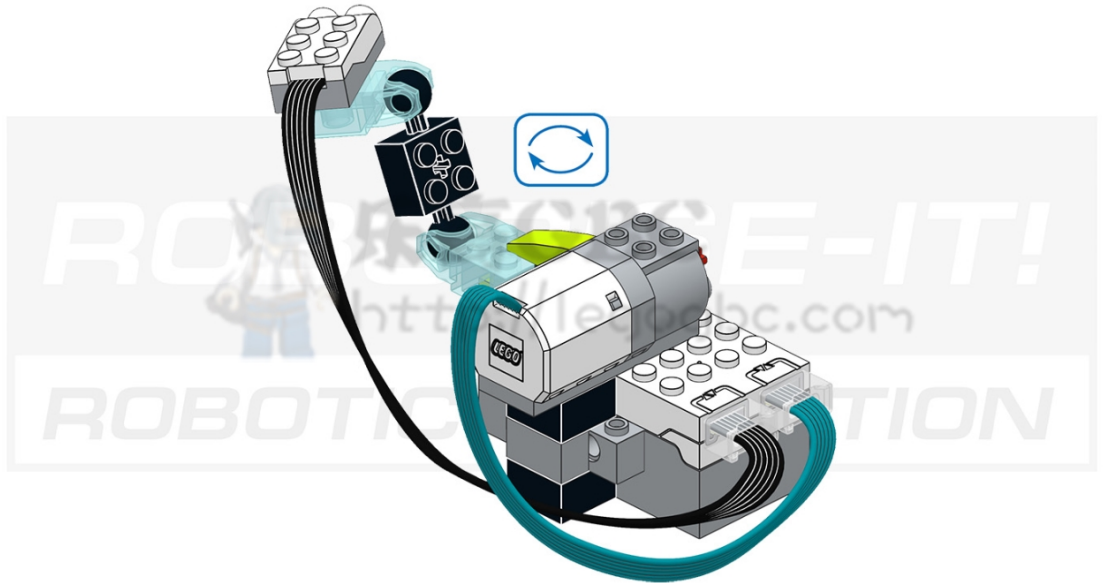


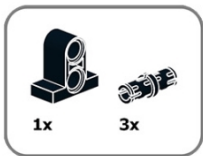


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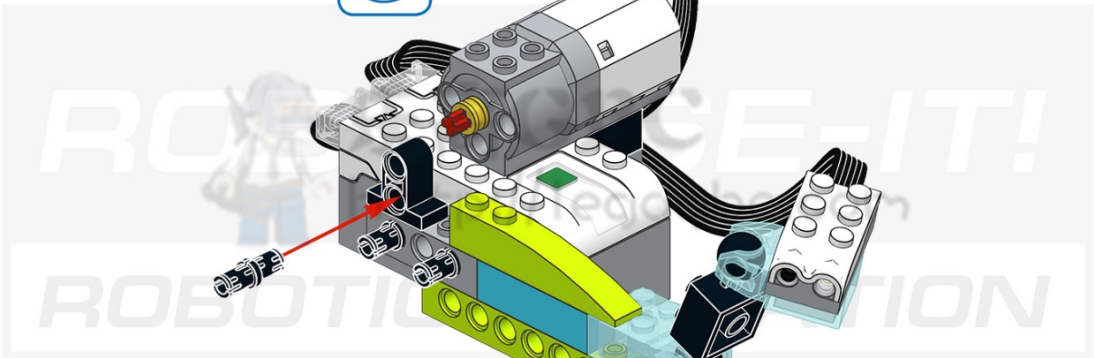


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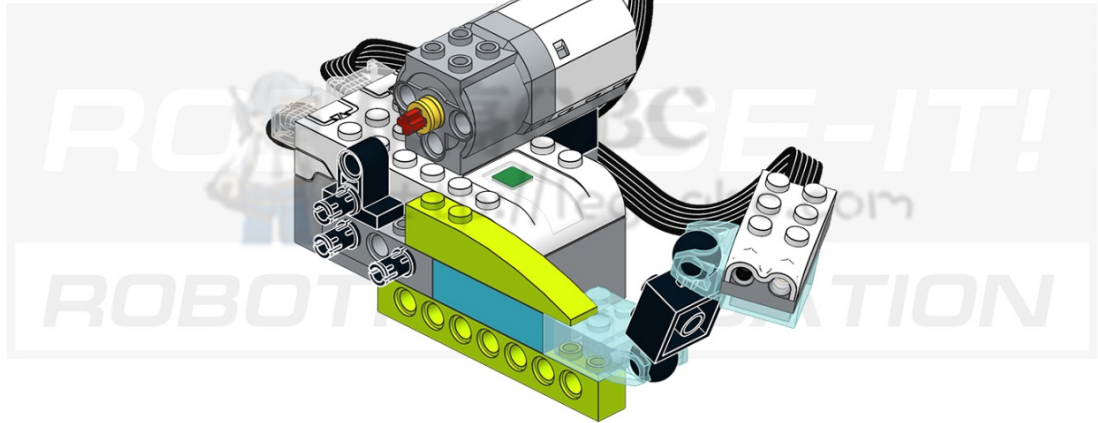


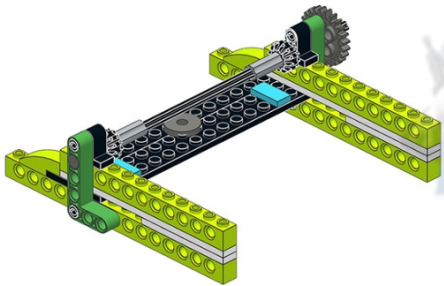
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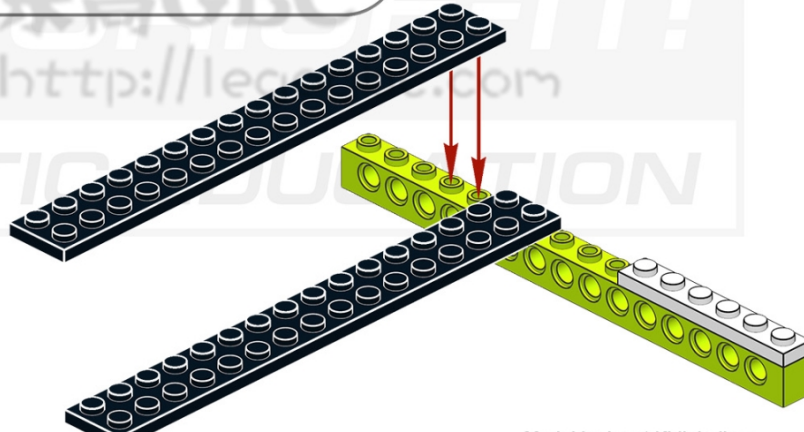
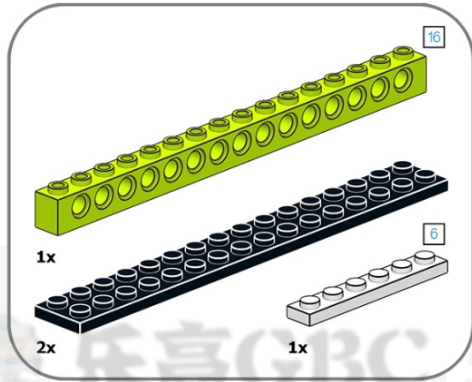
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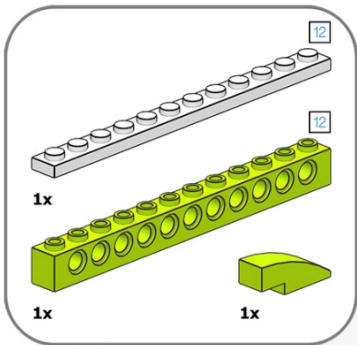
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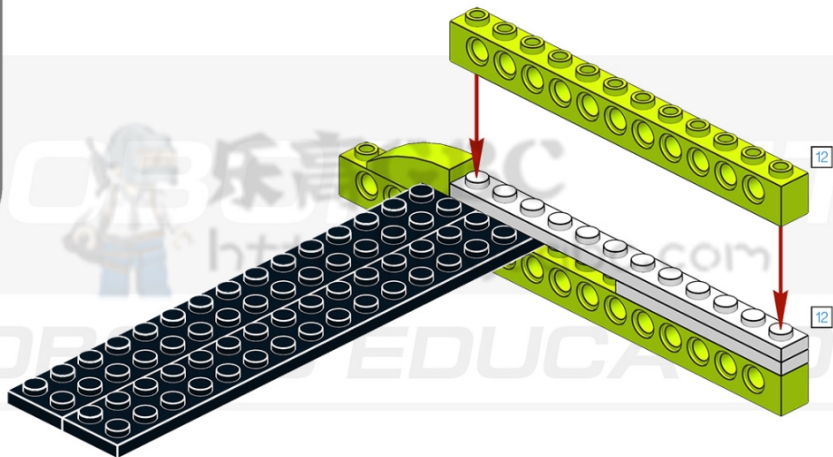


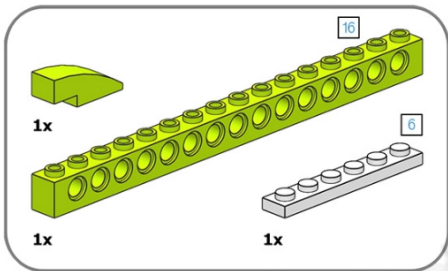
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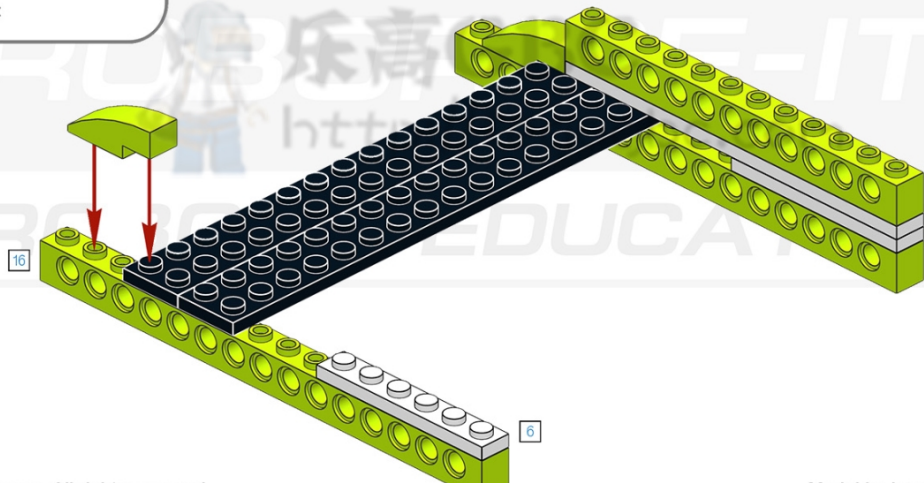


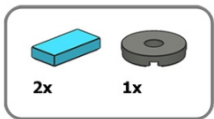
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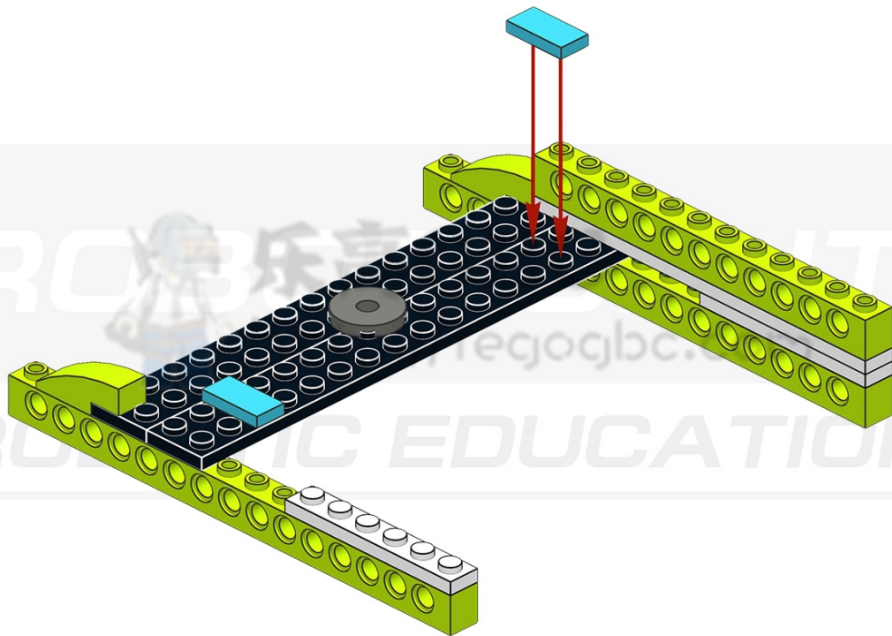


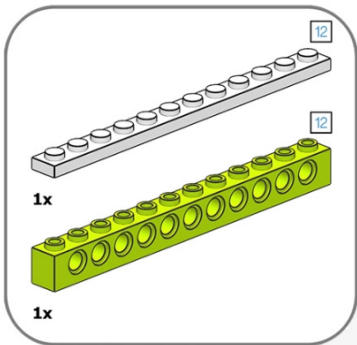
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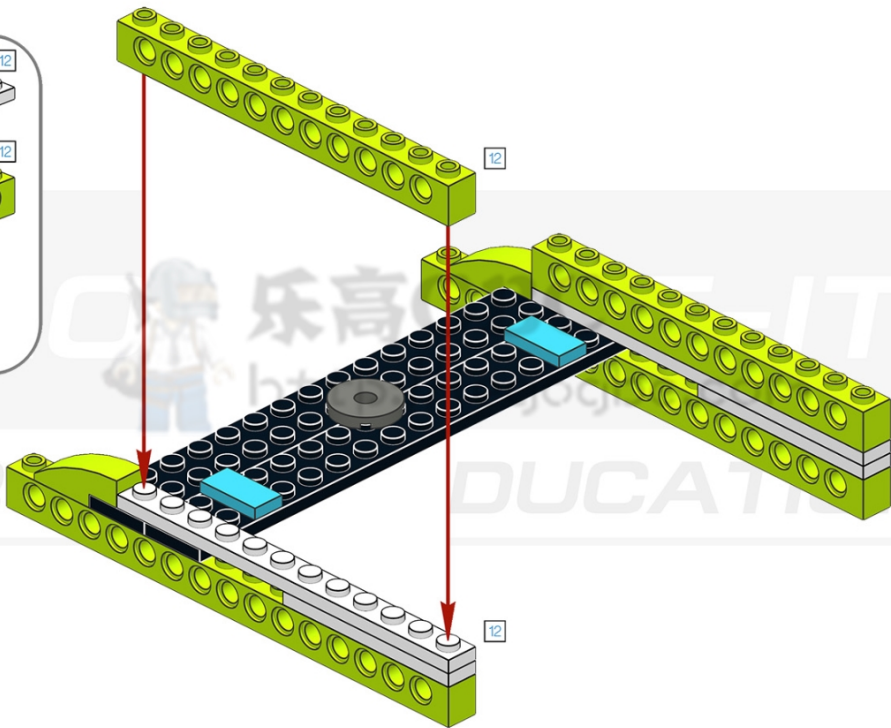


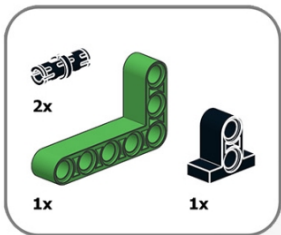
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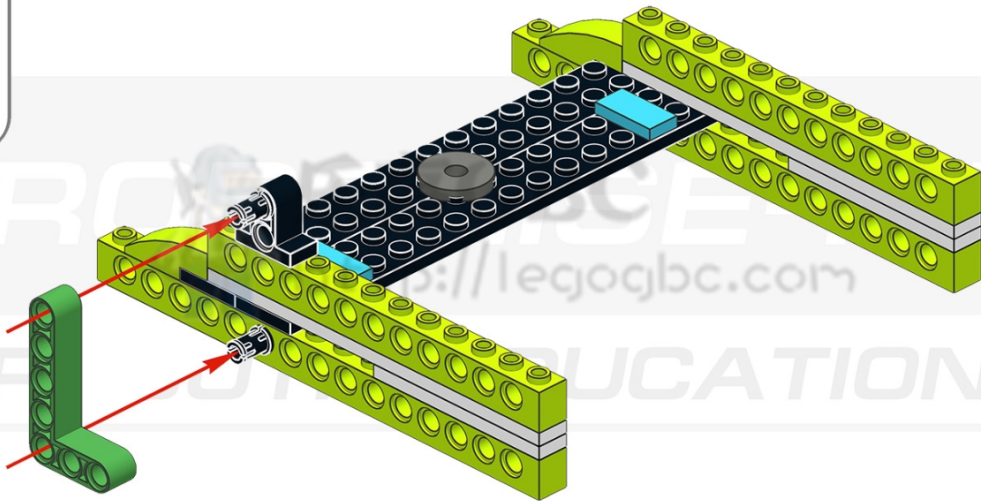


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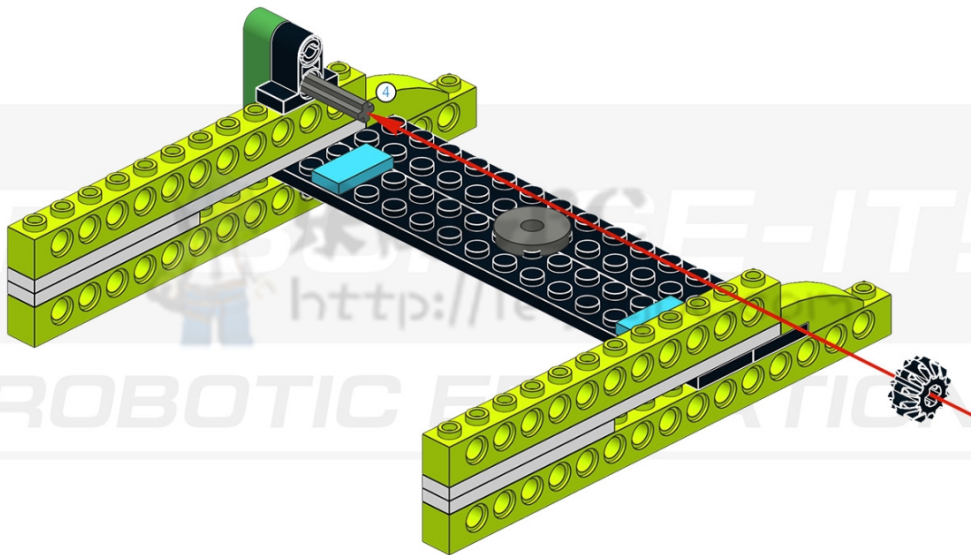


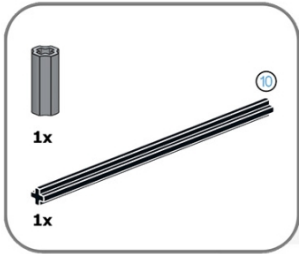
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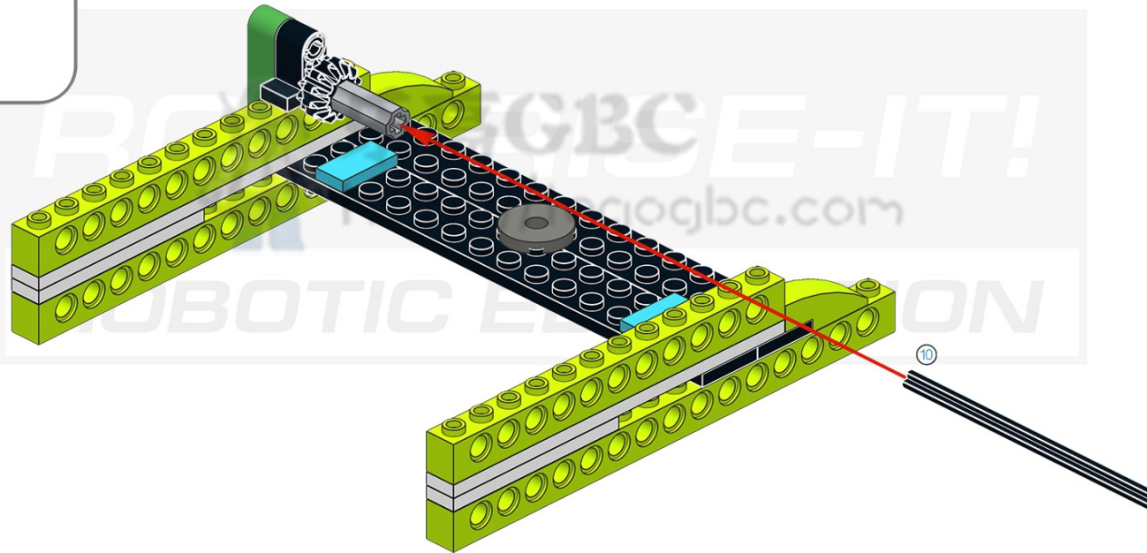


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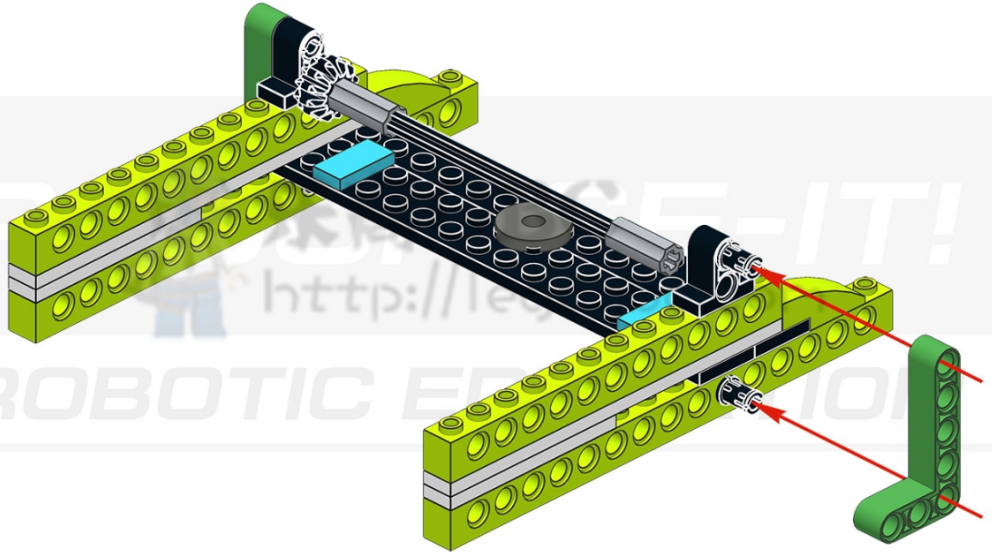


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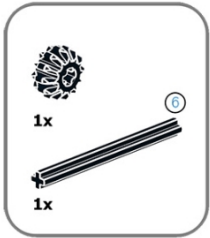




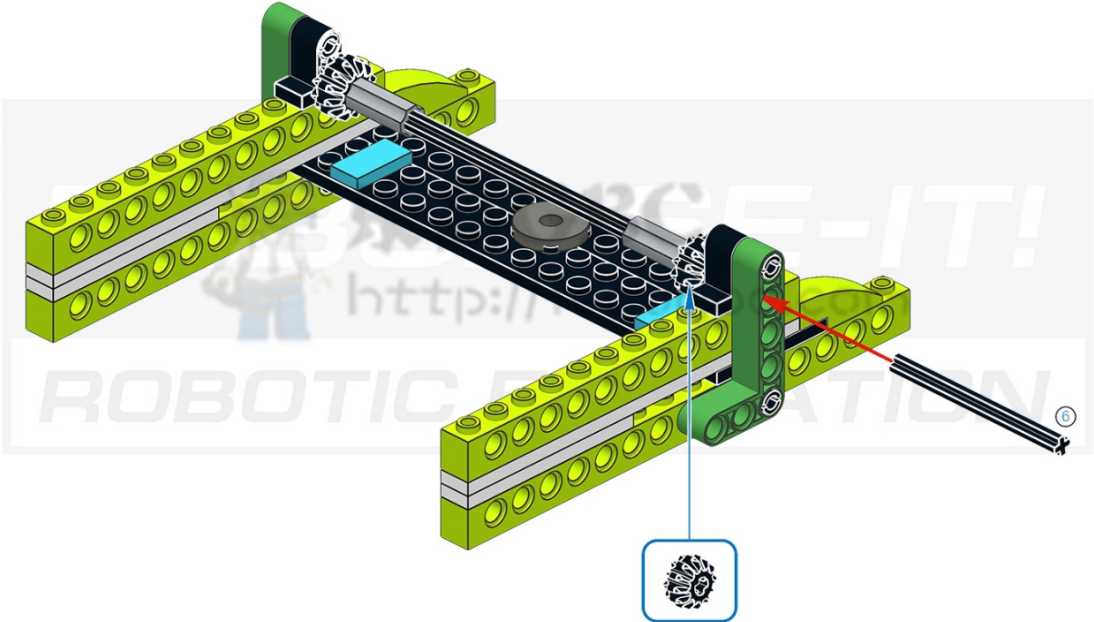
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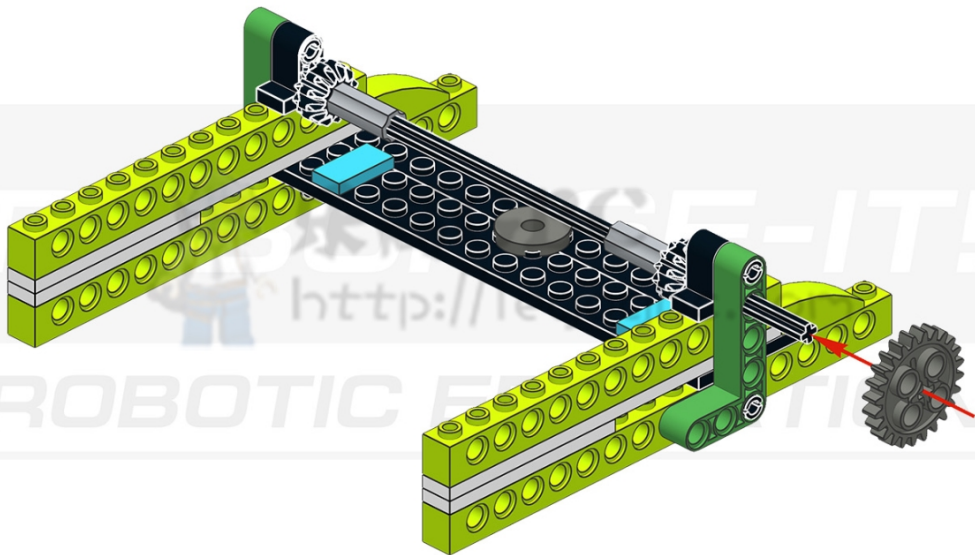


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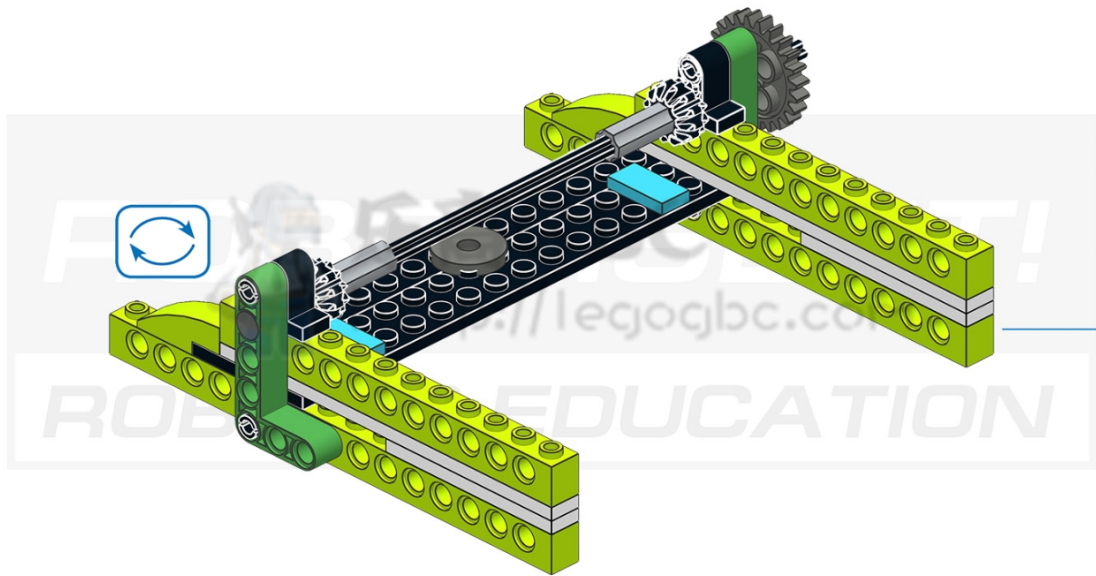




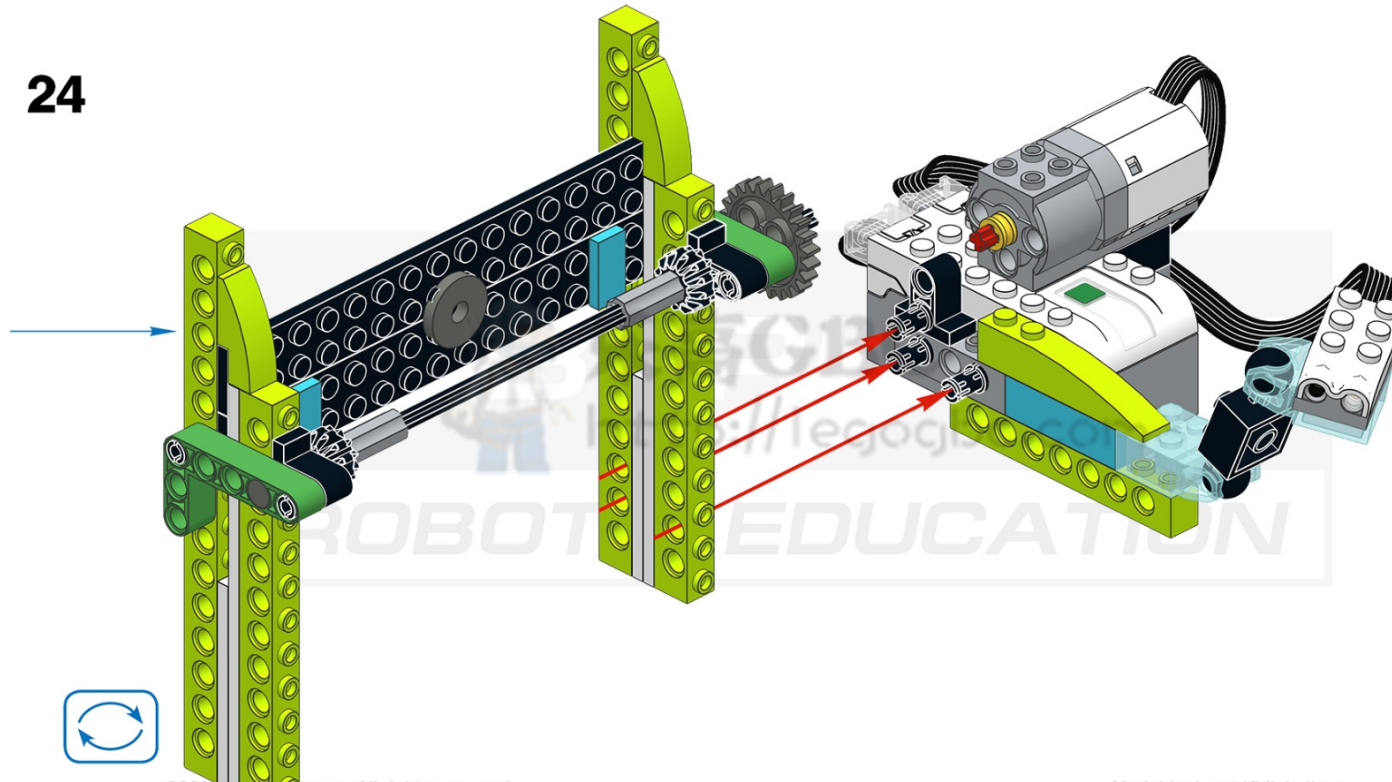
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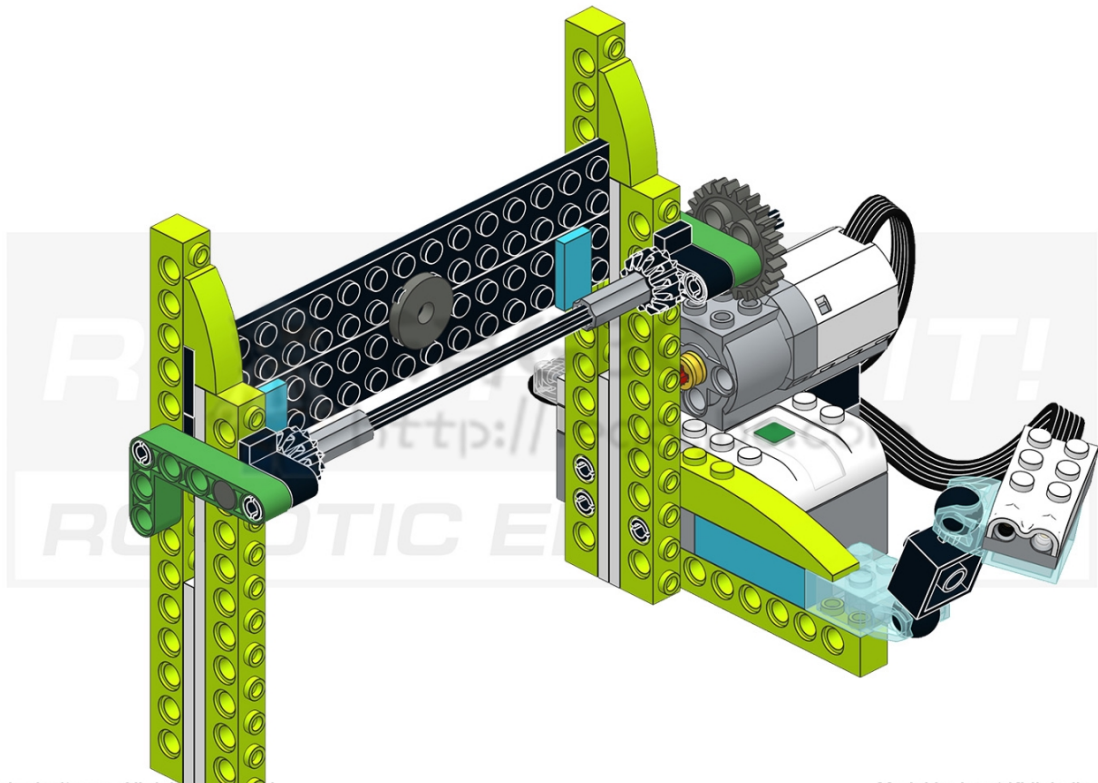
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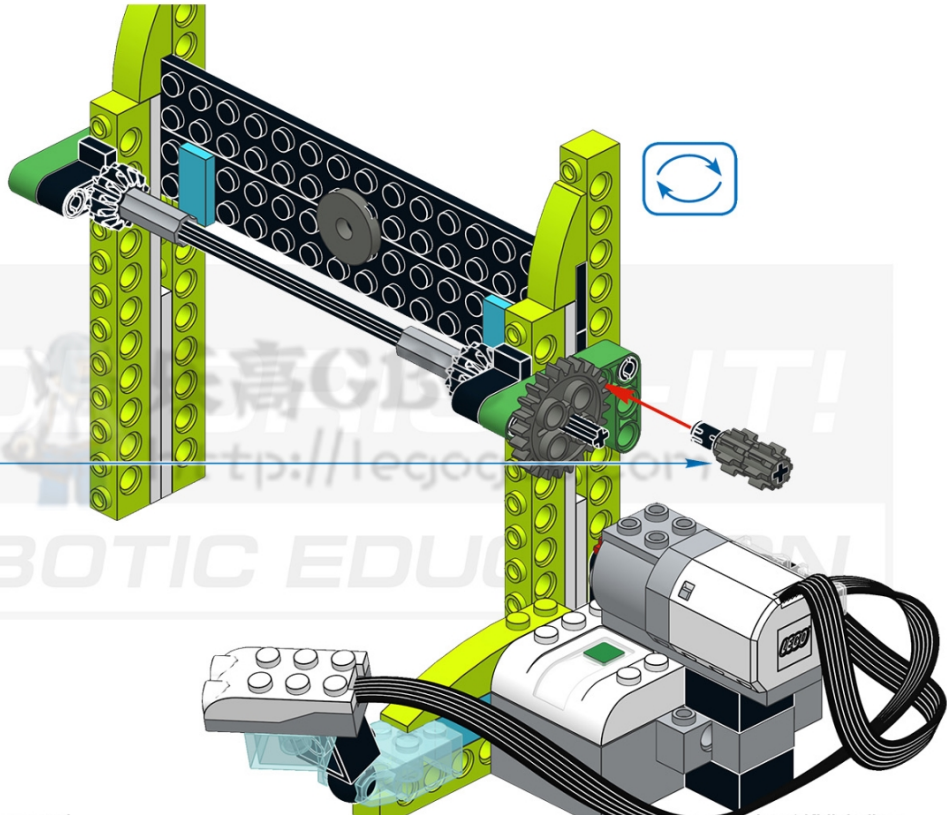
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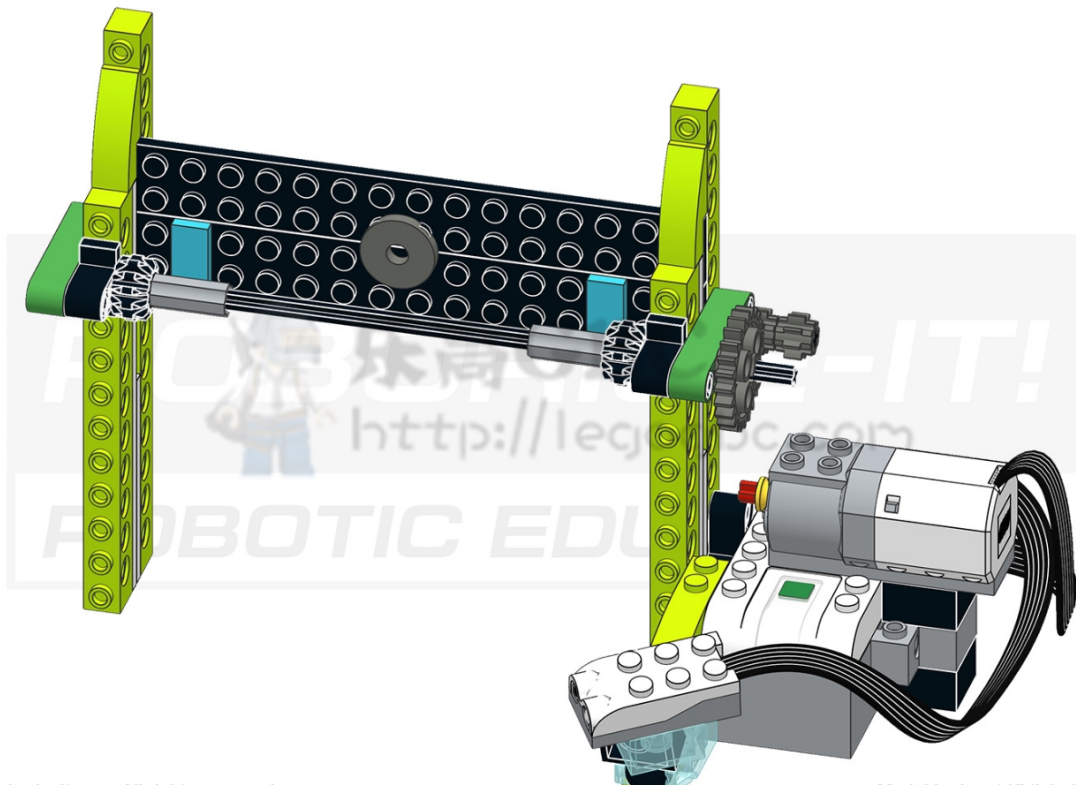
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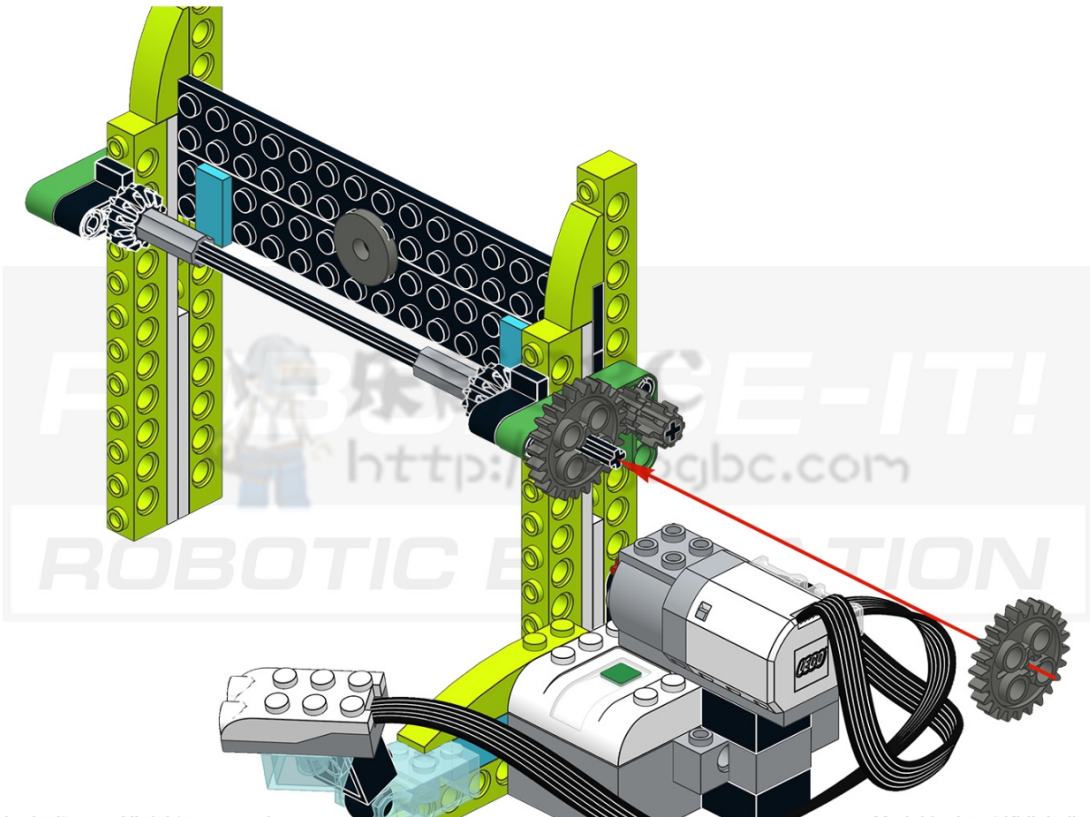


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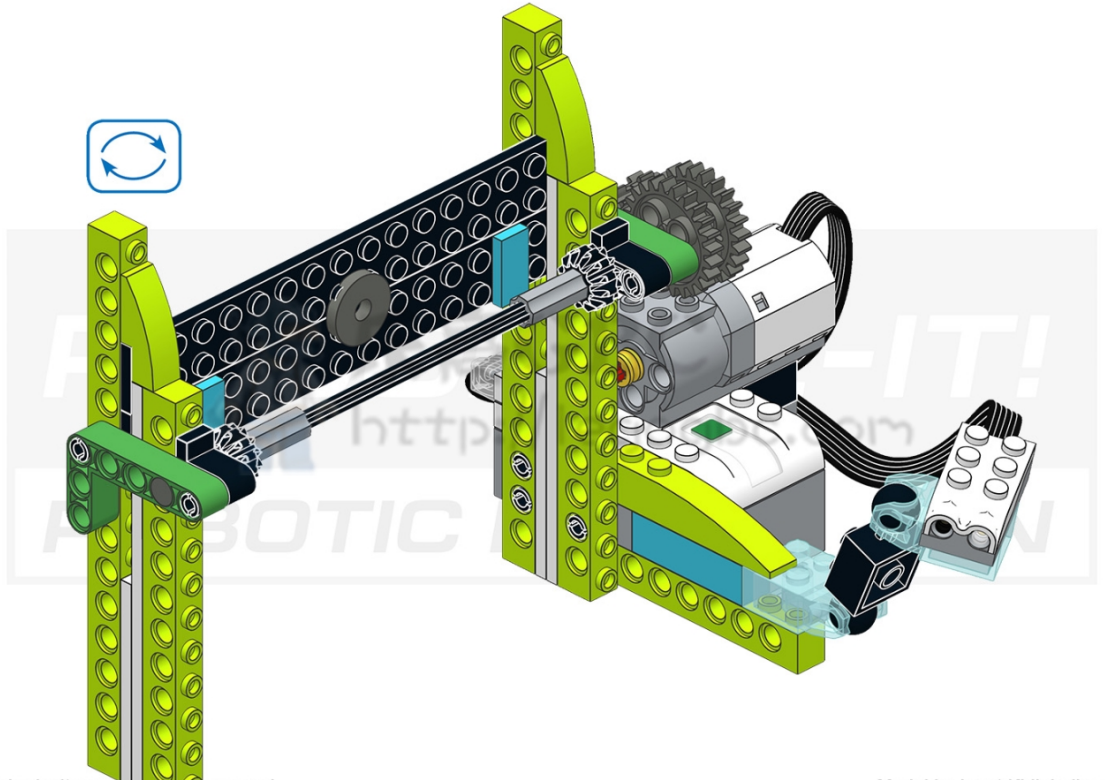


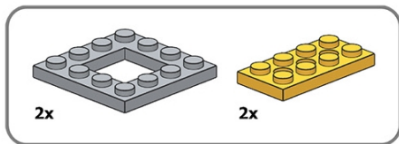
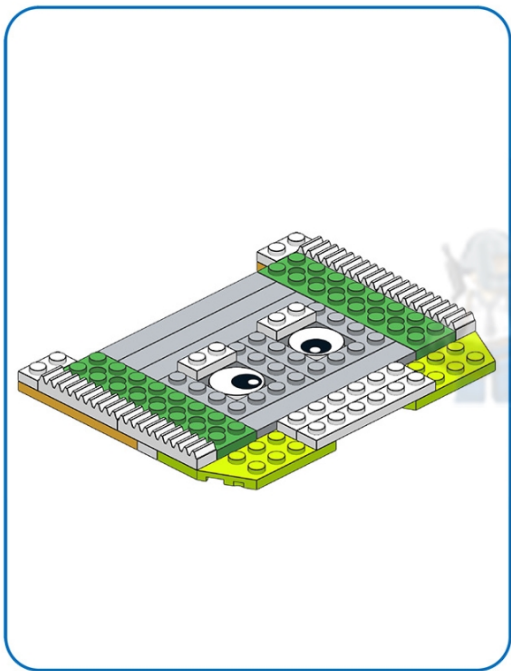


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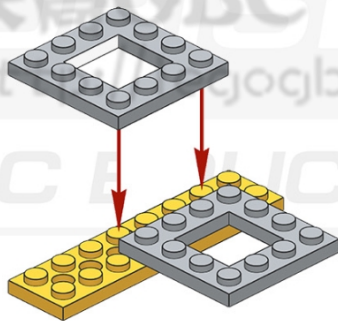


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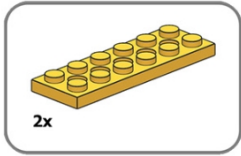




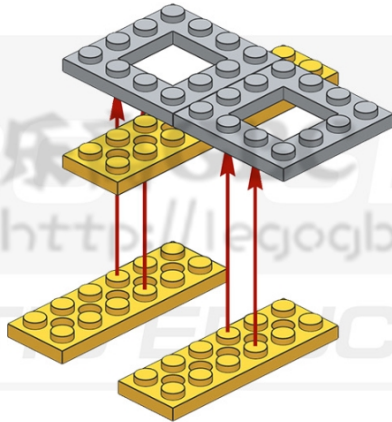
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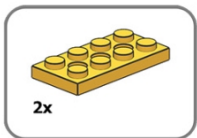


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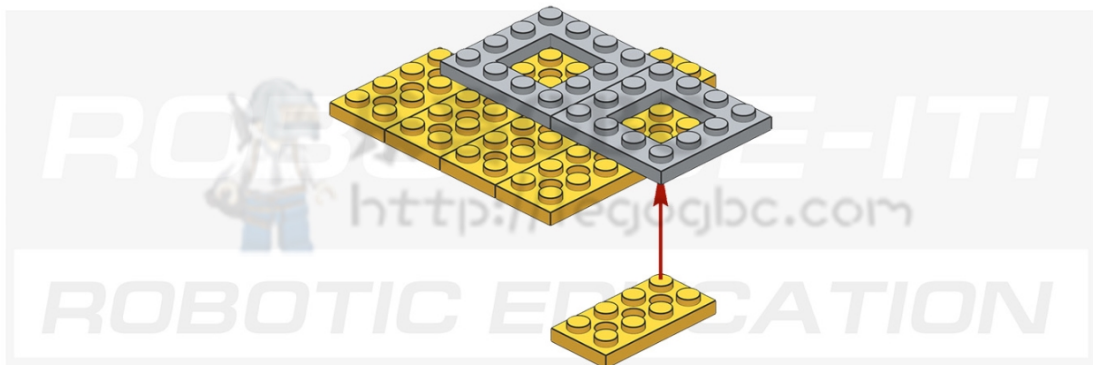


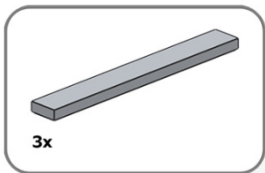
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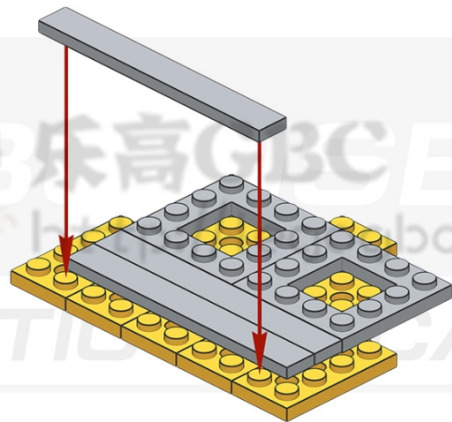


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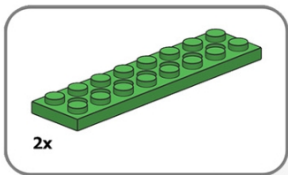




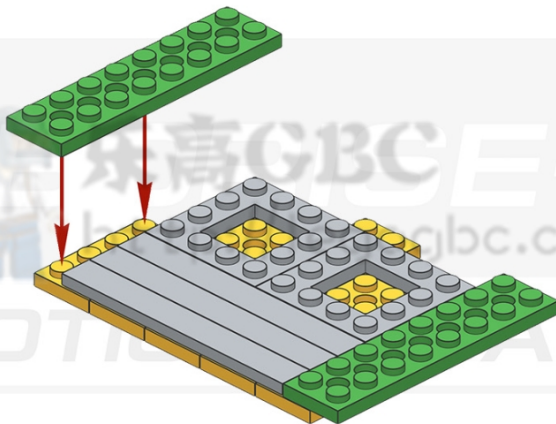
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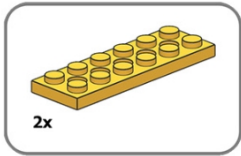
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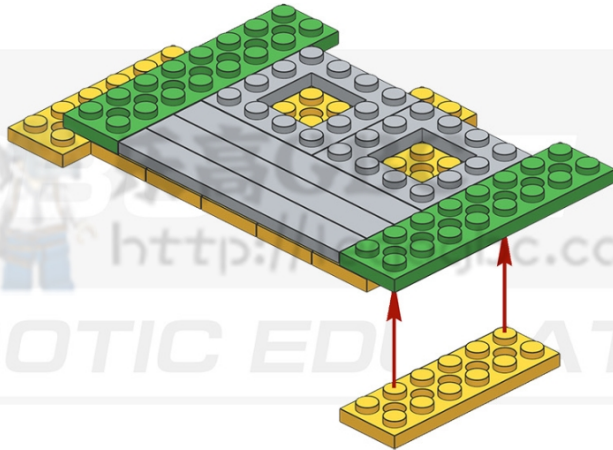
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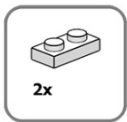
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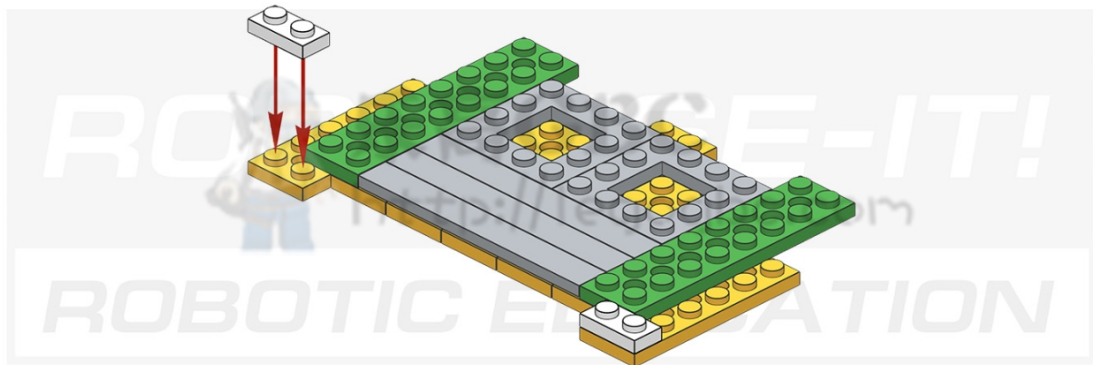
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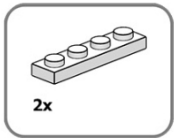
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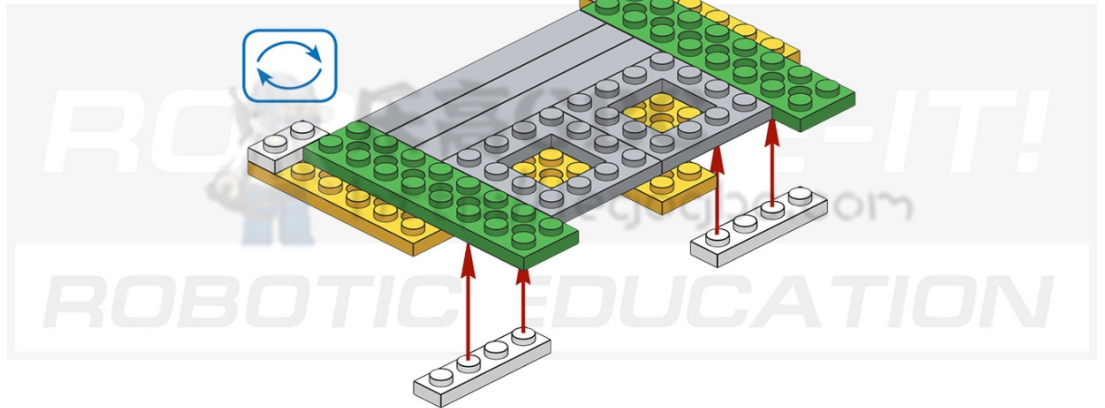


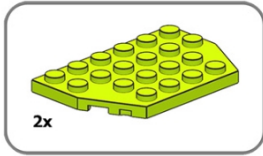
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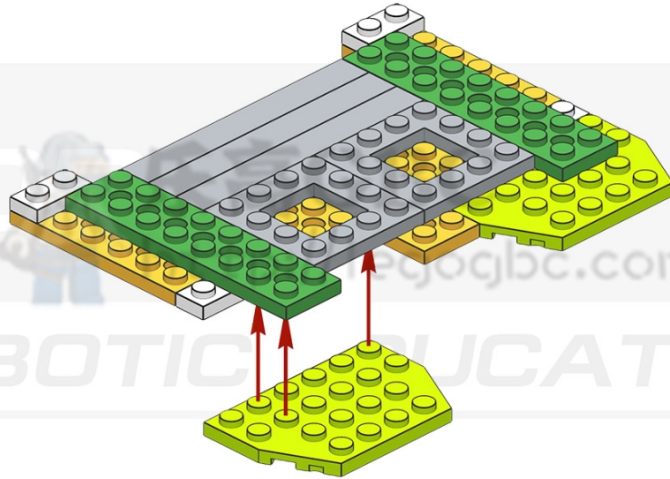


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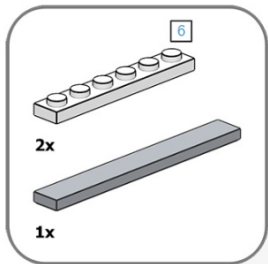
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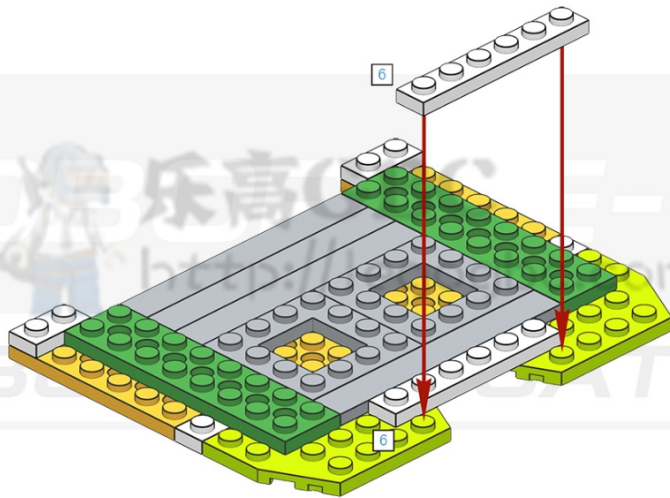
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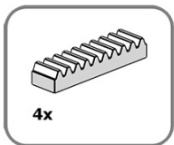
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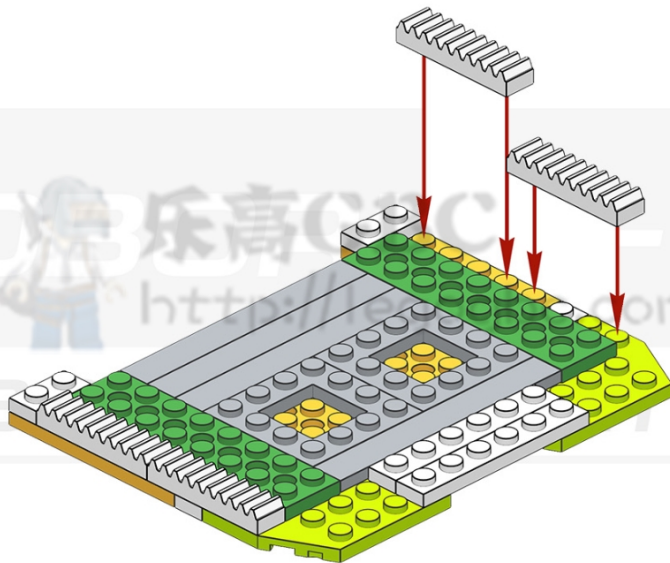


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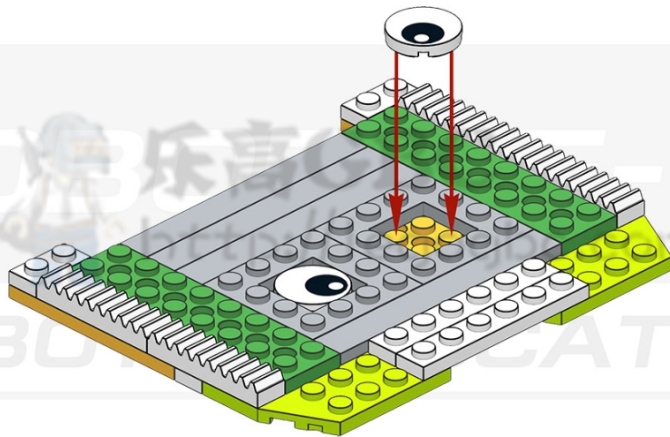


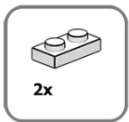
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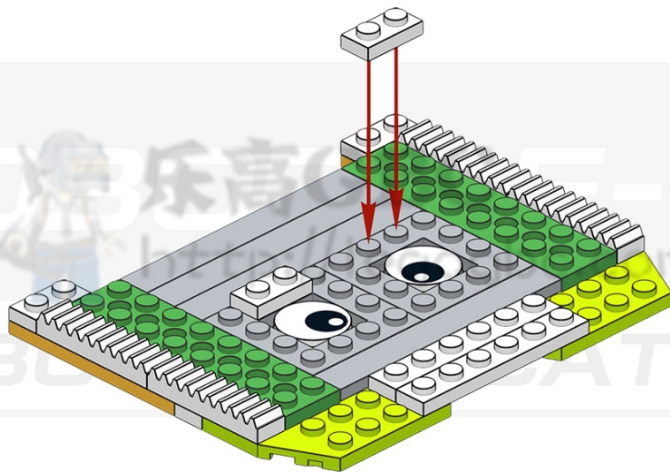


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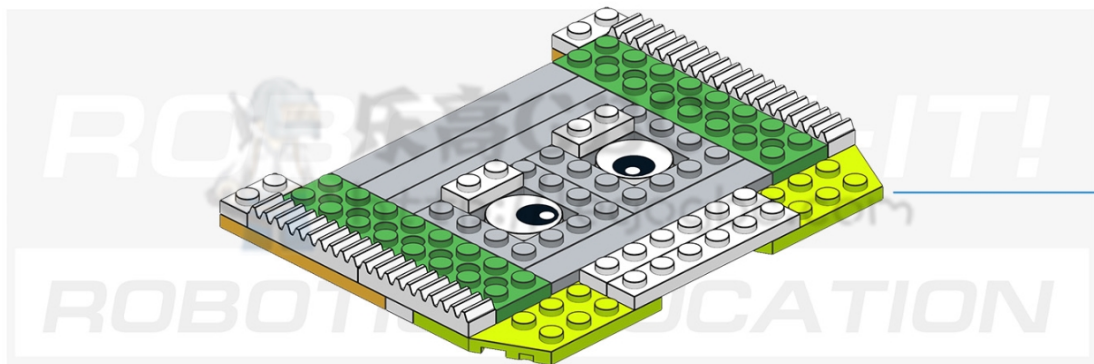


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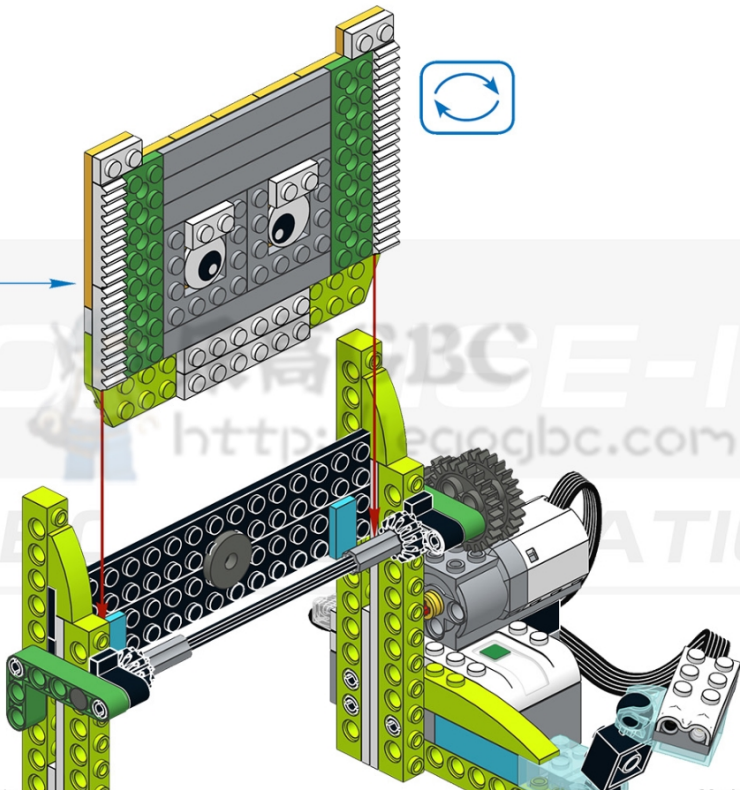


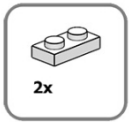
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ROBO-IT! ROBO-IT!
ROBO-IT! ROBO-IT!

43

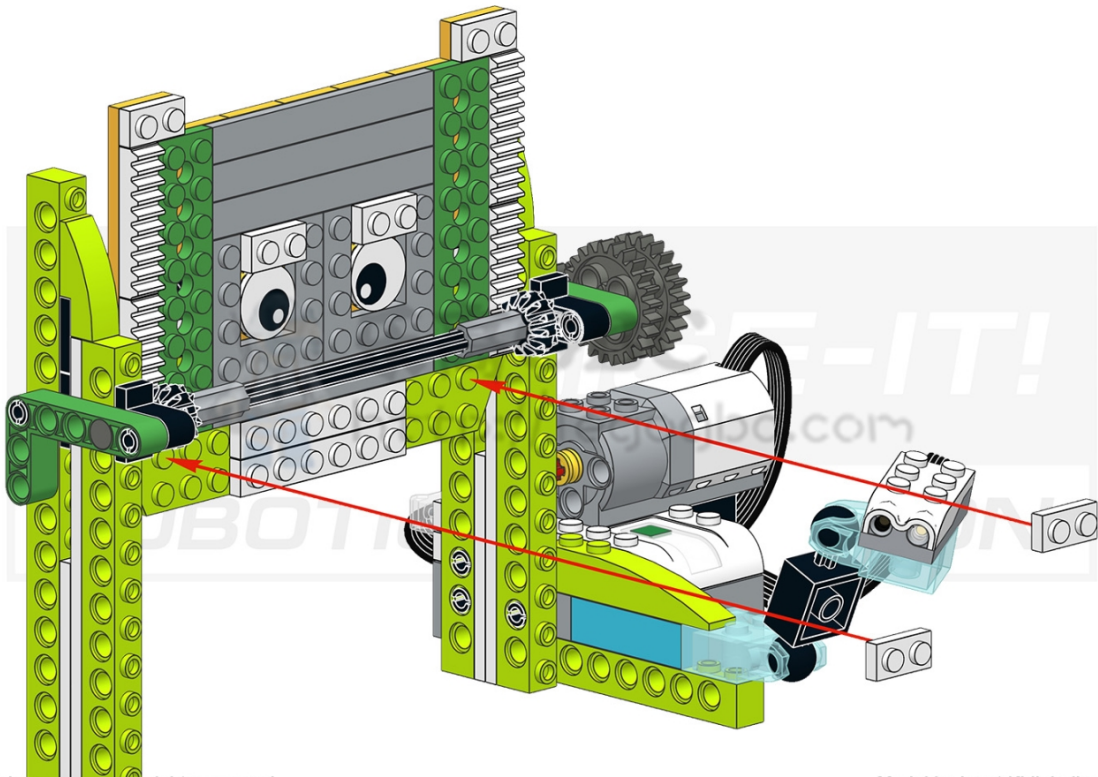


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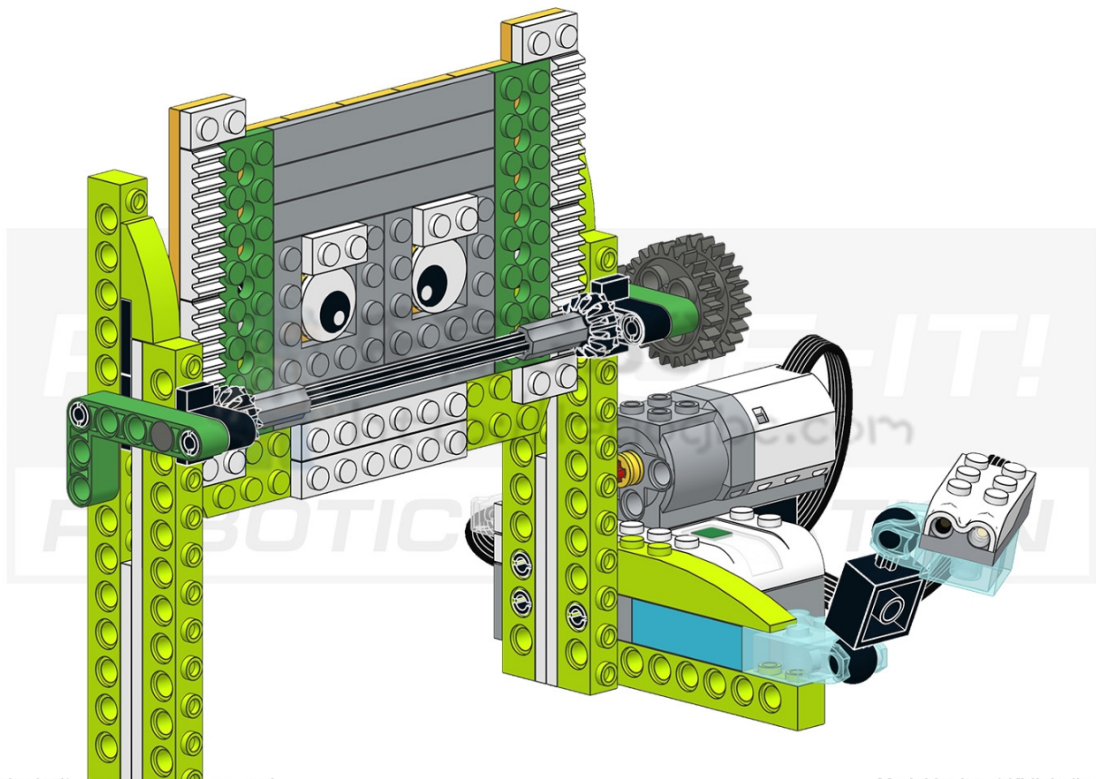




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46





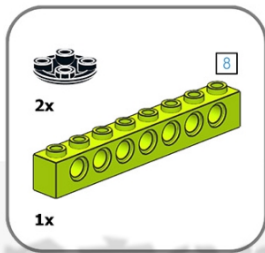
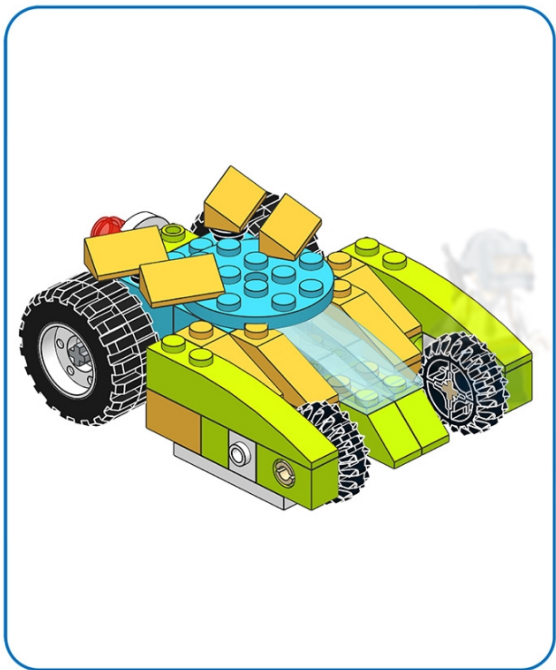
Car *



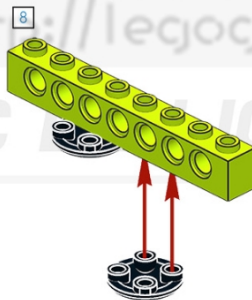
Finish the car used by the owner of the residence



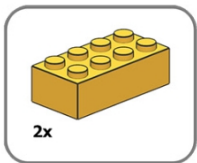
Go to the first slide of
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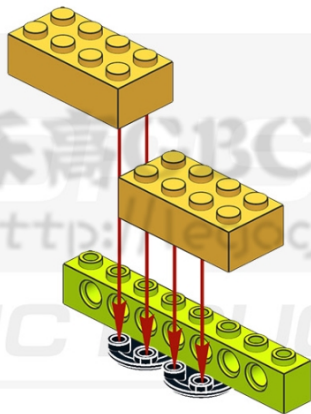
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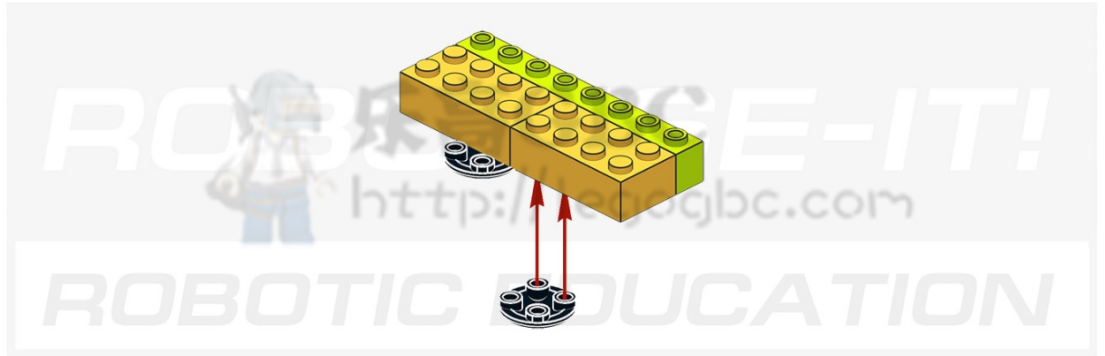
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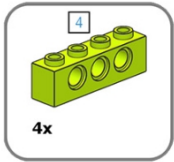
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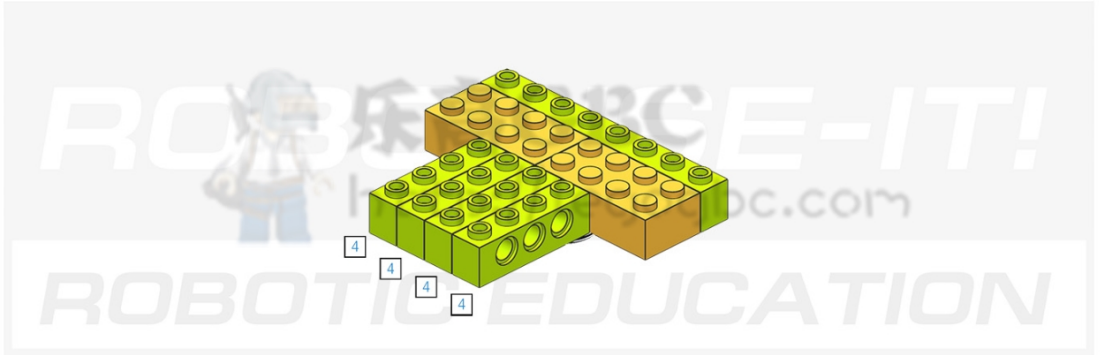


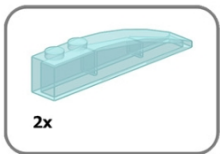
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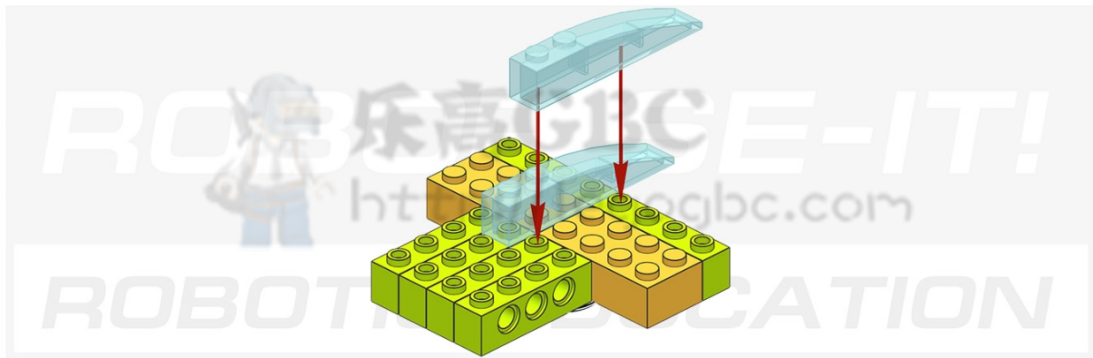


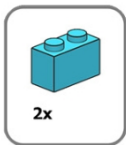
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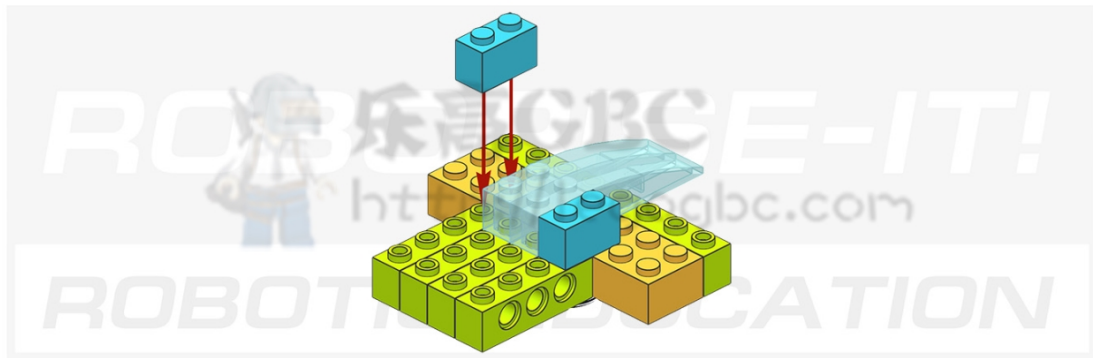


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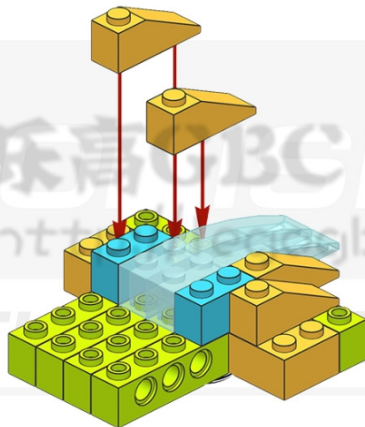


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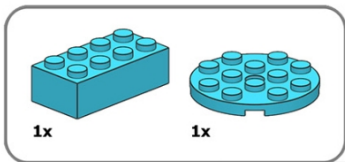
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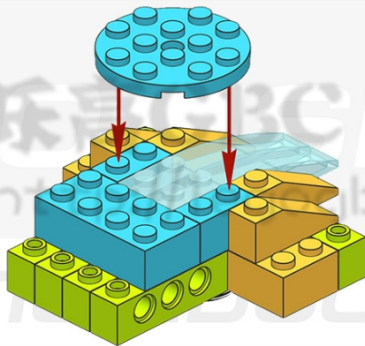
ROBOTSBC E-IT!

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54



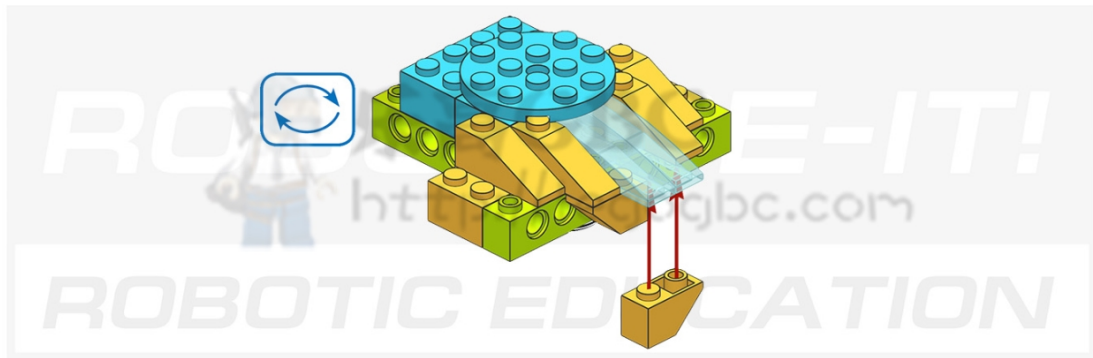
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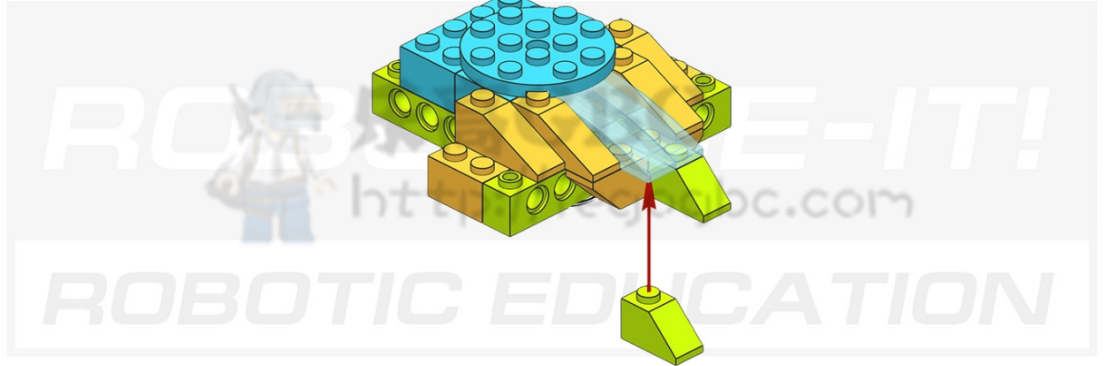


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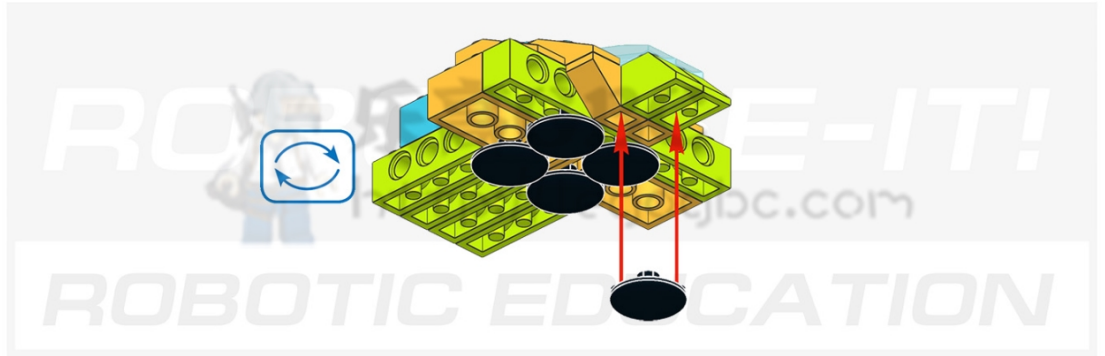


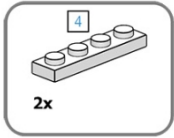
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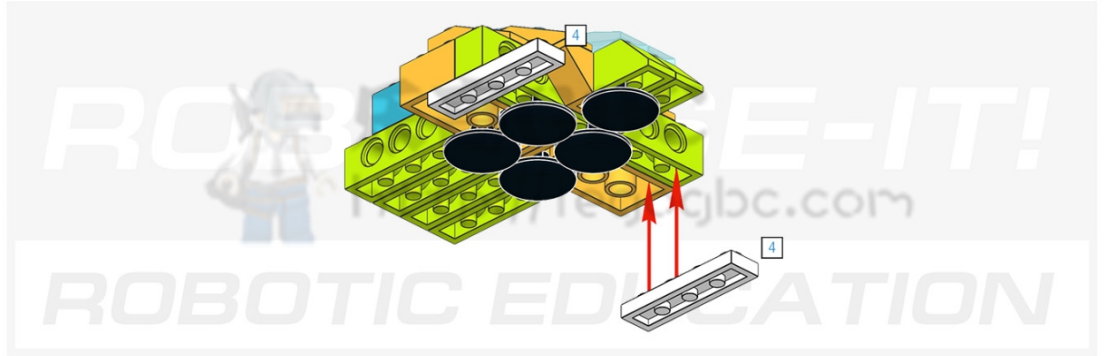


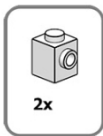
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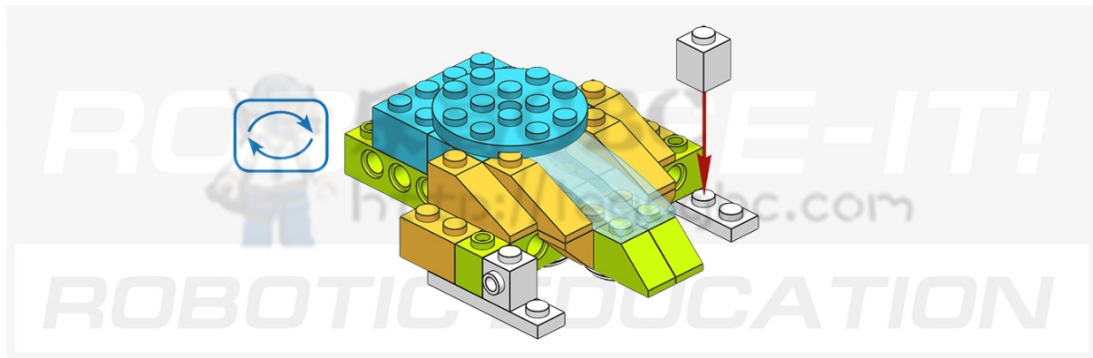


58





59





1x

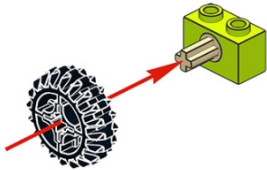


1x



1x

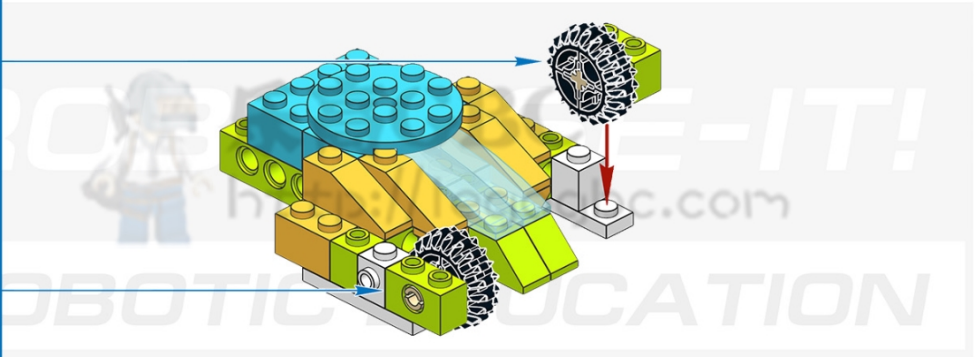
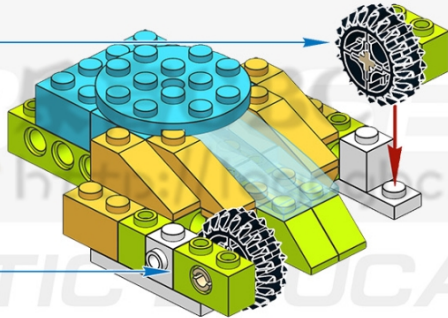
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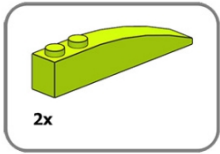


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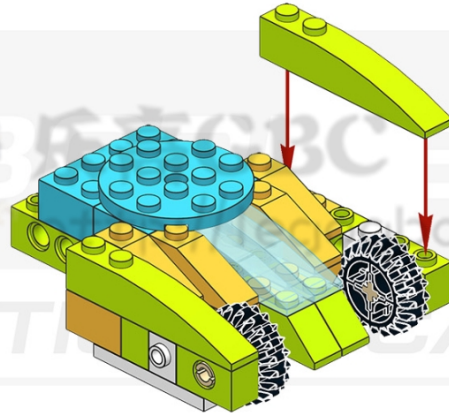


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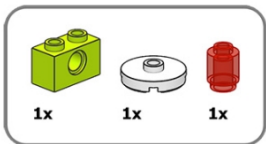
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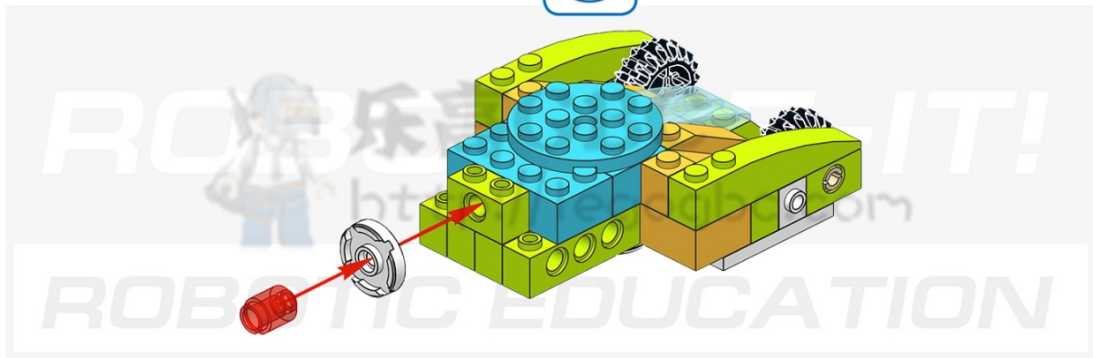
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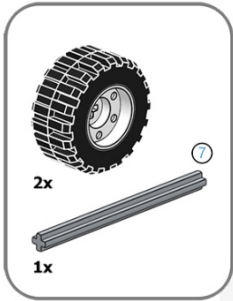
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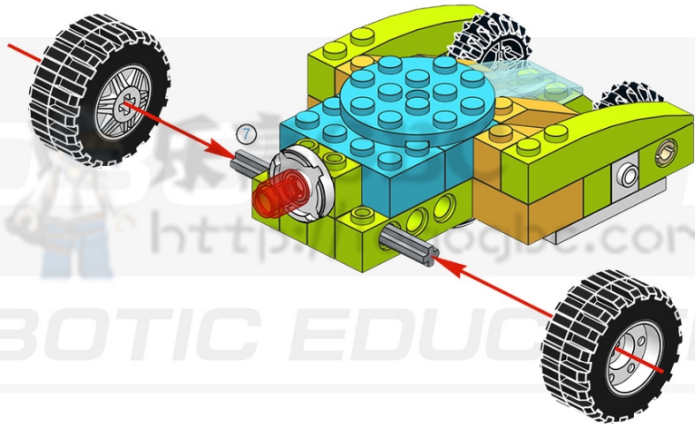


62





63

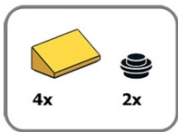


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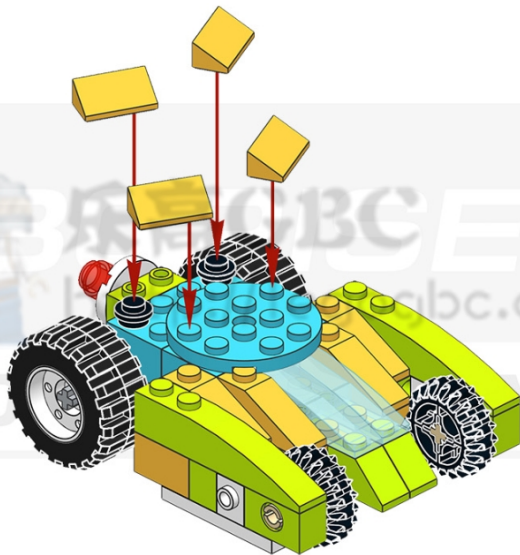
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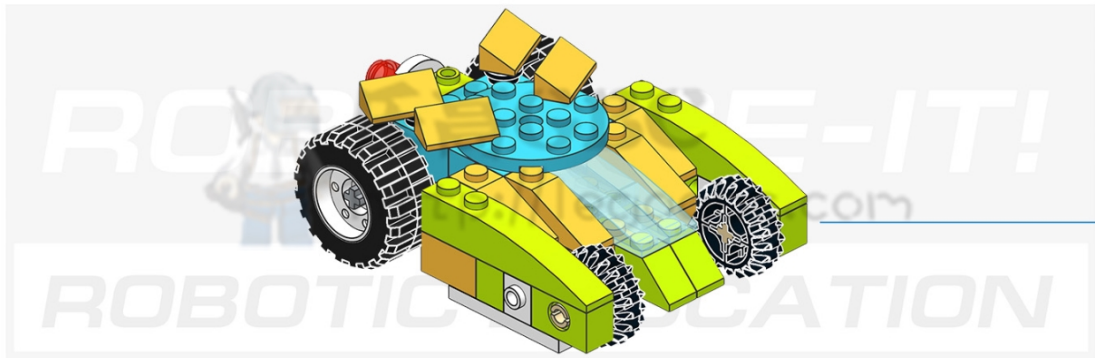


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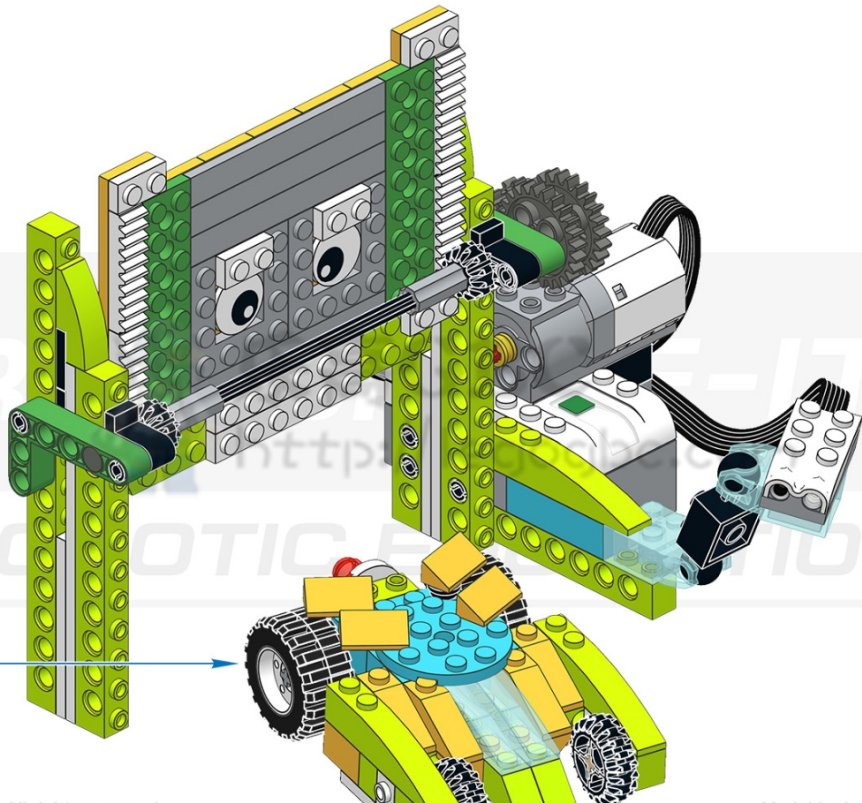
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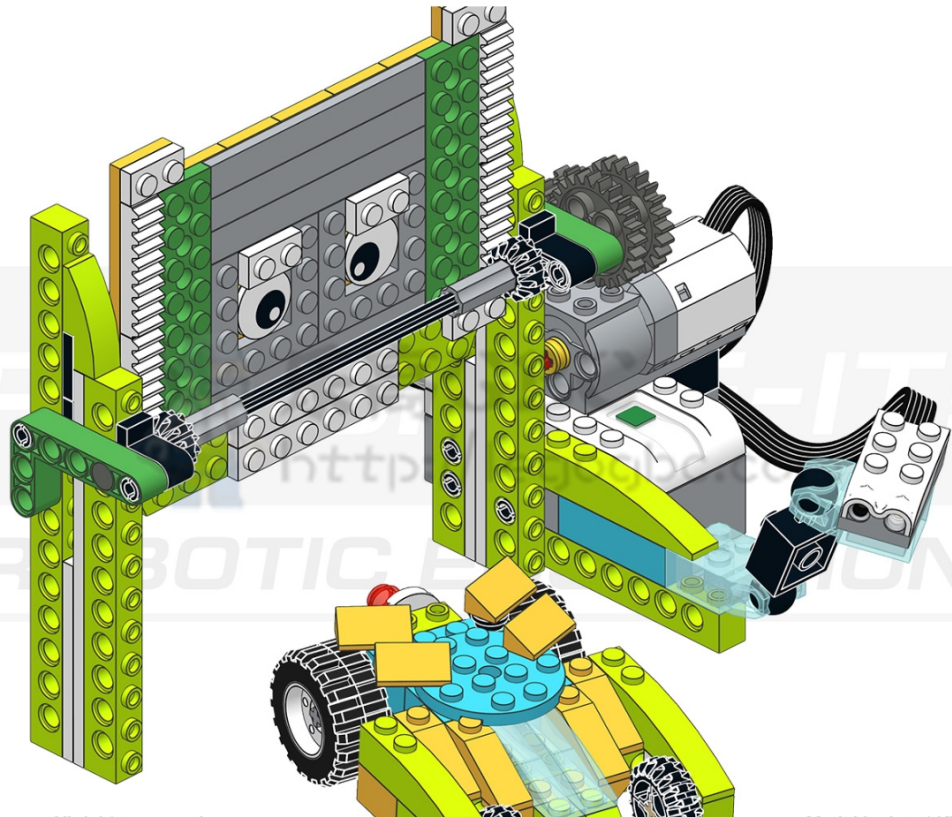
65



66



67





Note!



The cables must not rub while the robot is moving!



乐高GBC
<http://www.lego.com>



Tasks

Place the robot parts in the correct places



乐高GBC
<http://legogbc.com>





Task 1



Check the transmission of the robot. How does the lifting and lowering of the gate work now? How can a motor drive be built?





Discuss!



**How can a transmission be repaired?
What details are needed for this?**



Task 2



One possible solution is to use a belt drive. Install the driven pulley and belt.





Task 3



Program the gate controls using the buttons as on the remote control





Task 3. Program



Scratch

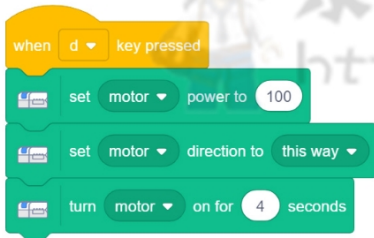


WeDo Software

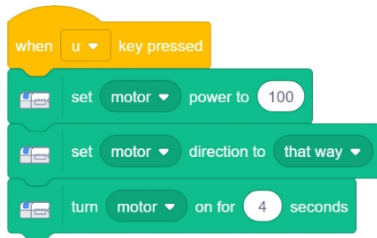


Program the robot controls using the buttons.

In the Scratch 3.0 programming environment, the program looks like this:



Adjust the duration of the movement so that the cogging of the toothed racks does not occur.





Task 3. Program



Scratch



WeDo Software



Program the robot controls using the buttons.

In WeDo Software, a similar program looks like this:





Task 4 *



The gate is equipped with a motion sensor. Use it to automatically open and close the gate.





Task 4 *. Program



Scratch

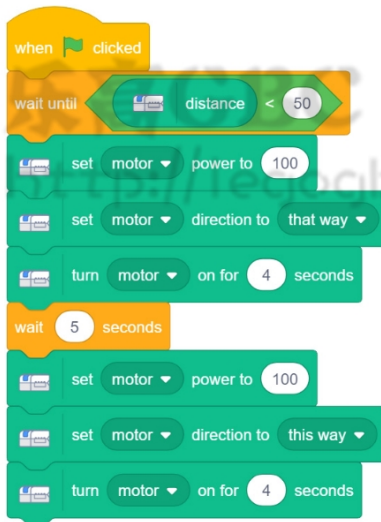


WeDo Software



Program automatic gate operation

In the Scratch 3.0 programming environment, the program looks like this:





Task 4 *. Program



Scratch

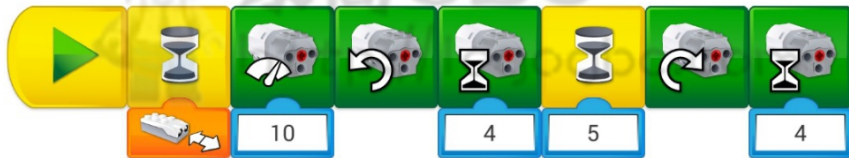


WeDo Software



Program automatic gate operation

In WeDo Software, a similar program looks like this:





Task 4 *



The detection point of the car will depend on the position of the motion sensor. To adjust the trigger point of the motion sensor, use the hinges on which it is attached.

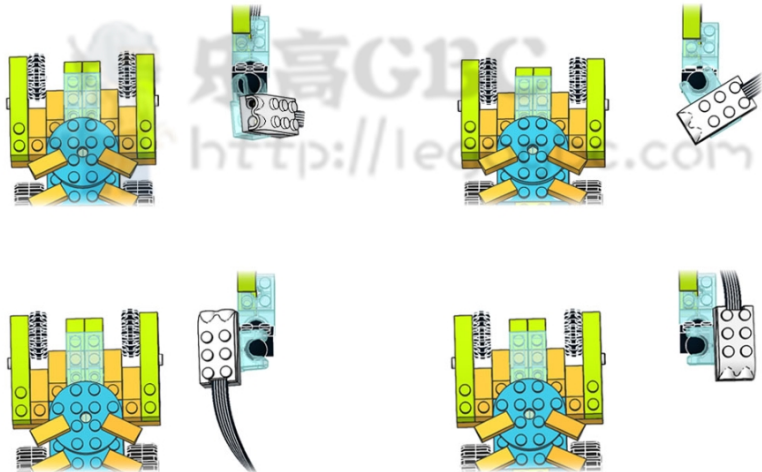




Question



How should the motion sensor be placed so that it can detect the approach of the car to the gate?





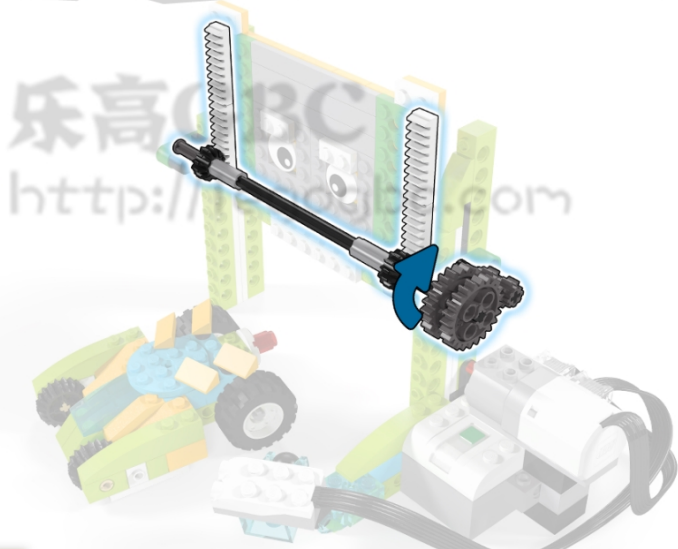
Tasks



At what direction of rotation of the gears will the gate rise?



Check
answer





Question



Scratch



WeDo Software



Which of the waiting blocks reacts to the appearance of the car?



```
when clicked
  wait until distance < 50
  set motor power to 100
  set motor direction to that way
  turn motor on for 4 seconds
  wait 5 seconds
  set motor power to 100
  set motor direction to this way
  turn motor on for 4 seconds
```



Question



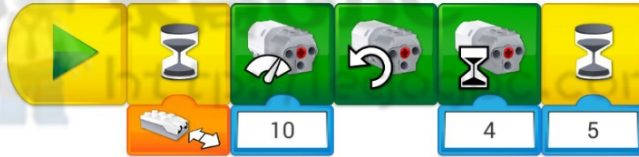
Scratch



WeDo Software



Which of the waiting blocks reacts to the appearance of the car?





Discuss!

- ▶ What gear did you use to build the robot's transmission?
- ▶ What part prevented the gate from closing in manual mode?
- ▶ What parts have been used so that the motion sensor can be configured to work with different cars?
- ▶ How does the gate rise and fall without distortion?





Your achievements

Total:

0



1



2



3



4

